

## **COMMITTEE REPORT TO THE ATTORNEY GENERAL: SHAKEN BABY DEATH REVIEW**

### **OVERVIEW:**

*“The tragedy of a child who dies unexpectedly in suspicious circumstances has many victims.”<sup>1</sup>*

On December 2<sup>nd</sup>, 2008, following the release of Mr. Justice Stephen T. Goudge’s *Inquiry into Pediatric Forensic Pathology Report* (hereafter the “*Goudge Report*”), the Attorney General of Ontario announced a review of pediatric head injury cases that resulted in criminal convictions based on evidence of abusive head trauma, specifically “shaken baby syndrome” and “shortfall” cases. The overarching principle of this review is to ensure and enhance public confidence in pediatric forensic pathology and its future use in the criminal justice system; the objective is to advise the Attorney General of concerns relating to the soundness of criminal convictions involving this specialized scientific knowledge, in light of today’s understanding of the evolving science.

The Attorney General assembled a Committee of medical and legal experts to conduct the review, led by the Honourable Justice Donald A. Ebbs, of the Ontario Court of Justice. The other members of the Committee are:

- Dr. Michael Pollanen, Chief Forensic Pathologist of Ontario
- Dr. Dirk Huyer, Regional Supervising Coroner, Office of the Chief Coroner of Ontario
- Marie Henein, Senior Defence Counsel
- Mary Nethery, Senior Crown Attorney and Director – Justice Excellence.

The genesis of this review was the recognition of an evolution in pediatric forensic pathology in relation to pediatric head injuries. In the past, a specific pattern of neurological observations alone was considered to be diagnostic of inflicted or abusive head injury, a diagnosis that played an important role in criminal trials. Medicine, however, is not static or frozen in time, as medical science continues to evolve following new discoveries, technological advances and scientific research. This evolution, particularly in this area, has led to increased knowledge and to recognition that previous medical views or diagnoses may need to be reviewed.

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<sup>1</sup> The Honourable Stephen T. Goudge, *Report on The Inquiry Into Pediatric Forensic Pathology in Ontario*, Volume 1, page 4.

Given the task at hand, this review rested on both current medical and legal knowledge. The composition of the Committee, with its members drawn from both disciplines, represented an example of a criminal justice system willing to examine itself in order to take action against potential wrongful convictions. The review was designed to identify cases where the pathology evidence relied on at trial would be considered questionable in light of current scientific knowledge. The Committee's function involved the analysis of whether this evidence, would now be viewed as questionable, was sufficiently important to the case to raise a significant concern that the conviction may be unreasonable.

The Committee commenced its review with 129 cases. Initial triaging by the Committee resulted in the exclusion of 81 cases on the basis of duplications or cases that did not result in criminal convictions, or otherwise did not fit within the mandate of this review.

The resulting 48 cases were examined by the Committee. In many of these cases, the medical evidence relating to head trauma was fundamental to the conviction. The Committee reviewed the medical and non-medical evidence in each case in order to properly assess whether the evolution in medical science could have an effect on the ultimate outcome of the case.

The Committee will provide legal advice to the Minister on each of these 48 cases. Many of the cases did not raise concerns about the soundness of the conviction because the change in the science of shaken baby syndrome or shortfall cases would have had no impact on the conviction. Examples include: fractures to the skull and/or other parts of the body, multiple contemporaneous injuries revealing a clear pattern of abuse, death occurred during the course of sexual abuse, and eye witness testimony of abuse.

The Committee concluded that 13 of the 48 cases required further medical evaluation. Nine of the 13 convicted persons consented to a further medical review of their case. The Committee was unable to locate one person. Out of an abundance of caution, this matter was also referred for medical review. These ten cases were referred to a group of internationally renowned medical experts (*referred to in the body of this document as the International Medical Panel or "IMP"*). These experts attended in Toronto, Ontario, in March 2010, spending two weeks together examining each of the ten cases. Their task was to determine whether or not there were concerns with respect to the medical evidence relied on at the time of trial. The results of their collective expertise are recorded in case-specific medical reports. The Minister will receive these reports, as will each of the ten convicted persons with respect to their individual cases.

The Committee reviewed the ten medical reports prepared by the IMP together with the medical evidence relied on at the time of trial, in the context of the facts and circumstances in each case. Based on the Committee's review and analysis, it has advised the Minister of concerns in four of the ten cases.

The Committee has not made any final determination in relation to the safety of the convictions in the cases it has examined. It will be up to the Attorney General to determine what, if any, further action should be taken in light of these findings. As well, each convicted defendant must decide for him or herself whether or not to take the matter further.

This Report, prepared by the Committee at the request of the Attorney General for Ontario, discusses the process adopted by the Committee from inception to conclusion, and summarizes the results of the review. The Committee hopes that this review will assist in restoring public faith in the use of medical science in the criminal justice system.

## **The Role of this Committee**

The Committee was comprised of Mr. Justice Donald Ebbs, Formerly Associate Chief Justice of the Ontario Court of Justice; Dr. Michael Pollanen, Chief Forensic Pathologist for the Province of Ontario; Dr. Dirk Huyer, Regional Supervising Coroner for the Regions of Peel, Halton and Counties of Simcoe and Wellington; Marie Henein, Senior Criminal Defence Counsel and President of the Advocates' Society; and Mary Nethery, Director of Justice Excellence and Senior Crown Attorney. All of these individuals are senior, respected members of their disciplines.

**Mr. Justice Donald Ebbs** is a Per Diem Judge of the Ontario Court of Justice. Justice Ebbs is the former Associate Chief Justice of the Ontario Court of Justice. Justice Ebbs was also Regional Senior Justice of the West Region. He has presided over numerous criminal cases since 1983. He brought sound judgement and the skills of an arbiter to the Committee.

**Dr. Michael Pollanen** completed postgraduate training in anatomical and forensic pathology and became a Fellow of the Royal College of Physicians and Surgeons of Canada in 2003 by examination in Anatomical Pathology (FRCPC). He was appointed as member (MRCPath, 2001) and later fellow (FRCPath, 2009) of the Royal College of Pathologists of the United Kingdom by published works and gained specialty qualification in forensic pathology, the Diploma in Medical Jurisprudence (Pathology) in 2002 [DMJ(Path)]. In 2006, he was appointed the Chief Forensic Pathologist in Ontario. Dr. Pollanen is an associate professor at the University of Toronto. He is the Founding Program Director of both the Forensic Pathology Residency, and the Centre of Forensic Science and Medicine, at the University of Toronto. Dr. Pollanen is a member of the Royal College of Physicians and Surgeons specialty committee on forensic pathology. He has acted as a consultant in forensic pathology to national and international organizations including the United Nations, Canadian International Development Agency, the International Criminal Court, and non-governmental human rights organizations.

**Dr. Dirk Huyer** is a medical doctor with expertise in child maltreatment. Dr. Huyer has been a coroner for the province of Ontario since 1992. He has been involved in over 5000 coroner's investigations including many deaths in children. He is the Regional Supervising Coroner responsible for deaths that are investigated in the Regions of Peel, Halton and the Counties of Simcoe and Wellington. He has additional specific expertise in the medical evaluation of child maltreatment, with a previous appointment on the Suspected Child Abuse and Neglect (SCAN) Program at the Hospital for Sick Children. He is the current Chair of the Office of the Chief Coroner Deaths Under Five Committee. Dr. Huyer holds an academic appointment as an Assistant Professor with the Department of Paediatrics at the University of Toronto. Dr. Huyer's ability to interpret clinical files and his comprehensive knowledge of medical practices in Ontario provided important context to the review.

**Marie Henein**, of Henein & Associates, is a senior defence counsel and practices criminal law and regulatory law at all levels of court including the Supreme Court of Canada. Since 1992, Ms. Henein has been an adjunct professor at Osgoode Hall Law School in Evidence and Advanced Evidence and has lectured at numerous professional conferences. She is currently the co-director of the Osgoode Hall Law School Part-time LL.M. Program in Criminal Law. Ms. Henein is the Associate Editor of the Canadian Criminal Cases and co-editor of Martin's Criminal Code, Martin's Annual Criminal Practice and Martin's Related Criminal Statutes. Ms. Henein is the President of the Advocates' Society. She is a member of the Regional Committee for Ontario of the Supreme Court Advocacy Institute and a Fellow of the American College of Trial Lawyers. Ms. Henein, well known for her effective advocacy skills and exceptional ability to analyze legal issues, provided an essential component to the Committee.

**Mary Nethery** is Director of Justice Excellence and a senior Crown Attorney with the Ministry of the Attorney General. Ms. Nethery has extensive experience in the Crown system as her practice has included significant trial and appellate work. More recently, she was appointed the Director of the Criminal Law Policy Branch and was responsible for providing policy advice to approximately 900 Crowns. As Director of Justice Excellence, Ms. Nethery has been responsible for the administration of a number of projects within the Ministry to identify and prevent wrongful convictions. Before joining the Crown Attorney System, Ms. Nethery was the partner in a law firm that was a general law practice. Ms. Nethery, known for her strong legal ethics and fair prosecution style, ensured that all evidence, scientific and non-scientific, was pressed to its legitimate strength.

Together, Ms. Nethery and Ms. Henein provided criminal law expertise from both a prosecution and defence perspective.

***Acknowledgements:***

The Committee would like to thank the following people for their assistance on this project:

Alex Smith, Mary Ellen Cullen, Paul Amenta, Celia Lindo-Butler, Lisa Joyal, Karen Shea, Marcie Henschel, a group of experienced and motivated counsel who formed part of the work team that reviewed each of the cases involved in this review.

Detective Sergeant Mark Gauthier of the Ontario Provincial Police, whose experience and investigative skills greatly assisted the Committee.

Ms. Earlene Marry, whose significant administrative skills and support throughout each stage of this review was essential to the process.

Ms. Mary Ellen Hurman and Ms. Ava Arbutck, whose contribution and dedication to this project were invaluable.

## **INTRODUCTION:**

“Shaken Baby Syndrome” (SBS) describes a head injury in an infant or young child believed to be caused by shaking. For decades, a diagnosis of SBS was the only evidence required to demonstrate the cause of death, the mechanism of death (shaking), and the perpetrator (the last person with the infant). In recent years, the premise underlying the diagnosis of SBS has come under scrutiny as the medical community has begun to question the validity of the diagnosis itself and has looked to other causes of the triad of findings. In response to the emerging medical controversies, scientific articles, reviews and the popular media have highlighted concerns about criminal prosecutions based on a diagnosis of SBS.

In Ontario, the *Goudge Report* recommended a review of SBS cases because of the evolution in science and the controversies in this area. The recommendation was based on advice from a number of experts who testified at the *Goudge Inquiry*. In the United Kingdom, a review of SBS cases has already occurred, and a body of case law has developed. Both the U.K. experience and the *Goudge Inquiry* recommendations have informed this review of Ontario cases.

Recent research and clinical studies in the medical community as to how to interpret the “triad” of findings have led to a change in science in relation to pediatric head injury cases. The issues have not yet been resolved, and will continue to evolve as scientific knowledge progresses. Therefore, it seems reasonable that in a case involving a diagnosis of SBS today, other medical and non-medical evidence must be examined in order to determine the medical cause of death and, ultimately, to determine whether it is possible to discern how the injuries occurred.

## **MEDICAL – GENERAL:**

*“Justice is served when we are open to considering well-grounded research, even when it challenges long-established theories.”<sup>2</sup>*

Child abuse by a parent or caregiver is an unfortunate component of our society. Physical abuse, a leading cause of serious head injury in infants, can lead to death. In most fatal cases, head injury is recognized by the presence of subdural and retinal hemorrhages. Often there are associated injuries including bruising to the head and/or body, and/or rib or limb fractures that reveal clear and usually contemporaneous signs of abuse.

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<sup>2</sup> Kelly R. and Bravos Z. A Critical Look at the Shaken Baby Syndrome. *Illinois Bar Journal*. Vol 97 #4 (April 2009).

However, in some pediatric deaths resulting from a head injury, there are no other injuries or external signs of abuse on the body. In these cases, the medical evidence usually consists of three findings:

- (i) subdural hemorrhages (typically, a thin layer-of blood over the surface of the brain in the space between the brain and skull);
- (ii) retinal hemorrhages (bleeding within the back part of the eye), and
- (iii) hypoxic-ischemic encephalopathy (HIE) (low oxygen injury to the brain that causes swelling).

SBS has been defined by the presence of the constellation of these three medical findings (characterized in the United Kingdom as the “triad”) that indicate head injury in a child caused by violent shaking. Medical studies have consistently corroborated the view that shaking and/or head impacts can cause these findings. With head impact, there may be different medical findings. For example, the subdural hematoma may appear as a large collection of blood rather than the thin layer described above.

At the same time, some experts have questioned the scientific basis for SBS, opining that limitations of previous medical studies raise concern about its validity. Findings in some studies have disputed the presumption that the triad represents conclusive proof of inflicted injury by manual shaking. The diagnosis of SBS has become the focus of significant controversy and debate.

### **SHAKEN BABY SYNDROME:**

Shaken baby syndrome (SBS) provides a possible medical diagnosis and an explanation for the constellation of the three findings described above. For decades, it has been understood as a severe form of head injury caused by shaking an infant or child with sufficient force to cause the child’s brain to forcibly move back and forth, striking the inside of the skull. The forces generated cause damage to the brain and to the blood vessels around the brain. Veins that extend from the brain to vein channels associated with supporting structures and the skull (bridging veins) are torn, causing bleeding on the surface of the brain (subdural hemorrhage). While the exact mechanism that causes retinal hemorrhages has not been determined, experts have theorized that these hemorrhages arise directly from the forces generated. The third component, which is low oxygen injury to the brain (HIE), is discussed in the section entitled, “Mechanism of Injury”, infra.

These cases are often difficult to assess, treat, and diagnose, given the lack of any visible finding of injury on the external aspect of the body, including the head. Head injuries may be overlooked, especially given that many of the symptoms

associated with SBS are similar to those that occur with other illness such as viral illness. Children with head injuries may demonstrate a range of symptoms including mild irritability and fussiness, poor feeding, vomiting, lethargy, seizures, breathing difficulties, respiratory distress, coma and, in some cases, death. Clinical studies have demonstrated that vigorous shaking can cause permanent disability including blindness, paralysis, mental disorders, seizure disorders, growth and development problems.

### **HISTORY OF THE DIAGNOSIS “SHAKEN BABY SYNDROME”:**

In the 1970s, the theory of “shaking” was advanced to explain the triad of findings when found in infants and children with no apparent outward signs of abuse. British neurosurgeon Dr. A. N. Guthkelch hypothesized that the repeated manual shaking of an infant, without any impact to the infant’s head, could result in subdural hematomas.<sup>3</sup> American pediatric radiologist Dr. J. Caffey suggested that the associated findings of subdural hematoma and retinal hemorrhages could provide sufficient diagnostic criteria to conclude abuse.<sup>4</sup> By 1974, Dr. Caffey had coined the phrase “whiplash shaken infant syndrome”, and the clinical diagnosis was born.

Since that time, SBS has been widely accepted as a clinical diagnosis for inflicted head injury in infants. It is considered specific to young children, given their unique anatomic features. As a result, the majority of children diagnosed as suffering from SBS are less than one year of age.

### **LEGAL CONSEQUENCES:**

The clinical diagnosis of SBS has resulted in far-reaching legal implications across North America and the United Kingdom as well as other jurisdictions. In the absence of witnessed abuse or external injuries suggestive of abuse, if the constellation of findings felt to be specific for SBS is present and the caregiver cannot provide an acceptable explanation for the child’s condition, the caregiver often was charged with and convicted of shaking the infant.

Medical experts have testified that the force necessary to cause head injury by shaking was extremely violent and abusive, such that the perpetrator would be

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<sup>3</sup> Guthkelch AN. Infantile Subdural Haematoma and its Relationship to Whiplash Injuries. *British Medical Journal* 2, 430-431 (1971). He proposed that whiplash injury caused subdural hemorrhages in infants by tearing the veins in the subdural space.

<sup>4</sup> Dr. Caffey J published three papers: The Parent-Infant Traumatic Stress Syndrome. *Am J Roentgen* 1972;114:217-228; On the Theory and Practice of Shaking Infants. *Am J Dis Child* 1972; 24:161-169; and, The Whiplash Shaken Infant Syndrome: Manual Shaking By the Extremities With Whiplash-Induced Intracranial and Intraocular Pleadings, Link with Residual Permanent Brain Damage and Mental Retardation. *Pediatrics* 1974;54:396-403. Dr. Caffey’s work described the radiologic and clinical features attributed to shaking injuries.

aware it was injurious. In addition, it was believed that there would be immediate and obvious signs of deterioration in the infant. This conclusion led both the medical and legal community to presume that the last person with the child when the deterioration occurred was the person who caused the injury. The presence of the triad, therefore, has been understood to establish beyond a reasonable doubt that the last person with the baby before deterioration occurred must have shaken the baby forcefully, causing fatal injury to the baby's brain. For years, the medical consensus on this issue was overwhelming.

### **PROGRESSION OF MEDICAL SCIENCE:**

Medicine is not a static field. Medical science continues to evolve following new discoveries, technological advances and scientific research. This leads to increased knowledge and may lead to recognition that previous medical views or diagnoses should be questioned or revised. Both pediatrics and forensic pathology are medical subspecialties and therefore have, and will, continue to evolve.

In recent years, the traditional experience-based approach to medical science has shifted towards "evidence-based medicine" standards that require medical professionals to derive their research from methods that are scientific and statistically rigorous. This approach enhances the strength of the scientific findings.

Knowledge about pediatric head injuries has grown over time leading to evolution in the evaluation approach when these findings are present. With enhanced knowledge resulting from research and medical literature, science progresses. This progression may lead to controversies as doubt may arise about previously held opinions. Individual levels of confidence about the significance of certain findings may also be modified.

### ***AREAS OF CONTROVERSY***

#### **MECHANISM OF INJURY:**

Clinicopathologic studies have consistently corroborated the view that shaking and/or head impacts cause subdural and retinal hemorrhages with hypoxic encephalopathy. With additional study, increased understanding has developed about the range of possible mechanisms of how a head injury can occur. Both the type and amount of force have been scrutinized.

Studies have illustrated that the amount of force generated by direct head impact is greater than that generated by shaking alone. Some biomechanical studies

have questioned whether a person would be able to generate adequate force to cause a fatal head injury from shaking alone.

Historically, experts believed that forceful shaking of a child caused diffuse traumatic brain injury. This opinion arose from observations of CAT scan abnormalities and pathologic findings.

Publications of neuropathologic reviews of brain tissue from SBS deaths that utilized specialized microscopic evaluation techniques demonstrated that in a number of the cases the brain injury was representative of low oxygen injury (hypoxic ischemic encephalopathy), in contrast to traumatic (from force application) axonal injury.<sup>5</sup> This finding raised questions about the amount of force required to cause SBS. Diffuse traumatic axonal injury is representative of significant force application, so the absence of this finding suggested the force involved may be less than previously believed. As low oxygen axonal injury was found more often than traumatic axonal injury, another potential mechanism with less significant force was proposed. This mechanism involves injury to the upper spinal cord in the area of the brain that controls breathing. Such injury could cause interruption of breathing and the resultant low oxygen brain injury.

A number of studies involving cases defined as SBS have found, upon review of the medical evidence (e.g. autopsy reports, slides etc), evidence of blunt impact injury to the head. Blunt impact occurs when the body is struck by a blunt (not sharp) object, or the object strikes a blunt surface or object (e.g. descent such as a fall).

Evidence of a blunt impact injury to the head may have been missed, overlooked, or previously considered unimportant. Currently, when evidence of blunt impact injury to the head is found, it often provides clear evidence of traumatic force application.

Controversy around the mechanism of injury in abusive head trauma remains. A number of publications of biomechanical data do not clearly support shaking as a mechanism of injury, but the confessional data does. There are different interpretations of this apparent contradiction. It may be that the experimental models used in the biomedical studies underestimate the magnitude or injurious nature of shaking forces, or, shaking is less important than impact. At the same time, the reliability of perpetrator confessions has been questioned.

Advances in the understanding of the mechanisms of injury has prompted a change in terminology by the American Academy of Pediatrics, with shaken baby syndrome superseded by the term "abusive head trauma" ("AHT").

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<sup>5</sup> Geddes JF, Whitwell HL, et al. Neuropathology of inflicted head injury in children, I. Patterns of brain damage. *Brain* 2001;124:1290-1298. Geddes JF, Whitwell HL, et al. Neuropathology of inflicted head injury in children, II. Microscopic brain injury in infants. *Brain* 2001;124:1299-1306.

This terminology is controversial. SBS or abusive head trauma may be interpreted to imply a legal conclusion about how the injury or death occurred. The cause of death statement in cases of “abusive head trauma” is often communicated by the forensic pathology field as: “head injury”. Many forensic pathologists believe that this statement allows the trier of fact to make an independent judgement about the circumstances surrounding the death and the medical evidence.

For obvious ethical reasons, there have been no laboratory experiments to evaluate whether manual shaking could be capable of producing brain injury in living infants.

Given the scientific controversies surrounding a diagnosis of SBS, judicial opinions and a recent statement by the Royal College of Pathologists (U.K.) have concluded that the constellation of the three findings (triad) is a strong pointer to mechanical trauma, potentially including vigorous shaking, but should not be regarded as absolute proof of traumatic head injury in the absence of any other corroborative evidence.<sup>6</sup> This position reflects the current state of medical knowledge.

### **TIMING OF THE INJURY:**

Experience and study have enhanced knowledge about the clinical presentation of a child following a traumatic head injury. At times in the past, the sudden collapse or death of a child has been interpreted as the time of injury.

If present, diffuse traumatic axonal (brain) injury would be expected to result in immediate or rapid unconsciousness. In some cases of SBS, traumatic axonal injury representative of direct force application is present. It is more likely, however, that brain damage in SBS results from low oxygen (hypoxic ischemic encephalopathy) secondary to traumatic force application. Hypoxic ischemic encephalopathy will be accompanied by varying clinical presentations, i.e. the child may not develop immediate unconsciousness.

While the child will not be completely normal following traumatic head injury, there may be a variety of symptoms, a number of which may be vague and non-specific, limiting the ability to recognize the presence of a traumatic head injury. Studies have demonstrated that the diagnosis of traumatic head injuries in children, particularly in young infants when presenting with vague symptoms, has been missed as the symptoms were attributed to a variety of other causes.

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6. *R. v. Harris et al* [2005] EWCA Crim 1981 at para. 70; The Royal College of Pathologists. Report of a Meeting on the Pathology of Traumatic Head Injury in Children. December 10, 2009, at page 11.

The potential exists, therefore, for hours or potentially days to pass between the injury event and loss of consciousness/ collapse. This interval, during which the baby appears “lucid” (appears to be functioning on some level), reduces the ability to pinpoint the timing of the injury and contradicts the belief that a baby will become unconscious immediately after having been shaken vigorously, a belief relied on previously to identify the perpetrator as the person with the baby at the time of collapse.

### **MIMICS:**

Over time there has been increased recognition that other disease processes may mimic the findings described in cases thought to be traumatic head injuries.

It is well documented that inherited and acquired bleeding disorders can result in subdural and retinal hemorrhage that mimic abusive head injury. In addition, a wide range of disorders or conditions can result in neuropathologic features that are similar to abusive head injury; for example, subdural hemorrhage has been identified through medical publication.

The following non-exhaustive list includes potential alternative causes for findings previously attributed to shaking:

- accidental trauma;
- abnormalities of blood vessels;
- medical or surgical interventions;
- prenatal, perinatal, and pregnancy-related conditions;
- birth trauma;
- metabolic, genetic, oncologic, or infectious diseases;
- congenital malformations;
- autoimmune disorders;
- clotting disorders
  - easy bleeding (hemophilia, clotting factor deficiency)
  - thrombi (clots) in the vein channels surrounding the brain (venous thrombosis);
- effects of drugs, poisons, or toxins;
- other, not-yet discovered, natural causes.

Currently, the diagnostic approach utilized when children present with the constellation of findings includes careful clinical and pathologic evaluation with consideration of, and testing for, potential mimics.

**REBLEEDING:**

Certain conditions may make children vulnerable to injury. One example is the potential of repeat episodes of bleeding into areas of previous bleeding; including birth related bleeding, in the space around the brain. Some have proposed that a child may have suffered bleeding from a medical cause or traumatic injury and that this episode could predispose the child to additional bleeding at a later time, potentially leading to death.

**SHORT FALLS:**

For many years, medical experts believed and provided testimony that it would take a fall from a multi-story building to generate sufficient force to cause the constellation of findings and death as seen in SBS cases.

Therefore, when a short fall was provided as the explanation for the constellation of findings the medical community rejected it as untenable, supporting the belief that the injuries resulted from abusive shaking. Published literature demonstrated that children rarely died from falls, even those of significant height.

Currently, it is recognized that accidental falls with the head striking the ground or floor can result in a fatal head injury in infants and children. This is a rare occurrence but includes some short distance falls and falls that occur on stairs. Fatal head injuries can also occur with television -- or other heavy objects -- tipping accidents. In these cases, there is generally a history of an accidental event.

Typically, in accidental head injuries there is evidence of head impact (e.g., scalp bruising with or without skull fractures). In addition, there is often a unilateral space-occupying collection of blood that is located in the subdural space or the epidural space (bleeding in the space between the outer supporting membrane and the skull). Another type of accidental head injury is a crushing head injury.

A short fall explanation must be evaluated in light of current medical understanding.

**RETINAL HEMORRHAGES:**

Retinal hemorrhages have been identified in many different clinical presentations, both with natural illness and traumatic injury events. It has been recognized that characterization of the retinal hemorrhages is important when considering their significance. For example, a small number of hemorrhages may be present in a variety of medical and accidental injury presentations.

Current medical literature supports the proposition that certain patterns of retinal hemorrhages (large number, located in multiple layers of the retinal tissue and extending to the outer edges of the retina) correlate to abusive head trauma.

This finding is significant for many because they believe there is no other known cause for this presentation of retinal haemorrhages. Others, however, caution against this conclusion because the exact mechanism of retinal haemorrhages is, as yet, unknown. While several theories have been suggested, none have been proven.

The uncertainty surrounding the mechanism leads some experts to believe that retinal hemorrhages are not necessarily diagnostic of abuse.

### **CONCLUSION:**

There are a number of areas of controversy surrounding the interpretation of the constellation of findings (triad) associated with SBS. Additional study and research have raised questions about the original theories. Many professionals do not accept the triad as a definitive diagnosis of abuse. However, these experts believe the triad remains a “strong pointer” to abuse. Others believe that the constellation of findings is representative of abusive head trauma.

Each case must be assessed thoroughly, individually and on its own merits. Other possible explanations for the injuries must be considered, including opinions from experts in areas such as neuropathology, child abuse pediatrics, neuroradiology, ophthalmology and biomechanics, before making a final diagnosis.

Science will continue to evolve and, given the enormity of the resulting legal ramifications, the criminal justice system must strive to keep up with developments in scientific knowledge.

### **NOTE ON TERMINOLOGY:**

Taking into account the advances in understanding the mechanisms associated with abusive head injuries, medical professionals in the United Kingdom and the United States have moved away from the mechanistic term “shaken baby syndrome” and have adopted terminology intended to be inclusive of all mechanisms of injury. In the United Kingdom, criminal justice system participants prefer the descriptor “NAHI” – Non-Accidental Head Injury<sup>7</sup> – a term that does

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<sup>7</sup> The term “NAHI” was adopted by the English Court of Appeal in its judgment in *R. v. Harris et al* [2005] EWCA Crim 1981. In its examination of the accepted hypothesis concerning SBS, the Court of Appeal pointed out that SBS was properly called NAHI (see *Harris*, supra, at para. 56). The recently published

not specify shaking but includes it as well as impact and other non-accidental types of inflicted head injury. The American Academy of Pediatrics (AAP) has adopted the descriptor “AHT” – Abusive Head Trauma – to broaden the terminology to account for the primary and secondary injuries that result from AHT.<sup>8</sup> Specifically, the AAP has recommended the adoption of the term “abusive head trauma” as the diagnosis used to describe the constellation of cerebral, spinal, and cranial injuries that result from inflicted head injury to infants and young children.<sup>9</sup>

Terminology in this report includes references to the “triad”, to “shaken baby syndrome”, to short household falls and to blunt impact trauma, descriptors taken from the case materials examined by the Committee. To the extent possible, the Committee has used the broader term “abusive head trauma” (AHT).

## **THE EXPERIENCE IN THE UNITED KINGDOM:**

On January 19, 2004, Lord Goldsmith Q.C., Attorney General of the United Kingdom, announced his intention to review past cases of infant homicide for potentially unsafe convictions. This review was initiated as a response to issues highlighted by English Court of Appeal in two separate cases involving sudden infant death syndrome (“SIDS”) or cot deaths, *Clark* and *Cannings*.<sup>10</sup> Included in the Goldsmith Review were a number of cases involving convictions related to SBS.

By this time, controversies relating to SBS had surfaced. Three SBS cases identified by Lord Goldsmith were scheduled to be heard by the English Court of Appeal. Therefore, Lord Goldsmith set aside the remaining SBS cases in his review to await the Court’s decision for guidance. In the summer of 2005, after hearing the opinions of 25 medical experts relating to the cause of the injuries found in SBS cases, the Court of Appeal concluded that the “triad” remains a “strong pointer” to, but is not diagnostic of, SBS, and that all of the circumstances including the clinical picture must be taken into account. The Court stressed that each case must be examined based on its own unique facts and circumstances.

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Legal Guidance on NAHI by the Crown Prosecution Service directs its prosecutors to avoid the term “shaken baby syndrome” because of its emotive connotations and the fact that it does not describe adequately the range of causes of head injuries. See Legal Guidance, “Non Accidental Head Injury Cases (NAHI, formerly referred to as Shaken Baby Syndrome [SBS]) – Prosecution Approach”, January 6, 2011, at page 3.

<sup>8</sup> American Academy of Pediatrics, Pediatrics, Vol. 123, No. 5, May 2009, pp. 1409-1411, *Policy Statement* “Abusive Head Trauma in Infants and Children”.

<sup>9</sup> AAP, *Policy Statement*, supra.

<sup>10</sup> *R. v. Clarke* [2003] EWCA Crim 1020; *R. v. Cannings* [2004] EWCA Crim 1. The English Court of Appeal overturned the convictions in both cases.

In addition, the Court also acknowledged that in rare circumstances, a short fall could cause serious injury and death (*Harris et al*)<sup>11</sup>.

Following examination of the 89 SBS/AHT cases in light of *Harris*, Lord Goldsmith found 3 cases that could raise concerns as to the safety of the convictions. The majority of the cases examined included additional evidence to support the convictions such as:

- baby was struck against the wall
- admissions to shaking and punching the baby
- earlier fractures
- head injuries on 2 separate occasions
- fractures indicating the baby was squeezed violently

In the three concerning SBS cases, letters were sent to the convicted individual advising that it may be appropriate for the English Court of Appeal and/or the Criminal Cases Review Commission, to consider the case, should any of these individuals wish to take the matter further. The letters stressed that no determination had been made relating to the safety of the conviction, and the Prosecution Service would decide independently whether to contest any appeals.

A number of English Court of Appeal cases have followed the *Harris* ruling, looking to the triad as a strong pointer to non-accidental head injury (NAHI), but not as diagnostic of it without further supporting evidence. Other institutional groups in the U.K. have addressed issues relating to abusive head trauma in an effort to provide medical and legal guidance in this evolving area. In broad brushstrokes, these groups appear to endorse the position approved in *Harris et al*.

(please see Appendix B, “The Experience in the United Kingdom and the United States”, for details.)

## **THE ADVICE OF THE GOUDGE REPORT:**

The *Goudge Report* was delivered on October 1, 2008. In his *Report*, Justice Goudge called for a review of SBS cases in Ontario based on his conclusion that, in light of the evolving science of the cause and mechanism of head injuries, pediatric death cases considered to be the result of SBS or AHT invite scrutiny to ensure that the convictions are sustainable.

Three areas in relation to pediatric head injuries were identified where traditional expert opinion has shifted over the years:

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<sup>11</sup> *Harris et al* [2005] EWCA Crim 1981.

- i) the predominant view that the triad on its own is diagnostic of SBS no longer holds;
- ii) the predominant view that short falls can never cause fatal injury no longer holds; and
- iii) most pathologists agree that this area of their specialty has become much more controversial than it was in the early or mid-1990s.<sup>12</sup>

The evidence at the *Goudge Inquiry* demonstrated how this area of pathology has evolved over time such that many forensic pathologists now question whether shaking can be diagnosed based on the triad of injuries, while others continue to hold the opposite view, although perhaps less commonly than before. In Justice Goudge's words, forensic pathologists today find themselves "at different places along a spectrum of views about what can and cannot be said about these issues".

Support for this proposition can be found in the decision of *Harris* where the Court characterized the triad of injuries as a "strong pointer" to non-accidental head injury (NAHI), but cautioned against its use as "automatically and necessarily leading to a diagnosis of NAHI".<sup>13</sup> In Justice Goudge's opinion, this conclusion raises questions about whether or when the triad alone can provide the foundation of proof beyond a reasonable doubt.<sup>14</sup> This premise also formed part of the backdrop of the Goldsmith Review.<sup>15</sup>

Justice Goudge also accepted the acknowledgement among medical professionals today that the traditional opinion regarding short household falls – that they could not cause serious injury or death – has moved along the spectrum. The contrary view, which was traditionally rejected outright or considered a fringe opinion, is now acknowledged as a possibility that should be examined in appropriate cases.

With this in mind, Justice Goudge developed Recommendation 143 (see *Appendix "A"*) which provided a helpful roadmap for our review.<sup>16</sup>

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<sup>12</sup> *Goudge Report*, Vol. 3, page 528.

<sup>13</sup> *Harris et al* [2005] WECA Crim 1981, at para. 70.

<sup>14</sup> *Goudge Report*, Vol. 3, page 527.

<sup>15</sup> *The Review of Infant Death Cases, Addendum to Report, Shaken Baby Syndrome* (February 14, 2006).

<sup>16</sup> *Goudge Report*, Vol. 3, page 533-535.

## **PROCESS FOLLOWED IN THE REVIEW:**

This section of the Report outlines the step-by-step process followed by the Committee from inception to completion of the review. Justice Goudge's Recommendation #143, which the Committee followed as closely as possible, provided the framework for the review. Essentially, the review was completed in five phases: (1) development of process and criteria for the review; (2) initial triaging; (3) detailed case analysis; (4) IMP Review; (5) the Committee's final conclusions. Each case was approached individually. Given the uniqueness of each case examined, the Committee adopted a consensus-based approach to accommodate issues as they arose on a case-by-case basis.

The Committee's first task was to establish the terms of reference for the review. To assist, the Committee met with Justice Goudge soon after its formation to hear his ideas and advice about the process he envisioned for a comprehensive and efficient review.

The Committee also met with The Honourable Justice Osborne and members of the Compensation Committee established by the Attorney General, as well as members of Association in Defence of the Wrongfully Convicted (AIDWYC), the Criminal Lawyers Association (CLA), and Crown Law Office--Criminal (CLO-C). The Committee received input from these representative groups at the forefront of the review process. When developing the process for the review, the advice from these individuals and groups was invaluable.

The Committee's mandate was to provide legal advice to the Minister regarding medical issues in relation to abusive head trauma in 129 cases. The Committee did not see its function as similar to that of a court of law. Trial and/or appellate counsel were contacted in some, but not all, cases on the basis of specific questions or issues that arose. The review involved a consideration of available medical and legal material, together with the views of the International Medical Panel.

The Committee developed the Terms of Reference outlined below based on a careful study of the principles in the *Goudge Report*.

## **TERMS OF REFERENCE:**

1. The 142 cases<sup>17</sup> referred to at the *Goudge Inquiry* will be reviewed to determine which resulted in convictions or findings of NCR (not criminally responsible).

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<sup>17</sup> The number "142" comes directly from the *Goudge Report, Recommendation #143 (g)(i)*. (See *Inquiry Into Pediatric Forensic Pathology*, Vol. 3, pages 532, 534).

2. Of these conviction/ NCR cases, a number will have either pathology or non-pathology evidence showing clear findings of abuse, to put the ultimate outcome beyond any reasonable controversy. In order to facilitate the decisions in individual cases, the Committee has developed a set of criteria to categorize cases into groups. This will assist in determining whether there is a significant concern that the conviction was wrongful such that the matter will be referred for external review.
3. The review will include convictions resulting from guilty pleas and trials.
4. The review will not be limited to those cases where the convicted person is still in custody, however, the in-custody cases will be the first priority of the review.
5. The initial review will include materials from Crown Attorneys' offices, the Office of the Chief Coroner, and police files.
6. Cases will only be referred for external review where the convicted person consents.
7. Cases will be referred for external review by forensic pathologists where, in the view of the Committee, pathology evidence was sufficiently important to the outcome of the case that there is a significant concern that the conviction was potentially wrongful. The external reviews should report on the reasonableness of the pathology opinions expressed in these cases in light of current knowledge. It will also be important to review whether or not the court was fairly advised of the extent of the controversy relating to Shaken Baby Syndrome/ Abusive Head Trauma, as it is now understood.
8. The convicted persons should be advised of the results of the external review so that they can determine whether to utilize existing processes available to address individual cases of potential wrongful convictions.
9. The Attorney will be advised of the results of the review.

#### **IDENTIFICATION OF CASES FOR REVIEW:**

Cases resulting in criminal convictions or findings of NCR (Not Criminally Responsible) relating to pediatric head injuries over a 20-year period were reviewed. Specifically, the reviewed cases included:

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- cases in which there was a diagnosis of SBS or AHT
- AHT cases involving infants characterized as “short fall” cases.

Excluded from review were cases before the courts at the trial or appellate level, or cases in which an application pursuant to Section 696.1 of the *Criminal Code of Canada* had been initiated prior to the commencement of this process, where SBS was a live issue.

The ages of the infants in the cases reviewed ranged from 4 weeks to 4 years old. The time frame for the review encompassed twenty years, from 1986–2006.

The *Goudge Report* recommended that this review commence with 142 cases of infant head injury that had been captured in the database of Office of the Chief Coroner (“OCCO”).<sup>18</sup>

The list provided by OCCO to the Committee contained the names of deceased infants only, with few other identifiers or information about whether the matter resulted in criminal prosecution and conviction. On closer examination, it became apparent that the cases on the list had been identified using over-inclusive terms to avoid missing potential head injury cases. Therefore, it was necessary to initiate an investigation into the background of each case in order to identify which cases appeared to fit within the parameters of this review. Excellent cooperation was offered by the Ontario Provincial Police (OPP), who assigned a senior officer to assist the Committee. His first task was to track the cases on the list provided by OCCO, which resulted in a list identifying 129 confirmed cases of infant death involving head injury.

This list of 129 cases was compiled from a number of databases and included one case referred to us by a Crown Attorney. A small number of cases had been referred to the Committee by members of the defence bar, however, all of these matters were still before the courts and therefore outside our mandate.

This list also included 16 infant head injury cases in which Dr. Charles Smith had been involved, either as the pathologist who conducted the autopsy or as a consultant on the case. Of the 16 cases, ten of them resulted in criminal convictions. These 10 cases were included in this review because they fell directly within our mandate, as the cause of death related to a diagnosis of SBS. At the time these cases were prosecuted, both the medical profession and the legal community relied on the triad of findings as diagnostic of a shaking injury. In other words, SBS was considered to be a reasonable diagnosis based on then-current medical science. The Committee is well aware of the issues relating to Dr. Smith’s work and, as a result, carefully scrutinized the cases in which he was

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<sup>18</sup> *Goudge Report*, Vol. 3, page 532.

involved. Of the ten “Dr. Smith” cases that resulted in convictions, two raise concerns and are noted in the conclusion of this Report.

Once the list of cases for initial review was verified at 129 cases, the work of the Committee could begin.

### **INCLUSION OF CASES WHICH RESULTED IN GUILTY PLEAS**

The cases reviewed included convictions resulting from guilty pleas. The reason for this inclusion was the possibility that some guilty pleas may have been entered based on the perceived strength of the medical evidence at the time, and the medical evidence upon which the conviction rests may be in question today. Accordingly, a guilt plea was not a bar to review.

The Committee was not in a position to surmise why an individual accused pleaded guilty. The Committee reviewed these cases to determine whether the original medical evidence and/or testimony, where relied on to secure a conviction, may bring the conviction into question. The reason behind the plea and whether it can be overturned is a matter to be decided in each individual case, based on applicable facts and the law, in another forum.

### **PRIORITY REVIEW OF CASES WHERE THE CONVICTED PERSON IS IN CUSTODY SERVING A SENTENCE:**

Once the list of 129 cases was confirmed, the Committee immediately identified the cases in which a convicted person was still in custody. The Committee felt that these cases, where an individual’s liberty was affected, should be reviewed on a priority basis. Of the 129 cases, 8 matters were identified in which the convicted person remained incarcerated, and their cases were prioritized by the Committee.

In each of the 8 cases, there was ample evidence of multiple injuries to support the conviction, in addition to the evidence relating to head injury. Examples of the injuries in these cases included evidence of sexual abuse, skull and limb fractures, cigarette and other burn marks, evidence of repeated physical assaults, and the witnessed physical abuse of the infant. None of these cases raised concerns about the safety of the conviction as a result of a medical diagnosis or a change in science.

### **INITIAL TRIAGE OF CASES – DEVELOPMENT OF BROAD CATEGORIES:**

The Committee triaged the 129 cases into two broad categories based on the nature of the case, the autopsy results and other medical findings, and the

ultimate disposition of the case. The first category was comprised of the cases that were excluded from further review; the second category was comprised of the cases which required further review.

The Committee excluded 81 cases from further review based on one or more of the following: the fatal head injury resulted from motor vehicle collision or a murder/ suicide; the convicted person was deceased; there was no conviction; the head injury was not the cause of death.

48 cases in the second category included the following types of cases that resulted in convictions: (i) those that involved the triad of findings only, (ii) cases that appeared to include evidence of blunt impact injury to the head; and (iii) cases that appeared to include multiple injuries together with a head injury. The number of cases in the second category totalled 48.

### **DETAILED CASE ANALYSIS (IN-DEPTH TRIAGE PROCESS):**

With 81 cases excluded from further review, the Committee focused on the 48 cases that had resulted in a conviction in relation to a fatal pediatric head injury. In order to further analyze these cases, the following matters needed to be addressed:

1. Collect materials including additional medical records, police files, crown files, and court transcripts;
2. Assemble a work team of Crown counsel, defence counsel, and a case management coordinator to assist the Committee;
3. Develop a process to request the consent of convicted persons to refer their matters for further medical review by the IMP;
4. Notify the non-offending parents that the cases had been referred to the IMP for further medical review;
5. Develop criteria for referral to the IMP to guide our discussions;
6. Develop a process for International Medical Panel Review.

## **MATERIALS GATHERED FOR REVIEW:**

Every effort was made to have a complete picture of each file available, both for the Committee and for the IMP if the case was referred for review.

File and source materials were gathered from a variety of sources. Contact was made with trial and appellate crowns, and Regional Directors of Crown Operations. Individual police services across Ontario and Manitoba were contacted to obtain additional files and materials, as were court offices across the province to obtain additional materials where required. All materials were copied and scanned. This was a daunting task, given the number and nature of the cases, some of which were over 20 years old.

Once a case was earmarked for IMP review, further medical materials were gathered including photographs, forensic exhibits and slides. Hospitals, doctors and clinics provided materials to the Committee. In all cases referred to the IMP, search warrants and/or production orders were executed to obtain all hospital records including birth records, as well as diagnostic imaging records.<sup>19</sup> Efforts were made to ensure that a full clinical picture of the deceased infant's life was provided to the IMP. In all, fifty-two (52) warrants and production orders were executed by the Ontario Provincial Police and the Winnipeg Police Service at a number of hospitals and medical offices throughout Ontario and Winnipeg.

## **THE WORK TEAM:**

In order to facilitate the review process, a team of seven senior experienced crown counsel and one defence counsel was assembled to complete in-depth reviews of each of the 48 cases. Orientation sessions were conducted to ensure the members of the work team were educated about the medical and legal issues involved, and in order to promote consistency of approach to their review of the case materials. The cases were divided among the work team members, with priority given to the eight (8) cases where the convicted person remained in-custody. As previously indicated, by this time the Committee had completed an initial review of all 48 cases and found that each of the eight (8) in-custody cases included very serious injuries in addition to a head injury. These initial observations were confirmed in the work team review.

The work team completed an objective paper review of the entire file in each case, with an emphasis on the medical reports and expert testimony. The team met regularly, often with the lawyers and doctors from the Committee, to discuss and identify the complex medical and legal issues in the cases. This process enabled the work team to follow up on any outstanding issues or requests for additional materials before the case was presented to the full Committee. For

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<sup>19</sup> A limited number of records were not available as they had been purged by records management because of the passage of significant time.

example, in some cases a Committee member requested further information such as additional medical records, photographs, or transcripts.<sup>20</sup>

In some cases, based on a review of the available materials, it was not clear whether the parties were aware of the scientific controversies and/or had an opportunity to explore them at the time of trial. For example, there were cases involving guilty plea arrangements at a time when the scientific controversies were emerging, and it was not possible to identify from the materials whether counsel were aware of, and had an opportunity to explore, those controversies. The decision was made to have one of the Committee members contact the prosecutor and/or defence counsel in the particular case in which this issue arose. In the majority of cases reviewed, this step was not necessary as the information was apparent from the existing materials.

This stage of the review, both challenging and time consuming, took approximately four months to complete.

### **WHAT CRITERIA DID THE COMMITTEE APPLY IN DECIDING WHICH CASES TO REFER TO THE INTERNATIONAL MEDICAL PANEL?**

The following three principles guided the development of the criteria for referral to the IMP:

- The fact that the science in the area of pediatric head injury is changing. The objective of the review was to obtain medical opinions in cases raising concerns about the original medical evidence in light of today's understanding of the science in this area.
- Some cases might reveal a wide array of serious injuries, rendering any medical controversy irrelevant having regard to the live issues at trial.
- There might be cases where the medical evidence was incorrect, however, the non-medical evidence put the verdict beyond question.

The Committee agreed upon and applied the following criteria to each of the 48 cases:

1. Were there any identified inaccuracies in the medical evidence, expert testimony or reports in the case? For example, were there possible

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<sup>20</sup> Justice Goudge's recommendation was to order the relevant court transcripts after the convicted person had consented to a further medical review. However, the Committee found that the relevant court transcripts greatly assisted the decision-making process and, therefore, ordered transcripts where necessary prior to making their determination of whether or not to refer the case to the IMP.

misdiagnoses of the triad and /or other medical issues that warranted further investigation?

2. Was the triad present with little, if any, other evidence to support a diagnosis of “shaken baby syndrome”?
3. Were there injuries concurrent with the triad? Evidence of physical maltreatment such as broken bones and bruises occurring at, or around the time of, the head injury factored into the analysis to determine whether this evidence put the conviction beyond question. The Committee also noted that in some cases there was evidence of prior maltreatment, but perhaps not by the accused; this prior abuse was considered, but not given the weight of other evidence.
4. Was there evidence of exclusive opportunity? Some of the change in science relates to timing of a traumatic event, which could mean someone other than the convicted person had the opportunity to commit the offence.
5. Was there a history of an accidental fall which could provide an explanation for the baby’s death? The traditional view was that a “short fall” could not kill a baby. The current literature suggests that, although rare and unusual, death can result from a short fall.
6. Were the controversies related to SBS and the triad known to defence counsel prior to a guilty plea? In the event of a trial, did defence counsel have access to information relating to the controversies? Was a defence expert retained?
7. Was there non-medical evidence to support the conviction, such as eye witnesses or solid confession? There is a caveat to this criterion as, upon review, some confessions raised concerns about the potential of coercion and aggressive questioning.
8. Is a medical review necessary as a matter of confidence in the administration of justice? For example, is there a real potential for a Section 696.1 application? Was this a Dr. Smith case?
9. Did adequate medical materials exist and were they available for a medical review (such as slides, medical reports)?

### **FULL COMMITTEE REVIEW:**

The above criteria were factored into the analysis of each case. In this way, the Committee was able to identify the cases that may benefit from the IMP's assessment of the reasonableness of the original pathology opinions in light of current medical knowledge, including whether the court had been advised fairly of the extent of the controversy relating to shaken baby syndrome and pediatric head injury.<sup>21</sup> In some cases, a single criterion supported a referral to the IMP, while in other cases one criterion alone was not viewed as sufficient for referral, given the strength of other aspects of the case.

The Committee's discussion about the issues that arose in these cases ultimately assisted the Committee in triaging them into one of three categories:

- (1) Triad of Injuries;
- (2) Blunt Impact Head Injury; or
- (3) Multiple Injuries including Head Injury.

At the completion of this stage, 13 cases had been identified by the Committee as meriting a further medical review by the international experts. None of the convicted persons in these 13 cases remained in custody in relation to this conviction.

### **CONSENT OF THE CONVICTED PERSON:**

The Committee sought the consent of the thirteen convicted parties as a necessary precondition to referring their cases for an external medical review. Consent was deemed necessary as per Justice Goudge's recommendation that the Committee should proceed further with the remaining cases only after obtaining the convicted person's consent.<sup>22</sup> The Committee understood that some of these individuals may not want to reopen this chapter of their lives and the Committee respected these views.

The decision was made to contact the convicted person's former counsel of record to request that counsel contact the former client to inform them about the purpose of the review and the fact that their case had been recommended for a further medical review. In the cases where counsel of record was not able to speak to the client<sup>23</sup>, the individual was contacted directly by the Committee and informed that the Committee wished to refer their case for a further medical review. The convicted person was encouraged to seek independent legal advice.

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<sup>21</sup> See *Goudge Report*, Recommendation 143(g)(viii), at page 535.

<sup>22</sup> Please see Recommendation #143(g)(v).

<sup>23</sup> Some counsel had been appointed to the bench; others were retired or deceased.

Excellent co-operation was provided by The Criminal Lawyers' Association, who made arrangements to have senior counsel available to provide confidential, free legal advice to any of the 13 convicted persons. The O.P.P assisted the Committee and counsel of record, as necessary, to determine contact information for the convicted person.

In addition, the Committee sent a letter with a consent form to each of the thirteen convicted persons. The letter provided information about the review together with the fact that their case had been identified by the Committee for referral to a group of international medical experts (*please see Appendix "C" for a copy of the letter and consent form*). The letter expressly stated that the medical review was not mandatory and could not proceed without their consent. The recipient was encouraged to contact a lawyer and was provided with the phone number of The Criminal Lawyers' Association, as well as a toll-free number to contact the Office of Justice Excellence – Ministry of the Attorney General, for further information and/or questions. Each convicted person was asked to sign and return the included consent form with his or her decision.

In the majority of cases, the Committee sent the letter and consent form in a sealed envelope to defence counsel with a cover letter explaining its contents and requesting the package be provided to their former client *after* that person had been informed by telephone of the review process. Where this procedure was not possible, the Committee advised the convicted person directly about the letter and consent form, offered the assistance of The Criminal Lawyers' Association to receive legal advice, and requested that they sign and return the consent form with their decision.

Of the thirteen (13) cases, nine individuals provided consent to have their matter reviewed.

Three did not consent, while a fourth individual could not be located in spite of efforts by police, family and community members, and defence counsel. Out of an abundance of caution, this fourth case was referred to the IMP. The results of this case review will be provided to the Attorney General, and will be made available, if requested, to the defendant.

### **CONTACT WITH THE NON-OFFENDING PARENTS:**

There was much discussion about how and when to advise the non-offending parents in the thirteen cases identified for further review. All Committee members were concerned about the non-offending party, as well as other family members, hearing about the review process from another source before it had a chance to communicate accurate information about the purpose and parameters of the review. The decision was made to contact the 13 non-offending parents prior to learning whether the convicted person consented to the external medical review.

The Committee engaged the assistance of the Victim Witness Assistance Program with the Ministry of the Attorney General to contact the non-offending parents in these cases. Information about the scope of the review and the process was provided, and each was invited to contact the Office of Justice Excellence with additional questions or concerns. A toll free number and e-mail address were provided for follow-up.

### **PROCESS FOR INDEPENDENT MEDICAL REVIEW OF CASES:**

The credibility of this medical review is critical to restoring public confidence in pediatric forensic pathology and its use in the criminal justice system. An independent objective medical review of the cases was required. To achieve this goal, the Committee decided to invite an international panel of medical experts<sup>24</sup> to assemble in Toronto to study the materials in the referred cases. In this way, medical practitioners would have an opportunity to discuss each case as a group, following which they would provide a written report in each case documenting their findings. By having the same panel of reviewers study each case, the Committee hoped to obtain a consistency of perspective in the approach to the cases and in the medical reports.

The Committee decided that the composition of the panel should be representative of the typical expert complement generally involved when a child is admitted to hospital and dies from a traumatic head injury. Therefore, it looked for recognized world leaders in forensic pathology, neuropathology and child maltreatment to provide advice in these challenging cases. The Committee strove to assemble a panel whose members possessed the following key qualities:

- respect within the international medical community
- training, experience, and qualification in their area of expertise
- sound research based knowledge
- broad spectrum of experience
- balanced objectivity

A request for expressions of interest was sent to members in the relevant disciplines. Ultimately, the Committee selected the following five world renowned medical experts, each eminently well-qualified to provide advice relating to cases involving pediatric head injury, each well respected by colleagues and noted for fairness and impartiality, to participate in the review process:

- Dr. Stephen Cordner (Australia) - forensic pathologist
- Dr. Kim Collins – (U.S.) - forensic pathologist

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<sup>24</sup> The Committee referred to this panel of experts as the “International Medical Panel” or “IMP”.

- Dr. Helen Whitwell (England) - forensic pathologist; neuropathologist
- Dr. Carole Jenny (U.S.) - child maltreatment expert
- Dr. Kent Hymel (U.S.) - child maltreatment expert

The Committee was aware that other expertise may be required during the review process, depending on the specific features of the case, and advised the international panel that it could consult with experts as required on a case-by-case basis.

### **THE IMP REVIEW:**

The IMP attended in Toronto from March 22 to April 1, 2010, for a total of nine working days to review all ten cases as a group. Prior to their arrival, each IMP member received materials containing a brief history of each of the ten cases, post-mortem examination reports, and additional medical reports. Hard copies of the above, along with the complete case files including all available medical and hospital records, x-rays, transcripts, and existing case notes in relation to these cases, were available for review by the IMP in a secured work-room for the duration of their stay.

### **THE IMP TIMETABLE:**

The international experts began to review the cases on Monday March 22, 2010, and worked diligently for nine days to complete all ten cases. They completed the reviews and signed off on ten reports on March 31<sup>st</sup>, 2010.

The Panel worked in a secured facility. All materials remained in the facility throughout the nine days and were locked up each night.

### **ISSUES TO GUIDE THE IMP DISCUSSIONS:**

The Committee crafted a list of issues to be addressed in each case to facilitate the review process and to provide consistency of approach. The IMP fine-tuned the issues such that the following questions guided their discussions and were addressed in their reports:

1. What is the cause of death?
2. Is there a demonstrable non-traumatic alternative explanation for the cause of death?
3. Could the history reasonably explain the clinicopathologic findings of head injury?

4. (a) In the absence of any history of trauma are the clinicopathologic findings only explained by trauma?  
  
(b) In the absence of any history of trauma can trauma be excluded as a cause for the clinicopathologic findings?
5. Is there any significant new medico-legal issue in this case that has been revealed by this review?
6. Is this review limited or hampered in any significant way?

### **PROCESS FOR DISCUSSION & DECISION MAKING:**

The ten cases were distributed among the experts so that each expert received two cases to thoroughly review, following which they presented the relevant facts to the others. In this way, all five experts were provided with the necessary details of each case to enable discussion about the main issues. The case presentations included the known history of events leading to death, details of any hospitalizations, and all significant medical history and findings. Autopsy photographs were available and relied on when relevant, as were microscopic slides. The questions (see above) guided the panel's discussions of the relevant issues.

Dr. Michael Pollanen and Dr. Dirk Huyer, members of the Committee, moderated the IMP's discussions by ensuring that the relevant questions were discussed and answered. Neither one participated in any case discussions, nor did they provide opinions. They were available to answer questions related to medical procedures in Ontario and to track down additional medical information if necessary.

The neuropathologist and forensic pathologists together attended the Office of the Chief Coroner at the end of the day and over the weekend with Dr. Michael Pollanen to review microscopic slides. The results of the microscopic slide reviews were shared with the other panel members and incorporated into the individual case reports.

### **IMP REPORTS:**

At the end of each case review, a written report was prepared which reflected the issues discussed by the international experts and their conclusions. General consensus was reached in most, but not all, of the cases. This fact is reflected in the individual reports. All five experts signed off on each report once satisfied that it represented the panel's opinions accurately. Each of the ten convicted persons

is entitled to disclosure of the IMP medical report prepared in relation to their individual case.

### **RESULTS OF THE IMP REVIEW:**

The experts looked at all available medical evidence presented at trial and appeal, together with slides, x-rays, MRIs, and CT scans, where available. In addition, hospital records, autopsy reports, autopsy photographs, medical test results, birth records, and case summaries, together with all original file materials, were reviewed. The IMP's reports contain the panel's analyses and conclusions concerning the issues relating to head injury.

Some cases presented as pure "triad" cases. The IMP's approach to these cases was a cautious one. The experts cast a critical eye on each case to determine whether there were other diagnoses to explain the death, including natural causes and disease processes. The experts appeared to view the triad as a strong pointer to, or highly suspicious of, AHT however, they did not make a diagnosis of AHT without additional, solid supporting evidence. The panel also acknowledged that very serious or fatal injuries may be caused by a short fall.

Of the ten (10) cases referred to the IMP, concerns about the medical evidence presented in the original case were not identified in six (6) cases.

In four (4) cases, concerns were identified by the IMP. In two of the four cases, some features of the triad of findings were identified by the experts, however, the IMP concluded that both cases contained atypical features. In these two cases, the experts could not agree among themselves on the cause of death, or that death was the result of head trauma.

In a third case, the panel agreed that the cause of death was head trauma and found evidence compatible with blunt impact injury. However, an explanation of a short fall had been raised, and they were divided in their opinions as to whether the injuries could have been caused by a short fall.

In the fourth case, the panel agreed the evidence supported a diagnosis of head trauma and that there was a substantial body of circumstantial evidence to support their opinion. However, the IMP concluded that the expert evidence at trial, and the medical opinion on which it was based, was incorrect.

Although the Committee hoped for consensus in all ten cases, it is not surprising that the controversy in the medical community has been reflected in some of the IMP's opinions.

The IMP did not consider all medical / legal issues, such as medical neglect, that could arise. The IMP's opinions relate specifically to head trauma in relation to

the cause of death. The IMP conducted their review within the context of a specific time frame (10 days) and with limited access to various materials. No independent testing was done by or for the panel.

The cases were assessed based on current medical knowledge and understanding of pediatric head injury. However, as science continues to evolve, some of the outstanding issues in relation to pediatric head injury may be resolved. If and when that occurs, these cases could be assessed differently in light of new scientific discoveries.

## **CONCLUSIONS OF THE COMMITTEE:**

At the request of the Attorney General and as per Justice Goudge's recommendation, the Committee has completed its review of Ontario convictions involving pediatric death cases categorized as SBS or AHT.

Ontario is very fortunate to have had the benefit of world renowned leaders in forensic pathology, neuropathology, and pediatrics to provide their collective views on pediatric head injuries in the ten cases referred to them by the Committee.

The conclusion of this review reveals that out of 48 criminal convictions relating to AHT in infants and young children, the vast majority – 44 cases – do not cause concern. The Committee has identified the remaining four cases that may give rise to concerns, based on the IMP Reports and the Committee's review of the facts and circumstances in each of these cases. In two (2) of these cases, Dr. Smith testified before the jury. None of these individuals is in custody.

The Committee has not made any final determination in relation to the safety of the convictions in the examined cases. It has advised the Attorney General of the potentially concerning cases it has identified. The Attorney General will decide what, if any, further action should be taken in light of the Committee's findings. Ultimately, each convicted person must decide for him or herself whether or not to proceed with their matter further.

Dated at Toronto, Ontario, Canada, on March 4, 2011.

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Justice D. Ebbs

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Dr. Michael Pollanen

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Dr. Dirk Huyer

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Marie Henein

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Mary Nethery