Office of the Chief Coroner

Province of Ontario

Annual Report
2005 & 2006

Table of Contents

Message from the Chief Coroner

As Chief Coroner for Ontario, it is my privilege and duty to oversee the investigation of certain deaths. It is clear that we must learn from preventable deaths so that we can minimize the chance that a death will recur in similar circumstances. I am pleased to present this report of our activities.

This report encompasses the years 2005 and 2006. In these two years, the Office investigated nearly 40,000 deaths. This represents approximately 25% of all the deaths in Ontario during this period. This proportion is greater than in some other jurisdictions. This is because in Ontario, under our **Coroners Act**, our physician-led system of investigation permits careful review of a broad range of cases.

For example, in Ontario, coroners investigate a significant number of deaths due to natural causes, significantly more than in some other jurisdictions. These investigations provide information, and, hopefully, reassurance to loved ones concerning these deaths. Our system ensures that a physician's knowledge will be brought to bear in the investigation of all deaths.

The homicide rate in Ontario has remained roughly constant over these two years (approximately 200 per year). It should be remembered that the coroner's definition of homicide does not imply blame or culpability. Similarly, the suicide and accident rates of death have remained approximately the same over the period of the report.

In selected cases, the coroner consults a pathologist, to perform an autopsy which assists in determining the cause of death. Over both years, about 37% of coroner's cases required that an autopsy be done. Autopsies are routinely done in all non-natural deaths and in certain natural deaths. Even in this day of advanced diagnostic testing, autopsies remain a key component in our understanding of disease and death.

There are a number of review committees consisting of experts who provide advice to the coroner. The reports of these committees can be found under separate cover but there are summaries in this report. I suggest that the reader review these summaries, and in particular, draw your attention to the recommendations made by these committees concerning preventable deaths. One area that deserves a special emphasis is that of infant deaths associated with unsafe sleeping environments (page 60).

I am proud of the commitment, skill and dedication of the coroners, pathologists and staff of the Office of the Chief Coroner for Ontario. I thank them, and all those from other agencies who support our work. I believe that their efforts contribute greatly to making Ontario safer for all, and to ensuring that the death of no one in our communities is overlooked, concealed or ignored.

Ontario Coroners' System

Ontario's death investigation system has its origins in eleventh century England. When a body was found, a representative of the Crown, formerly known as the "Crowner" was responsible for answering five questions:

- **Who** was the deceased?
- **Where** did he die?
- **When** did he die?
- **How** did he die?
- **Who** was to blame?

Present-day coroners no longer determine legal responsibility. Their investigations include an examination of the manner and circumstances surrounding the death.

To help the "Crowner" make his findings, he summoned all the men from the surrounding villages to give evidence. This evolved into a selected jury to hear the evidence. The "Crowner" (now referred to as a coroner) had other functions such as, the collection of taxes and seizure of certain goods on behalf of the crown. A coroner's appointment in the county was as important as that of the sheriff. The duties and powers of the coroner were modified over the centuries to meet the needs of those parts of the world that inherited the English system of Common Law. The Ontario Coroners' System is based on the English model.

Pursuant to the *Coroners Act*, all coroners in Ontario must be licensed to practice medicine in the province and are appointed by the Lieutenant Governor for an indefinite term. They investigate all unnatural deaths such as those where foul play, suicide, accident, negligence and malpractice are suspected or alleged on a fee-for-service basis. Today, the coroner is required to answer the following questions in the course of their duties:

- The **identity** of the deceased
- **How** the death occurred (i.e. the medical cause of death)
- **When** the death occurred
- **Where** the death occurred and
- **By what means** the death occurred (i.e. natural, suicide, accident, homicide or undetermined)

In 2005 and 2006, there were approximately 325 investigating coroners and 35 coroners specially qualified to conduct inquests.

Mission Statement

The Office of the Chief Coroner for Ontario serves the living through high quality death investigations and inquests to ensure that no death will be overlooked, concealed or ignored. The findings are used to generate recommendations to help improve public safety and prevent future deaths in similar circumstances.

Motto

Ontario coroners have adopted the following phrase coined by MP Thomas D'Arcy McGee (1825-1868), as their motto:

"We speak for the dead to protect the living."

This motto addresses the fundamental mandate of the Ontario Coroners' System: answering questions surrounding deaths requiring investigation under the Coroners Act and utilizing the information gathered to prevent similar deaths and promote public safety.

Organizational Structure

The activities of the Office of the Chief Coroner fall under the jurisdiction of the Ministry of Community Safety and Correctional Services-Community Safety Division. The ministry is committed to ensuring that Ontario's communities are supported and protected by law enforcement and public safety systems that are safe, secure, effective, efficient and accountable. These systems include emergency measures, scientific investigations, coordination of fire safety services and the coroners' system.

The Chief Coroner is responsible for:

- Administering the Coroners Act
- Supervising, directing and controlling all coroners in Ontario
- Conducting programs for the instruction of coroners in their duties
- Bringing the findings and recommendations of coroners' juries to the attention of appropriate persons, agencies and ministries of government
- Preparing, publishing and distributing a code of ethics for the guidance of coroners
- Performing such other duties as are assigned by any other Act or by the regulations of the Lieutenant Governor in Council

The Office of the Chief Coroner is comprised of the following program areas:

- Investigations
- Inquests
- Pathology Services
- Legal Services and
- Program Support

The following figures represent the number of full-time, part-time and seconded positions for the years 2005 and 2006:

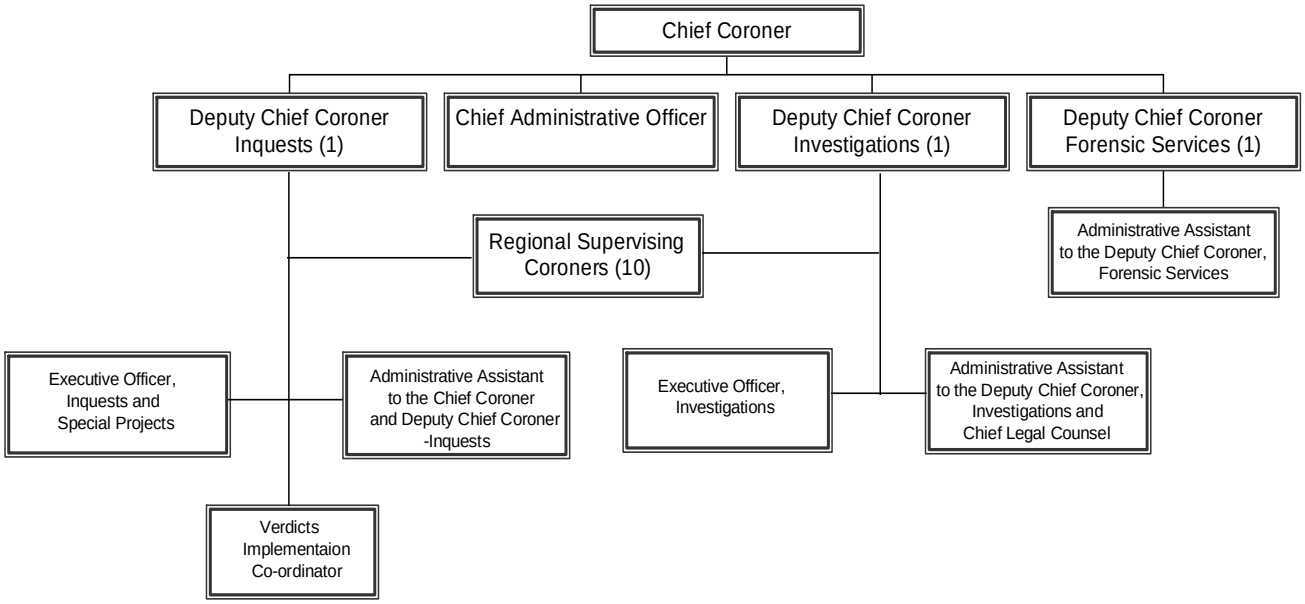
2005	**2006**
79	*83*

Organizational Structure

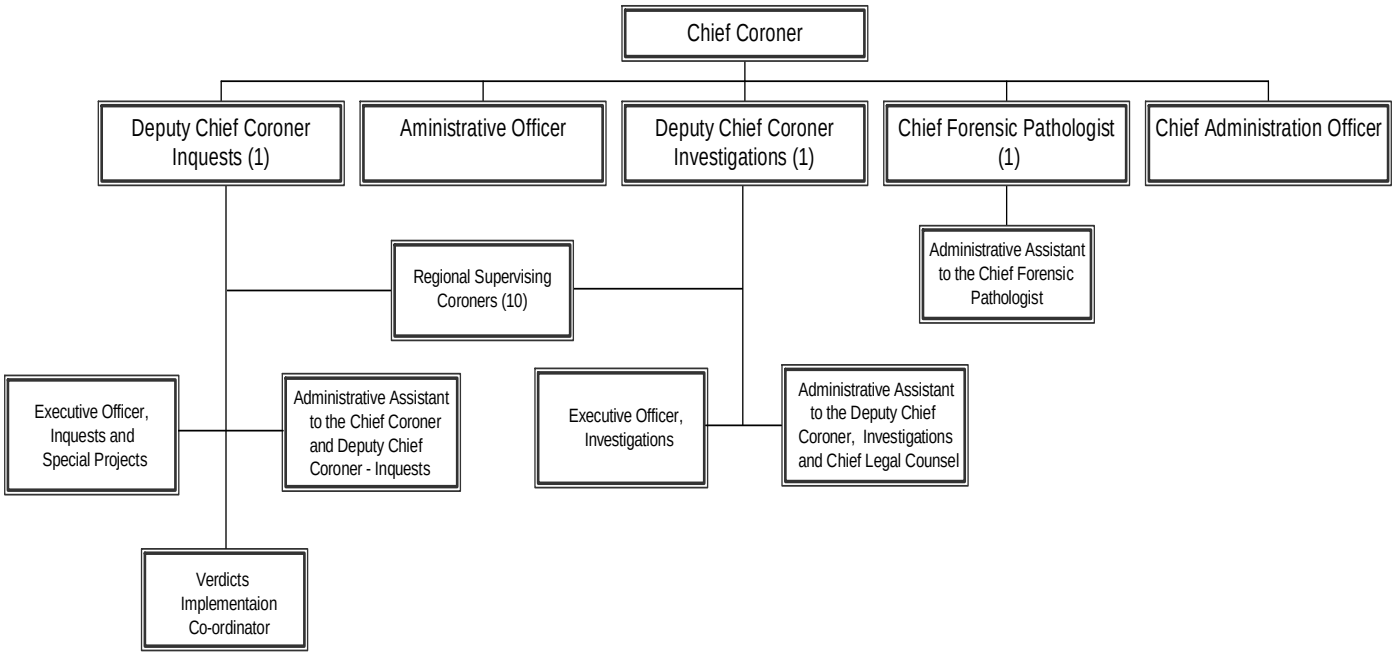
In addition to its head office in Toronto, the Office of the Chief Coroner has a number of regional offices around the province. Each office is managed by a Regional Supervising Coroner with support from administrative staff. The regions and their respective boundaries are outlined below:

Region	Office Location	Boundaries
Central	Brampton	York, Durham, Peel
East	Kingston	Dundas-Glengarry, Frontenac, Lanark, Leeds-Grenville, Lennox-Addington, Ottawa-Carleton, Prescott-Russell, Prince Edward County and Stormont
West	St. Catharines	Brant, Haldimand-Norfolk, Hamilton-Wentworth, Niagara
East	Peterborough	Haliburton, Hastings, Manitoulin, Muskoka, Nipissing, Northumberland, Parry Sound, Peterborough, Renfrew, Sudbury, Victoria
North	Thunder Bay	Algoma, Cochrane, Kenora, Rainy River, Temiskaming, Thunder Bay
Central	Guelph	Dufferin, Halton, Oxford, Simcoe, Waterloo, Wellington
West	London	Bruce, Elgin, Essex, Grey, Huron, Kent, Lambton, Middlesex, Perth
Central	Toronto East	Toronto (east of Yonge Street)
Central	Toronto West	Toronto (west of Yonge Street)

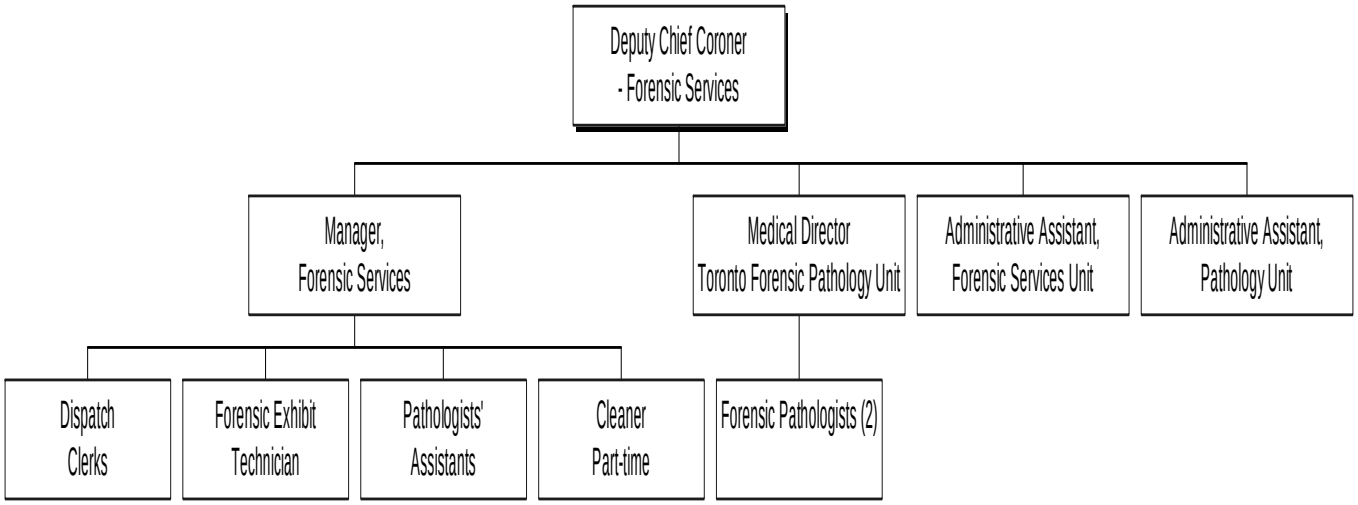
Office of the Chief Coroner – Organizational Structure - 2005



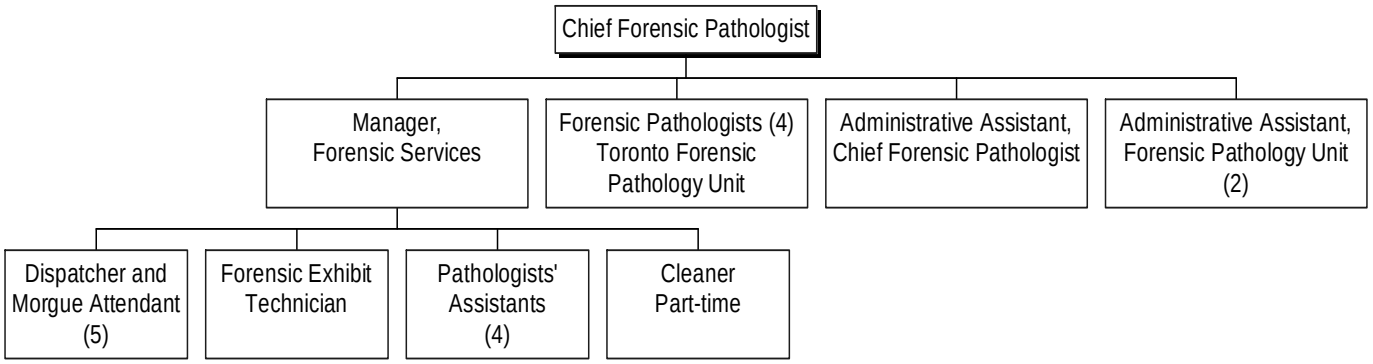
Office of the Chief Coroner – Organizational Structure - 2006



Forensic Pathology Unit – Organizational Structure - 2005



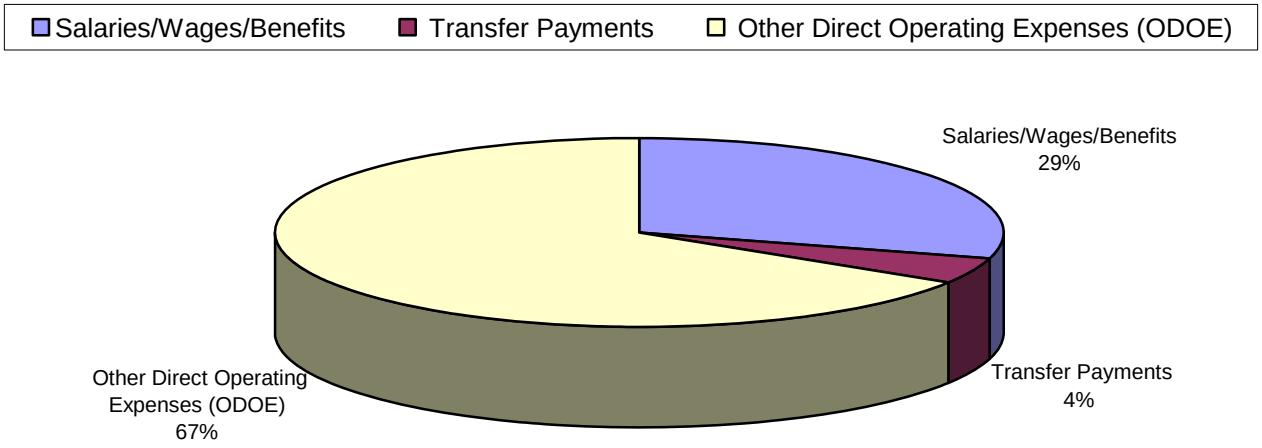
Forensic Pathology Unit – Organizational Structure - 2006



Budgets

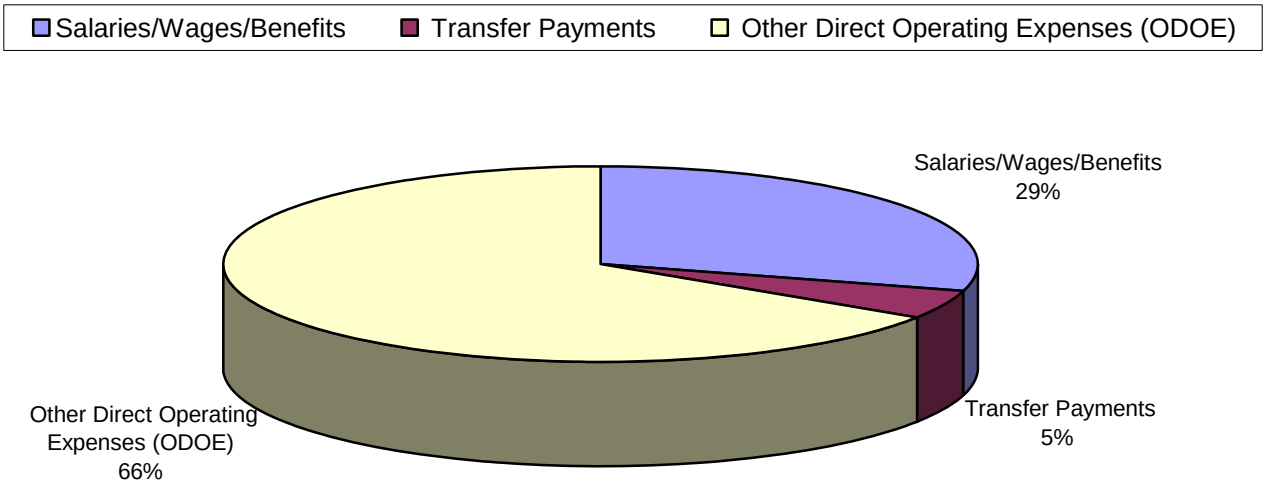
2004 - 2005 Budget ($24.5 Million)

ODOE - Transportation, Administration, Inquests, Pathology/Medical Services, Supplies and Equipment



2005 - 2006 Budget ($23.8 Million)

ODOE - Transportation, Administration, Inquests, Pathology/Medical Services, Supplies and Equipment



Pathology Services

An autopsy is an examination of a body for the purpose of determining cause of death. This procedure is performed under the authority of a coroner's warrant in the course of a coroner's investigation and when the cause of death cannot otherwise be determined. In cases where a coroner can reasonably determine cause of death based on medical history, treatment, circumstances of the death and the condition of the body, an autopsy may not be necessary.

Autopsies can be forensic or non-forensic in nature. Non-forensic autopsies, otherwise known as medico-legal autopsies, are performed in non-criminally suspicious cases. Criminally suspicious or homicide cases require the expertise of Forensic Pathologists; specially trained experts who may be expected to provide testimony in a court of law. A forensic autopsy may be necessary in order to collect evidence of violence and/or trauma to support a criminal investigation, to identify the deceased or to determine cause of death when it cannot otherwise be determined.

The Office of the Chief Coroner is home to the Provincial Forensic Pathology Unit for the Province of Ontario. Located in Toronto and commonly referred to as the Toronto Morgue, this unit offers forensic and non-forensic autopsy services to coroners from across the province. Formerly under the leadership of the Deputy Chief Coroner – Forensic Services (2005) and presently the Chief Forensic Pathologist (2006), this unit has access to a variety of experts whose knowledge and expertise in specific areas can assist in the death investigation process (e.g. forensic anthropologists, dentists, toxicologists). The mandate of the Provincial Forensic Pathology Unit is to ensure that the people of Ontario are provided with forensic pathology services that are of the highest possible quality.

The Office of the Chief Coroner has been providing pathology services to the nation's Armed Forces for a number of years. Military personnel killed in Afghanistan and elsewhere undergo an autopsy at the Provincial Forensic Pathology Unit in order to:

- Aid in identification
- Determine cause of death
- To better understand the patterns of injury in war trauma, which may allow for the design and implementation of improved protective equipment, which may prevent future deaths.

The Office of the Chief Coroner is honoured to provide this service to the Government of Canada.

The Office of the Chief Coroner retains the services of several pathologists around the province on a fee-for-service basis. Where appropriate, autopsies

are performed in hospitals that are as close as possible to the family of the deceased. This ensures more timely service. The Office of the Chief Coroner is pleased to partner with a number of quality pathology units located across Ontario.

The following figures detail the number of autopsies performed under a coroner's warrant:

2005

Number performed at the Provincial Forensic Pathology Unit: 1424

Provincial total: 7375

2006

Number performed at the Provincial Forensic Pathology Unit: 1488

Provincial total: 7264

Death Statistical Data

2005 Manner of Death (by Region)

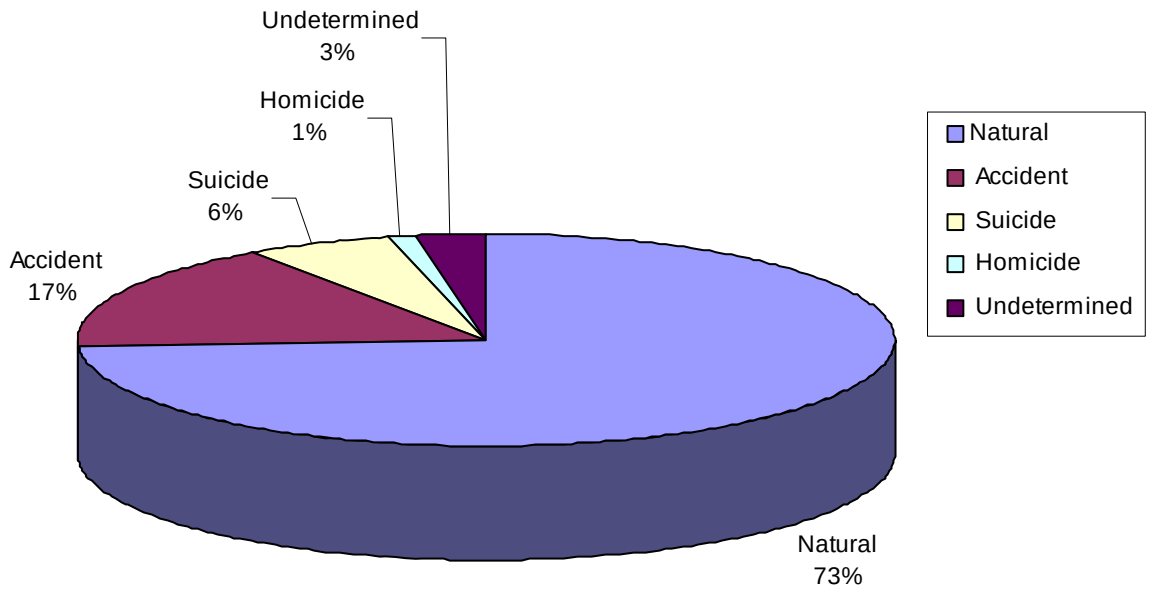
Region	Natural	Accident	Suicide	Homicide	Undetermined	Skeletal	Total
Brampton Office - Central Region	1215	277	88	13	45	8	1646
Guelph Office - Central Region	1611	412	140	16	61	20	2260
Kingston Office - East Region	1775	294	114	21	42	9	2255
London Office - West Region	2187	484	164	27	99	8	2969
Peterborough Office - East Region	984	213	79	7	39	9	1331
St. Catharines Office - West Region	2079	604	204	34	81	35	3037
Thunder Bay Office - North Region	1283	326	125	17	39	8	1798
Toronto East Office - Central Region	1700	348	128	52	48	6	2282
Toronto West Office - Central Region	1785	319	107	36	74	6	2327
Total	**14619**	**3277**	**1149**	**223**	**528**	**109**	**19905**

2006 Manner of Death (by Region)

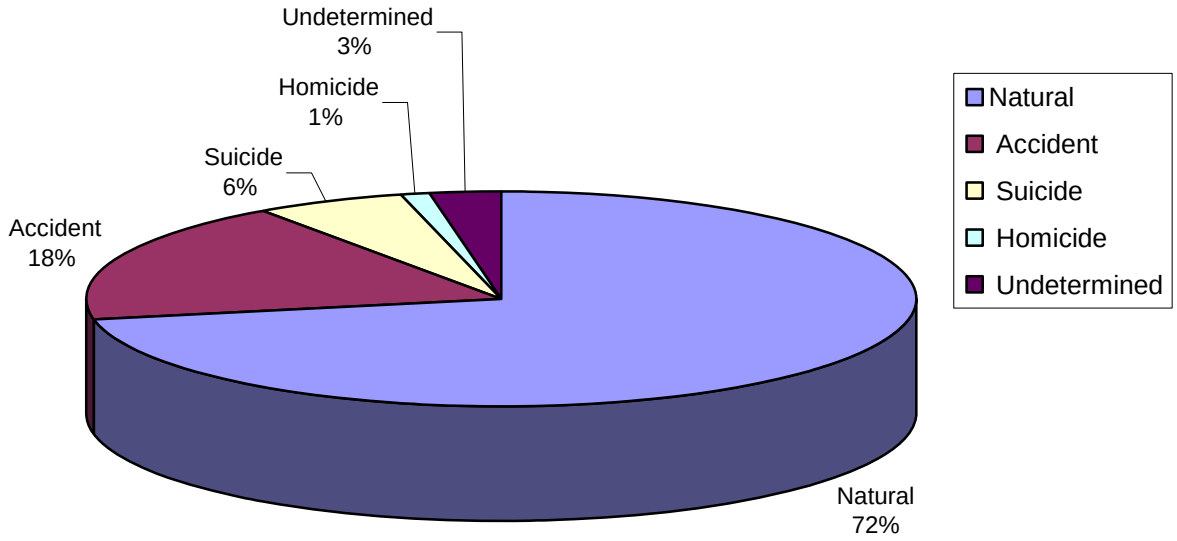
Region	Natural	Accident	Suicide	Homicide	Undetermined	Skeletal	Total
Brampton Office - Central Region	1147	302	94	19	48	11	1621
Guelph Office - Central Region	1503	401	138	20	81	19	2162
Kingston Office - East Region	1715	355	113	19	40	13	2255
London Office - West Region	2020	501	152	28	88	10	2799
Peterborough Office - East Region	956	216	75	2	25	13	1287
St. Catharines Office - West Region	1906	643	163	18	67	48	2845
Thunder Bay Office - North Region	1227	354	130	17	54	11	1793
Toronto East Office - Central Region	1497	350	133	48	66	3	2097
Toronto West Office - Central Region	1455	323	105	30	51	5	1969
Total	**13426**	**3445**	**1103**	**201**	**520**	**133**	**18828**

NOTE: There were approximately 85,000 deaths in Ontario for each of the years 2005 and 2006.

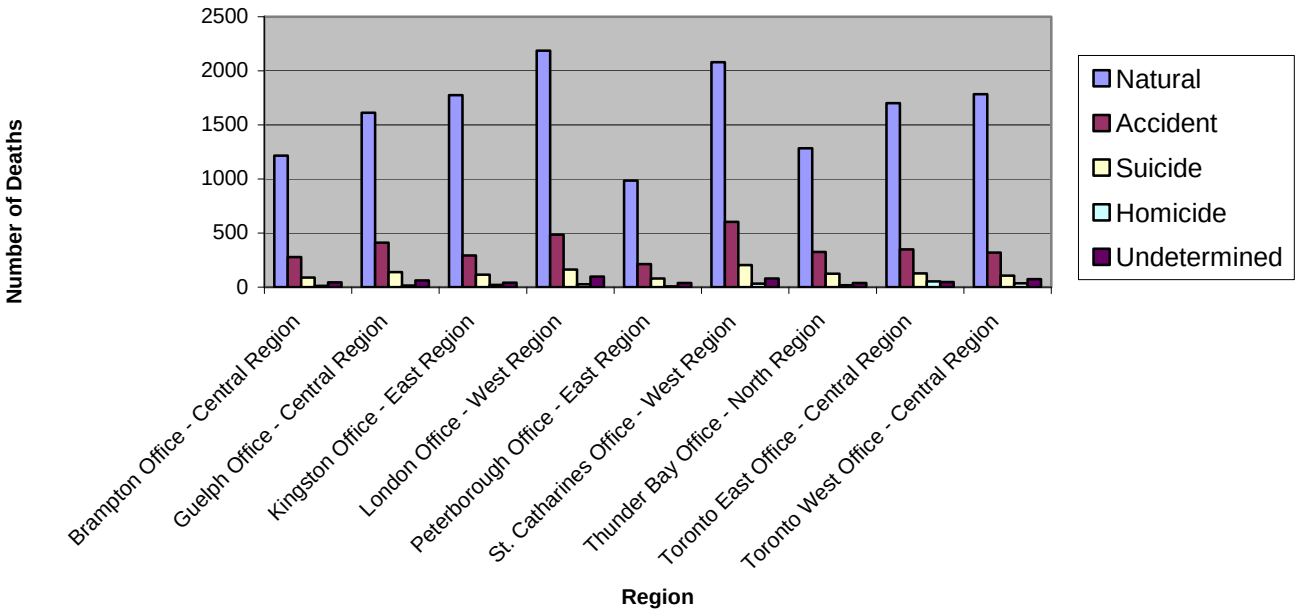
Total Number of Deaths by Manner (2005)



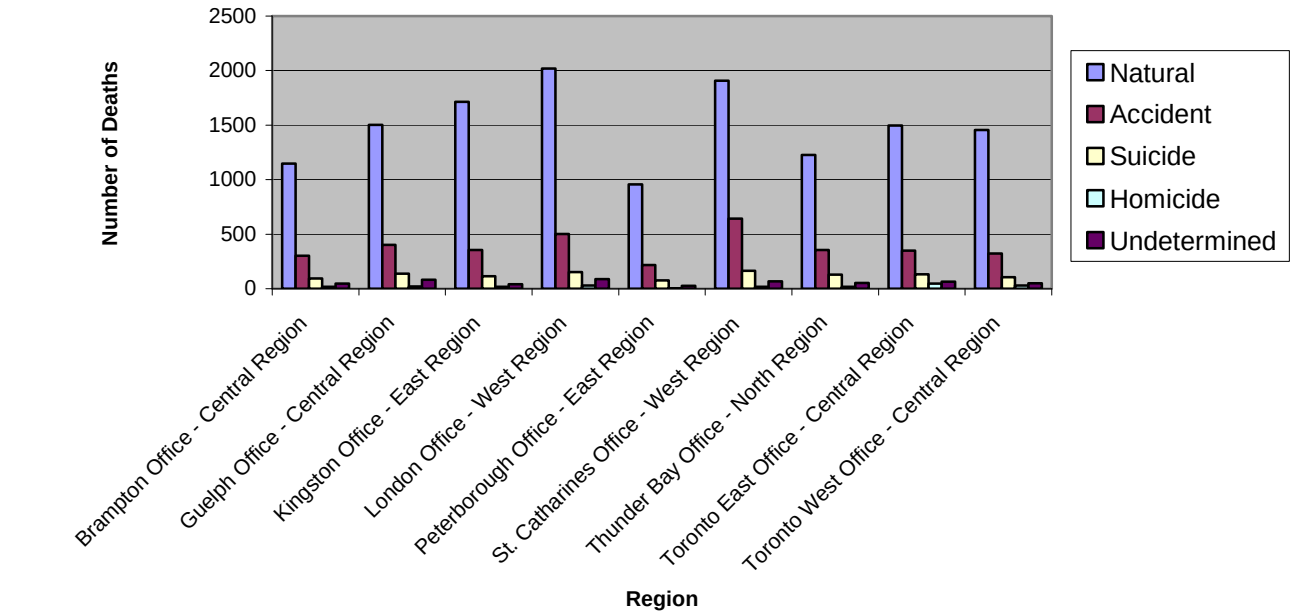
Total Number of Deaths by Manner (2006)



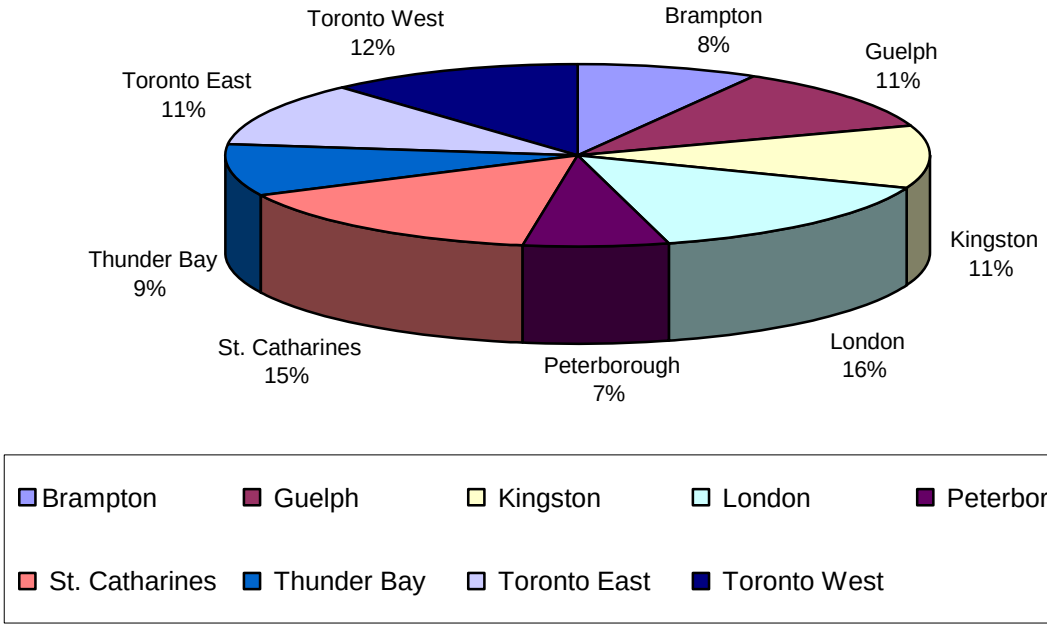
Summary of Manner of Death by Region (2005)



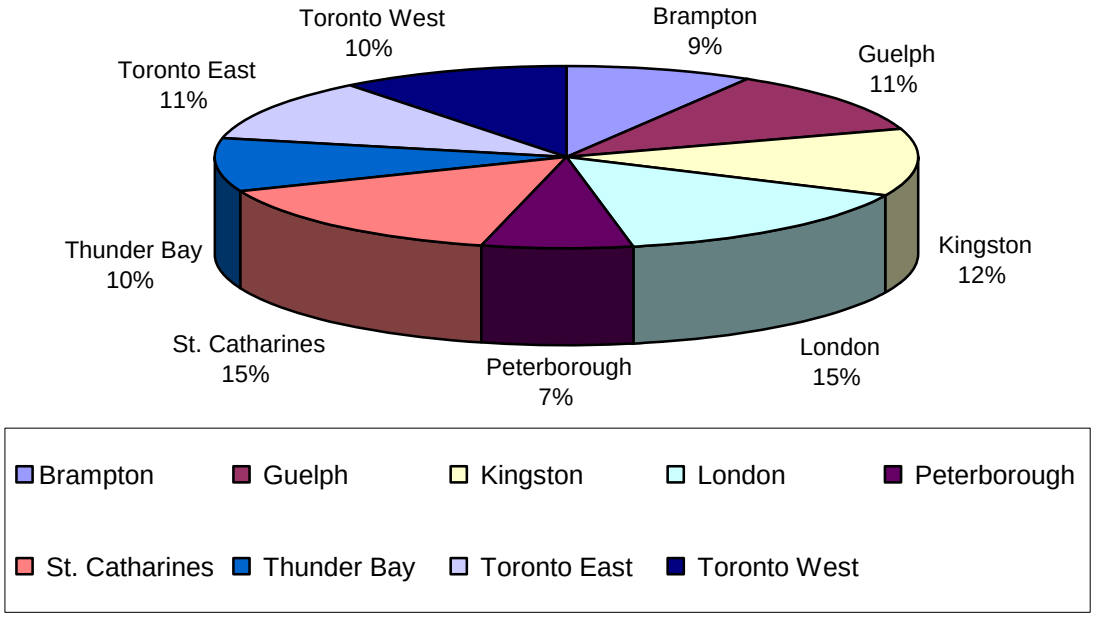
Summary of Manner of Death by Region (2006)



Total Number of Deaths Per Region (2005)



Total Number of Deaths by Region (2006)



Top Ten Causes of Death in the Province of Ontario (2005 and 2006)

Top Ten Causes of Death	2005			2006		
	Male	Female	Total	Male	Female	Total
Natural Disease – Cardiovascular - Myocardial	4574	2733	7307	4309	2468	6777
Natural Disease - Pulmonary	1038	1034	2072	1010	944	1954
Natural Disease – CNS/Neurological	503	729	1232	466	653	1119
Fall/Jump – Same Level	493	683	1176	542	734	1276
Natural Disease – Unspecified/ Other	511	561	1072	469	494	963
Natural Disease - Gastrointestinal	494	437	931	509	392	901
Trauma – Motor Vehicle, Vehicle/ Pedestrian Collision	579	257	836	558	289	847
Natural Disease – Cardiovascular – Other, Peripheral Vascular	462	279	741	439	260	699
Drug Toxicity - (Acute)	369	285	654	382	255	637
Asphyxia – Hanging	365	82	447	325	86	411

Coroner's Inquests

In Ontario, specially trained coroners preside over inquest proceedings. Jurors for coroner's inquests are drawn from the traditional jury pools used in other judicial proceedings. Just like coroners, juries must answer the following five questions and they may make recommendations as required:

- The **identity** of the deceased
- **How** the death occurred (i.e. the medical cause of death)
- **When** the death occurred
- **Where** the death occurred and
- **By what means** the death occurred (i.e. natural, suicide, accident, homicide or undetermined)

There are two types of inquests: mandatory and discretionary. Mandatory inquests are conducted pursuant to the legislative requirements of the Coroners Act. Mandatory inquests are conducted into deaths arising from accidents in the course of employment at construction, mining, pit or quarry sites and deaths occurring while being detained or in custody. In 2006, the Coroners Act was amended to include the deaths of children under certain circumstances. All other inquests are discretionary and may be conducted in accordance with section 20 of the Coroners Act.

There are several factors that a coroner takes into account when deciding whether to hold a discretionary inquest. For instance, the coroner must consider whether the answers to the five questions are known. The coroner may also determine whether or not it is desirable for the public to have an open and full hearing of the circumstances of a death. Additionally, an inquest allows juries to make useful recommendations that if implemented, could prevent future deaths in similar circumstances.

Inquests are open to the public and the media. The verdicts and recommendations made by inquest juries are public and can be requested through the Office of the Chief Coroner or by visiting the ministry's website.

The following inquest examples illustrate their preventative function and how these forums can lead to a safer province for all Ontarians.

Inquest #1

J.M., an 18 year-old apprentice carpenter with only a few months of experience, was employed with a small carpentry firm in western Ontario. The project he was working on entailed converting a barn into a residence. On November 8, 2004, J.M. was working on the roof of the barn where he was tasked with placing sections of steel roofing on the barn. It was while he was performing this task that he lost his balance and fell. He slid down the roof, fell onto a Skyjack work platform and then fell 6.6 metres to the ground. He suffered severe head trauma, which led to his death three days later.

Pursuant to the Coroners Act, an inquest was considered mandatory as the death occurred at a construction site. The inquest was held on June 19 and 20, 2006, in Milton Ontario.

The primary focus of the evidence and testimony at the inquest concerned workplace safety regulations and standards. The jury answered the five questioned and determined that J.M. died from a closed head injury as the result of an accidental fall. They made 5 recommendations that were directed to improving education for young people in schools and in the workplace with respect to workplace safety requirements; better training for trainers in the area of workplace safety; the development of a uniform training program and the continuation of media advertisements to raise awareness among young workers about unsafe work conditions and workplace safety regulations.

Of the five recommendations directed to appropriate respondents:

- 1 recommendation was implemented
- 2 recommendations had alternatives implemented
- 3 recommendations received no response

Inquest #2

On June 9, 2001, two elderly patients at a Toronto area long-term care facility were bludgeoned to death and a third was severely beaten by another patient. The assailant had been admitted to the facility earlier in the day at the request of his family. He reportedly displayed aggressive behaviour to the point where his family was unable to care for him at home. It was the family's intention to place him in a controlled environment where he could be more closely monitored.

The assailant had a medical history that included Atrial fibrillation, Asthma and Dementia. Three months earlier he suffered a stroke that left him aggressive and confused. While he mildly improved, he continued to display aggression thereby requiring close supervision in the family home. At some point, he assaulted a family member.

The family sought the assistance of the local Community Care Access Centre in order to find a long-term care facility for the assailant. The necessary assessments were conducted on an expedited basis given his aggressive behaviour within the home. A facility was identified and the assailant was accepted for admission.

Upon his admission, the assailant was placed in a room with two other patients. While it was never established if his family told him that the move was permanent, the assailant was noted by staff to be polite and quiet. He showered, ate, and napped during the day. For all intents and purposes, he appeared to be settling in.

In the early evening, the assailant was observed to be going into another room. When staff investigated, they found the two other patients severely injured and a third one being beaten with a metal object. The assailant was restrained and emergency services responded. The assailant was criminally charged and was sent to a psychiatric facility for an assessment where he died from a stroke.

The Chief Coroner calleded a discretionary inquest. It was held in Toronto from January 31 to April 5, 2005.

The jury answered the five questions and determined that both victims died from blunt force head injuries by means of homicide. The jury made 85 recommendations that focused on funding, staffing levels, training, assessments, communication, regulations/policies and standards of care of people living in nursing homes who are cognitively impaired.

Of the 85 recommendations directed to appropriate respondents:

- 15 recommendations were implemented
- 8 recommendations will be implemented
- 15 recommendations had alternatives implemented
- 6 alternatives were going to be implemented
- 29 recommendations were under consideration
- 11 were rejected and
- 1 recommendation could not be implemented due to unresolved issues

Inquest #3

M.T.M. was an eight year-old boy who drowned at a public beach on August 21, 2004. This child had an extensive history of behavioural problems for which he was taking medications. He was diagnosed as having Attention Deficit Hyperactivity Disorder and/or Oppositional Defiance Disorder. Up until the early summer of 2004, he resided with his parents and siblings.

Due to his worsening behaviour in the home, his parents sought the assistance of the local Children's Aid Society. M.T.M was placed in foster care in June 2004 and then moved to a children's mental health centre the following August.

On the day of his drowning, M.T.M. went swimming with three other boys from the center at a public beach that was supervised by lifeguards. Three staff members from the center accompanied the boys on this outing. At some point, M.T.M. disappeared under the water. A rapid search was organized with over 50 people assisting including fire fighters and other beach patrons. His body was found after approximately 45 minutes. M.T.M. was transported via helicopter to the nearest children's hospital, where he was pronounced dead.

In response to M.T.M's death, the residential facility and the municipality in which it was located initiated internal reviews to examine the policies and procedures around taking children to water-based recreational activities. The Lifesaving Society performed an overall audit of the beach facility and the lifeguard standards and procedures.

A discretionary inquest was called to explore and consider the remedies already put into place by the involved public agencies. It was held in Port Stanley from September 26 to October 6, 2005.

The jury ruled that M.T.M. died as the result of drowning by accidental means. The jury made nineteen recommendations that addressed such areas as; lifeguard numbers and equipment; emergency response protocols; search operations in deep water; life jacket loaner programs; beachfront safety audits, public awareness of water safety measures; residential rules for water-based activity outings and staff awareness of client water-based skill levels.

Of the 19 recommendations directed to appropriate respondents:

- 16 recommendations had been implemented
- 1 recommendation will be implemented
- 1 recommendation could not be evaluated
- 1 recommendation was under consideration

Inquest #4

On October 5, 2004, J.C., a 65 year-old man, was admitted to the Toronto Jail on outstanding charges. Upon his admission, he reported to officials that he suffered from congestive heart failure and was on medications for the condition. Subsequently, he was seen by health care personnel several times prior to his death. He was given medications and further tests were ordered. When it was observed that his condition appeared to be deteriorating, arrangements were made to transfer him to hospital for further assessment and treatment. On October 8, 2004, he collapsed in the jail while awaiting transfer to hospital. Emergency services were called and resuscitative efforts were undertaken. He was pronounced dead in hospital.

As J.C's death occurred while in custody, a mandatory inquest was ordered. It was held from January 30 to February 9, 2006, in Toronto.

The jury determined that J.C. died as a result of coronary atherosclerosis by means of natural causes. The jury heard evidence pertaining to transfer procedures, nursing practices, record keeping, medical file documentation and the challenges of working with an increasingly older population with complex medical problems. The jury made 11 recommendations addressing staffing levels, the enhancement of nursing plans, improved communications between all staff; the provision of in-service nursing education and improved documentation.

Of the 11 recommendations directed to appropriate respondents:

- 10 recommendations were implemented
- 1 recommendation was under consideration

Aid to Inquests

This Aid to Inquests provides general information and assistance to persons who may wish to apply for, and who are granted standing, at an inquest in Ontario. This information is meant to provide an understanding of the conduct and outcome of an inquest and is not intended to be a substitute for legal advice.

When is an Inquest called?

There are two types of inquests: mandatory and discretionary. Mandatory inquests are conducted pursuant to legislative requirements under the Coroners Act. Mandatory inquests are conducted into deaths arising from accidents in the course of employment at construction, mining, pit or quarry sites; deaths occurring while being detained or in custody and deaths of children under certain circumstances (2006). All other inquests are considered discretionary and may be conducted in accordance with section 20 of the Coroners Act.

There are several factors that a coroner takes into account when deciding whether to hold a discretionary inquest. For instance, the coroner must consider whether the answers to the five questions are known. The coroner may also determine whether or not it is desirable for the public to have an open and full hearing of the circumstances of a death. Additionally, an inquest allows juries to make useful recommendations to prevent other deaths in similar circumstances. This preventative function is a very important aspect of inquests because it encourages changes that will result in a safer province. Recommendations from previous inquests have resulted in changes to legislation (e.g. graduated licensing and labour laws), policy (e.g. how the police and courts administer justice), procedures (e.g. how we protect children and how safe medical practices are encouraged) and product development (e.g. safety mechanisms for motorized vehicles and other consumer goods).

A relative (as defined in s. 26 the Coroners Act) of a deceased may request an inquest by submitting this request in writing to the investigating coroner. This request will be presented to the Regional Supervising Coroners' management team to determine whether an inquest should be conducted in accordance with section 20 of the Coroners Act.

There is no time limit between the date of death and the convening of an inquest.

What an Inquest is NOT

An inquest is NOT an adversarial process. It is also neither a trial, nor a process for discovery. It is not a royal commission, a campaign or crusade directed by personal or philosophical agendas. An inquest is an inquisitorial process

designed to focus public attention on the circumstances of a death. It is to be a dispassionate public examination into the facts.

Inquest Courtroom Behaviour

While an inquest is not a criminal court of record, it is nevertheless a court process. Appropriate behaviour, dress, and demeanour will be expected of participants, the media, and others attending an inquest.

The Jury

The inquest jury consists of five persons selected by the coroner's constable from a list of jurors from the community. Service on an inquest jury is a public duty.

On the first day of the inquest, the jurors meet and select a foreperson from their group. Jurors are then sworn or affirmed to "diligently inquire" into the death and must deliver a verdict answering the five questions regarding the death. This verdict need not be unanimous and can be reached by majority. Jurors can take an active role in the inquest and are encouraged to ask relevant questions of the witnesses and raise issues of concern. Once the five questions are answered, jurors may make recommendations based on the evidence presented to them. However, it is not a requirement that jurors make recommendations.

Inquest juries are prohibited from making any finding of legal responsibility or expressing any conclusion of law. Their role is not to assign blame, to free from blame, nor to state or imply any judgment in their recommendations concerning the death. If a verdict does make such a finding, it will be considered improper and will not be received.

Inquest juries may be required to view photographs of the deceased's injuries or to examine the location where a death occurred. In the modern day inquest, they are not asked to view the body of the deceased.

Who can participate in an inquest?

An inquest is open to the public and the media. There are prohibitions regarding the use of cameras in the courtroom. There are also restrictions with respect to the use of recording devices in the courtroom by the media or any other person at an inquest.

A specially trained coroner presides in a quasi-judicial role over the inquest. The coroner is usually represented by a Crown attorney who acts his/her counsel. In addition, the presiding coroner shall allow other persons with a substantial and direct interest in the inquest, including persons who may be directly and uniquely affected by the recommendations, to take an active part in the proceedings. This

participation is called “standing”. A person or party must apply for standing. To be granted standing, the coroner must find that they are both substantially and directly interested in the inquest.

Parties with standing may represent themselves, or have lawyers or agents represent them. Parties may cross-examine witnesses relevant to their expressed interest and may call certain witnesses of their own, if the coroner finds that the evidence of such a witness is relevant to the proceedings. In order to make such a finding, the coroner will require the production of a “will say” or written statement of the anticipated evidence before the witness is called to testify.

Parties with standing can also present arguments and submissions to the jury after all the evidence has been heard. This is to ensure that every person who might be significantly affected by the verdict or recommendations has an opportunity to be heard and to present their point of view. If necessary, the coroner will hold a separate hearing to determine issues of standing or any other matter that requires a decision in the absence of the jury. Although an inquest may have lawyers representing various (and sometimes opposing) interests, it is essential to remember that no one is on trial and that the jury is not allowed to assign blame in its verdict.

The family of the deceased may wish to seek standing (with or without a lawyer), or may simply wish to observe the proceedings along with the public. Depending on the circumstances, family members may also be called as witnesses at an inquest. Unless they are going to be witnesses, the deceased’s family members are not required to attend the inquest.

Witnesses who have relevant evidence to give at an inquest will be summoned to attend. Witnesses will be sworn or affirmed and must give truthful testimony. Witnesses can be cross-examined by parties granted standing at the inquest. Evidence cannot be used to incriminate individuals in other courts unless they commit perjury. Perjury at an inquest is an offence and may lead to criminal charges. Witnesses are entitled to have their own lawyers or agents present to advise them of their rights, but further involvement requires permission of the coroner.

A court reporter is present during an inquest to record the proceedings. Transcripts of the proceedings can be obtained through the court reporter for a fee.

The coroner’s constable selects the jury and assists the coroner in maintaining order during an inquest. The constable swears or affirms witnesses, assists the jury and is responsible for handling the exhibits.

The Pre-Inquest Meeting

Prior to the beginning of the inquest, the coroner may convene a pre-inquest meeting. At this meeting, which is usually conducted by counsel to the coroner, certain matters will be discussed to ensure an efficient and effective inquest. Matters such as scheduling of hearing days, issues to be explored, and the sharing of information will be discussed. It is usually at this meeting that the inquest brief is handed out to parties having counsel present. The inquest brief is only distributed after the signing of an undertaking, which ensures confidentiality of the brief, and the return of the brief after the inquest is completed. If a party is not represented by legal counsel, special arrangements can be made to obtain access to the inquest brief.

Inquest Protocol

The coroner at an inquest is addressed as Mister or Madame Coroner and the jury foreperson as Mister or Madame Foreperson. After the jury has been sworn, the coroner addresses the court with opening remarks. Coroner's counsel then addresses the jury and calls the first witness. As each witness is called, the other parties with standing have the opportunity to ask relevant questions of these witnesses in cross-examination. Jurors also have the opportunity to ask questions and examine exhibits. The coroner may rule on the admissibility or relevance of evidence. Rules regarding evidence at inquests are different from other court processes.

The jury is allowed to discuss the evidence amongst themselves outside the courtroom, but these discussions must be kept secret during the inquest, during deliberations and after the inquest has been completed. This secrecy of deliberations is crucial to a fair process and to prevent harassment of jurors once the inquest is completed. The jurors are not to speak to anyone else, including the media, for the duration of the inquest or to discuss their deliberations after the inquest is completed.

Generally, access to exhibits is restricted to the parties participating in the inquest. At the discretion of the coroner, and being mindful of the privacy interests of the parties involved, exhibits may be available to the public and media for viewing during breaks. However, copying of exhibits will only be permitted by the coroner in certain rare circumstances.

When all the evidence has been heard, lawyers or agents will usually address the jury. These submissions will be a final opportunity to present the jury with interpretations of the evidence and to suggest recommendations. Joint recommendations from all parties may also be considered. Counsel to the coroner will also present closing submissions to the jury including defining points of law.

Following the arguments and submissions of all parties, the presiding coroner will charge the jury. The coroner will describe the jury's responsibilities and limitations and give them instruction regarding the law as it applies to inquests.

Verdict and Recommendations

The jury will retire with all the exhibits to consider their verdict and prepare recommendations, if they so choose. A jury verdict that assigns blame will not be accepted. The jury must answer the five questions and they may make recommendations. Recommendations are not mandatory, but they represent the voice of the community and should be considered in the prevention of similar deaths in the future. Recommendations must be based on evidence heard during the inquest.

The jury is not sequestered while they review the evidence and exhibits. However, they are instructed not to listen to, or read, anything about the inquest in the media and not to discuss their deliberations outside the jury room. When the jury returns to the court, the verdict is read aloud and the inquest is then closed. The verdict and recommendations are available to the public, upon request, from the Office of the Chief Coroner.

The verdict and recommendations, along with a brief explanation written by the presiding coroner, are sent to the Chief Coroner for distribution to agencies, associations, government ministries, or other identified organizations that may be in a position to implement the recommendations. Recipients are asked to evaluate their response to the recommendations and are requested to submit their response to the Office of the Chief Coroner within a year of the inquest. Members of the public, including the media, may request a copy of responses to inquest recommendations by submitting a written request to the Office of the Chief Coroner.

The Office of the Chief Coroner prepares an implementation report on the status of implementation of recommendations from all inquests. Implementation reports are published in an annual report on inquests that is available to the public.

Inquest Statistical Data

2005 Executive Summary

- 80 inquests were held in 2005
- 19% of the inquests conducted were discretionary
- 81% of the inquests conducted were mandatory (custody, construction and mining)
- 49% were custody
- 29% were construction
- 4% were mining
- 17.5% of the inquests resulted in no recommendations
- A total of 621 recommendations were made
- On average, 77% of the organizations asked to respond, did so
- On average, each inquest in 2005 lasted 4.4 days

According to the responses received regarding recommendations:

- 42% have been implemented
- 6% will be implemented
- 15% have had alternates implemented
- 2% will have alternates implemented
- 13% are under consideration
- 2% have unresolved issues
- 4% were rejected with no specific reason given
- 2% were rejected due to flaws
- 7% did not apply to the agency assigned
- 5% received no response
- 1% received responses that could not be evaluated

2006 Executive Summary

- 53 inquests were held in 2006
- 6% of the inquests conducted were discretionary
- 94% of the inquests conducted were mandatory (custody, construction and mining)
- 66% were custody
- 26% were construction
- 2% were mining
- 36% of the inquests resulted in no recommendations
- A total of 190 recommendations were made
- On average, 70.8% of the organizations asked to respond, did so
- On average, each inquest in 2006 lasted 4.2 days

According to the responses received regarding recommendations:

- 33% have been implemented
- 12% will be implemented
- 10% have had alternates implemented
- 2% will have alternates implemented
- 17% are under consideration
- 0% have unresolved issues
- 3% were rejected with no specific reason given
- 2% were rejected due to flaws
- 0% were rejected due to lack of resources
- 9% did not apply to the agency assigned
- 11% no response received
- 2% received responses that could not be evaluated

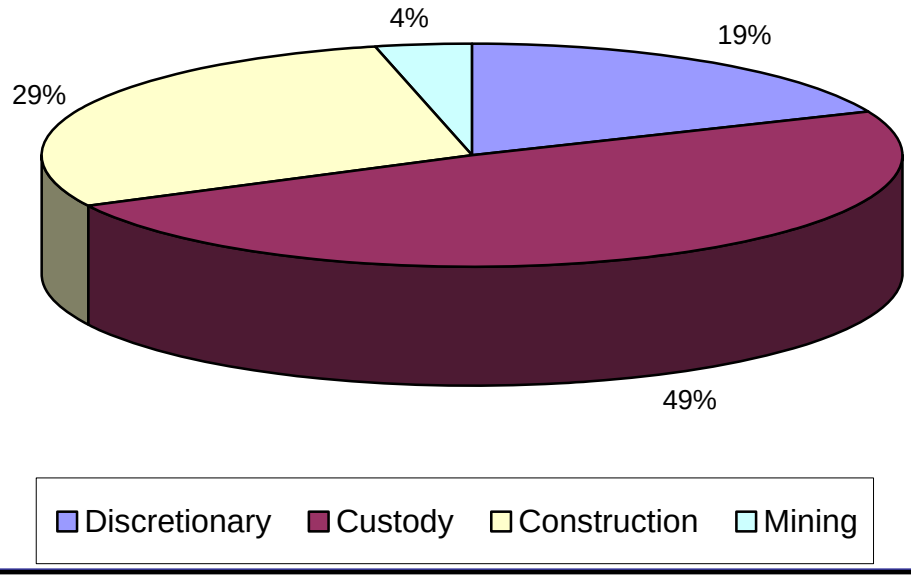
Summary of Inquests – Based on Inquest Type - 2005

Type	Total # of Recs	% of Total Recs	Total # of Inquests	% of Total Inquests	Avg # of Recs per Inquest	Avg % Response Rate*	Total # of Days in Inquest	Avg # of Days in Inquest
Discretionary	298	48	15	19	19.9	79.9	142	9.5
Custody	177	29	39	48	4.5	89.5	127	3.3
Construction	125	20	23	29	5.4	79.1	76	3.3
Mining	21	3	3	4	7.0	58.3	7	2.3
Total	**621**	**100**	**80**	**100**	**7.8**	**76.7**	**352**	**4.4**

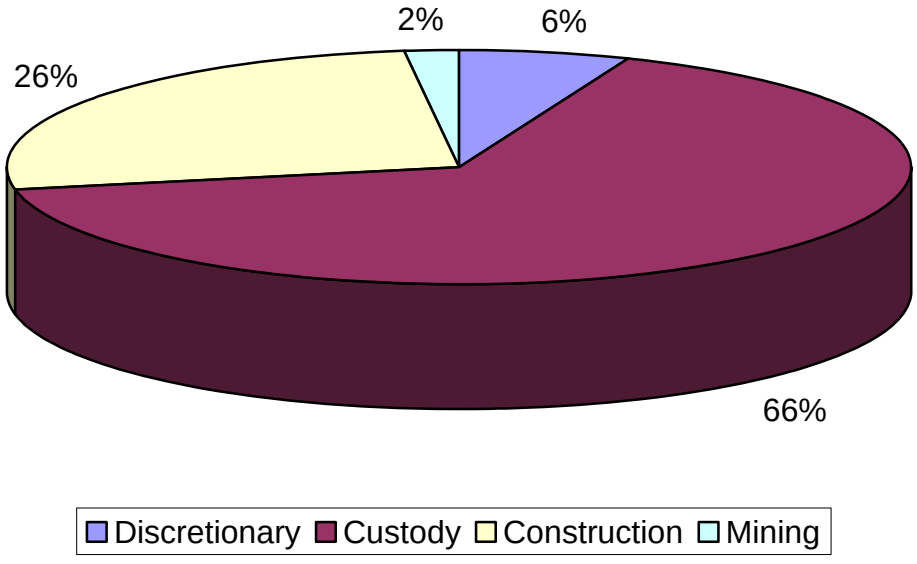
Summary of Inquests – Based on Inquest Type – 2006

Type	Total # of Recs	% of Total Recs	Total # of Inquests	% of Total Inquests	Avg # of Recs per Inquest	Avg % Response Rate*	Total # of Days in Inquest	Avg # of Days in Inquest
Discretionary	35	18	3	6	12	71	24	8
Custody	117	62	35	66	3	95	164	5
Construction	32	17	14	26	2	88	29	2
Mining	6	3	1	2	6	29	3	3
Total	**190**	**100**	**53**	**100**	**6**	**71.0**	**220**	**4**

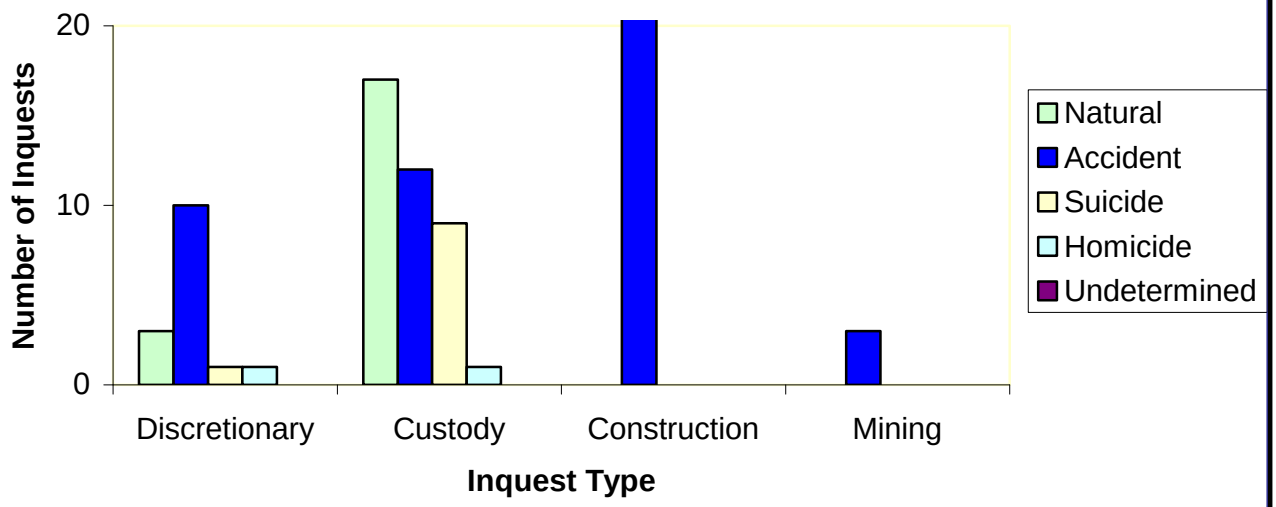
Percent of Inquests by Type - 2005



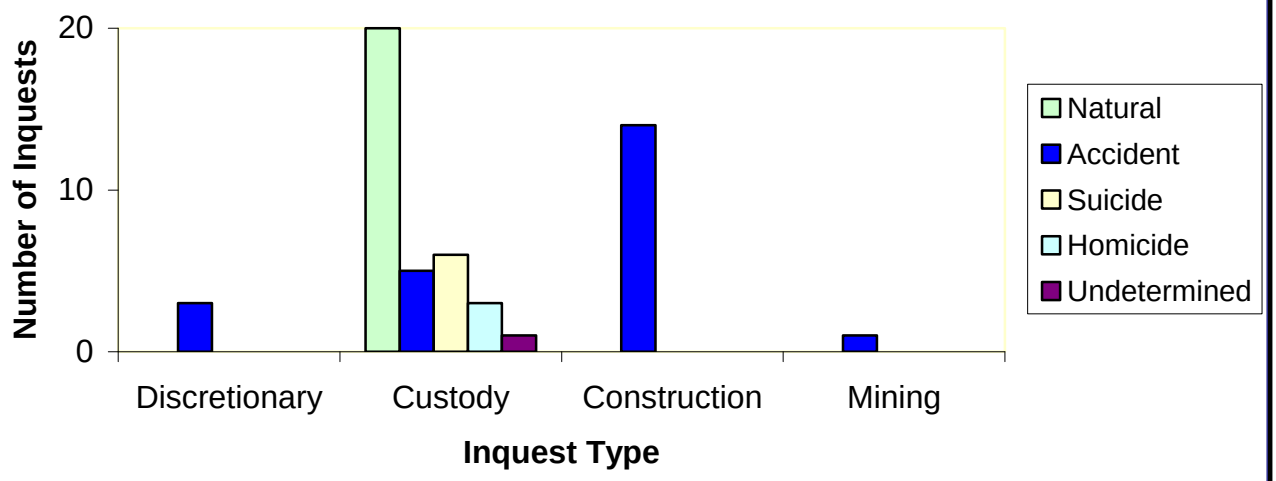
Percent of Inquests by Type - 2006



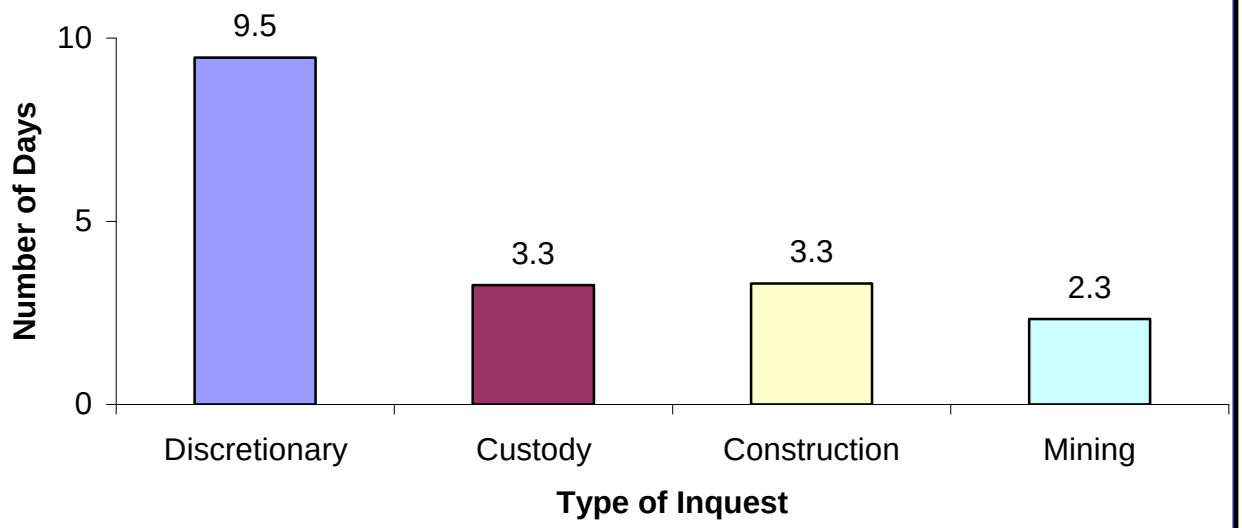
Comparison of Inquest Type and Manner of Death - 2005



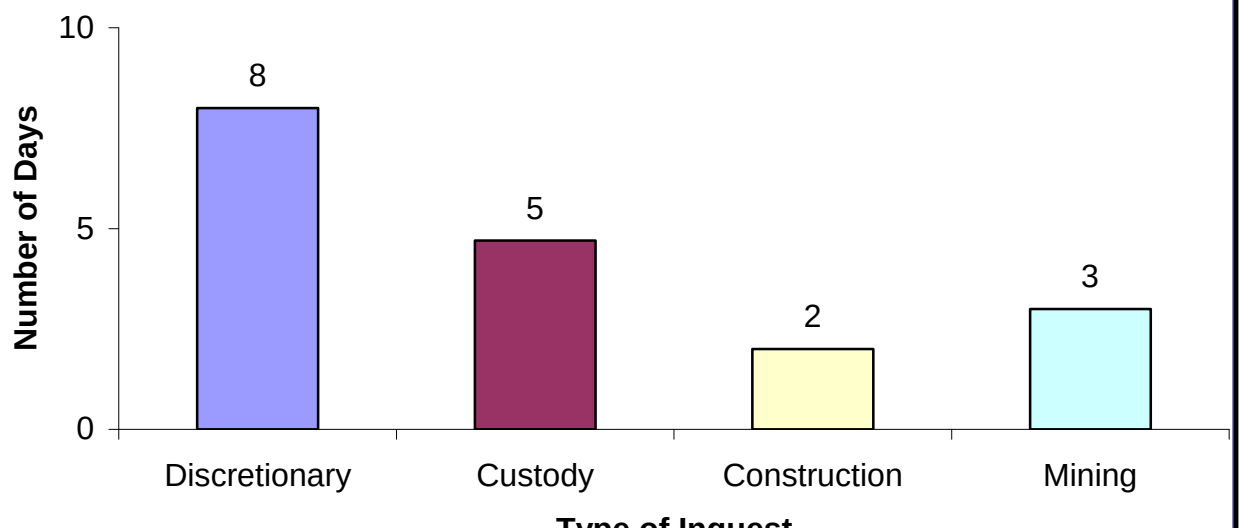
Comparison of Inquest Type and Manner of Death - 2006



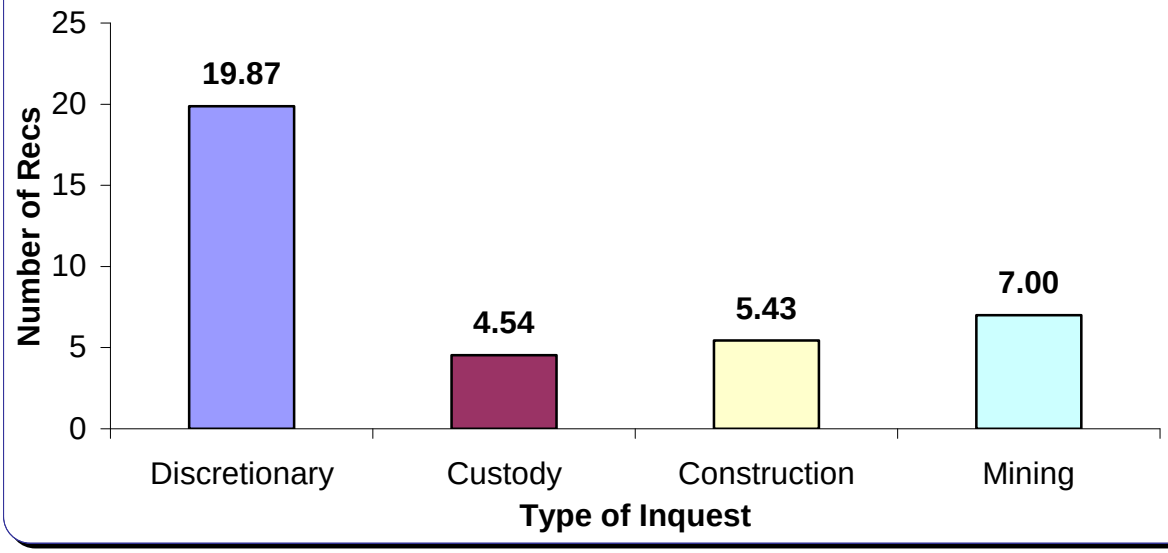
Average Number of Days per Inquest - 2005



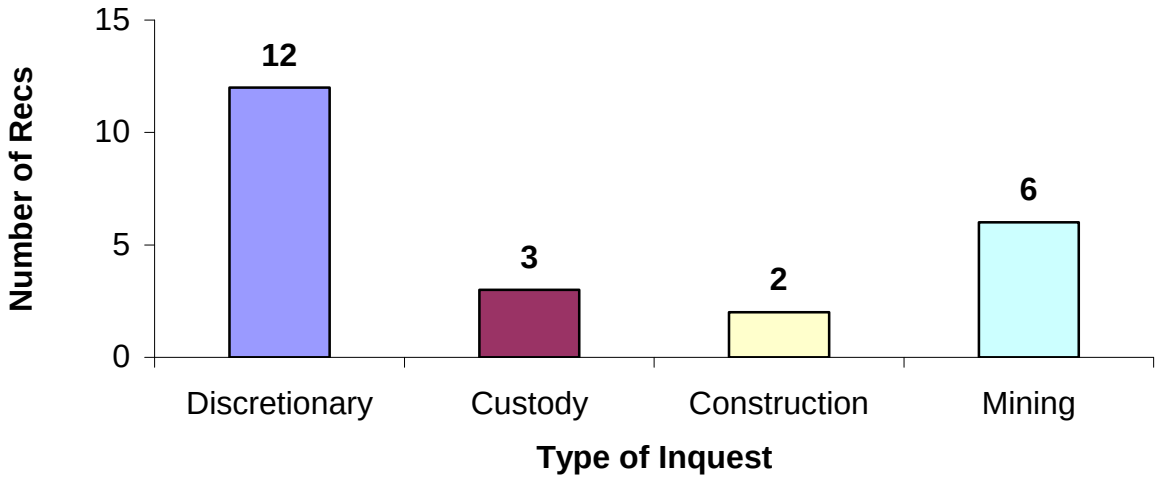
Average Number of Days per Inquest - 2006



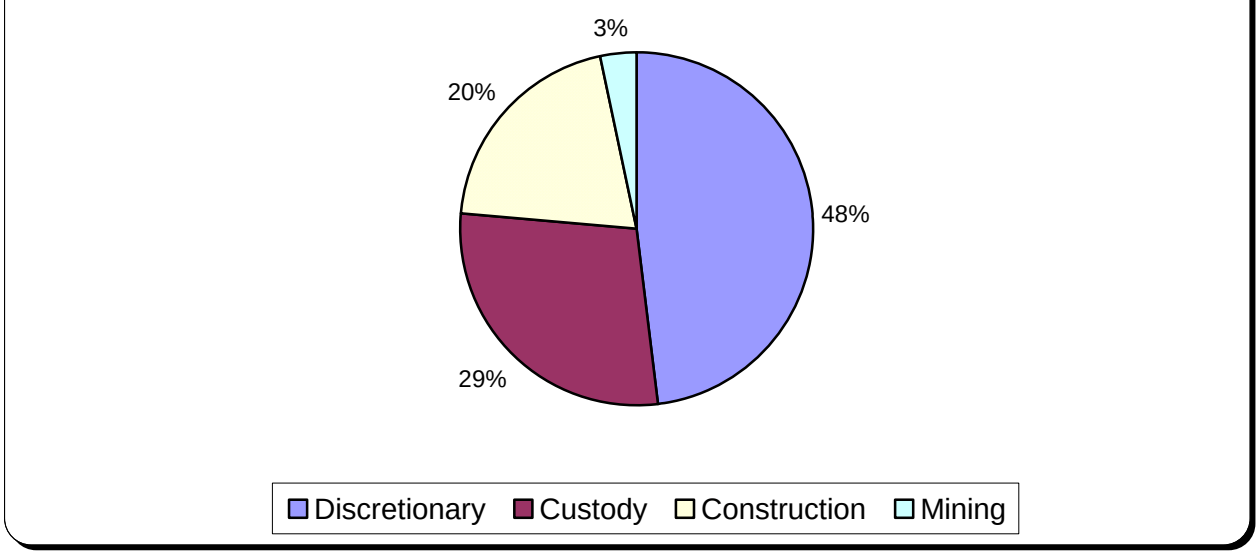
Average Number of Recommendations Per Inquest - 2005



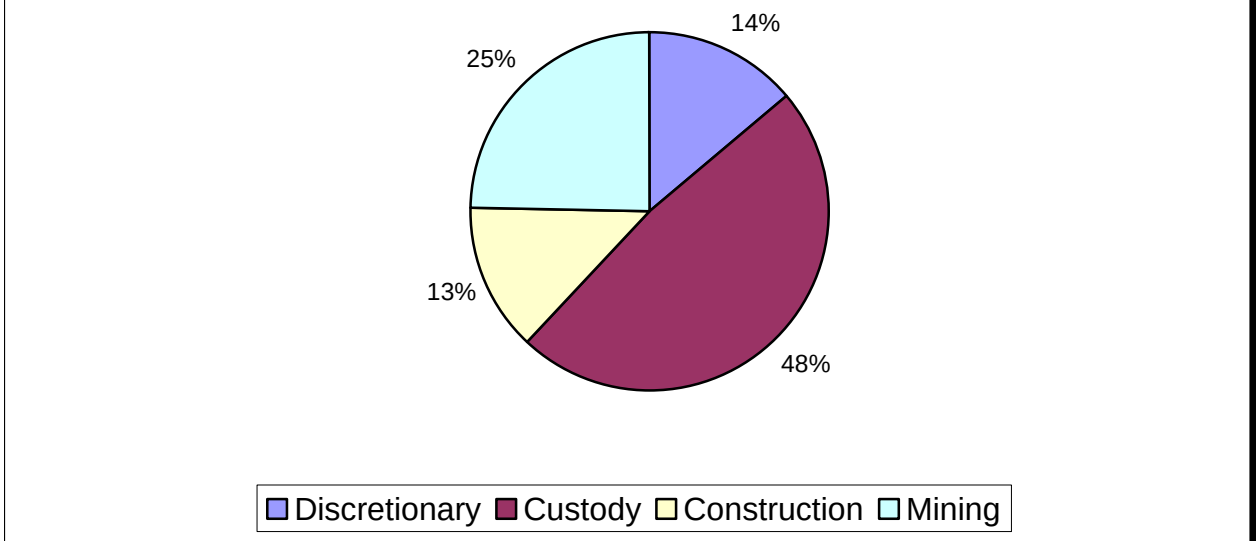
Average Number of Recommendations Per Inquest - 2006



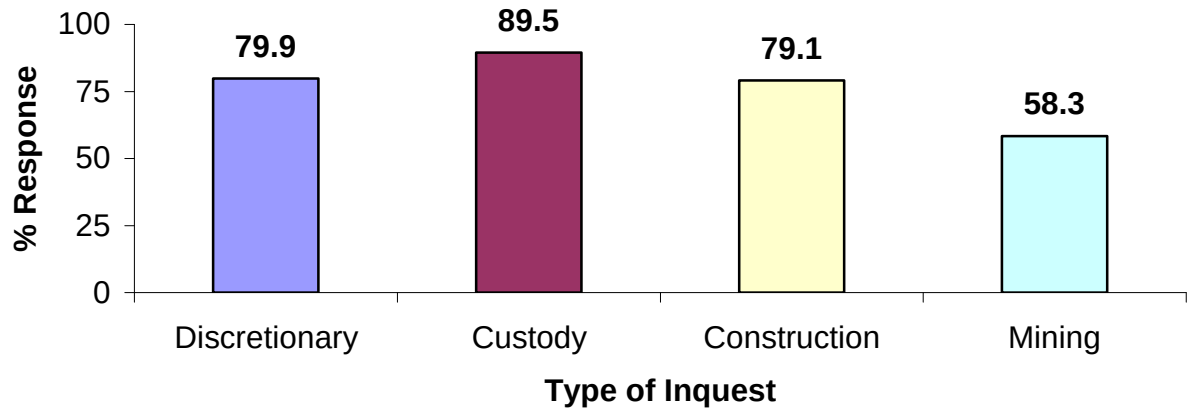
% of Total Recommendations by Inquest Type - 2005



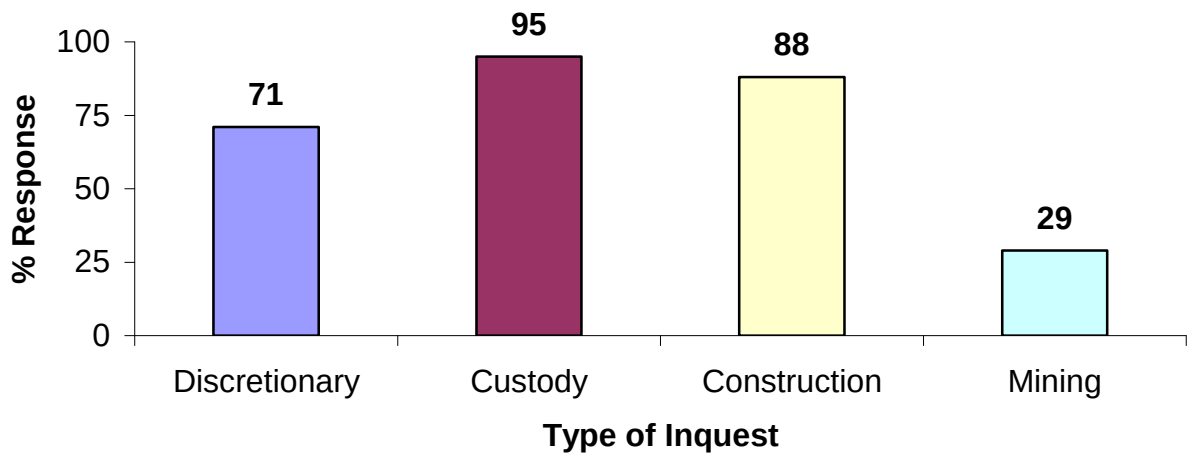
% of Total Recommendations by Inquest Type - 2006



Average Percentage Response Rate by Inquest Type-2005



Average Percentage Response Rate by Inquest Type-2006



Expert Death Review Committees

The Office of the Chief Coroner oversees six expert death review committees. The committees' membership includes individuals representing a diversity of multi-disciplinary fields, who provide advice and expertise for investigations and reviews conducted by the Office of the Chief Coroner. The committees include:

1) Domestic Violence Death Review Committee
2) Maternal and Perinatal Death Review Committee
3) Geriatric and Long Term Care Review Committee
4) Patient Safety Committee
5) Paediatric Death Review Committee
6) Deaths under Five Committee

The objectives of these committees are to:

- Offer an opinion on cause and manner of death,
- Offer an opinion on the presence or absence of systemic issues, which may need further follow-up by the Investigating, Regional or Chief Coroner,
- Offer expert opinion regarding the need to refer to other appropriate bodies for further investigation and/or action
- Stimulate educational activities through the recognition of systemic issues,
- Promote research where appropriate,
- Undertake random or directed reviews when request by the Chair,
- Advise the Chief Coroner of cases that may further public safety if examined through inquest process.

The committees offer specialized knowledge and expertise in complex death investigations within specific subject matter areas. The committees utilize the services of knowledgeable and experienced individuals representing a variety of medical, social, legal and academic disciplines, and provide a thorough, comprehensive and diverse review of the circumstances and facts surrounding the death(s). However, committees do not make decisions regarding standards of care. They may identify issues relating to standards of care and may recommend that the Chief Coroner consider a referral to a regulatory body for further examination, if appropriate.

Members of expert death review committees receive modest compensation based upon attendance at committee meetings and preparation of death review reports. Committees meet 3-10 times per year, depending on the volume and urgency of cases to be reviewed.

The Office of the Chief Coroner has developed death investigation procedures that mandate expert death committee reviews for deaths in certain circumstances. It is

policy to require mandatory expert death committee reviews in the following circumstances:

- All homicides that involve the death of a person, and/or his/her child(ren) committed by the person's partner or ex-partner from an intimate relationship, are reviewed by the Domestic Violence Death Review Committee;
- All deaths investigated by coroners involving children under the age of five are reviewed by the Deaths Under Five Committee;
- All deaths involving children who were receiving, or who had received, the services of a Children's Aid Society within 12 months of the death, are reviewed by the Paediatric Death Review Committee;
- All homicides occurring within long-term care facilities are reviewed by the Geriatric and Long-Term Care Review Committee;
- All women who die "during pregnancy and following pregnancy in circumstances that could reasonably be attributed to pregnancy", are reviewed by the Maternal and Perinatal Death Review Committee.

The committees prepare reports that contain their findings on each case referred. In the course of the investigation, the findings may be shared with other interested parties in an effort to generate meaningful dialogue and systemic change, if appropriate. The findings may also be shared with the family of deceased individuals who are the subject of reviews.

Domestic Violence Death Review Committee

The Domestic Violence Death Review Committee (DVDRC) is a multi-disciplinary advisory committee of experts that was established in 2003 in response to recommendations made from two major inquests into the deaths of Arlene Mays/Randy Iles and Gillian and Ralph Hadley. The mandate of the DVDRC is to assist the Office of the Chief Coroner with the investigation and review of deaths involving domestic violence with a view to making recommendations aimed at preventing deaths in similar circumstances and reducing domestic violence in general.

The DVDRC consists of representatives with expertise in domestic violence from law enforcement, criminal justice system, health care and social services sectors and other public safety agencies and organizations. By conducting a thorough and detailed examination and analysis of facts within each case, the DVDRC strives to develop a comprehensive understanding of why domestic homicides occur and how they might be prevented. Information considered within this examination includes the history, circumstances and conduct of the abusers/perpetrators, the victims and their respective families. Community and systemic responses are examined to determine the primary risk factors and to identify possible points of intervention that could assist with the prevention of similar deaths in the future. The following chart identifies some of the statistical highlights identified in the reviews for the respective years:

	2005	2006
Number of cases reviewed	14	13
Number of deaths reviewed	19	21
Number of recommendations generated	10	33
Risk Factors:		
Female victims	86%	100%
History of domestic violence	86%	92%
10+ risk factors identified	51%	76%
Couples pending or actual separation	79%	95%
Perpetrators - criminal history	50%	69%
Perpetrators – unemployed	50%	31%
Length of relationship between 1-10 years	50%	46%

Our analysis, consistent with other years, demonstrates that the vast majority of victims are female and conversely, perpetrators are predominantly male.

Case Example

This case involved a homicide of a female victim. The teenage couple had been involved in an intimate relationship for approximately three years. There had been

a number of altercations where police had been involved, but no charges were ever laid, often because the victim minimized the abusive behaviour. A few months prior to the homicide incident, the victim and perpetrator broke off their relationship, and the victim began seeing another person.

The perpetrator had a history of emotional problems, difficulties in school, use of drugs and alcohol, and involvement with police. Following the separation, he became depressed, and began harassing and stalking the victim. Shortly before the incident, he saw a psychiatrist and expressed feelings of aggression towards the victim.

On the day of the incident, the perpetrator damaged property and stole some items from the victim's residence. The perpetrator called the victim later that day and arrangements were made for her to meet at his home to retrieve her belongings. Upon her arrival, the perpetrator came out of the house and began assaulting the victim with a baseball bat, striking her in the head. He fled the scene and the victim was transported to hospital, where she succumbed to blunt force traumatic injuries. The perpetrator was later apprehended.

Recommendation: It is recommended that the Ontario Psychiatric Association, in conjunction with the Canadian Psychiatric Association, develop and/or promote educational materials that highlight the correlation between depression and the risks associated with intimate partner violence (IPV).

Rationale: A psychiatrist saw the perpetrator one week prior to the homicide. At that time, the perpetrator was expressing feelings of depression and thoughts of aggression towards the victim. The only intervention was a prescription for medication.

Recommendation: It is recommended that the Ontario Women's Directorate continue to develop and implement public education programs about Domestic Violence (e.g. The Neighbours, Friends and Families Campaign).

Rationale: Although family and friends were aware that the victim was being stalked and harassed by the perpetrator, there was no effective intervention or safety planning.

Recommendation: It is recommended that police receive ongoing training in the dynamics of Domestic Violence to assist officers with assessing situations and laying charges, where appropriate.

Rationale: The decision to lay charges should not be left to the victim in Domestic Violence cases, but should be based on a thorough assessment and determination of which party is the dominant aggressor/offender.

Maternal and Perinatal Death Review Committee

The Maternal and Perinatal Death Review Committee (MPDRC) of the Office of the Chief Coroner was formerly known as the Obstetrical Care Review Committee. The name of the committee was changed in 2004 to reflect an additional role within the Chief Coroner's Office based on recommendations of Health Canada's Special Report on Maternal Mortality and Severe Morbidity in Canada.

The mandate of the MPDRC is to provide assistance to coroners in their investigations of *all* deaths involving women who died during pregnancy and following pregnancy in circumstances that could reasonably be attributed to pregnancy. Still births and the deaths of neonates may be referred by a Regional Supervising Coroner to the committee for their opinion regarding the circumstances of the death(s).

The MPDRC includes representation from health care professionals including: midwives, obstetricians, maternal foetal medicine specialists, family physicians, pathologists, obstetrical nurses and a paediatrician. The committee is chaired by a Regional Supervising Coroner.

The MPDRC produces an annual report that includes an overview of cases reviewed and recommendations made. The annual report is made available to health care professionals and the general public for the purpose of preventing similar deaths in the future.

	2005	2006
Number of Cases Reviewed	30	28
Number of Deaths Reviewed	31	29
Number of Recommendations Generated	71	59
Number of Maternal Deaths Reviewed	12	7
Number of Stillbirths Reviewed	8	8
Number of Neonatal Deaths Reviewed	11	13

Case Example

Cause of death

Perinatal hypoxia

History

The mother was a 28-year-old woman, G_1P_0. Her last period was February 9, 2005. An ultrasound done May 2 indicated the pregnancy was at 12 weeks and

three days 'gestation'. Her obstetrician saw her July 11, and routine antenatal investigations, including a glucose challenge test, were normal.

On August 5, a second ultrasound reported a normal 25-week-to-date pregnancy. She was considered low risk and was referred to a new family doctor for ongoing care and delivery. On September 6, at 30 weeks' gestation, the mother's family doctor saw her. At 34 weeks' gestation, her Group B Streptococcus testing was negative.

She was seen on November 15 at triage with possible ruptured membranes. She was found not to have ruptured membranes and an NST was reactive. Her last prenatal visit was on November 21 at 40 weeks and five days' gestation. Her blood pressure was slightly elevated at 146/90, and the fundal height was 38 cm, down two cm from a week earlier. The cervix was closed.

She was admitted to hospital at 0030 hours November 24 with mild to moderate contractions. The cervix was fingertip dilated and 90% effaced. The NST on admission was reactive. Her contractions continued much the same during the early morning and intermittent electronic foetal heart rate monitorings were within the normal range. An extended strip was run from 0720 to 0745 hours and intermittent electronic monitoring was done between 0822 and 0959 hours.

The mother's family doctor assessed her at 1015 hours and an artificial rupture of membranes was carried out for thick meconium. A foetal scalp clip was applied and the cervix was 1 cm dilated with the vertex at spines -2. A foetal heart rate deceleration occurred at 1030 hours and then the heart rate recovered to the baseline. A second deceleration occurred at 1040 hours and went on to become a persistent bradycardia. At 1053 hours, the foetal scalp clip was reapplied and the foetal heart rate could not be detected.

At 1100 hours, the operating room was called to organize an emergency Caesarean section. The obstetrician was called and attended immediately and at 1114 hours, under general anesthetic, the patient delivered an 8-lb, 2-oz male infant.

Thick meconium was encountered and the cord was loosely around the infant's neck. The Apgars were 0, 0 and 0 at 1, 5 and 10 minutes. The arterial cord gases were pH 6.90, bicarbonate 17 and base excess 23.8. The venous cord gases were pH 7.01, bicarbonate 17 and base deficit -18.5. Resuscitation failed and the baby was pronounced dead at 22 minutes after birth.

Postmortem

The baby was morphologically normal, but there was severe multi-organ vascular congestion attributed to constriction of the umbilical chord by traction or compression. The lungs showed extensive meconium aspiration and evidence of

sub-acute and chronic stress indicated by the presence of extensive extramedullary erythropoiesis, thymic involution and adrenal cystic change.

The pathologist commented about the possibility of a short umbilical cord. There was extensive meconium staining and prominent meconium amnionitis of the membranes and vascular thrombi in the foetal vessels. The infant showed moderate villous atrophy and patchy infarction. The cause of death was stated to be asphyxia probably secondary to a short umbilical cord.

Discussion

Since the cord was noted to be loosely around the infant's neck at the time of delivery, it is unlikely the cord was too short. The clinical picture is considered more consistent with placental insufficiency. This opinion is based upon the review of the foetal heart rate tracings, the cord gases and the sub acute/chronic stress reactions identified on the postmortem examination report.

The foetal heart rate tracing on admission at 0030 hours did not meet the criteria of a reactive NST: acceleration of the foetal heart rate greater than 15 beats per minute lasting longer than 15 seconds with foetal movement on two occasions in 20 minutes.

Decelerations that were borderline to late, were recorded in the strip that was run from 0720 to 0745 hours. It is not clear why the electronic foetal monitoring tracing was discontinued when the pattern was non-reassuring. The decelerations leading up to the persistent bradycardia were also of late nature.

The cord gases indicated severe metabolic acidosis and the sub-acute/chronic changes found at post mortem are consistent with placental insufficiency and not a cord problem.

The most likely cause for placental insufficiency in this setting would be post dates. There is no evidence of intrauterine growth restriction, a finding that would implicate a more chronic process. Aside from the mild blood pressure elevation at the last prenatal visit, there was no evidence of an underlying hypertension process.

The estimated date of delivery was November 16 based on the last menstrual period; the expected date of delivery based on the May 2 ultrasound would have been November 12. A discrepancy of four days is within the range of error of ultrasound at this gestational age. Therefore it was reasonable to establish an expected delivery date of November 16.

It should be noted, however, that the records reviewed do not include a menstrual history, which is critical in establishing an expected delivery date. If a reliable menstrual history was not available, or if the history indicated a cycle less than 28

days, it may have been more reasonable to use the first ultrasound to establish the expected date of delivery. This would have resulted in a due date of November 12, making the gestation 41 weeks, five days at the time of delivery.

The current approach to post-dates pregnancy is to recommend induction at 41 weeks, three days or implement foetal surveillance testing including a biophysical profile. There is no documentation on the antenatal record II on the visit at 40 weeks, five days (by menstrual dates) that a plan was discussed for the management of post dates, despite the fact that the mother was a primip and the cervix was closed.

Furthermore, consideration should be given to the possibility that the 2-cm decrease in symphysis-fundal height at the last prenatal visit was significant, warranting further investigation by the ultrasound/biophysical profile.

The record also does not contain any reference to foetal activity/movement at the hospital or at the antenatal visit when the mother was 40 weeks and five days. Management of the post-dates pregnancy would be quite different for a history of normal foetal movement than it would be for a change to decreased foetal movement. It is difficult to interpret the foetal movement indicators on the electronic foetal monitoring strip, but it looks as if there was very little foetal movement.

The response to the foetal bradycardia was appropriate and carried out expeditiously.

Recommendation: Obstetrical care providers are reminded of the need to document a clear management plan for post-dates pregnancies.

Recommendation: Obstetrical care providers are reminded that after considering the entire clinical picture, a 2-cm decrease in symphysis-fundal height may warrant investigation by an ultrasound/biophysical profile.

Recommendation: Obstetrical care providers, both physicians and nurses at the hospital, should review this case as it pertains to the interpretation of foetal heart rate tracing patterns.

Recommendation: Obstetrical care providers are reminded of the importance of documenting information with respect to foetal movement, particularly in the management of post-date pregnancies.

Geriatric and Long Term Care Committee

Originally formed in 1989, the Geriatric/Long Term Care Review Committee (GLTCRC) is an advisory committee to the Chief Coroner that conducts independent reviews of deaths occurring in geriatric and long term care facilities in Ontario. The GLTCRC is chaired by a Regional Supervising Coroner and includes membership from health care professionals that are dieticians, nurses, family practitioners, geriatricians, emergency room physicians and coroners.

The Committee conducts independent reviews and prepares reports, which may include recommendations to prevent future deaths in similar circumstances. Reports and recommendations are distributed to health care agencies, family members, other provincial, national and international jurisdictions and to the public at large.

Recommendations made by the committee in 2005 and 2006 addressed concerns in the following areas: medical/nursing management, communication/ documentation, use of drugs, admission/discharge/transfer policies, determination of capacity and consent for treatment/DNR and Ministry of Health and Long-Term Care policy and procedures.

	2005	2006
Number of Cases Reviewed	28	27
Number of Deaths Reviewed	28	27

Case Example

Issue

Use of narcotic analgesic in the elderly.

History

This is the case of an 82 year-old gentleman who lived in the community with his wife. When she developed breast cancer and was known to be dying, she expressed the desire to take one last trip to England before she died. The committee noted that she was having increasing difficulty caring for her husband in their home.

In September 2005, the gentleman was assessed by the Community Care Access Centre (CCAC) for placement in a licensed long-term care home (LTCH). The CCAC notes, which were part of the gentleman's LTCH medical record, indicated that pain was not an issue at the time of the assessment. While awaiting placement, his family actively searched for a respite care bed.

On October 19, 2005, the gentleman was admitted to the LTCH for respite care. Within a few days, his residency status changed to permanent. Medical diagnoses noted on admission included the following:

1. Superficial bladder cancer,
2. Chronic obstructive pulmonary disease,
3. Osteoarthritis,
4. Peripheral vascular disease,
5. A remote history of a fall in October 2004 without evidence of a fracture,
6. A cutaneous pressure ulcer over his right hip for which a pressure relieving mattress was being used at home, and
7. A history of a cerebrovascular accident (stroke) on July 2003, which had left him with a left hemiparesis. The stroke was further complicated by the development of pneumonia and a severe upper gastrointestinal bleed secondary to ulcerative esophagitis. Stroke related mobility impairment resulted in him using a manual wheelchair since September 2004.

Medications being taken at the time of admission to the LTCH included the following:

1. Docusate Calcium 240 mg. bid.,
2. Hydrochlorothiazide 12.5 mg. od.,
3. Quetiapine Fumarate 12.5 mg. bid.,-77-
4. Lansoprazole 30 mg. od.,
5. Tolterodine L-tartrate 2 mg. bid.,
6. Standardized Sennosides prn., and
7. Enteric Coated Acetyl Salicylic Acid 81 mg. od.

On admission to the LTCH, nursing staff noted that the gentleman was quite confused and needed encouragement to eat.

On October 21, 2005, 2 days after admission, the attending physician recorded a progress note indicating that the gentleman had “depression at separation” which resulted in the prescribing of the antidepressant Citalopram Hydrobromide at a dosage of 10 mg. od.

On October 24, 2005, an urine culture for pathogens including MRSA was taken and, on the following day, a 7 day course of Sulfamethoxazole/Trimethorprim was prescribed. Also on October 25, 2005, Ibuprofen was prescribed as the gentleman was complaining of “pain all over”.

On October 28, 2005, the attending physician’s progress note stated “Ibuprofen no help with pain, c/o chronic pain”. One 25 mcg. Fentanyl Patch was ordered and applied around 1100 hours. By 2100 hours, nursing staff noted that the gentleman was slumped over in his wheelchair and had not eaten supper nor taken fluids and had not taken his medications.

Additional nursing notes dated October 28, 2005 were recorded, but were likely written on October 29, 2005, which was the date of his death. At 0700 hours, the gentleman was found to be lethargic, but somewhat responsive. He vomited a small amount at this time. At 0910 hours, nursing staff found the gentleman with absent vital signs. As there was no DO NOT RESUSITATE order on the gentleman's medical record, CPR was commenced and 911 was called to arrange an ambulance transfer to the emergency room of the local general hospital. Further resuscitative efforts were unsuccessful and death was pronounced shortly thereafter.

The death was reported to a local coroner who commenced and investigation and ordered a postmortem examination which demonstrated the presence of the following:

1. Atherosclerotic cardiovascular disease with:
    a) Significant (<75%) cross sectional narrowing of all major coronary arteries by calcific atherosclerosis,
    b) Acute thrombosis of the circumflex coronary artery,
    c) Marked cerebrovascular atherosclerosis,
    d) A remote myocardial infarction of the posterior wall of the left ventricle,
    e) Microscopic evidence of the presence of an acute myocardial infarction,
    f) Severe, complicated atherosclerosis of the entire aorta and its major branches,
2. Bronchopneumonia,
3. Pulmonary congestion and edema with bilateral pleural effusions,
4. Systemic congestion,
5. Cardiomegaly,
6. Nephrosclerosis,
7. Splenomegaly,
8. Diverticulosis,
9. Focal acute inflammation of the kidneys,
10. Cholesterol emboli of the kidneys, and
11. Toxicology results:
    a) Fentanyl 5.4 ng./mL.,
    b) Diphenhydramine 0.16 mg./L., and
    c) Citalopram 0.48 mg./L.

The Toxicologist noted that toxicity associated with Fentanyl is dependent upon individual tolerance. Respiratory depression has been attributed to plasma Fentanyl concentrations (ranging) from 2 to 5 ng./mL. (Poklis, 1995, J. Toxicol. Clin. Toxicol., 33: 439-447).

The Committee noted that examination of the brain failed to demonstrate the presence of Alzheimer's disease.

It was the Committee's opinion that death was due to an acute thrombotic occlusion of the circumflex coronary artery in association with acute Fentanyl intoxication.

Discussion

This is the case of an 82 year-old gentleman who was admitted to a LTCH for respite care on October 19, 2005. Within 3 days, his admission status was changed to permanent and within 10 days, he was deceased. Death was attributed to an acute thrombotic occlusion of the circumflex coronary artery in association with acute Fentanyl intoxication.

Upon admission to the LTCH, there were specific assessments and protocols to be completed within a specific time frame. It would appear that the issue of an "advance directive" was not included in the LTCH's admission protocol and the decision as to whether or not cardiopulmonary resuscitation (CPR) was to be performed was in the process of being considered by the gentleman's family. It has been the committee's experience that, in the absence of a Do Not Resuscitate (DNR) order, most LTCHs only commence CPR if the staff witnesses the cardiopulmonary arrest. In this particular case, CPR was instituted immediately after the gentleman was found to be vital signs absent and was continued in the ambulance and in the emergency room of the local general hospital unsuccessfully. The committee believed this course of action was entirely appropriate.

On transfer to the LTCH, the gentleman was noted to be quite confused and had "depression at separation". In the committee's experience, it is not unusual for newly admitted residents to a LTCH to exhibit confusion, especially if the resident has cognitive impairment, which was likely the case in this instance. Of some concern to the committee was the fact that an antidepressant was prescribed during a period of transition without definitive evidence of the presence of a major depression, such as a high score on a standardized assessment tool such as the Geriatric Depression Scale or criteria to support a DSM IV diagnosis. In the committee's opinion, the prescribing of an antidepressant was not a factor in the gentleman's death.

Of concern to the committee was the fact that the gentleman was diagnosed to have chronic pain, while the medical record suggested that the pain was of recent (3 day) onset. From the documentation submitted for review, investigations were not done in an attempt to detect the cause of the pain. The fact that a Fentanyl Patch was prescribed in this circumstance was a concern, given that the United States FDA approval label for transdermal Fentanyl emphasizes that the medication is for use in opioid tolerant patients only. The label goes on to note that serious life threatening hypoventilation can occur in patients who are not opioiod tolerant. Given the gentleman's rapid decline following application of the Fentanyl

Transdermal Patch, the committee suspected that the medication might have contributed to the death.

Recommendation: Health care professionals should be reminded of the importance of using caution when making the diagnosis of depression in a resident newly admitted to a licensed long-term care home. Recognized valid diagnostic criteria should be used to make the diagnosis of depression.

Reference: National Guidelines for Seniors' Mental Health: The Assessment and Treatment of Mental Health Issues in Long-Term Care Homes (focus on mood and behaviour Symptoms) Conn D, Gibson M, et al, Canadian Coalition for Seniors' Mental Health, 2006. Available through the website: www.ccsmh.ca

Recommendation: Health care professionals caring for the elderly in the long term care setting should be reminded that the first step in the management of any painful condition should be an attempt to identify the cause of pain.

Recommendation: Health care professionals should be reminded that the Fentanyl Transdermal Patch should only be prescribed to opioid tolerant patients. If a patient develops side effects, such as, unresponsiveness or a decreased level of consciousness, the patch should be removed immediately and consideration should be given to the use of a narcotic antagonist.

Patient Safety Committee

The Patient Safety Review Committee is comprised of representatives of various medical specialties including the following areas: death investigation, nursing, primary care, medication safety, quality/risk management, physician/patient safety and safety systems.

Cases may be referred to the committee through the Regional Supervising Coroner, when/if there is an identified trend in the prevalence of deaths in certain circumstances; there are concerns by the family or investigating coroner relating to the quality of care or provision of services; the nature and complexity of the case requires subject-matter expertise; there are potential public safety issues that can best be explored with the assistance of experts; a multi-disciplinary review is necessary to complete a coroner's investigation (i.e. answer the five questions) and where such a review would likely yield recommendations which may prevent future similar deaths or improve public safety.

The mandate of the committee is to:

- Provide expert opinion about the cause and manner of death in healthcare-related cases where system-based errors appear to be a major factor;
- Assist coroners to improve the investigation of deaths within, or arising from, the healthcare system in which systems-based errors appear to have occurred;
- To stimulate educational activities for professionals through identification of systemic problems, referral to appropriate agencies for action, collaboration with professional regulatory bodies and the dissemination of an annual report;
- To provide expert evidence at inquests;
- To do, or promote, research;
- To undertake random or directed reviews.

Within the context of this mandate, the word 'error' does not imply blame or responsibility on the part of any individual or organization. For the purpose of the review by this committee, 'error' is defined as a system design characteristic that either permits unintended adverse events to occur (latent error) or does not detect deviations from the intended path of care (active error). System design would include not only the design of the care process, but also the management of access to care (e.g. waiting lists). The presence of such errors does not mean that an individual or organization should be assigned blame or responsibility for an unintended outcome.

This committee is advisory to the Chief Coroner and may make recommendations to the Chief Coroner through the Chairperson. In all cases, any action/recommendation proposed by the committee will be discussed with the relevant Regional Supervising

Coroner and the Regional Supervising Coroner will communicate the findings and subsequent recommendations with appropriate agencies and organizations.

Structure of Reviews

The full review of a case requires the use of root cause analysis methods. This would ordinarily require that a team of analysts and investigators to attend the site of the death, catalogue and analyze the scene, utilize a series of triggering questions, interview those involved, pose follow-up questions and generate recommendations aimed at minimizing the likelihood that a similar event would reoccur.

The committee is limited in resources and must work within the mandate and terms of reference. Therefore, the foregoing approach has been modified. Reviewers are usually limited to a review of the health record, the Coroner's Investigation Statement, the Report of Post-Mortem (if performed), information supplied by other investigators and information supplied by the health care institution.

The approach taken by the reviewers generally conforms to the following:

1. Review of material provided by the Regional Supervising Coroner.
2. MedLine or literature search using terms relevant to the review.
3. A Root Cause Analysis Framework, such as that of the Veteran's Administration, is used to develop a series of triggering questions that are used to help identify system issues surrounding each case.
4. Further information is sought from the Regional Supervising Coroner where necessary.

Root Cause Analysis Framework

Triggering Questions:

1. Were issues related to patient assessment a factor? Why?
2. Were issues related to staff training or staff competency a factor? Why?
3. Was equipment involved in this event in any way? Why?
4. Was the work environment a factor in this event? Why?
5. Was the lack of information (or misinterpretation of information) a factor in this event? Why?
6. Was communication a factor in this event? Why?
7. Were appropriate rules/policies/procedures—or the lack thereof—a factor in this event? Why?
8. Was the failure of a barrier—designed to protect the patient, staff, equipment, or environment, a factor ion this event? Why?
9. Were personnel or personal issues a factor in this event? Why?

Based on these triggering questions, follow up questions are posed in the following areas:

1. Human Factors: Communication
2. Human Factors: Fatigue
3. Environment and Equipment
4. Rules/Policies
5. Barriers

Through the use of triggering questions, follow up questions, and case review, the committee attempts to identify relevant issues contributing to the outcomes of each case.

Case Example

A 78 year-old man was admitted to a nursing home. The relevant medical history included severe kidney disease, diabetes mellitus, and dementia. The relevant social history included intermittent wandering and inappropriate social behaviour.

Several months later, he was admitted to hospital with an acute coronary syndrome. He was referred to a nephrologist who planned to monitor the patient in a kidney function clinic.

He was later admitted to hospital with congestive heart failure. His kidney function had continued to deteriorate. Hemodialysis was recommended. A tunneled subclavian dialysis catheter was inserted. Hemodialysis was initiated. The patient was transferred back to the nursing home after 4 dialysis sessions.

For approximately one month, the patient received outpatient hemodialysis three times per week.

Throughout this time, there were problems with intermittent hypoglycemia related to dietary non-compliance and insulin therapy.

The patient was next found in his nursing home bed suffering extensive bleeding from the catheter site. The catheter had been torn. Pressure was applied to the wound by nursing staff. EMS attended the patient and continued to apply pressure.

When the patient arrived at the hospital, he had developed significant respiratory distress. Air was observed to enter the catheter. The catheter was clamped. The patient developed progressive cardiorespiratory failure. He was intubated, ventilated, and given inotropic support. He died in the intensive care unit the day after admission

The coroner was contacted. The family requested no autopsy. No autopsy was performed. The cause of death was probable air embolism.

Issues for Review

1. The use of an accessible central line in a patient with cognitive impairment.
2. The training and supervision required at a nursing home for a patient with cognitive impairment a history of pulling and tearing at objects and a central line.
3. The fact that there did not appear to be clamps which could be used for occluding the line at the nursing home or in the ambulance.
4. The choice of renal replacement therapy.

Structure of the Review

- Review of material provided by the Regional Supervising Coroner
- MedLine search of 'air embolism' and 'dialysis catheter'
- Veteran's Administration National Centre for Patient Safety Root Cause Analysis Framework.

MedLine Search

Three relevant articles were obtained.

Root Cause Analysis

Triggering Questions

Were issues related to patient assessment a factor? YES

1. Were issues related to staff training or staff competency a factor? YES
2. Was equipment involved in this event in any way? YES
3. Was the work environment a factor in this event? YES
4. Was the lack of information (or misinterpretation of information) a factor in this event? YES
5. Was communication a factor in this event? YES
6. Were appropriate rules/policies/procedures—or the lack thereof—a factor in this event? YES
7. Was the failure of a barrier—designed to protect the patient, staff, equipment, or environment, a factor ion this event? YES
8. Were personnel or personal issues a factor in this event? YES

Based on these questions, follow up questions were posed in the following areas:

Human Factors: Communication

- Information was not shared by members of the treatment team on a timely basis.
- Policies and procedures were not communicated adequately between the dialysis team and the nursing home team.
- Correct technical information was not adequately communicated.
- It is not clear whether the patient's family were involved in the decision regarding hemodialysis, or whether concerns regarding confusion and non-compliance were shared.
- There was a history of wandering, non-compliance with diet, and inappropriate sexual comments. However, there was no documented evidence of pulling at catheters. There was one instance of removing an oxygen mask. The patient had a Foley catheter on several occasions and there was no documented evidence of pulling at the Foley catheter.
- There was inadequate communication of catheter care between the nursing home and the hospital based on the documentation.

Human Factors: Training

- There is no documented evidence of training of staff related to catheter care. Such training may have occurred, but it is not documented. The care plan was changed to assess the catheter dressing only.
- There is no documented training of nursing home staff on the care and risks of central lines.
- There is no documented training of staff related to risks and emergencies related to catheter use.

Human Factors: Fatigue

- The incident happened at night. However, there is no evidence for an additional role for fatigue, understaffing, or staff mix.

Environment and Equipment

- The catheter was in active use at the dialysis unit, so it is assumed that it was in good working order prior to December 9, 2004. The records from the outpatient dialysis unit were later reviewed to confirm this.
- Evidence was not seen of an emergency provision or back up system in case of equipment failure.
- It is not known if the Nursing Home had other patients with central catheters.

- The reviewers consulted a nephrologist and a dialysis nurse for general understanding of dialysis catheters and catheter procedures. The clamps are built onto the catheter, and it is virtually impossible to remove them inadvertently. One would have to rip or tear the catheter in order to remove the clamps. In this case, it is concluded that the clamps were dislodged and lost in the patient's room. It is not clear if the distal end of the catheter was ever recovered.
- There is no evidence of staff training on the use of central catheters or procedure in the event of catheter dysfunction.
- There is no evidence of 'back up' clamps available for the patient at the nursing home or in the ambulance.

Rules/Policies

- There are no documented rules or policies related to use of central catheters in confused patients.
- There are no documented rules or policies related to care of central venous catheters at the nursing home.
- There are no documented rules or policies shared with the nursing home by the hospital.

Barriers

- There are no documented barriers.
- It is presumed that there was routine checking of catheter status at the time of dialysis sessions.
- It is standard catheter design that clamps are 'built' onto the catheter lumens. These cannot be easily removed.
- There are guidelines for catheter care that are relevant to the prevention of air embolism. These were designed to ensure safe planned removal of the catheters, but they are relevant to unplanned removal and catheter tearing as well. The major recommendation is the availability and use of an occlusive (airtight) dressing (e.g. Tegaderm ®) over the site to prevent entrainment of air.
- Dialysis units have additional clamps that are routinely used for clamping dialysis tubing attached to the dialysis machine. These are blunt plastic clamps. They could be used in an emergency to clamp catheter tubing as well.

The Decision to Initiate Hemodialysis

Regarding hemodialysis, the general considerations are:

1. Does the patient require renal replacement therapy?

2. Does the patient desire renal replacement therapy?
3. Are there strong indications or contraindications to any type of renal replacement therapy?

In this case, the patient had a clear indication for renal replacement therapy, congestive heart failure, severe impairment of kidney function, and possibly uremic encephalopathy (worsening confusion caused by kidney failure).

The family, as substitute decision makers, desired renal replacement therapy. There is no documentation of any discussion regarding risks and benefits of the central venous catheters, or any concerns related to confusion or patient non-compliance.

There is no documentation regarding the choice of renal replacement therapy. The ability of a patient to safely care (or allow care) of a dialysis catheter is essential for the choice of hemodialysis. It is more difficult to 'pull' a peritoneal dialysis catheter.

Causal Statements

1. The lack of communication of policies and procedures related to catheter care between the hospital and the nursing home increased the likelihood that the torn tubing would not be occluded and clamped.
2. The lack of policies and procedures related to the care of central catheters at the nursing home increased the likelihood that the torn catheter would not be occluded or clamped.
3. The lack of nursing home staff training on the care of central catheters increased the likelihood that the torn catheter would not be occluded or clamped.
4. The lack of necessary equipment (barrier dressings and additional clamps) increased the likelihood that the torn catheter would not be occluded or clamped.

Recommendation: Hospitals that insert central lines should develop and provide clear care policies and procedures related to the care of the catheter, including management of catheter-related emergencies.
(This recommendation addresses causal statements 1-3.)

Recommendation: Nursing homes that provide care for patient with central lines must train staff on appropriate catheter care and management of catheter related emergencies.
(This recommendation addresses causal statements 2-4.)

Recommendation: EMS personnel should be trained on management of catheter emergencies.

Recommendation: Catheter emergency kits should be stored in the patient's room and at the nursing station, and should be available to EMS personnel. This kit should include a checklist of procedures, clamps, and barrier dressings.
(This recommendation addresses causal statement 4.)

Recommendation: The Ministry of Health and Long-Term Care (MOHLTC) and dialysis providers should examine ways and means to encourage the use of peritoneal dialysis in long-term care facilities, as this may be a safer modality than hemodialysis for this population.

Patient Safety Committee Statistics

- Committee formed in May 2005
- Eight cases reviewed in 2005
- Seven cases in 2006

Trends in Cases

- About ¼ primarily medication-related (narcotics and anticoagulants are over-represented)
- About ¼ involved medical device problems (not necessarily failures)
- 1/6 involved under-recognition of the severity of illness (in other words, the symptoms were thought by caregivers to be due to non-serious illness)

Recommendations made by the committee are directed to appropriate agencies and institutions. Further, the case reports of the committee are published in such journals as the Members' Dialogue of the College of Physicians and Surgeons and the Ontario Hospital Association Bulletin to educate and make clinicians aware of these issues.

The Paediatric Death Review Committee and The Deaths Under Five Committee

The mandate of both committees is to assist in the investigation and to provide advice to the Chief Coroner regarding the cause and manner of death in paediatric fatalities. In addition, the medical and child welfare death reviews conducted by the Paediatric Death Review Committee (PDRC) may provide opportunities for recommendations directed toward the avoidance of death in similar circumstances in the future.

The committees track and report on the trends, risk factors, and patterns identified by the reviews, in the interest of public safety and prevention.

Of paramount importance is that the public understand that these review committees, while identifying causes of death and systemic issues which may have been contributory to deaths, are prohibited from taking on advocacy positions, developing guidelines, or implementing programs for the prevention of death. When informed by the Chief Coroner of identified trends, these tasks should be properly undertaken by non-governmental agencies, ministries of government, representative organizations or advocacy groups.

In addition to a Deputy Chief Coroner and a Regional Supervising Coroner, the committee membership includes representatives from multiple disciplines including, paediatricians, pathologists, police, crown attorney's office and child welfare experts. Other individuals with specific expertise and/or case knowledge may be invited to committee meetings on a case-by-case basis, as the need arises at the discretion of the Chair, and with advice from members of the Committee.

Referrals to the Committee

1. Regional Supervising Coroners notify the Chair of the Committee of all relevant paediatric deaths.

2. Upon completion of the initial investigation, the respective Regional Supervising Coroner refers cases, in writing, to the Paediatric Death Review Committee/ Deaths Under Five Committee.

3. Upon receipt of a case referred to the committee, the Executive Officers coordinate and examine the documentation in relation to the case. The Executive Officers and the Chair will subsequently disseminate the case to members for review, or make the decision not to proceed with a full case review. Items reviewed by the PDRC include, the Coroner's Investigation Statement, autopsy report, toxicology report, ancillary reports, police report, child welfare and medical files.

Case Reviews

The Deaths Under Five Committee (DU5C) reviews, all deaths of children under five years of age investigated by a coroner in Ontario, assists in the classification of cause and manner of death, and may refer the case for further review to the PDRC as required. The DU5C meets approximately 6 times per year.

The PDRC reviews medically complex deaths, where the cause and/or manner of death may be in question, or where there are concerns regarding medical care. The committee may also review selected cases where family members or caregivers raise concerns. All cases, where the deceased child's family had an open file with a Children's Aid Society (CAS) at the time of death, or within the preceding 12 months, are reviewed, as per a Joint Directive between the Office of the Chief Coroner and the Ministry of Children and Youth Services. The PDRC meets 10 times per year, monthly from September to June.

The DU5C and PDRC review a large number of cases annually. The intake, preparation and review of these cases are labour intensive.

PDRC

In 2005, the PDRC reviewed a total of 49 cases. 28 of those cases had CAS involvement with the child prior to their death. The three cases recommended for inquest were of a medical nature and had no CAS involvement.

In 2006, the PDRC reviewed 86 cases, with 63 having involvement with a CAS. One case was referred for inquest.

PDRC: Medical and CAS Case Reviews 2005-2006

	2005		2006	
Manner of Death	**Medical**	**CAS**	**Medical**	**CAS**
Natural	18	10	16	18
Accident	1	6	1	13
Homicide	0	0	3	7
Suicide	0	5	0	9
Undetermined	2	7	3	9
Ongoing Investigation				*7*
Total Case Reviews:	**21**	**28**	**23**	**63**

Identified Themes

Since its inception in 1991, the PDRC has compiled a number of common themes that have recurred in the review of children's deaths. Reviews echo the findings of an increasing volume of literature on errors in medicine, which suggests that tragedies rarely result from a single fatal error, or flaw, and are more likely to arise from a series of latent flaws in both systems and in performance. The occurrence of multiple imperfections is frequently synergistic. Latent flaws in the **medical cases** reviewed, which may appear quite basic, but are seen repeatedly by the Committee include:

- Failure to ***listen*** to repeated parental concerns, particularly in the child who returns without having responded to initial medical management.

- Failure to record or review ***vital signs***, particularly blood pressure – ***VITAL SIGNS ARE VITAL!!!!***

- Failure to make a semi-quantitative assessment of *fluid intake and output*, particularly in the child with vomiting and diarrhea (e.g. number of loose stools, wet diapers etc).

- Where lab tests are ordered, particularly in an emergency department, it is essential that the results of these tests be **known *before a decision is made regarding further treatment***.

- ***Illegible* or *sloppy handwriting***, which is misinterpreted by others.

- Failure to record ***thought processes***, or the reasons behind certain actions – the more badly things are going, the more important charting becomes (and the less likely complete charting is to be found).

- Failure to record *weight* or to use *growth charts.*

- Failure to include not only the *date* but also the *time* of a chart entry.

- Failure to ***follow-up on missed appointments*** especially for the "non-compliant parent and non-responsive patient".

- Failure of an institution to *meet with the parents* after a death to discuss and review the care provided.

- Refusal by care providers to ***accept alternative explanations*** after the event, even after review by third parties.

PDRC Case Example

A 14 year-old child, with a long history of depression and suicidal ideation, committed suicide by hanging. She had been monitored by her family physician and a school nurse. She demonstrated self-cutting behaviour in early 2006 with initiation of Paxil. One month later, she attempted to hang herself, but the ligature broke. She attended a community hospital emergency department, where she was transferred to a tertiary care centre. She was admitted for one week in a Child and Adolescent Unit. Her Paxil was discontinued and Prozac was prescribed. Upon discharge, she was referred for counselling at an adolescent behavioural counselling group. One month following her discharge, she was admitted to hospital on a Form 1 after being assessed by a physician following a suicide attempt two days before.

Over the months between this admission and her death, there were multiple contacts with hospitals and health care providers as well as a number of suicide attempts.

Cause of death

Hanging

Manner of death

Suicide

Themes

1. Access to mental health services for children and adolescents is limited. In small communities, it is nonexistent.
2. There is often no access to child and adolescent psychiatric beds.
3. Hospitals caring for psychiatric patients rarely have dedicated paediatric psychiatry beds.
4. Psychiatric services offered to paediatric patients are generally outpatient services. It was difficult to keep this child safe out of hospital.

Recommendation: The Regional Supervising Coroner responsible should meet with the child and adolescent health care team to determine if the problems identified in this death are ongoing.

Recommendation: If these problems continue to be ongoing, then they should be reported to the Chair of the Paediatric Death Review Committee (PDRC).

CAS Case Themes

Involvement with a CAS is not a factor in the vast majority of child deaths in Ontario; for those children who died while receiving CAS services, most deaths could not have been foreseen or prevented by a CAS. However, a number of the children's deaths reviewed by the PDRC resulting from acts of omission or commission were potentially preventable with increased or different intervention, education or monitoring. By identifying patterns and themes, and making meaningful recommendations, it is hoped that future deaths in similar circumstances can be prevented. For example, many of the deaths reviewed might have been prevented by:

- Provision of a safer sleep environment.
- Provision of coordinated mental health resources and facilities directed to youth identified as high risk for suicide.
- More appropriate or adequate supervision of a child.
- Intervening before a violent act was directed at a child by a caregiver.
- Closer attention and response to a child's medical needs.

DU5C

In 1995, the Office of the Chief Coroner introduced a protocol to be used in investigating the death of any child under 2 years of age. Over the years, the protocol has been significantly refined, and in December 2006, it was felt appropriate, to issue an up-to-date version of the protocol to be used by the death investigation team (police, coroners, pathologists) to investigate sudden and unexpected deaths of all children under 5 years of age. As a result, the *Deaths Under Two Committee* was renamed the *Deaths Under Five Committee* to encompass the new age range.

Age 0 to 5 yrs Manner of Death	2005	2006
Natural	136	111
Accident	33	32
Homicide	10	9
Undetermined	53	42
Total	**232**	**194**

Trends in Infant Deaths in Ontario

- Decrease in the number of Sudden Infant Death Syndrome (SIDS)
- Increase in the number of Sudden Unexpected Death (SUD)
- Unsafe sleeping, bed-sharing were contributing factors to the SUD total

- Ontario in 2006 – 5 SIDS; 27 SUD (with bed-sharing or unsafe sleeping as contributing factors).

According to Statistics Canada:

- Between 1980 and 2005, the infant mortality rate in Canada declined by 52%. The infant mortality rate in Canada for 2005 increased marginally to 5.4 compared to 2003 and 2004 at 5.3 deaths respectively, per 1,000 live births.Between 2004 and 2005, the infant mortality rate for babies under one year of age increased in 6 provinces and territories, including Ontario, where the rate was 5.6 per 1,000 live births.

In 1991, there were approximately 140 deaths classified as SIDS in Ontario. Clearly, since that time, the numbers have decreased to less than 10 per year, the reasons being:

1) **Education:** Back to Sleep Program -referring to placing a baby on their back (supine position) when putting them down to sleep.
2) **Stricter Definition of SIDS:** The Office of the Chief Coroner uses the National Association of Medical Examiners (NAME) guidelines when classifying infant deaths. This allows for a consistent classification in the Coroners' system.
3) **DU5 Questionnaire:** Designed by the Coroner's Office, the questionnaire assists coroners and police officers to ensure that all aspects of a comprehensive scene investigation are addressed.

Unsafe Sleeping Environments and Bed-sharing vs. Co-sleeping

The terms SUD or SUDI (Sudden Unexpected Death in Infancy) are now often used instead of SIDS in many jurisdictions, including Ontario, in some deaths previously considered to be SIDS. SIDS, being a diagnosis of exclusion, is reserved for deaths of infants where there are no positive findings after a complete and thorough investigation has been conducted.

Increasingly, the findings of "unsafe sleeping environment" and "bed-sharing" are being recognized as positive findings in the death investigation leading to the manner of death being classified as 'undetermined'. This change is causing a diagnostic shift in the mortality data globally, and can cause confusion.

In Ontario, the DU5C considers the sleep environment in all deaths of children who die during sleep, particularly those under the age of one year. Unsafe sleeping environments include, surfaces not designed for infant sleep, such as adult beds, couches, armchairs and infant swings. However, any sleep surface that is cluttered with pillows, blankets, toys, duvets and other objects is deemed to be an unsafe sleeping environment.

The terms "co-sleeping" and "bed-sharing" are often used interchangeably by professionals and in the literature. The PDRC and the DU5C have committed to

using “bed-sharing” to mean an infant sharing the same sleep surface with someone else (usually an adult, but occasionally a sibling). The term “co-sleeping” is used to describe an infant sharing the same room with the caregiver (s).

The number of infant deaths reviewed by the committees where unsafe sleeping practices, including bed-sharing, are factors, is a growing concern. While there is no way of knowing how many parents share a bed with their infants without incident, the frequency with which death results is a genuine public safety issue. Various Child Death Review teams share this view and several organizations have taken a strong stance and have issued position statements and warnings about the risks associated with bed-sharing. Although a controversial issue, the PDRC/DU5C members believe it is a growing issue for public safety and it would be irresponsible not to report the number of these deaths reviewed in Ontario. This message is meant to raise the awareness of parents, alternate caregivers, and professionals who work with young children, as it is critical in the prevention of future deaths. Further research in this area is warranted and is ongoing.

DU5C Case Example

A six-week-old female child was being breast-fed by her mother in the parents’ bed; the father was also present. The mother apparently fell asleep while breast-feeding and woke up in the morning to find the child vital signs absent. The child was subsequently transferred to the emergency department where resuscitation attempts were unsuccessful. Autopsy results revealed no obvious anatomic cause of death. There was no evidence to suggest foul play; post-mortem radiology showed no recent or old fractures and toxicology test results were negative. The death was classified as:

Cause

SUDI; Sudden Unexpected Death in Infancy (in the presence of bed-sharing with both parents in an unsafe sleeping environment – adult bed)

Manner

Undetermined

Conclusion

In reviewing child deaths, we all learn from:

- Investigations
- Internal Reviews
- Death Review Committees
- Inquests
- Disseminating results & recommendations

“Mistakes are a great educator when one is honest enough to admit them and willing to learn from them” … (anonymous).

Chief Coroner's Special Investigations

In addition to the formal coroners' inquest process and the investigative work by the various death review committees, the Office of the Chief Corner can also conduct special investigations at the direction of the Chief Coroner to advance public safety. The Chief Coroner can order a special investigation when a death(s) may require closer examination to identify the possible presence of systemic issues or concerns. Its purpose is to generate recommendations that, if implemented, could prevent future deaths under the same or similar circumstances and not to point blame or assign responsibility.

Case #1

In January 2005, a Chief Coroner's Special Investigation was announced concerning the deaths of 10 individuals at a regional residential centre in Southern Ontario that occurred from January 2000 to November 2004. The investigation was announced in response to a tragic death of a resident who went missing from the facility and was subsequently found deceased. The following is a synopsis of that investigation.

This publicly funded regional residential centre had been providing both residential and non-residential programs for adults and children with developmental disabilities since 1975. The 10 residents suffered from complex medical, psychiatric and/or developmental disabilities. The investigative team consisted of the Deputy Chief Coroner – Inquests, the investigating coroner, three police officers, a general surgeon, psychiatrist and family physician with expertise in providing medical care to patients with developmental disabilities.

The three month investigation consisted of an examination of each residents medical chart; interviews with staff and management; interviews with family members, medical providers and representative from the Board of Directors and families association at the facility, as well as staff from the Ministry of Community and Social Services.

The residents who were the subject of the review ranged in age from 22 to 57 years and resided at the facility for between one and 27 years. For each of their cases, the answers to the five questions – the identity, the how, when, where and by what means the deaths occurred were known. Three residents died of tragic accidents and as a result, a number of changes had already been implemented in response. This review did not identify any additional need for further changes.

Of the remaining deaths, four were from natural causes and a review of the circumstances raised no issue for specific recommendations.

The three remaining deaths were from complications of gastrointestinal blockages or perforations. One resident suffered an acute event that could not have been

predicted. The other two residents died from complications of a disease, know as pica (a disease of chronic ingestion of non-nutrient substances). The investigation into these three cases did reveal the basis for some for the recommendations made at the conclusion of the investigation.

The investigative team made 11 recommendations. Eight of those recommendations were directed to the facility; two to the Ministry of Community and Social Services and one to the Office of the Chief Coroner. All recommendations, while not binding, were implemented by all respondents.

The investigative team acknowledged the dedicated professionals who provide care for the residents at this center, as they were eager to cooperate and willing to identify what, if anything, could have been done differently for their residents. The families were also acknowledged for their support and understanding.

Case #2

In June 2005, the Royal Canadian Mounted Police and the Ontario College of Pharmacists, launched an investigation into the dispensing of the drug Norvasc (amlodipine), a cardiac medication, from a particular pharmacy in the Hamilton area. A customer had contacted authorities to report that her recent prescription of this drug looked significantly different than previous tablets she had been given. The investigation revealed that the pharmacist had been purchasing Norvasc from an independent wholesaler, who claimed to be able to purchase the drug from the manufacturer at a reduced price due to high volume purchases. Analysis performed by the manufacturer revealed that one vial of the seized drug did not contain the proper therapeutic level of active ingredient and therefore, was not approved for sale in Canada. Known as “grey-market drugs”, these preparations are manufactured by reputable pharmaceutical companies, but may only be dispensed in approved countries due to their formulations. Another vial contained little or none of the active ingredient and was therefore considered “counterfeit.”

As a result of this investigation, the Chief Coroner ordered special investigations into 11 deaths of individuals, who were dispensed Norvasc from this pharmacy and had subsequently died. All of the 11 deaths occurred in 2004 and 2005 and included males and females who were in their late 40’s to early 90’s. All were initially thought to have died of natural causes.

The Regional Supervising Coroner for the Niagara Region led the investigation. With the assistance of other agencies, it was determined amlodipine substitution could be excluded as a factor in the death to a high degree of confidence in seven of the 11 cases. Of the remaining four cases, amlodipine substitution was considered both plausible and possible but the extent to which could not be determined with confidence. In these four cases, the medical cause of death was changed to include the phrase, “possible unauthorized medication substitution,” and the manner of death was classified as “undetermined.”

The Office of the Chief Coroner developed six recommendations aimed at preventing deaths in similar circumstances. These recommendations included improved tracking mechanisms to monitor drugs from the time of their manufacture to the time of their sale, as well as regulations that govern where pharmacists can buy drugs to be reviewed and restricted, if necessary. The recommendations were sent to the Ministry of Health and Long-Term Care, Health Canada and the Ontario College of Pharmacists. Of those recommendations, two "will be implemented"; one "alternative will be implemented" and three are "under consideration."

The pharmacist was criminally charged with a number of offences and stood trial in February 2007. He was acquitted of all charges. On January 18, 2008, the Ontario College of Pharmacists suspended his Certificate of Registration for a period of 12 months; ordered remedial training and placed a number of restrictions against his certificate for a five-year period.

Note: The Hamilton pharmacy was sold and placed under new management in August 2005.

Legal Briefs

The law affecting the work of coroners is derived from two primary sources: legislative enactments, through the passage of new statutes or regulations; and legal principles expressed by the courts through decisions that interpret and apply the legislation. Both legislative developments and judicial decisions contributed to the growing body of law involving coroners and their important public responsibilities. The years 2005 and 2006 saw the emergence of two significant legal developments affecting the inquest process.

Case Law Developments in the Courts (2005)

(i) Hanley v. Eden (2005), 249 D.L.R. (4th) 447, 193 O.A.C. 292, [2005] O.J. No. 55 (Div. Ct.)

The Ontario Divisional Court, in this 2005 case, had occasion to consider challenges to the established practice whereby the presiding coroner establishes a date, location and time for an inquest based upon the availability of the key personnel (coroner, coroner's counsel, investigator and coroner's constable) and a suitable location for the inquest. It had been argued by counsel representing a party with standing at the inquest that the coroner should hold a meeting or conference call with the parties or their representatives in order to establish a date that is mutually acceptable to all.

The Court rejected this argument, holding that the selection of a "start date" for an inquest or a new date following and adjournment is that of the coroner. The coroner's decision prevails, unless it is demonstrated that to proceed on the date selected by the coroner would result in a fundamental failure of justice. The Court further held that there is no requirement that the coroner hold a meeting or otherwise seek unanimity from the interested parties prior to notifying them of the date chosen.

The coroner may, of course, subsequently be persuaded that there is a valid reason to change the date initially chosen. The Divisional Court held that if the date set out in the notification would bring about a fundamental failure of justice, it would be up to the party or parties affected to apply to the coroner to have the date changed. Such parties would, as a matter of fairness, have a right to be heard on such an application.

The Court also considered another aspect of the scheduling of an inquest. The particular inquest concerned the death of a skier at a ski club. The coroner had decided to hold the inquest at the height of the ski season in order to provide "maximum exposure" and call public attention to the issues. The Divisional Court noted that the circumstances surrounding the death of a member of society, and

the question of whether the death could have been avoided or prevented through the actions of agencies under human control, are matters within the legitimate scope of the whole community. It concluded that the coroner was within his rights in choosing a "high season" date rather than starting the inquest in the "off season."

(ii) Snow v. Minister of Community Safety and Correctional Services (Ontario Divisional Court, October 27, 2006, Court File No. DV-702-05, unreported) (2006)

This 2006 decision dealt with judicial challenges to decisions by the Chief Coroner and by the Minister of Community Safety and Correctional Services to refuse to order the holding of an inquest into two deaths that occurred as a result of a motor vehicle collision. Mr. Snow, the husband of one of the two deceased, had made formal requests to both the Minister and the Chief Coroner that an inquest be held.

In dismissing both applications for judicial review, the Court made two pronouncements of significance to the law concerning the holding of inquests. First, the Court held that in deciding whether to hold an inquest or not, the Chief Coroner owes a duty to the public as a whole, and not merely in relation to the personal interest of the person making the request. Second, the Court found that while there is only a limited "appeal" from a decision of the Chief Coroner to the Minister under subsection 26 (3) of the *Coroners Act*, section 22 of the *Act* confers a free-standing discretion upon the Minister to order an inquest and that this discretion operates independently of the decision of the Chief Coroner.

New Legislation (2006)

The year 2006 saw the enactment of a statute known as *Kevin and Jared's Law* (Statutes of Ontario, 2006, Chapter 24). This *Act*, which began as a Private Member's Bill (Bill 89), amended both the *Coroners Act* and the *Child and Family Services Act*. It made two changes in relation to the law of inquests.

First, it created a new category of mandatory inquests. Under the new section 22.1 of the *Coroners Act*, an inquest into the death of a child is now required where all three of the following have occurred:

1. A court has made an order under the *Child and Family Services Act* denying access to the child by a parent of the child or had made that access subject to supervision; and
2. On the application of a Children's Aid Society, the court subsequently varied the order to grant access or make it no longer subject to supervision; and
3. The child subsequently died as a result of a criminal act by a parent or family member who had custody or charge of the child at the time of that act.

The second change made to the *Coroners Act* is the establishment, in certain circumstances, of a right of a person with standing at an inquest to apply to the Minister of Community Safety and Correctional Services to have the costs incurred for representation by legal counsel at that inquest paid out of the victims' justice fund account under subsection 5 (1) of the *Victims' Bill of Rights*. This right to apply is given to a person granted standing who is a:

1. Spouse;
2. Same-sex partner; or
3. Parent

of the person whose death is the subject of the inquest, where the inquest is into the death of a person who is a "victim" as defined in the *Victims' Bill of Rights*.

Research

The Office of the Chief Coroner is active in research, both within the organization, other ministries and with outside agencies, such as Statistics Canada, The Ontario Trauma Registry, Toronto Public Health, Traffic Injury Research Foundation and many more organizations, to advance public safety in Ontario.

Statistics Canada

The Office of the Chief Coroner's information database was used for a pilot project to develop the mapping of standard coding of case files translated into the international coding system for collecting medical data across Canada. Coroner/Medical Examiner data positively contribute to injury prevention campaigns and policies.

Ministry of Transportation and The Traffic Injury Research Foundation

These two organizations use data from the Office of the Chief Coroner of all motor vehicle accidents to promote public awareness of drinking and driving and seatbelt usage.

Ontario Trauma Registry (OTR)

The Ontario Trauma Registry deals with all lead trauma hospitals in Ontario to collect medical data of injuries in conjunction with the Office of the Chief Coroner. Its purpose is to provide trauma death data for the promotion of education and policies in the medical field.

Toronto Public Health

Toronto Public Health collects data of all drug related deaths in Toronto. This data, tabulated since 1986, provides information on both legal and illicit drugs use, combinations used and their associated dangers. Drug-related deaths are a key indicator in multi-agency reports on drug use compiled by Toronto Public Health. The data is used to facilitate early recognition, a better understanding of drug-use trends and to share ideas concerning issues of local importance related to drug use. An example of their work would be the promotion of a needle exchange program to enhance public safety.

Closing Message from the Chief Coroner

I would like to once again express my thanks to our dedicated staff who prepared this report. In particular, would like to acknowledge the efforts of Dr. Bonita Porter, Deputy Chief Coroner for Inquests, Cheryl Mahyr, Amanda Mattix, Katherine Stephen and Kathy Kerr.

Resources

Office of the Chief Coroner:
http://www.mcscs.jus.gov.on.ca/english/office_coroner/about_coroner/about_coroner.html

Ministry of Community Safety and Correctional Services:
http://www.mcscs.jus.gov.on.ca/english/default.html

Service Ontario (Death and Birth Certificates):
http://www.serviceontario.ca

Coroners Act:
http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90c37_e.htm

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