ARTICLE

EFFECTIVE PREPARATION FOR EXAMINING A PATHOLOGIST IN A HOMICIDE CASE

by John T. Philipsborn (c)¹

Introduction

In 2008, the government of the province of Ontario (Canada) established a Commission tasked with ‘The Inquiry Into Pediatric Forensic Pathology in Ontario’:

The Inquiry’s mandate was to conduct a systematic review and an assessment of the policies, procedures, practices, accountability and oversight mechanisms, quality control measures, and institutional arrangements of pediatric forensic pathology in Ontario from 1981 to 2001 as they relate to its practice and use in investigations and criminal proceedings. The Commissioner was asked to make recommendations to address systemic failings and restore and enhance public confidence in pediatric forensic pathology in Ontario.²

¹ Copyright John T. Philipsborn, 2012. John T. Philipsborn is a criminal defense lawyer in San Francisco who has defended more than 50 homicide cases, a number of them involving the death penalty, and who consults regularly with other lawyers defending such cases. John regularly publishes on matters related to the defense of criminal cases and has often lectured on the defense of homicide cases. He has been the Chair of CACJ’s Amicus Committee for 20 years, and his work figures in numerous published decisions. Along with Michael Burt, John was responsible for examining the various pathologists involved in the post-conviction hearings of the West Memphis Three, who were released in 2011.

² From the official website of the Inquiry Into Pediatric Forensic Pathology in Ontario, www.attorneygeneral.jus.gov.on.ca
The Goudge Inquiry [Stephen Goudge was the appointed Commissioner] was made necessary by the revelation that a physician who had been conducting pediatric autopsies in the province had been providing opinions based on reported findings that, in several cases that when reviewed, proved unsustainable. A succinct example, discussed in the archives related to the Inquiry, was a case in which the physician opined that the cause of death of an infant was trauma inflicted by a sharp object, likely scissors or a knife. The finding had led to the prosecution and jailing of the child’s mother. On further review it was determined that the evidence actually supported an informed opinion that the toddler had been bitten and mauled by a dog.³ For lawyers interested in the assessment of problems in the application of forensic medicine to actual cases can develop, a review of the transcripts of Ontario’s Goudge Inquiry is a useful education. So is looking at the recommendations and procedures that were put in place in Ontario after the Inquiry. As the website of the Ontario Forensic Pathology Service explains it: “The Goudge Inquiry underscored the need for a fresh start for forensic pathology in this province.”⁴

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³ Those interested can easily access archival news stories about Dr. Charles Smith and the conviction of Louise Reynolds, whose daughter Sharon was the victim.

⁴ [www.mcscs.jus.gov.on.ca/english/death](http://www.mcscs.jus.gov.on.ca/english/death) investigation/pathology
The unresolved question, underscored by the useful example of Ontario, is how lawyers faced with defending a homicide case avoid being overwhelmed by the apparently authoritative and expert opinions of a forensic pathologist who happens to be providing unsubstantiated information which is often the product of a process with few substantive quality assurance mechanisms. Notwithstanding the publication of recent works like the National Research Council’s *Strengthening Forensic Science in the United States: A Path Forward* (‘The NRC Report’), it remains a truism of our ‘system’ in the United States that if defense lawyers do not know enough about an area of expertise like forensic pathology to be well prepared and sufficiently equipped to effectively examine purported experts in the field, unreliable and unsupported testimony from pathologists will continue to be given in cases.5

The *NRC Report* discusses the Medical Examiner and Coroner systems, and points out the following:

> Jurisdictions vary in terms of the required qualifications, skills, and activities for death investigators... They may or may not be physicians, may or may not have medical training, and may or may not perform autopsies....6

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6 NRC Report at p.247.
Of greater concern, though often lost on the criminal defense bar, is the succinct comment that Medical Examiner offices and Coroners “... have varying forms of organizational oversight.”7 This truism is, in the case of many offices, an understatement. And the lack of oversight (and quality assurance) is especially problematic because lawyers handling homicide cases often have inadequate knowledge of how to collect enough information to evaluate the work done by a forensic pathologist, let alone to usefully challenge that pathologist where necessary. While legendary lawyers have advocated that anyone handling a medical malpractice case, or defending homicide cases, should have attended autopsies and become immersed in reading medico-legal literature, the reality is that it is the rare lawyer who does so. There is no requirement that lawyers have a certain type of exposure, and training, in basic pathology for lawyers, even for those certified as specialists in criminal law.8 So when an ignorant lawyer is defending a case staffed by a poorly informed pathologist, the chances of the error(s) committed by the pathologist coming to light are slim indeed.

7 NRC Report at p.249.

8 There are some exceptions to this - for example, court-appointed ‘panels’ that have requirements that lawyers get training in the defense of homicide cases if they are to be eligible for appointments in death penalty, or non-capital homicide cases. However, even some of the most stringent professional guidelines for criminal defense lawyers, for example the ABA’s Guideline for the Appointment and Performance of Counsel in Death Penalty Cases (2003), and NLDA standards, do not cover medico-legal training and pathology in detail. Indeed, as lawyers who have been exposed to training in capital case defense are well aware, there is so much to learn to have even basic expertise in the defense of complex criminal cases involving homicide that it is hard to do the case work and continuing education required, let alone achieve a mastery of lawyering issues in pathology.
According to some sources, murder rates in the United States have fallen since 2000. Nonetheless, the *Economist* underscores what most informed persons in the United States are aware of: “America has one of the highest homicide rates in the developed world, at 4.8 per 100,000 people.”

Many lawyers in institutional defender offices, and in the varieties of practice in the private sector will, at some point, defend a homicide case. Perhaps unfairly, this writing proceeds from the assumption that a number of criminal defense lawyers, like the writer of this piece, have learned about forensic pathology on the job, combining what ‘formal’ training for lawyers is available with personally-driven efforts. The focus here is to provide some suggestions on how to get enough information to begin to effectively approach evidence provided by a pathologist.

**Addressing basic procedures and ensuring preservation of evidence**

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Knowledgeable lawyers will be aware of the various Working Groups (some funded and organized by the U.S. Department of Justice), laboratories (the FBI, the Metropolitan Police (UK), etc.) and professional groups have published the procedures, methodologies and ‘recipes’ that are used in DNA-related laboratory procedures. By contrast, at this point in time, the forensic investigation of death lags well behind some other areas of the forensic sciences in being systematized and, as with bench laboratory endeavors, standardized. There are a number of reasons for this that are discussed, in a useful way, by Coroners, Medical Examiners, and pathologists who attended a recently held symposium on Forensic Death Investigation.\(^\text{10}\) During that symposium, there were a number of calls for a unified system of medico-legal death investigation, and renewed calls for improvement in training and education in the field of death investigation.

Each jurisdiction in the U.S. has either formal or informal procedures. Some jurisdictions have published procedures that determine (at least on paper) who goes to the crime scene to investigate a death; how the body of the victim is to be picked up and stored; how the determination of the responsibility for the autopsy process is made; how the decision of which physician does the autopsy is made; how the decision of how qualified the physician conducting the autopsy should be; how the autopsy process is supervised; how the report is written; how the associated lab work is done; how the

\(^{10}\) See National Institute of Justice, Forensic Death Investigation Symposium. www.nij.gov/nij/topics/forensics/investigations/death-investigations
quality control procedures are implemented; how the case is signed off; how the case is documented; how the files are kept; how the documentation of the findings are kept (photographs; videos; tape recordings of notes; notes, etc.).

Lawyering a case in which there has been a death necessitates an understanding of the procedures involved, and some immediate attention to detail. Coming into the case, written requests are made by counsel requesting the preservation of biological material, including tissues, tissue blocks, and body fluids, as well as the preservation of whatever by-products of the autopsy process may remain for re-examination and retesting. There may be questions that need to be answered urgently - and that will require the lawyer to quickly (if time and resources permit) acquire the services of a consulting pathologist who will, among other things, make suggestions about further procedures (including, significantly, re-autopsy or the sampling of additional tissues); additional laboratory testing; additional photographs; further autopsy, and the like that should take place.

The lawyer will also need to learn the culture of the office that has done the pathology work - what kind of internal procedures are ‘officially’ written out and specified; what are the actual practices; and what records are generated by the pathologist who conducted the autopsy? On occasion, pathologists who make notes on anatomic diagrams, or who take their own photographs, will have reasons for segregating their own work product (or what they consider to be their own work product) from the ‘official’ file in a case. The lawyer needs to know enough to ensure that all pertinent material is
preserved, and that she/he begins to get access to that material as part of the defense investigation of the death at issue.

An important adjunct to this particular step in the process is to find out who the pathologist who conducted the autopsy is - what kind of credentials, background, and training does the person have? As pointed out by a number of respected pathologists, training in the specialty of forensic pathology has evolved. 11 There are certain acknowledged centers for training forensic pathologists - and any training program for pathologists generally has a curriculum. The enterprising lawyer will make sufficient inquiries to learn how a given pathologist would have been taught and supervised during a residency in clinical and/or anatomic, and forensic pathology (or other sub-specialty). How did that teaching program teach its residents to document its cases - why was that protocol encouraged, and is the physician following the protocol? If not - the question at some point will be, why not?

Without seeking a meeting with the pathologist who conducted a given autopsy at his/her place of work, the lawyer will not be informed on certain basics that may become important to the lawyering of the case - what kind of a medical library did this physician have access to; to what degree does the physician access literature over the internet or


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through other means; how is research conducted on a given case by this physician or in this office; what considerations went into the choice of tissue samples, etc. These seemingly minor matters may become important if some phenomenon in the case leads to the expression of an opinion that, on reflection, the lawyer should have looked into.

The just-covered steps should be an almost synaptic response that include basics: preservation of evidence and records; acquisition of information; getting access to the pathology records quickly; acquiring a consultant; beginning consultations with the pathologist who will be testifying for the prosecution and finding out both about that pathologist and the basic structure that was provided to ensure quality assurance and reliability (if it exists). The lawyer wants to avoid being placed in a situation in which a physician will testify about critical parts of a case in such a way that the lawyer feels unequipped to understand what happened in the case, or what the physician is saying, or how to challenge those parts of the testimony being offered that warrant challenging.

**Learning who and what you are dealing with**

An informal survey accompanied the preparation of this article. Calls were made to Medical Examiner’s offices in several major urban areas, including New York City, St. Louis, Missouri, and a number of locales in California to find out if the offices had internal written policies available about the investigation of death and autopsy process used. Two offices responded that they did, though all offices noted awareness and general compliance with the standards of the National Association of Medical Examiners
Note that between 50 and 60 offices involved in the investigation of death are accredited by NAME. The accreditation checklist is available online. It is basic, but would help a lawyer understand the difference between an office that is accredited, and which attempts to function according to what standardization there is in the field, and one that is not. The Medical Examiner’s office may, as is the case in some States, be part of a crime laboratory, either regional, local, or state-wide. The laboratory at issue may, or may not be, accredited - laboratories may be accredited for some purposes but not for others. Again, this is an important matter to be informed about.

Individual physicians may, or may not, be board-certified - and in any event, may not be board-certified in forensic pathology. The NRC Report points out that there are relatively few board-certified forensic pathologists in the United States. The NRC Report, and information disseminated through the American Board of Pathology, are in agreement that since forensic pathology became a certified specialty (in 1959) fewer than 1500 physicians have received certification, and more recent data suggests that there are only around 500 forensic pathologists practicing full-time in the United States. Prior to 1999, individuals sitting for the Forensic Pathology Board Examination did not have to have completed an accredited training program.

12 National Association of Medical Examiners, 2007, cited by Dr. Randy Hanzlick in a pamphlet entitled “Options for Modernizing the Ontario Coroner System”.
The definition of a ‘forensic pathologist’ may vary - for example, there is a difference between the definition used by the College of American Pathologists (noting that a forensic pathologist is one who has received special training or experience in forensic pathology and actively engages in death inquiry) and the definition set forth in the Forensic Autopsy Performance Standards of the National Association of Medical Examiners (NAME) that specifies alternatives between a certification in forensic pathology by the American Board of Pathology, or (prior to 2006) the completion of a specified training program (or its international equivalent), while being deemed ‘qualified for examination’ in forensic pathology by the American Board of Pathology.¹³

The American Board of Pathology, which provides board certification, has a website (www.abpath.org). The board makes available the information that it expects from applicants for certification, and the kind of data (for example, number of necropsies performed) that physicians applying to the board must document. From a lawyering perspective, this is useful information. For example, it may mean that a physician may have recent certification materials available for review. Indeed, many offices track the autopsies/necropsies performed by a given physician. This is useful information to have when a lawyer encounters the physician who claims to have done ‘more than 10,000 autopsies’, which occasionally happens.

¹³ National Association of Medical Examiners Forensic Autopsy Performance Standard.
Counsel can verify whether a given pathologist is in fact a Diplomate of the American Board of Pathology, which certifies physicians in anatomic, clinical, and other sub-specialty areas of pathology. A physician who is an applicant for certification in forensic pathology with the American Board of Pathology will have undergone training (and certification) in anatomical or clinical pathology (or both) prior to sitting for the examination in forensic pathology - though there are varying courses of training in this regard.\textsuperscript{14} There are, also, other professional organizations that address competency in pathology, including the College of American Pathologists.

The National Association of Medical Examiners has “forensic autopsy performance standards” which are straightforward, and not particularly complicated. Nonetheless, assuming that the physician who performed the autopsy is not board-certified, and seems mystified by questions concerning his/her protocol, one of the questions to be asked might be what basic guidelines for the investigation of death, including published autopsy guidelines, is the physician aware of. Perusal of a website like that of the College of American Pathologists discloses that there are basic publications including ‘introduction to autopsy technique,’ step-by-step diagrams’; ‘basic competencies in forensic pathology’; ‘autopsy performance and reporting.’

\textsuperscript{14} The information relayed comes in part from discussions with Dr. Werner Spitz, and several other board-certified pathologists who have either been with, or are with, the New York Medical Examiner’s Office, in addition to conversations with persons at the American Board of Pathology.
A review of credentials and literature on the investigation of death will help lawyers understand whether the pathologist is likely to offer ‘non-standardized’ opinions based on ‘non-standardized’ practices. Non-standardized, as applied here, means that the physician is explaining to the lawyer (and will likely explain to a court and jury) that she/he is guided by experience and training - amorphously described. Essentially: I did it according to my training; here are my opinions. A standardized approach is one in which the physician references use of a method that is published; references generally accepted literature in the field; complies with good professional practices as described in the field, and involves quality assurance mechanisms aimed at ensuring reliability. The base-line, whether the lawyer is using the Federal paradigm or not, is to assess whether the physician is able to provide some basic information that will allow the lawyer (and later the judge/trier of fact) to assess whether the opinion rendered is reliable.

Admittedly, not all jurisdictions use *Daubert v. Merrell Dow Pharmaceuticals* or *Kumho Tire Co. v. Carmichael* as their gateway tests.\(^\text{15}\) Some jurisdictions have specialized gateway tests for the admission of medical testimony - including some of the Federal Circuits.\(^\text{16}\)


\(^{16}\) This is true, for example, of the Ninth Circuit that, echoing other Circuits, notes that medical testimony is admissible, if, in part, it is dependent on knowledge that itself would be viewed as reliable knowledge in the medical profession by a good physician. *Sullivan v. U.S. Department of Navy*, 365 F.3d 827, 834 (9th Cir. 2004).
Contact with the Medical Examiner/Coroner office and the pathologist.

Inquire about the office’s: accreditation; use of office-specific written procedures; adherence to NAME standards; insistence on board certification in forensic pathology as a condition of full-time employment as a forensic pathologist; quality assurance protocols; citations to literature pertinent to the issues presented in a given case.

In doing so, find out whether the office at issue uses its own *autopsy-related reporting forms*; an office-specific autopsy report template; and office-specific anatomic diagrams and appendices. Some offices make blank forms available to counsel.

The preparation for the encounter should include not only collecting whatever documentation has been made available or is provided as part of the discovery packet, but also having in hand the *NAME autopsy standards*, and relevant excerpts from some of the standard textbooks on post-mortem investigation of death. The literature review, hopefully aided by consultation with a knowledgeable forensic pathologist/consultant, will help define what is missing.

For example, some offices will not provide autopsy diagrams (with the pathologists’ contemporaneous notes) as part of the regular public record of the investigation of death - and will not make photographs taken and preserved in their files part of that record either. Those offices that require the inclusion of laboratory reports and/or radiology reports (where the interpretation of radiological findings is of importance) may or may not provide copies of pertinent, underlying documentation.
In a case in which visual evidence of the resting place of a bullet fragment, or other piece of evidence, may be at issue, obtaining the foundational information may be of significance. Counsel (and a consultant) should get access to foundational information like x-rays or photographs taken by the pathologist and retained in-house and photograph them to document their existence.

There are also cases in which experienced, competent, forensic pathologists will have done much more work on a case than just the autopsy. Therefore, where the pathologist has been to the scene (which is a requirement in some offices), and has taken notes, and may have received anecdotal information, counsel should request and obtain copies of such notes. Some offices have a protocol that includes obtaining and reviewing law enforcement investigation reports; third-party reports; Coroner or Medical Examiner investigation reports; medical records. All of these should be obtained and reviewed.

Similarly, there may have been a consultation with a specialist, for example a neuropathologist in the case of a head injury. As one expert in the field has observed:

In the performance of their duties, forensic pathologists... may enlist whomever they desire to assist with the primary mission - the determination of the cause and manner of death. This often involves the use of expert consultants such as forensic dentists (odontologists), forensic anthropologists, forensic psychiatrists, biomechanicians, and neuropathologists.\textsuperscript{17}\textsuperscript{18}

\textsuperscript{17} Leestma, \textit{Forensic Neuropathology} (2d ed) at p.5.
All notes, phone messages, memoranda and the like documenting such consultations should be obtained.

**A word on inquiries into laboratory procedures and histopathology**

Histology involves the study of the anatomy of cells. Lawyers defending homicide cases should find it useful to obtain some knowledge (through observation, hopefully) of the procedures involved in sectioning and staining tissues obtained in a post-mortem for further examination under a microscope - and for other processing. Histopathology involves the study of diseased tissue. It is an integral part of the investigation of the cause, manner, and sometimes also the approximate time, of death.

The effectiveness of histology/histopathology in the investigation of a death that is the subject of a criminal case depends in part on the quality of the procedures used to sample tissues; to preserve them through chemical fixation or freezing; and finally to process them through staining with various compounds that will help to identify matters such as the shape, appearance, and integrity of the cells; the presence of abnormalities, or disruptions; and numerous other matters that may be of concern to those involved in the

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18 The above reference to bio-mechanics is not just a passing reference. There have been a number of studies, and writings, about the bio-mechanics of head injury, including ongoing research concerning the properties of human cerebral blood vessels, studies of simulated injuries in children, and studies of blunt force trauma. See, for example, Gennarelli et al, *Mechanism of Primary Head Injury* (1996); Ommaya et al, *Cerebral Concussion and Traumatic Unconsciousness, Correlation of Experimental and Clinical Observations on Blunt Head Injuries* (1994). For a more recent, and more specialized treatment, see Monson et al, *Axial Mechanical Properties of Fresh Human Cerebral Blood Vessels* (2003).

Note that some offices have photographs of stained tissue slides. Such photos allow for some level of re-examination and certainly aid (if necessary) during hearings or trial. Properly ‘fixed’ tissues may be embedded in a paraffin/wax block or frozen in such a way that they can be preserved to allow additional slides to be made in the event more slide studies, or more specialized staining, needs to be done. It is not uncommon for pathologists consulting with defense counsel to request re-cuts, or their own sets of slides.

One recent work on forensic histopathology summarizes approaches as follows:

While conventional histological staining methods have been established for decades, some for more than a century, immunohistochemical techniques are not yet routinely used in forensic diagnostics. They are used, however, when specific problems occur. In such cases, depending on the problem, routine diagnostics may be supplemented with specific microscopic techniques, including electron microscopy, laser scanner microscopy, and laser microdissection techniques, in order to isolate single cells or cell groups. For important routine diagnostics, established standard histological staining methods are discussed here. Basic information on immunohistochemical techniques and the best-practice use of immunohistochemical and other methods are mentioned only briefly and therefore do not substitute reference to the specialist literature.²⁰

The following instructive note succinctly explains some of the issues pertinent to the application of histopathology to pediatric cases:

The pediatric pathologist routinely collects a complete sampling of appropriate tissue sections. Unfortunately, there are no uniformly

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accepted guidelines for postmortem histology in childhood. Many forensic pathologists have not had special training in the pediatric postmortem examination and, because there are no specific or standardized guidelines, histologic sampling is often less than ideal, especially in head trauma cases. Sampling of traumatic injuries, sampling routine organs with and without pathology, and appropriate fixation and sampling of brain, brain stem, and spinal cord are mandatory in any case of sudden traumatic death that could involve inflicted injury and in any case that remains unexplained following autopsy surgery. Special dissection may be indicated in sexual assault cases, history of fall, cases with possible deep tissue contusions, pre-mortem or postmortem diagnosis of occult fractures, etc. Fractures and injuries must be sampled and examined histologically when there is suspicion of abuse. Often overlooked is the bone sampling of the skull fracture.21

A review of some of the available texts on histopathology reveals that a number of different topics can be addressed by pathologists who have collected tissue samples that may assist in the analysis of a given case. A review of some of the texts allows lawyers some insight into how microscopy, and the various available preparations of tissues for examination, will yield information that may either buttress, or undermine, opinions rendered by the pathologist based on the gross examination of tissues, organs, and the appearance of evidence on the body. A useful contrast is presented by the discussion of the appearance of injuries (bruises, for example) in some general texts on pathology, and the more specialized and recent discussions of the appearance of tissues collected from an area of injury which is being used for the interpretation, for example, of the relative age

21 Ophoven and Olein, Childhood Head Trauma - Forensic Approach, in Forensic Sciences, C. Wecht, editor, 2008.
of a given injury.

While various well-respected pathologists continue to urge caution in the development of estimates of time of injury based on the appearance of a bruise, or wound, to the naked eye, others have shed light on what techniques may be available to provide rough estimates of the time range of a given injury based on the examination of tissue slides. 22 Note the cautionary language used by the authors of a recent work on forensic histopathology:

Accurate dating of injuries has been an area of considerable research and debate. The body’s response to trauma is diverse and is affected by innumerable variables. A review of the literature will reveal a considerable variation in the time periods associated with injury development and appearance and that there is variation in rates of wound healing in different sites of the same individual... These are all issues that need to be considered to interpret the age of traumatic lesions, and still we are often left with a more realistic binary decision between “acute” and “remote”. It is imperative that you not permit yourself to get “painted in” to an age for a contusion or abrasion. These are best handled in windows of time, posited with a caveat that the vagaries of biology preclude a more precise time factor. 23

While the above language may seem to underscore that a pathologist referencing even the most recent research on the appearance of wounds should be cautious to underline the limitations inherent in an opinion on the age of a wound, knowledge of the relevant literature would assist counsel to examine the pathologist whose opinions on these

22 See, for example, the relatively recent discussion of this subject in Cummings et al, *Atlas of Forensic Histopathology* (2011, Chapter 1, “Post-Injury Intervals”).

subjects are framed with a tone (and content) of certainty - underscoring that a given open
wound, contusion, or bruise could not possibly be of a given age.

Inquiries into prior death investigations involving similar issues/pathologists’
experience; office records.

Defense counsel often find themselves dealing with a pathologist professing to
have vast experience - thus leading to the inference that the pathologist has seen
everything, including all of the phenomena present in the case at hand. In a recent case,
one of the questions was whether a pathologist testifying for the State had mistaken as
pre-mortem knife wounds (or wounds caused by a particular type of tool or implement)
what was actually post-mortem animal predation (meaning injuries inflicted by animals
after death, but before law enforcement discovered the bodies).

During post-conviction litigation, at least eight experts (five board-certified
forensic pathologists (some with other areas of specialization as well), and three senior
odontologists (all of whom worked in different jurisdictions) concurred that animal
predation had been erroneously omitted from the findings of the initial autopsy. Defense
counsel were interested in getting information about the post-mortem examinations
conducted by the pathologist in question on bodies recovered from water. While at one
point the pathologist mentioned that his office was looking into such cases going back
some ten years, the internal research was never produced because of professed
record-keeping problems. The case was resolved before the issue was further addressed
in detail. This is one example of a case in which there was an evident need for the
defense (and in that case, post-conviction Petitioners) to arrive at an understanding of what data experts in pathology are relying on in expressing opinions. It is not uncommon for lawyers to seek records that shed light on the level of institutional experience, and in the case of an individual pathologist, of individual experience, with certain kinds of cases that would permit a pathologist to express opinions with more reliability.

It is surprising how often lawyers fail to obtain readily available information about the types of cases that a given office or pathologist may have been involved with in recent memory. Equally surprising is the number of offices that, either in yearly reports, or in reports to municipal or other governmental agencies, make known information about their caseloads. As explained above, physicians applying for certification, or re-certification, have incentive to keep track of their cases (and caseload). Various physicians, and their offices, may be conducting research that calls for the maintenance of specific sorts of data.

One part of a lawyering protocol focused on investigation of death should be data-based inquiries aimed at understanding the relative experience of the ‘players’ in a case. Counsel should not be surprised that experienced, methodical pathologists will not only have descriptive data, but also photographs from various previous cases illustrating a specific issue they have encountered several times before. Nor should surprise result from responses indicating that the pathologist can produce no evidence that she/he had ever previously personally reviewed a similar case.
Consultation with qualified experts

A lawyer’s failure of consultation involving the investigation of death may take one of several forms. The two most obvious are: failure to consult with qualified and competent pathologists about the case at issue; failure to consult with experienced lawyers known to have defended cases involving medico-legal issues. Indeed, it is not uncommon for lawyers who tend to specialize in handling criminal cases to have interacted with colleagues in the civil bar who have had to address complex medico-legal issues - and who may have had occasion (and the funds) to consult with several pathologists about given phenomena. A fair amount of research concerning head injuries has been done in the context of the development of automotive safety mechanisms, as well as in the analysis of head injuries to children. Several academic research centers have devoted themselves to gaining a greater understanding of the mechanics of head injuries, and both civil and criminal lawyers have had occasion to access some of the scientists involved.

In addition, a variety of individuals have developed expertise in areas that are not immediately evident to lawyers (or discussed in some of the larger textbooks). ‘Civilian’ pathology issues do not cover matters that have been inquired into, for some time, by the various military services. Experienced counsel are aware that there is an Armed Forces Institute of Pathology. At various points in relatively recent times, there have been efforts made by the military (and contractors and businesses working for the military) to
assess cause and mechanism of wounds and injuries for a variety of purposes. The recent military operations in Iraq and Afghanistan have produced literature on a number of topics, including the diagnosis and mechanics of brain injury. However, literature from previous time periods is also highly informative.

This leads to the third area of failure of consultation by a lawyer: the failure to consult relevant literature. For example, Martin Fackler, a physician affiliated with the Letterman Army Institute of Research, Division of Military Trauma Research, conducted research over a period of several years leading to his succinct statement: “Probably no scientific field contains more misinformation than wound ballistics.” While a number of lawyers have, over the years, accessed work done by Dr. Fackler and his colleagues (and by other groups studying similar phenomena), many lawyers fail to access readily available, specialized, literature that would help in their understanding of the dates available on a mechanism of injury.

Similarly, those knowledgeable about research in areas of endeavor that involve the investigation of injuries, and causes and manner of death, point to work that has been done by physicians and allied professionals in the United Kingdom, and in other places in which there are accessible bodies of literature that are overlooked by some supposedly authoritative works.

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In sum, the well-prepared lawyer will have not only done her/his own literature search, but will also have reached out to pathologists (who may or may not be formally retained), and to other lawyers, researchers, and the like whose information may shed light on necessary areas of preparation.

**Useful literature**

There are a number of useful sources for lawyers seeking information on specific aspects of post-mortem investigation which is in the province of the forensic pathologist - or of an office that is investigating a death. The following discussion is accompanied by a cautionary note that conversations with highly experienced, well known, pathologists (allied experts and experienced lawyers) will often suggest more specific, and useful, literature (especially periodical literature) pertinent to a given case. Another observation, based on consultations with accomplished pathologists and experienced lawyers, is that while recognizing contemporary works in the field (sometimes their own) some forensic pathologists who have been involved in teaching, and courtroom expertise, for a number of years point to the utility of accessing not only contemporary literature, but also some of the older works on the autopsy process and investigation of death as being very useful in understanding the evolution of the investigation of death, and understanding the autopsy process.\(^{25}\)

\(^{25}\) The writer’s references here include conversations on the training of pathologists and useful literature with experts including Dr. Werner Spitz, Dr. Michael Baden, Dr. Terri Haddix, Dr. Janice Ophoven, Dr. Jan Leestma, Dr. Robert Wood (odontologist who testified during
In addition to some of the often-cited general works on pathology, including those of Drs. Dolinak, DiMaio, Knight, Spitz, there are more specific texts as well. For example, lawyers addressing certain types of cases may want to consult highly specific works devoted to asphyxia and drowning; gun shot wounds; poisoning; electrical weaponry (Tasers and the like).²⁶

Ontario’s Goudge Inquiry), and Dr. Richard Souviron, Chief Odontologist at the Miami Dade Medical Examiner’s office. Many readers will be aware that Drs. Spitz and Baden have had celebrated careers as forensic pathologists, both with Government-operated offices that served as well-known teaching facilities for forensic pathologists, and in private practice.

One of the basic issues in a case may be the adherence to the practice guides, and guidelines, of NAME that may be of use to lawyers in understanding whether a given investigation of death departed in significant ways from what is described as competent practice. The Forensic Pathology Committee of the College of American Pathologists (in conjunction with NAME) has published a pamphlet entitled *Basic Competencies in Forensic Pathology, A Forensic Pathology Primer*, which is described as covering the basics. A recent work entitled *Essential Forensic Pathology* aims in part at describing procedures that enhance the training of forensic pathologists, and scenarios that a pathologist may encounter.\(^{27}\) Another general work that may prove of use in analyzing (and conducting courtroom examinations about) the work of a forensic pathologist is the *Code of Practice and Performance Standards for Forensic Pathologists*, published by the Royal College of Pathologists and Home Office.\(^{28}\) Leading pathologists in the United States have noted the level of expertise in forensic pathology in the United Kingdom, and will often be aware of the literature generated by agencies like the Home Office (which is responsible in part for overseeing aspects of law enforcement and associated functions in the United Kingdom). Reference to approaches used in given cases in the United Kingdom may lead to ways of either buttressing, or undermining, work done by a


\(^{28}\) The *Code of Practice and Performance Standards for Forensic Pathologists* was published in 2004, and is available online by accessing the website of the Royal College of Pathologists. The same website has a number of other publications. [www.rcpath.org](http://www.rcpath.org).
There are sources that focus on aspects of the autopsy process, including microscopy, histology and histopathology. As emphasized here, gaining an understanding of what pathologists can learn from review of microscopic tissue review will lead to a better understanding of how pathologists provide estimates of the time at which a given injury may have occurred - distinguishing (for example, in the case of injuries to the brain) an old injury from one that was inflicted shortly before death.

Other matters (in addition to microscopic tissue review) also go into estimation of the time of death. In addition to information that is provided in general textbooks on forensic pathology, there are volumes specifically devoted to the subject, for example, a volume contributed to by several well-regarded experts: *The Estimation of the Time Since Death in the Early Post-Mortem Period.*

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30 Henssge, et al, *Estimation of the Time Since Death in the Early Post-Mortem Period* (2d ed). It might be noted, for those lawyers who have been involved in cases in which estimations of the time of death was a critical issue, that the just-mentioned volume helps explain why estimations of the time of death are just that, since this work focuses in part on the relationship between research on matters that can assist in the estimation of time of death, and techniques often used by pathologists to provide an analysis of changes caused during the early post-mortem period that allow some inferences to be drawn of when death occurred as a result. Those unfamiliar with the volume just mentioned are not likely to find that there is an easily stated formula that provides a clear method to estimate time of death. Part of the utility of this volume, since it is co-authored by persons known for their contributions to their respective fields, is that it is useful for lawyers to be aware of what literature there is on the topic so as to better be able to confront and cross-examine expert witnesses who are purporting to make definitive estimates.
For those involved in cases focused on the death of a child, suffice it to say that there is a great deal of literature in a number of areas - particularly controversial ones like head and brain injuries in children, and child death ‘syndromes’. The subject of the cause and mechanism of brain injuries in children, and what techniques and procedures exist to pinpoint cause and manner of death has produced a fair amount of scholarly journal-based literature, and a number of pieces in the periodical literature. One useful body of source material that lawyers can assemble in assessing child deaths are those textbook-length works focused on neuropathology (which have great utility in other cases as well), and recent works on histopathology. The reason for recommending works like Dr. Jan Leestma’s *Forensic Neuropathology*, or Dr. Manfred Oehmichen’s *Forensic Neuropathology and Associated Neurology* (there are other works also footnoted here) is that they will inform a reader on a procedure for analyzing head, neck, and brain injuries that can help structure a lawyer’s examination of a physician who is stating a largely unexplained opinion on how a particular brain trauma occurred - or what its significance is.

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Lawyers who practice in jurisdictions that have relatively sophisticated forensic pathology offices (often using a Medical Examiner system, with an internal laboratory) are used to receiving post-mortem examination packets that include basic toxicology reports. What these mean, how laboratories process and test body fluids, and where the problem areas in the interpretation of tests may be is often a matter ignored by lawyers focused on obvious issues - for example, when the question of whether the deceased had drugs or alcohol ‘on board’ seems to be answered in a reported result of a blood or urine sample. There are cases in which more subtle questions of toxicology may arise, and there is useful literature to address these, and areas that counsel may view as more ‘obvious’.

There are also publications on what might seem more mundane issues - matters that on occasion turn out to be critical, such as understanding or interpreting a death certificate. There is useful literature on this topic, authored by a well-known resource. Finally, in terms of ‘basics’, there are a few volumes available from online book sellers that provide general information on forensic pathology for allied professions, including

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32 There are a number of works on toxicology in the post-mortem examination process, some focused on aspects of the laboratory techniques, and others more generally explanatory. Some examples include Telepchak, Forensic and Clinical Applications of Solid Phase Extraction (2004); Wong, et al, Drugs of Abuse: Body Fluid Testing (2005); Haschak, Handbook of Toxilogic Pathology (2000-2001).

practicing lawyers.\textsuperscript{34}

The standards/guidelines for testimony by pathologists - finding them/using them

\textsuperscript{34} There are a couple of readily available examples of ‘general’ texts that include a discussion of forensic pathology aimed at the legal profession. Dr. Cyril Wecht’s volumes on *Forensic Sciences* is one example; Prahlow, *Forensic Pathology for Police, Death Investigators, Attorneys, and Forensic Scientists* (2010) is another. It might be noted that many of the textbook-length treatments mentioned here are written in a generally clear and accessible way, such that the lawyer reviewing what appears to be a ‘medical’ text will likely be able to obtain highly useful information.
There are some guidelines (and related publications) for testimony by pathologists - in addition to those professional standards and guidelines published by the American Medical Association and affiliated professional groups addressing testimony by physicians. The College of American Pathologists has published “Expert Witness Guidelines for the Specialty of Pathology”, which are relatively general - but are sufficient to provide lawyers with reference points when a pathologist has, for example, stated an opinion that is ‘without medical foundation’ - or is stating opinions without the review of ‘available and appropriate medical records and contemporaneous literature’.\(^{35}\)

Dr. Eliot Foucar has published a useful piece on the topic at hand entitled *Pathology Expert Witness Testimony and Pathology Practice: A Tale of Two Standards*.\(^{36}\)

In providing his views, Dr. Foucar notes:

> In fact, because medical experts provide scientific opinions in a setting where oversight, incentives, and objections differ from those encountered in clinical practice, it is not surprising that courtroom testimony might sometimes differ from opinions offered in a clinical setting.\(^{37}\)

Part of the proposal discussed in Dr. Foucar’s article (which appears elsewhere in medical literature) concerns the need for peer reviewing testimony (and the utility of a peer review process).


\(^{36}\) 129 Arc Pathol Lab Med 1268 (2005).

\(^{37}\) *Id.* at 1272.
The American Academy of Forensic Sciences also discusses the place occupied by testimony in the function of a forensic scientist. The Academy recognizes pathology as a forensic science.

There are a number of other sources that focus on the pathologist as an expert witness, and the well-known textbooks on pathology cover, to varying degrees, the subject matter of the expert’s role; and the combination of common sense and standard/guideline-related limitations on the expression of testimony.

Counsel preparing the testimony of a pathologist are well served by remembering that, as in other areas of the forensic sciences, there have been unethical (and untrue) investigation of death reports issued by some pathologists. As one article in the ABA Journal notes in describing a particularly disastrous situation: “If the prosecution theory was that death was caused by a Martian death-ray, then that was what he reported.”

Counsel preparing to examine pathologists appearing as witnesses should remind themselves that when a physician/pathologist testifies, there are the specific standards/guidelines related to testimony from a pathologist that are at issue, and (as noted above) the more general standards and guidelines that apply to medical testimony generally. In this connection, it is useful to review pronouncements and standards of

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38 Fricker, “Pathologist’s Plea Adds to Turmoil: Discovery of Possibly Hundreds of Faked Autopsies Helps Defense Challenges”, 79 ABA Journal 24 (March, 1993) - the quotation was attributed to one of the investigators focusing on the behavior of Texas pathologist Dr. Ralph Erdmann.
practice/practice guidelines memoranda and circulars that have been issued by professional organizations of physicians, including the American Medical Association.

A basic first question list

Like a number of writings of this kind, part of the objective here is to describe what lawyers should read, collect, and prepare under optimal conditions. Often, those in institutional defender offices have neither the time nor the budget to collect a wide swath of literature, and to obtain consultations of various kinds from experts in pertinent fields. That said, the lawyer who takes the position that no study, reflection, or consultation is necessary on cause and manner of death issues in a homicide case is not complying with basic standards of practice, including those as general as the ABA Standards: The Defense Function.

A lawyer who has begun to collect information to help her/him analyze a homicide case, focusing on the pathology-related issues should consider certain basic questions, framed by the easily accessible literature on forensic pathology and the investigation of death.

1. Is the office that conducted the investigation of death certified (if so, by whom, and when)?

2. Is the pathologist who conducted the autopsy board-certified in forensic pathology (or a sub-specialty including neuropathology)?

3. Did the pathologist go to the crime scene, and if not, who related to the
investigation of death did?

4. How were the remains (and accompanying clothing/artifacts) cared for and preserved between the initiation of the investigation and the autopsy?

5. What records concerning the deceased were obtained, including medical records?

6. What photographic/video record was kept of the investigation of death, including all aspects of the autopsy process (from the acquisition of the deceased through the unpacking; unclothing; cleaning, etc.)?

7. What are the protocols, if any, in use at the office that conducted the post-mortem examination?

8. Specifically, what are the protocols for documentation and preservation of evidence, including harvesting tissues; photography; use of specific autopsy forms; requests for special studies; histopathology; acquisition of swabs, fluid samples, hair samples, nail samples, etc.

9. Given the type of case (gunshot wound; blunt trauma; head injury; suspected sex crime, etc.), what was the process of examination used, and how did that process or method line up with the recommendations/practice guidelines of the literature beginning with the basic published practice guides of NAME; the College of American Pathologists; the predominant literature in the area?

10. How adequate and complete was the pre-autopsy study?
11. How adequate and complete was the gross autopsy-related examination?

12. How adequate and complete was the internal examination, including, given the issues in the case, the specific procedures used (where there was a neck injury, how was the neck dissected, spinal column removed, etc.)?

13. What is the documentation and description of the microscopic examination?

14. What is the documentation and description of the laboratory examinations?

15. What consultations occurred during the post-mortem examination process (including the autopsy) given the issues presented, including, where necessary (or recommended) the involvement of: a neuropathologist; a radiologist; a pediatric pathologist; a cardiac pathologist; a pediatric radiologist. Where certain injuries, or artifacts, appear, was there consultation and examination by: an odontologist; an anthropologist; an entomologist?

16. Is there documentation of the autopsy readily available in the form of diagrams, notes, and photographs that are retained by the pathologist in question for later preparation?

**CONCLUSION**

There is a great deal that lawyers can do to prepare for the examination of a pathologist. As noted here, the preparation should include the gathering of useful and informative material, and consulting with experts and professional colleagues.