Paediatric Death Review Committee and Deaths Under Five Committee Annual Report

Office of the Chief Coroner
Province of Ontario

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This report is available in an alternative accessible format on the Office of the Chief Coroner Publications webpage.

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Message from the Chair

I am pleased to be sharing the 2014 Annual Report of the Paediatric Death Review Committee and Deaths Under Five Committee of the Office of the Chief Coroner (OCC) – the product of two very dedicated committees that share a common goal: contributing to child death prevention through careful, thorough discussion and review of child deaths.

After acting as interim Chief Coroner since July 2013, I was appointed Chief Coroner this March. Together with Ontario's Chief Forensic Pathologist Dr. Michael Pollanen, we are embarking on a divisional strategic plan to guide our work over the next five years. Part of this process includes evaluating the approach to paediatric death review and death review committees. As a result of this evaluation, changes to the paediatric death review process may take place in 2015.

A key priority of the OCC and Ontario Forensic Pathology Service (OFPS) is a commitment to data driven public safety. The death investigation system works collaboratively to provide high quality data to inform both at the individual level i.e. investigators and families, but also at the aggregate level, where we see how our information compares with broader sets of data – other cases, data over time, and other jurisdictions. Family members deserve the best answers possible to understand more about their loss. By ensuring each investigation is comprehensive and of high quality, we will not only be in the best position to inform the family, the data may contribute to a broader understanding of deaths. We are taking every opportunity to work with others to improve and standardize data collection so it will be useful for experts in affecting public health analysis, policy development, research and prevention strategies.

In striving to adopt more innovative approaches, we will be guided and informed by lessons learned through the practices of other jurisdictions and the experience gained by the OCC through paediatric death reviews over time.

This is the second report I have presented as Chair of the Paediatric Death Review Committee (PDRC) and the Deaths Under Five Committee (DU5C). There have been some changes to our approach already, which is consistent with my view that we should always strive to grow, improve and find ways to do things better. In last year's annual report, we introduced the DU5 Committee's new approach to classifying infant deaths and replaced the DU5 Investigative Protocol with the new Investigative Questionnaire for Sudden and Unexpected

Deaths of Infants. This year's annual report expands the PDRC - Child Welfare (CW) analysis to go beyond only providing information on the cases the committee reviewed the previous year. We are now including the data and information on all cases reported by children's aid societies (CAS) during the year. By considering this additional data, we can gain valuable insight into paediatric deaths with CAS involvement, and in some cases, how these deaths compare or contrast to the information available on non-CAS paediatric deaths. In keeping with our overall mandate, we are hopeful this additional information will assist stakeholders in developing strategies and policies aimed at preventing future deaths in similar circumstances.

Our report this year is published later in the year than it has been previously. We have undergone a number of changes at the OCC, including significant changes in committee management. After eight years with the OCC, Child Welfare Specialist Karen Bridgman-Acker has moved on to other opportunities. I am very appreciative of the contributions Ms. Bridgman-Acker made in strengthening the information flow between the child welfare sector and Ontario's death investigation services. She effectively demonstrated and applied her expertise in assessment of child protection concerns to make positive contributions that improved and supported paediatric death investigation at the OCC. I thank her for that work.

Making significant contributions to this year's annual report were two newcomers to the OCC – Tara McCord, who is the Executive Lead for the OCC's death review committees, including the DU5C, and Jessica Diamond, on special assignment from the Ministry of Children and Youth Services to facilitate the child welfare portion of the PDRC and assist with the evaluation of the paediatric death review process. Together with the diligent and excellent work of the PDRC and DU5C members, there have been tremendous efforts made to ensure that the untimely deaths of children are respectfully reviewed and carefully considered. I am fortunate to be supported by such a dedicated team of professionals.

I am enthusiastic about the next steps that the OCC will take in the field of paediatric death investigation and review, and believe that this Annual Report is reflective of a more holistic perspective of paediatric death reviews in Ontario.

Dirk Huyer, MD
Chief Coroner for Ontario
Chair, Paediatric Death Review Committee
and Deaths Under Five Committee

The Office of the Chief Coroner and the Context of Paediatric Deaths in Ontario

In Ontario, death investigation services are provided by the Office of the Chief Coroner (OCC) and the Ontario Forensic Pathology Service (OFPS). Together, they form a division within the Ministry of Community Safety and Correctional Services.

The OCC partners with the OFPS to ensure a coordinated and collaborative approach to conduct the highest quality death investigations in the public interest. Other key death investigation partners include police services, the Centre of Forensic Sciences and other investigative agencies including but not limited to Children's Aid Societies, the Ministry of Labour and the Office of the Fire Marshal. Ontario is the largest medico-legal death jurisdiction in North America.

In Ontario, coroners are medical doctors with specialized training in the principles of death investigation. Coroners investigate approximately 15,000 deaths per year in accordance with Section 10 of the Coroners Act. They investigate all non-natural deaths such as those involving violence, foul play, suicide, and where accidental injury may be involved. Investigations are completed on natural deaths that are sudden and unexpected as the manner of death is initially unclear. Other natural death investigations may occur depending on the type of death and/or if there are concerns about the care of the deceased prior to death. The OCC investigates approximately 20% of all deaths that occur within the province each year. In paediatric deaths (i.e. from live birth to the nineteenth birthday), this proportion over the past five years is approximately 35%.

The Paediatric Death Review Committee (PDRC) and the Deaths Under Five Committee (DU5C) are two of the seven expert death review committees that report to the Chief Coroner for Ontario. For administrative purposes, the PDRC is composed of two sections based on the nature and circumstances of the death: PDRC - Child Welfare reviews cases with child welfare (i.e. Children's Aid Society) involvement, and; PDRC - Medical reviews the deaths of children where issues or concerns about the medical diagnosis or provision of care have been identified.

The OCC has death investigation procedures that mandate expert death committee reviews for deaths in certain circumstances. The DU5C reviews all deaths investigated by coroners involving children under the age of five. The PDRC - Child Welfare must review all deaths involving children and youth when the child the youth or their family was receiving, or had received, the services of a Children's Aid Society (CAS) within 12 months of the death. All other reviews conducted by the PDRC, particularly those with medical implications, are done on a discretionary basis and are referred to the PDRC – Medical by the relevant Regional Supervising Coroner or DU5C.

Child and Youth Deaths in Ontario and Canada: Trends Over Time

While deaths of children and youth comprise a small percentage of those investigated by the OCC, each of these deaths is challenging from emotional and investigative perspectives. It is important to consider the findings published in the Annual Report within the broader context of childhood deaths in Canada.

While the OCC defines the paediatric age group from live birth to the nineteenth birthday, adolescent data provided by Statistics Canada also includes the nineteenth year (i.e. up to the twentieth birthday). For the purpose of the comparisons demonstrated in Charts 1 – 4, data from the OCC includes investigations of adolescent deaths up until the twentieth birthday as well. On average, the OCC investigates 63 deaths of individuals in their nineteenth year. For Charts 1 – 4, please note that 2011 is the most recent year for which complete data is available.

Chart 1 illustrates the number of child and youth deaths per year and compares the number of cases investigated by the OCC with the provincial and national numbers. Between 2005 and 2011, the year to year totals have remained fairly consistent both in Canada and Ontario, as seen in **Chart 2**.

Chart 1: Comparison of Child and Youth Deaths In Canada and Ontario with Investigations by Ontario Coroner's 0-19 Years of Age (2005-2011)

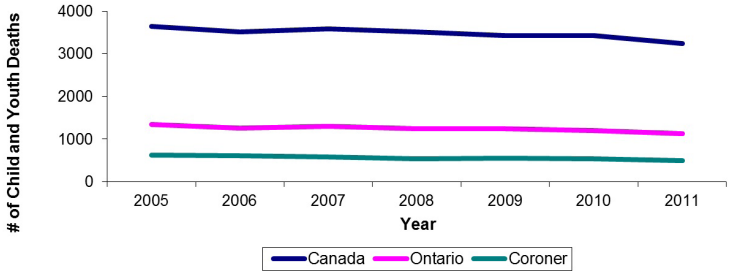


Chart 2: Paediatric deaths in Ontario compared with Canadian totals

	Canada (Total)	Ontario (Total)	% of Ontario paediatric deaths vs. Canada
2005	3640	1335	37%
2006	3513	1249	36%
2007	3591	1297	36%
2008	3517	1237	35%
2009	3423	1247	36%
2010	3424	1201	35%
2011	3245	1122	35%
Average	**3479**	**1241**	**36%**

Child and Youth Deaths in Ontario: Distribution Across Age Groups

Chart 3 illustrates the average number of death investigations completed by the OCC compared with the six year average Ontario total number of deaths, distributed by age group. Proportionately, infants compose the largest subgroup of deaths, followed by adolescents.

Chart 3: Average of Child and Youth Deaths in Ontario (2005-2011) Distribution Across Age Groups

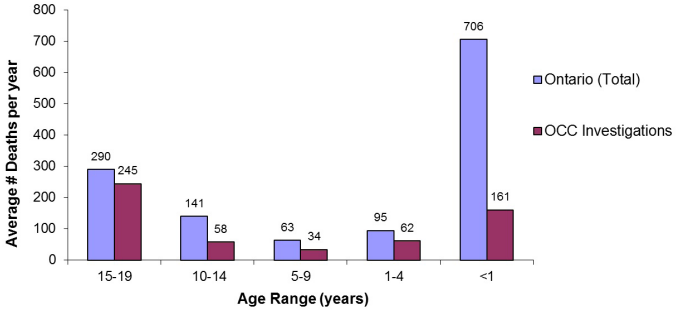


Chart 4 illustrates that over the 6-year period studied, the OCC investigated approximately 23% of infant deaths (< 1 year), 65% of deaths of 1-4 year olds, 54% of the 5-9 year olds, 41% of 10-14 year olds and 84% of adolescent deaths (15-19 year olds).

As demonstrated in **Chart 5**, there is a change in the distribution of the manner of death provided by Ontario coroners that follows age progression from infancy to adolescence. There is a clear contrast between the manners of death provided in infancy (< 1 year) versus adolescence (14-18 years). Natural and undetermined deaths dominate investigations of children under one, gradually changing to non-natural manners (accident, homicide and suicide) which are more prevalent among adolescents.

Chart 4: Percentage of Cases Investigated by Coroners comparted with all Ontario Deaths Based on Age Group Averages from 2005-2011

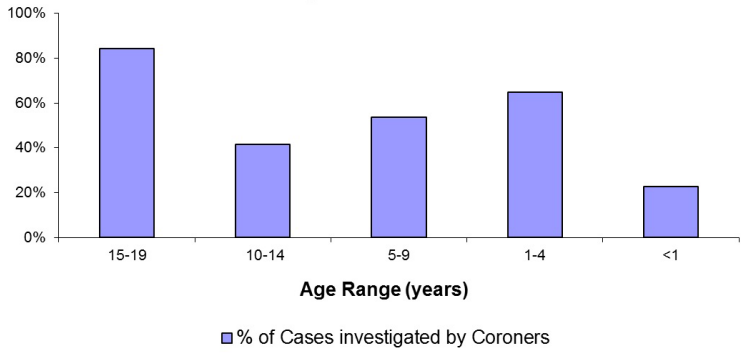
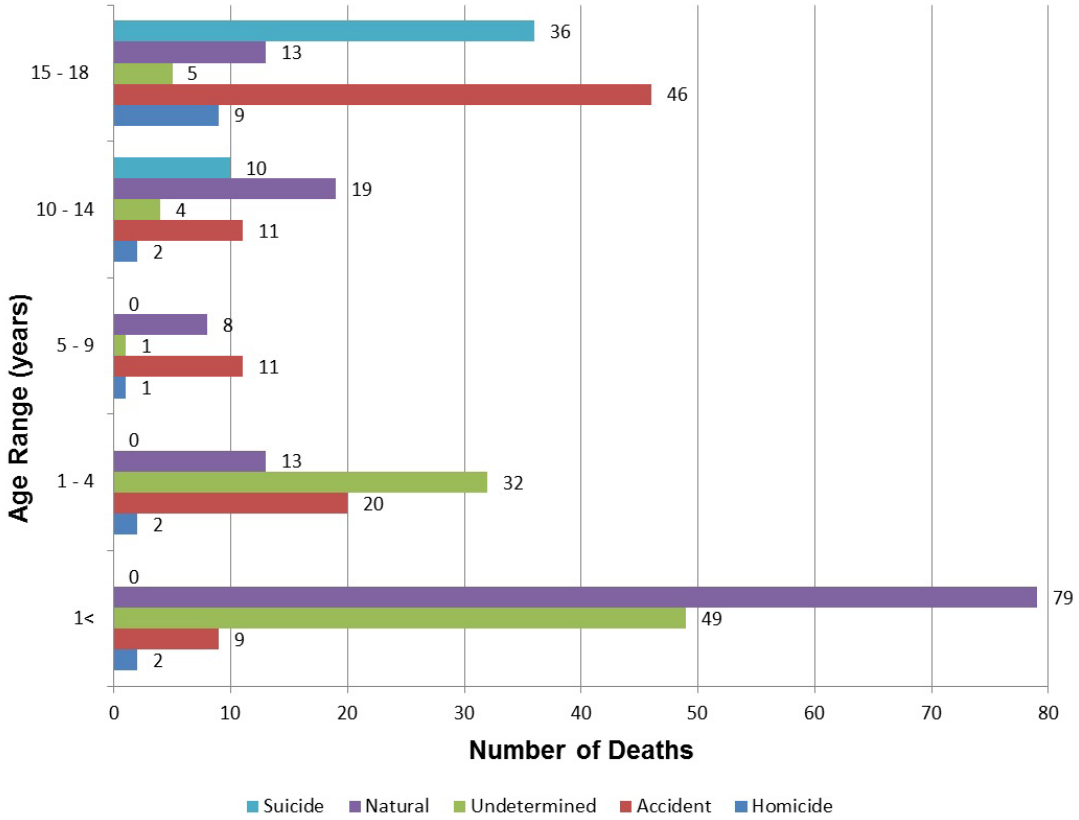


Chart 5: Manner of Death in OCC Investigations (2013) Distribution Across Age Groups



Deaths Under Five Committee

Introduction

The Deaths Under Five Committee (DU5C) of the Office of the Chief Coroner (OCC) meets at least six times per year for the purpose of comprehensively reviewing the deaths of children less than five years of age investigated by coroners in Ontario. It is a multi-disciplinary committee and members include forensic pathologists, coroners, police detectives, child maltreatment and child welfare experts, crown attorneys, a Health Canada product safety specialist and executive staff from the OCC. Attendance for knowledge enhancement is common, including learners from different stages of medical education and detectives from police services that are not active committee members. The membership is balanced to reflect Ontario's geography. It also includes members from ten police agencies that provide diversity in terms of geographic area, size of police service and the skill set of the investigators.

Scope and Mandate

The DU5C reviews all cases investigated by a coroner involving the deaths of children under five years of age including, neonatal cases where the death was potentially linked to parental behaviour (e.g. sleep circumstances/unsafe sleep environment, maternal substance use, neglect, domestic violence, etc.) and those in which the Children's Aid Society (CAS) was involved at time of the death. The committee does not review neonatal deaths that occur prior to discharge from hospital where no substantive issues have been identified. The mandate of the DU5C is to determine the cause and manner of death for all cases meeting the criteria for review. Case-specific recommendations for additional investigation, further laboratory/pathologic testing, evaluative testing of relatives or systemic improvements may arise during the review.

DU5 Review Process

Cases are referred to the DU5C by the relevant Regional Supervising Coroner. Case reviews are not confined to deaths that occurred during the calendar year of the Annual Report. Given the complexities involved in paediatric death investigations, the investigations sometimes take a long time to complete, delaying the DU5C review.
The DU5C review is a two-tiered "triaging" process involving an Executive Team Review and/or Full Committee Review.

Executive Team

The Executive Team reviews cases of deaths under five that are:

- Natural deaths with defined illnesses and no issues (i.e. the deaths are "all natural" and there are no police or child welfare concerns)
- Accidental deaths that are well documented where no issues have been identified (e.g. motor vehicle collision, drowning)
- Homicides or criminally suspicious deaths where the case is still under active police investigation or before the courts.

The cases are received, tracked and triaged by the Executive Team, whose membership includes the DU5C Chair, Executive Lead and other individuals as necessary.

Full Committee

The full DU5C includes the multiple disciplines noted above. The full committee reviews cases of deaths under five including:

- All cases where the cause of death remains undetermined after a complete investigation
- Deaths where the sleep circumstances\unsafe sleep environment may have been a potential contributor
- Potential cases of Sudden Infant Death Syndrome (SIDS)
- Natural deaths with complex medical presentations where potential investigative or pathologic issues that may affect the cause and/or manner of death have been identified
- Accidental deaths involving unusual circumstances
- Deaths resulting from head injuries that are not well documented accidental deaths (i.e. motor vehicle collision)
- Homicides (when the investigation and court process has been completed)
    - Most homicides are reviewed by the Executive Team and presented to the committee prior to completion of the court process given the time period until resolution in the criminal justice system

Cases referred to the DU5C undergo a comprehensive and detailed review of investigative materials including (but not limited to):

- Post Mortem Examination, toxicology results and other investigative findings
- Photographs (of the scene and Post Mortem Examination)
- Coroner's Investigation Statement
- Police and other investigative reports (e.g. Fire Marshal and CAS reports, etc.)

Chart 6 Illustrates that over the past five years, the full DU5C reviewed between 92 and 108 cases, the exception being 2013 where 55 cases were reviewed by full committee (explanation for the lower number is provided in 2013 summary). The manner of death for majority of cases for all five years was "undetermined."

Chart 6: DU5C - Full Committee Reviews Based on Manner of Death 2009-2013

Year	Natural	Accident	Homicide	Undetermined	Total
2009	16	14	2	60	92
2010	17	14	4	73	108
2011	3	13	3	79	98
2012	6	2	9	75	92
2013	3	3	0	49	55

DU5C cases reviewed in 2013

Summary of Full DU5C Reviews in 2013:

- In 2013, the full DU5C reviewed 55 cases.
- 52% (29) of the cases reviewed by full DU5C involved male children and 48% (26) female children.
- 82% (45) of the cases reviewed by the full DU5C involved children less than one year old.
- Of the cases reviewed by the full DU5C involving children less than one year, the manner of death was 91% (41) undetermined, 2% (1) Natural and 7% (3) accident.
- 18% (10) of the cases reviewed by the full DU5C involved children aged one to five years.
- Of the cases reviewed by the full DU5C involving children aged one to five years, the manner of death was 20% (2) natural and 80% (8) undetermined.
- Collectively, for all full DU5C reviews, the manner of death was 89% (49) undetermined, 5.5% (3) natural and 5.5% (3) accident.
- Cases reviewed by the Full DU5C involved deaths that occurred in 2009 (1); 2010 (1); 2011 (7); 2012 (37) and 2013 (9).

Summary of Executive Reviews in 2013:

- In 2013, the executive team reviewed 57 cases.
- 51% (29) of the cases reviewed by the executive team involved male children and 49% (28) female children.
- 44% (25) of the cases reviewed by the executive team involved children less than one year old.
- Of the executive reviews involving children less than one year, the manner of death was 95% (23) natural and 5% (2) accident.
- 56% (32) of the cases reviewed by the executive team involved children aged one to five years.
- Of the executive reviews involving children aged one to five years, the manner of death was 66% (21) natural, 28% (9) accident and 6% (2) homicide.
- Collectively, for all executive team reviews, the manner of death was 77% (44) natural, 19% (11) accident and 4% (2) homicides.
- Cases reviewed by the executive team involved deaths that occurred in 2011 (3), 2012 (35) and 2013 (19).

Total Cases Reviewed by the DU5 (Executive Team + Full Committee) in 2013:

- In 2013, there were 57 cases reviewed by the executive team and 55 cases reviewed by the full DU5C, for a combined total of 112 cases.
- 52% (58) of all cases reviewed by the executive team and full DU5C involved male children and 48% (54) female children.
- Collectively, for all executive team and full DU5C reviews, the manner of death was 42% (47) natural, 13% (14) accident, 1% (2) homicide and 44% (49) undetermined.
- 89% (100) of the cases reviewed by the executive team and full DU5C involved deaths that occurred in 2012 and 2013.

Cases Reviewed by the DU5C 2012 compared with 2013

- In 2013, 112 deaths were reviewed by the committee – 49% fewer than the 220 deaths reviewed in 2012.
- Comparing year-to-year data is challenging because the DU5C reviews deaths from more than one calendar year.
- Potential considerations for the lower number of case reviews in 2013 include:
- increased rate of referral/review in previous years with completion of complex cases (for example in 2012, the number of homicide cases was significantly different).
- decreased referral rate in 2013 arising from current case complexities or competing investigative priorities.

Analysis of findings:

- **Chart 7** demonstrates the difference in findings of manner of death between cases reviewed by the executive and full DU5C reviews.
- The majority of executive reviews involved natural deaths.
- The majority of full DU5C reviews involved deaths where the manner was undetermined.

- **Chart 8** demonstrates the manner of death categorized by age for both the executive and full DU5C
- The majority of executive reviews of natural deaths involved children less than one year old.
- The majority of full DU5C reviews of undetermined deaths involved children less than one year old.

- **Chart 9** demonstrates that 41% of all DU5C referrals in 2013 came from West Region and 36% of referrals came from Central Region.

Chart 7: Manner of Death
Executive vs. Full DU5C Review (2013)

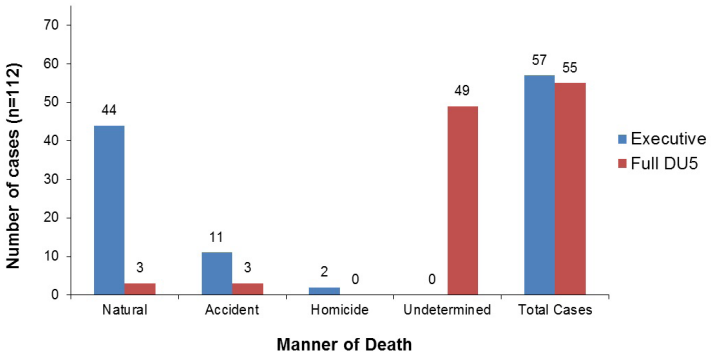


Chart 8: Manner of Death based on age (< 1yr vs. 1-5 yrs) and level of review
Executive vs. Full DU5 Committee (2013)

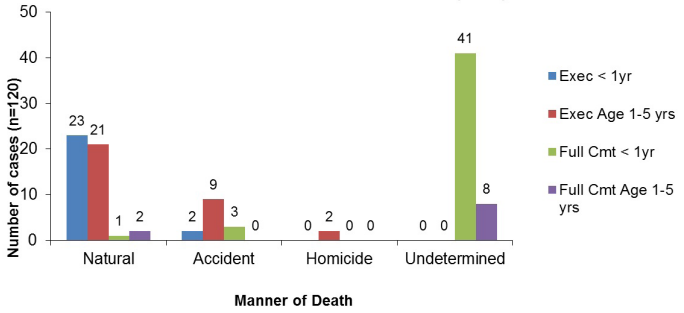
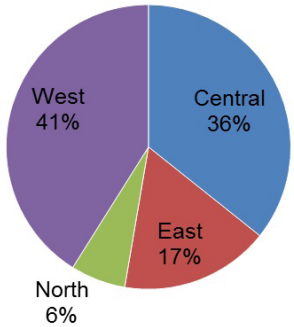


Chart 9: Percentage of Total DU5C Reviews based on Region (2013)



Determining the Cause and Manner of Death

One of the greatest challenges the DU5C reviewers face is trying to properly assign manner and cause of death. The most challenging cases are in children less than one year of age, where the autopsy has not clearly demonstrated a cause of death. Even with the most qualified and experienced forensic pathologists performing the autopsy, it is not uncommon for the cause of death to be undetermined.

Over the past four years, the classification of infant deaths has been a topic of discussion for the Canadian Chief Coroners and Medical Examiners (CCME). Different approaches in the classification of infant deaths have been used across provincial and territorial jurisdictions. The CCME has not achieved a national standard yet; however, they are making great strides in fulfilling their mandate to standardize the certification and classification of infant deaths requiring investigation by coroners or medical examiners across Canadian jurisdictions.

One of the significant changes reflected in the classification of these deaths (see **Chart 10**) involves the cause of death being provided as "undetermined" in cases where there is a comprehensive investigation but no conclusive finding. Previously, based upon a 2005 publication of the National Association of Medical Examiners, many death investigation jurisdictions began using the often confusing "Sudden Unexpected/ Unexplained Death in Infancy (SUDI)" on the Medical Certificate of Death. This terminology is no longer used by the DU5C.

Chart 10: Infant Death Classification

	Autopsy Findings	Investigative Findings	Cause of Death on Death Certificate	Manner of Death
1	Autopsy reveals a definitive cause of death (pneumonia, head injury, etc.)	Variable/may directly inform cause/manner of death	As per the autopsy/ investigative findings	Based on autopsy/ circumstances
2*	No anatomic or toxicologic cause of death identified	No findings of concern identified during the complete investigation - child found supine or prone - no evidence of sleep-associated circumstances** - may include exposure to environmental tobacco smoke or in utero tobacco use	Ia- Sudden Infant Death Syndrome (SIDS)	Natural
3A	No anatomic or toxicologic cause of death identified	Presence of sleep associated circumstances ** Presence or absence of social risk factors***	Ia- Undetermined Ib- II-Unsafe Sleep Environment (description in parentheses)	Undetermined
3B	No anatomic or toxicologic cause of death identified	Includes cases that do not meet definition of SIDS No sleep associated circumstances** May be presence of social risk factors *	---OR--- Ia- Undetermined Ib- II-	Undetermined
4t	No anatomic or toxicologic cause of death identified	Findings in investigation/ autopsy, examples include: - autopsy findings for which the differential diagnosis includes non- accidental injury (ex: healing fracture, bruises, etc) - death of a previous child in suspicious circumstances - significant toxicologic findings for which there is an inadequate explanation	Ia- Undetermined Ib- II-	Undetermined

References: Chart 10

** Sleep associated circumstances include:

- Sharing a sleep surface with a person or pet (adult, toddler, child, cat, dog, etc.)
- Sleeping on a surface not intended for infant sleep (adult bed, waterbed, sofa, child carrier, car seat, non-approved playpen or bassinet)
- Sleeping in a cluttered sleep environment (bedding, toys, clutter in the sleep area that represent an asphyxia potential)

*** Social Risk Factors, including, but not limited to:

- Previous involvement with child welfare agencies, substantial mental health histories in caregivers, domestic violence in the home, alcohol or substance use in the caregivers, concerning, but non- specific investigative findings (ex: inconsistent accounts of circumstances surrounding the death)
- these risk factors will not be listed on the Medical Certificate of Death.

* Category Two represents deaths that meet the definition of Sudden Infant Death Syndrome (SIDS):

- As defined: Sudden death of an infant under 1 year of age that remains unexplained after a thorough case investigation, which must include:
- A complete autopsy
- (including full skeletal survey & toxicology)
- Review of the circumstances of death
- Examination of the death scene
- Police investigation
- Review of the clinical history

A death will not be considered in Category 2 if any of the following is/are present:

- SIDS definition is not met
- Presence of sleep associated circumstances (described above):
- Presence of social risk factors (described above)
- anatomic or toxicologic findings that do not establish a cause of death, but for which the differential diagnosis includes maltreatment, and the caregiver has no explanation for the findings, or the caregiver's explanation for the findings is unwitnessed, or undocumented

A death would be considered as Category 4 if:

- Anatomic or toxicologic findings are present that do not establishing a cause of death, but for which the differential diagnosis includes non-accidental injury, AND the caregiver's explanation of these findings are unwitnessed or undocumented.

Deaths Under Five Committee Classification of Infant Deaths

In 2013, 63% (70 of 112) of the deaths reviewed by the DU5C occurred in infants who were less than one year of age. The categorization of infant deaths reviewed by the DU5C in 2013 is illustrated in **Chart 11** (following page). There were 46% fewer infant deaths reviewed by the DU5C in 2012 (70 reviewed in 2013 compared with 131 in 2012). As previously outlined in this report, the significance of this difference is unknown.

Chart 11 - Classification of Infant deaths reviewed by the Deaths Under Five Committee in 2013

	Autopsy Findings	Investigative Findings	# of 2013 DU5C cases (Executive + Full Cmt reviews) involving infants (under 1 year)	% of total DU5C reviews involving infants (under 1 year)	Notes
1	Autopsy reveals a definitive cause of death (pneumonia, head injury, etc.)	Variable/may directly inform cause/manner of death	30	42%	25 natural 5 accident (2 of which were related to the sleep environment)
2	No anatomic or toxicologic cause of death identified	No findings of concern identified during the complete investigation -child found supine or prone -no evidence of sleep- associated circumstances -may include exposure to environmental tobacco smoke or in utero tobacco use	0	0	
3A	No anatomic or toxicologic cause of death identified	Presence of sleep associated circumstances Presence or absence of social risk factors	36	51%	18 Unsafe sleep 18 Bed sharing
3B	No anatomic or toxicologic cause of death identified	Includes cases that do not meet definition of SIDS No sleep associated circumstances May be presence of social risk factors	2	3%	1—No sleep associated circumstances but social risk factors 1—no sleep associated circumstances or risk factors but did not meet Category 2 definition
4	No anatomic or toxicologic cause of death identified	Findings in investigation/ autopsy, examples include: - autopsy findings for which the differential diagnosis includes non- accidental injury (ex: healing fracture, bruises, etc) -death of a previous child in suspicious circumstances -significant toxicologic findings for which there is an inadequate explanation	2	3%	
		Total:	70		

The Importance of Consistent Definitions

Clear understanding and effective classification of sudden and unexpected infant deaths can be hampered by inconsistent use of definitions and terminology. There is variable use of terminology in scientific and medical literature when discussing unexpected infant deaths. Death investigation organizations frequently have individualized approaches to the classification of these deaths.
To accurately study unexpected infant deaths, data needs to be collected from consistently defined records and reports. Collection of consistently defined data sets across many death investigation systems would enable a true analysis of the key factors contributing to these deaths – if the definitions are not the same, it is difficult to compare. The more data we can gather from these tragic deaths, the better positioned our community safety partners will be to develop strategies to prevent similar deaths.

Sudden Infant Death Syndrome (SIDS)

The Ontario death investigation system continues to use the term Sudden Infant Death Syndrome (SIDS) as a classification of a unique category of natural infant deaths, where in the future, a specific underlying natural cause may be found, i.e. cardiac, neurologic, metabolic. These are cases that would benefit from further research within the scientific community that may find common underlying factors causing these deaths. The value of categorizing deaths as SIDS (i.e. recognizing SIDS as an "entity") has been clearly demonstrated through focused research projects. With the Back to Sleep Program, for example, had significant public health benefit, contributing to a 53% reduction in deaths (NICHD Back to Sleep Campaign https://www.nichd.nih.gov/SIDS/ Pages/sids.aspx). Research in this area is ongoing by several others well.

In Ontario, SIDS is provided as a cause of death following a thorough review of all components of the death investigation including: the autopsy; examination of the death scene; review of the clinical history; and a review of the police investigation. The death is then reviewed by the DU5C, who will only attribute the death to SIDS if a consensus decision is reached that the case strictly meets the definition The DU5C strictly applies the definition of SIDS and excludes cases with even minor deviations. SIDS is only given as a cause of death when all other causes have been ruled out. If the investigation reveals any concerning finding, the cause of death will not be classified as SIDS. It is a finding of exclusion, which is why there are a low number of SIDS cases in 2013.

Understanding the Manner of Death

In almost 60% (40 out of 70- see data in Chart 11 – Sections 3A+3B+4) of infant deaths reviewed in 2013 by DU5C, the manner of death was "undetermined." Undetermined is one of four potential manners of death that would apply in infancy. The Office of the Chief Coroner applies the following definitions when determining the manner of death:

Natural: a death is natural if it is due to a natural disease or complication thereof; or known complication of diagnosis or treatment of the disease

Accident: a death is accidental if it is due to an occurrence, incident or event that happens without foresight or expectation.

Homicide: a death is classified homicide if it results from the action of a human being killing another human being.

Undetermined: a full investigation has shown no evidence for any specific classification or there is equal evidence or a significant contest among two or more manners of death.

The manner of death is informed by the autopsy and other investigative findings. At times, the external and internal examinations completed at the time of autopsy do not reveal an anatomic cause of death. This is more common for infant deaths than youth or adult cases.

A so-called "negative autopsy" may present in a number of situations including, but not limited to:

- Toxicologic deaths
- Metabolic disorders
- Asphyxial deaths (i.e. airway obstruction)
- Infectious disease
- Cardiac diseases (i.e. conduction disorders)
- Sudden Infant Death Syndrome (SIDS)

To evaluate for these potential causes, ancillary (additional) testing is completed. This includes: histologic review; vitreous biochemistry; toxicologic analysis; metabolic and microbiologic testing for infectious agents. These tests may identify a cause of death and a specific manner of death can be determined.

It is important to look at how all the information available fits together when investigating death. For example, information about the incident leading to the death can be helpful when considering the autopsy findings in drowning cases. Investigative information may also be of assistance in determining cause and manner of death. For example, a negative autopsy with observed sudden cardiac arrest with accompanying defibrillator data indicating definitive arrhythmia may allow an opinion of Sudden Cardiac Death with natural manner. Alternatively, in criminal cases, a police investigation may demonstrate clear evidence of airway obstruction while the post mortem examination did not demonstrate any pathologic findings (with cause of death provided as undetermined) leading to manner of death as homicide.

The finding of undetermined cause and manner of death is challenging for investigators and family members to receive, given the lack of conclusiveness and/or the fact that other potentials remain. This is especially true within the context of the emotional response that accompanies any death, especially infant deaths. An undetermined finding follows careful consideration of all the evidence, and is a true and honest representation of a thorough investigation. It should not be considered a failure to reach this conclusion. The classification of undetermined allows for future review that may contribute to a better understanding and knowledge about infant deaths.

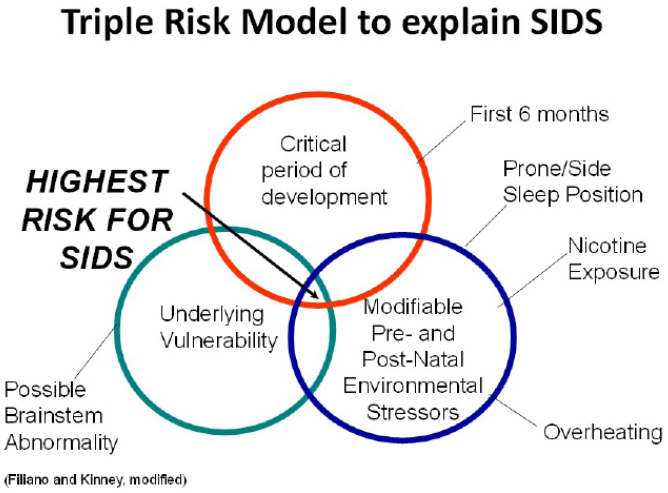
Unsafe Sleep Circumstances - Determining the Role

Specific findings during post mortem examinations are typically absent in situations of airway obstruction in infants, whether intentional, accidental (e.g. overlay during bed sharing) or other unsafe sleep circumstances.

Potential unsafe sleep circumstances exist along a continuum, from the defined safe environment (infant sleeping on their back in an uncluttered crib that conforms to regulation) to situations clearly identified as dangerous and likely a direct contributor to death. The lack of specific pathologic findings of airway obstruction and the potential of other unidentified causes of death have hampered the ability to accurately determine how frequently unsafe sleep circumstances cause infant deaths. These limitations require assigning an undetermined manner of death. However, experience in Ontario, supported by epidemiologic data, is that sleep circumstances may be a contributing factor in many cases.

Capturing Factors Potentially Related to the Death

A risk factor is something associated with ill health, disease and death; it may predispose individuals to develop a particular disease. SIDS has been conceptualized as a "Triple Risk Theory" where a child with (1) an underlying vulnerability (2) at a critical period of development is (3) exposed to an external factor align to lead to the death. (Kinney, HC, Thach BT. The sudden infant death syndrome. N Engl J Med 2009; 361 (8): 795-805)



In most literature, accepted risk factors associated with SIDS include: prone positioning, cigarette smoking during pregnancy (and in the post-delivery period) and overheating. These external factors have been defined as modifiable risk factors that predispose the infant to be directly affected by an underlying natural abnormality.
It is unclear where on the safe sleep continuum specific external factors identified in individual death investigations move from acting as factors that predispose to a natural death (e.g. SIDS) to those that directly contribute to an accidental death, i.e. airway obstruction during overlay while bed sharing or suffocation on a soft sleep surface. In other words, we don't know the dividing point on the continuum from natural to accidental death.

The DU5C considers the potential contribution of sleep related circumstances within the context of stratification of risk (based upon literature and experience). During case review by the DU5C, unsafe sleep circumstances found at the death scene preclude the death from being classified as SIDS. Any factor identified at the death scene which might interfere with an infant's breathing and/or cause entrapment, overlaying, or suffocation is identified. These include: sharing a sleep surface; unsafe sleep surfaces (not intended for infant sleep) such as adult mattresses, waterbeds, couches, car carriers, car seats; a safe sleep surface which is cluttered with toys, blankets and pillows; or a non-approved bassinet or playpen. This is in contrast to previous literature and the practices of some jurisdictions, where these deaths are classified as SIDS.

The association between unsafe sleep environments and sudden unexpected infant deaths has been recognized by death investigators and researchers for many years. The literature, including a number of publications over the past year, adds to the growing field of knowledge about infant deaths. Two recent articles of interest are: Sleep Environment Risks for Younger and Older Infants. (Colvin, JD, Collie-Akers V, Schunn C, et al. Pediatrics 2014; 134: e406-e412); and the Registered Nurses' Association of Ontario Working with Families to Promote Safe Sleep for Infants 0-12 months of age: http://rnao.ca/bpg/guidelines/safe-sleep-practices-infants.

Additional research and documentation of sleep environments at the time of death is necessary to help understand the cause, effect and identify potential prevention strategies. When it is believed that the sleep environment may have contributed to the death, it is included as a contributing factor on the Medical Certificate of Death. This will be captured as data which can be used to inform the development of public health policies and further research into unsafe sleep environments contributing to infant death. This is reflected in Category 3A in Charts 10 and 11.

While the DU5C recognizes the convention of not including contributing factors when the cause of death is undetermined, the committee believes that these cases are a special group and deserve a unique approach. The committee maintains that entering potential contributing factors on the Medical Certificate of Death is more inclusive and recognizes the scope of the death investigation. Similar to the identification of SIDS as a special group, this may allow easier identification for further case study, facilitating future research and potentially informing a public safety approach.

Unsafe Sleep Environment – What is the data?

Review of Chart 11 demonstrates that there were 40 infant deaths reviewed by the DU5C in 2013 where the manner was deemed to be undetermined (Categories 3A + 3B +4). There were 36 infant deaths classified as 3A (unsafe sleep circumstances) indicating that sleep circumstances may have been a contributing factor.

Paediatric Death Review Committee – Medical

The Paediatric Death Review Committee (PDRC) - Medical is a multi-disciplinary committee that consists of specialized paediatric practitioners including: paediatric pathology, paediatric critical care, community paediatrics, paediatric emergency medicine, neonatology and cardiology. The membership is balanced to reflect Ontario's geography and includes all levels of institutions that provide paediatric care and teaching centres, when possible.

Medical reviews analyze and consider the medical issues involved in the time preceding a child's death to gain a better understanding of the circumstances of the death. Case referrals for committee evaluation include medically complex deaths when there are concerns regarding the medical care or if the clinical diagnosis, cause and/or manner of death is in question.

Review process

Case assignment occurs by aligning the practice profile and expertise of the committee members with the circumstances of the death. For example, paediatric deaths from a community setting will be reviewed by one of the community paediatricians. Similarly, the death of a neonate will be primarily reviewed by the neonatalogist. The review process involves analyzing the existing record of the decedent. The record routinely includes medical records, the Coroner's Investigation Statement, the report of the Post Mortem Examination, toxicology report, police report and other relevant documents.

At the committee meetings, the primary reviewer presents the findings to the members for discussion. This provides an opportunity for discussion about issues that may have been identified through the review. The committee may also develop recommendations based on the findings of the review. The primary reviewer will compose a final report reflecting the committee's consensus opinion. The report, which will include the cause and manner of death and any committee recommendations, is provided to the referring Regional Supervising Coroner. If the recommendations are systemic, the ministry, organization, agency or individuals are notified by the Committee Chair. Organizations are asked to respond back with the status of implementing the recommendation(s) within one year.

Where a case presents a potential or real conflict of interest for a committee member, that member will not participate in the review. Should a case require expertise from another discipline, an external expert will review and attend a PDRC meeting to participate in the discussion and drafting of recommendations.

Limitations

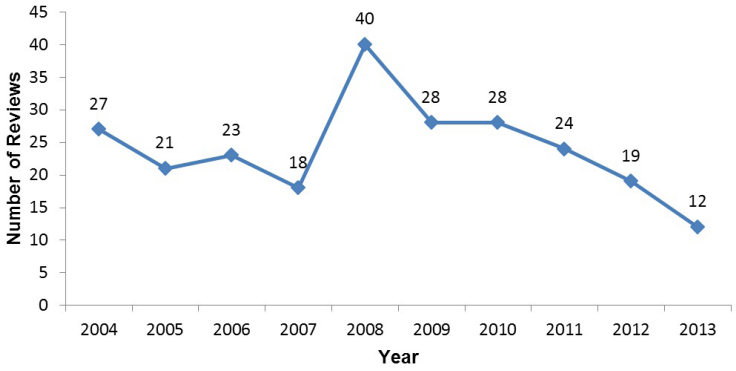
The PDRC is an advisory committee that makes recommendations to the Chief Coroner through the Chair. The PDRC case reports are prepared for the OCC and are governed by the Coroners Act, the Vital Statistics Act, the Freedom of Information and Protection of Privacy Act and the Personal Health Information and Protection of Privacy Act.

The consensus report of the committee is limited by the data provided. While efforts are made to obtain all relevant data, it is important to acknowledge that these reports are generated from a review of the written records. Sometimes the coroner/ Regional Supervising Coroner conducting the investigation may have received additional information not included in the records that may render one or more of the committee's conclusions invalid.
Recommendations are made following a careful review of the circumstances of each death; they are not intended to be policy directives.

Statistical Analysis for Paediatric Death Review Committee – Medical

The number of PDRC - Medical reviews varies from year to year and on average, is about 24 cases per year. Case reviews conducted by the PDRC Medical from 2004-2013 is reflected in **Chart 12:**

Chart 12: PDRC - Medical
Total number of reviews
2004-2013



Analysis of 2013 Case Reviews PDRC – Medical

In 2013, a total of 12 cases were referred to the PDRC – Medical. Ten of these cases had care-related concerns and two involved a clinical review to inform clinical diagnosis, cause and manner of death. One case met both of the referral criteria.
Of the 12 cases reviewed, seven involved children under one year of age, four involved children aged one to five years and one involved children and youth aged six to 18 years. 83% (10) of the cases reviewed were male and 17% (2) were female.

Recommendations

One of the important benefits of PDRC – Medical review is informing medical systems through recommendations using a "no blame" approach. The focus is on preventing future deaths via:

- Systemic changes;
- Changes in professional practice; and
- Response to emerging trends.

Given the PDRC – Medical referral criteria, recommendations are commonly directed to health care facilities. The collective expertise of the committee provides very comprehensive reports that can be helpful to inform a healthcare organization's Quality of Care Review Process. The findings and recommendations in the reports create an opportunity for the organization to see the potential for improvement in its internal processes or policies to avoid similar outcomes in the future. In 2013, the reviews resulted in 19 recommendations.

Summary of 2013 recommendations made by PDRC – Medical

The 19 recommendations made from the 12 PDRC – Medical reviews focused on the following themes and were addressed to the identified organizations:

One review resulted in no new recommendations.
**The type of review process is not defined by the committee allowing the health care organization to determine the forum most applicable to their needs

Organization(s) asked to respond to recommendation	Theme of recommendation(s)	Number of reviews where theme was identified
Health care organizations	• Review of the death through a Quality of Care Review Process	7**
Treating Health Care Professionals	• Lessons learned case review	1
Ministry of Health and Long Term Care	• To support systemic enhancement of paediatric transportation	1
Ontario Hospital Association		1
Health Care Professional Regulatory Bodies	• Professional practice issues	1
	• Publication of case review as an educational opportunity	
Family members of a deceased child	• To ensure testing is undertaken for potential heritable disorders in surviving relatives	2
	• To provide resources to assist with understanding of the medical cause of death	2
Death Investigation System	• Additional diagnostic testing	1
Professional Associations	• Development/expansion of clinical assessment approaches	2

Themes arising during medical reviews

Themes are often identified in individual case reviews and sometimes patterns may emerge when similar issues are observed in other reviews. Over time, the PDRC – Medical has identified and compiled a number of themes that have been common in child death reviews. The benefit of having a thematic approach is that the recurring themes can become an agent for systemic change. Over the past number of years, there have been a number of initiatives stemming from PDRC – Medical recommendations that have enhanced paediatric health care in Ontario.

Themes from 2013 case reviews

Nine of the 12 cases reviewed by the PDRC – Medical in 2013 were associated with five key themes. Some cases had more than one theme identified.

While these themes are consistent with past findings, by taking the extra step of evaluating for emerging trends, a refined focus for recommendations is taken with a view of systemic improvement instead of only considering the individual cases. The five consistent themes, and issues associated with each, are:

1. Treatment - Quality of Care

Treatment and/or quality of care were identified as themes in eight of the cases reviewed. Issues included:

- Vital signs not obtained/recorded;
- Abnormal vital signs not appreciated;
- Growth parameters (weight, length, head circumference) not obtained/plotted;
- Assessment/recording of fluid balance not undertaken;
- Incorrect diagnosis and subsequent intervention;
- Lack of adherence to established protocols;
- Unrecognized complications of procedures; and
- Need for involvement of advanced paediatric expertise.

2. Differential Diagnosis

Differential diagnosis was identified as a theme in four of the cases reviewed. Issues included:

- Alternative diagnoses not considered;
- Potential confirmation bias limited consideration beyond the admitting diagnosis;
- Non-recognition or lack of appreciation of:
  - Symptoms
  - Laboratory tests
  - Diagnostic imaging
  - Patient response to treatment
- Non-appreciation of repeated parental concerns;
  - Especially in the child who returns without having responded to initial management.

3. Documentation

Documentation was identified as a theme in four of the cases reviewed. Issues included:

- Not completed in a timely manner;
- Qualitative and quantitative limitations;
- Poor or illegible hand writing;
- Date and time of entry absent; and
- Thought process/rationale for clinical approach not provided.

4. Communication

Communication was identified as a theme in four of the cases reviewed. Issues included:

- lack of discussion of vital patient information:
  - between health care staff at the time of transfer within a health care facility
  - between physicians at the time of transfer of care
  - between key informants at the time of transfer to another facility
- lack of attention/acknowledgement of expressed patient/parent concerns;
- ineffective transfer of discharge advice/instruction; and
- Limited parental appreciation of clinical information due to ineffective understanding or ineffective information provision.

5. Medical Transport

Medical transport was identified as a theme in two of the cases reviewed. Issues included:

- Transfer approach of critically ill paediatric patients;
- Paediatric resource issues;
- Transfer record effectiveness; and
- Communication between transferring and receiving health facilities.

PDRC – Medical: Case Example

This case was reviewed by the PDRC – Medical and illustrates the difficulties and challenges that can arise for health care practitioners when caring for paediatric patients.

Past Medical History

This five-year-old child was reported to be healthy and active. On August 14, 2012, six days prior to going to the hospital, the child developed a low grade fever. The child subsequently developed cough and vomiting two days later, but these symptoms improved.

On August 18, 2012, after waking in the morning, the child complained of chest pain and vomited once. The child was taken to the pediatrician for assessment. The physician examined the child, noted a pulse of 72, and prescribed Ibuprofen.

On August 19, 2012, the child was complaining of chest pain and feeling unwell, prompting attendance at the Emergency Department (ED). Initial vital signs recorded at 17:00 hours indicated: pulse 160, blood pressure 68/50, and respiratory rate 20. The child was described as appearing somewhat pale, but was not felt to be in any distress. Examination noted right upper quadrant abdominal tenderness, without jaundice. The heart examination was reported as normal. There was no neck stiffness. Laboratory testing demonstrated: White blood cell count (WBC) 8.4, Hemoglobin 119, platelets 365, CO2 17, sodium 139, potassium 5.5, blood urea nitrogen (BUN) 13.8, creatinine 154, AST (Aspartate aminotransferase) 238, ALT (Alanine aminotransferase) 43. X-rays of the abdomen and chest were unremarkable. The child was seen by a paediatrician at about 22:30 hours with opinion that the child likely had gastrointestinal illness with early hepatitis.

The child was admitted to hospital and provided antibiotics and fluids by intravenous route. The child received two boluses of 10 mL/kg of normal saline. Vitals recorded at 19:50 hour were: blood pressure 79/51, and pulse 86. At 23:00 hours, blood pressure was 60/38 with pulse 133. At about midnight, nursing assessment documented decreased urine output. The pediatrician provided order by phone for another bolus of normal saline. Documentation of vital signs during the night were not found in the information provided for review, however the child was noted in the health care notations to have remained tachycardic overnight. Oxygen saturation was documented as greater than 94% on room air. At 04:12 hours, the blood pressure was documented to be 61/33.

Terminal Events

At about 07:30 hours on August 20, 2012, the child's clinical condition deteriorated with tachypnea, and signs of poor perfusion. The pulse was 170 with low blood pressure. Oxygen was provided at 10 L/minute. ECG demonstrated tachycardia with wide complex QRS. CritiCall connected the consultant pediatrician to the tertiary care hospital bridge line at 08:37 hours. Discussion was undertaken regarding management of wide complex tachycardia. The tertiary care physician requested to see the recording of the ECG to guide the management approach. Options discussed were: a) convert the rhythm with Amiodarone, b) electric cardioversion of the abnormal rhythm c) transfer of the child to the tertiary care hospital for further management. The tertiary care intensivist was concerned about myocarditis noting benefit for extracorporeal membrane oxygenation (EMCO) backup if difficulties arose during rhythm conversion. The initial plan was for dispatch of transport paramedics to facilitate transfer to the tertiary care facility.

The tertiary care cardiologist reviewed the fax copy of the ECG agreeing that the rhythm was wide complex tachycardia. At 09:13 hours, a bridge call was re-initiated with notification that the child's clinical condition had deteriorated. As the paediatrician at the treating hospital was inserting an intraosseous line, it took about ten minutes to arrive at the phone. Blood testing showed pH 7.23, pCO2 22 and HCO3 9. Participants from the tertiary care hospital on the bridge call simultaneously were a cardiac intensivist, and cardiology and critical care fellows. Each of the potential management approaches was discussed. Given the child's clinical deterioration, a decision was reached to take the child to the operating room to provide intravenous Amiodarone with elective intubation and electrical cardioversion followed by transfer to the tertiary care hospital. The tertiary care team ended the call with plans to call back in 15 minutes.

The child arrived at the operating room at about 09:55 hours. The child was intubated following provision of Fentanyl and Rocuronium. The child was given a bolus dose of Amiodarone and then cardioverted with 1 joule/kg. The cardiac rhythm deteriorated to PEA (pulseless electric activity) and a code was called at about 10:05 hours. Full resuscitation attempts were initiated and continued for approximately 60 minutes without return of spontaneous circulation. The child was pronounced deceased after discussion with the bridge tertiary care medical team who remained on line throughout the resuscitation process.

Post Mortem Examination Findings

Both the height and weight were above 90th percentile. The heart weight was 128 grams (normal 85 grams for this age) with cardiomegaly. The coronary and heart anatomy were normal. Microscopic examination of the heart demonstrated fulminant polymorphous myocarditis with predominantly lymphohistiocytic

infiltrate and scattered neutrophils and plasma cells. No giant cells of viral cytopathic affects were identified. Extensive myonecrosis was identified with interstitial edema and patchy foci of extravasated erythrocytes. The pathologist provided opinion that the death was due to fulminant myocarditis with refractory arrhythmia. A viral cause for the myocarditis was thought to be most likely. There were no findings to suggest an underlying rheumatologic or autoimmune process.

Cause of Death: Viral myocarditis

Manner: Natural

Comments and Issues Raised

1. Diagnosis

This five-year-old healthy child developed fulminant myocarditis. The mortality from this illness is high, even with timely intervention. In this case, the child had viral prodrome, developed acute onset myocarditis, wide complex tachycardia with death occurring during cardioversion. The initial presentation was vomiting without diarrhea. It is not uncommon that despite a lack of diarrhea, this clinical presentation would be attributed to gastroenteritis. This was subject of an article in the 2012 Annual Report of the Paediatric Death Review Committee.

2. Management by the outpatient pediatrician

When the child first presented to the outpatient pediatrician with chest pain, the heart rate was documented. Other vital signs were not recorded within the context of complaint of chest pain. Myocarditis would not be the primary diagnosis for a pediatrician when a child presents with vomiting and chest pain. The pediatrician documentation was challenging to decipher. A follow up plan was not clearly documented.

3. Medical management at the hospital

a. Emergency room and the first night of admission

The child was documented to have tachycardia and low blood pressure in the Emergency Department. There was transient improvement in response to fluid boluses, but this was not sustained with further decompensation in blood pressure and heart rate. This appeared to have been largely attributed to dehydration, however in retrospect, likely reflected poor myocardial function. There was persistence of tachycardia overnight with blood pressure at about 04:00 hours found to be 61/35 with pulse 98. Within the medical records available for review (computerized documentation may have been absent), there was limited entry of vital signs making it difficult to ascertain whether the definitive clinical deterioration occurred suddenly in the morning, or followed a pattern of gradual deterioration overnight.

b. Management of wide-complex tachycardia

Management of wide-complex tachycardia in an otherwise healthy child is challenging and is guided by the underlying diagnosis. The bridge line recordings demonstrated that the tertiary care intensivist and cardiologist raised the possibility of myocarditis being the underlying cause of wide-complex tachycardia. Typically, the first line of therapy is electrical cardioversion in hemodynamically unstable patients and Amiodarone in hemodynamically stable patients. Myocarditis mediated arrhythmias are difficult to manage with risk of death during treatment.

Consideration was given to transfer of the patient to the tertiary hospital prior to conversion of wide complex tachycardia, however; the rapid deterioration prompted change in management approach. The recording demonstrated that the tertiary care team initially perceived the child's clinical condition to be better than apparent from review of the medical records. The patient was described to be hemodynamically stable in contrast to the clinical status documented in the records reviewed. This likely affected the management approach initially planned. If the clinical picture was fully appreciated by the bridge physicians, transfer to the operating room may have occurred earlier, but there were no findings to indicate that this contributed to the outcome.

Recommendations

1. The hospital should undertake a Quality of Care Review (in the forum of their choice) of the care and managemen of this child during the Emergency Department visits and admission in August 2012. This review should include:
   a. Physicians and nursing staff from the Department of Paediatrics and Emergency Medicine (at minimum) and the Community Paediatrician (who was involved in the days prior to the death);

   b. Suggested areas for focus:

      i. Approach to a child vomiting to allow consideration of potential learning opportunities to assist with differentiation of viral gastroenteritis from other less common causes of vomiting

      ii. Approach to collection and recording of vital signs in a clinically unwell child;

      iii. Approach to management of a child with persistent significantly abnormal vital signs including:

         1. approach to direct paediatric assessment
         2. threshold for nursing staff to trigger contact of the paediatrician

Paediatric Death Review Committee – Child Welfare

Child welfare services in Ontario are provided by 46 Children's Aid Societies (CAS), seven of which are designated Aboriginal agencies. Each CAS is an independent, not-for-profit agency governed by a board of directors. CASs receive provincial funding from the Ministry of Children and Youth Services (MCYS).

By policy, coroners in Ontario investigate all paediatric deaths where a CAS has been involved with the child, youth or family within 12 months of the death. In 2006, the OCC and the MCYS implemented a Joint Directive on Child Death Reporting and Review. The Directive outlines the process CASs must follow when reporting and reviewing child deaths when they have been involved with the child, youth or family within 12 months of the death (see Appendix A for more information). Stemming from the process outlined in the Directive, there are three distinct sets of information that are relevant to CASs, the government and the public, resulting from:

- the death investigation by the coroner;
- CAS reporting related to these deaths; and
- PDRC - Child Welfare reviews completed in certain circumstances.

This annual report presents an analysis of this information, to support data driven public safety, by:

- comparing paediatric deaths with CAS involvement to paediatric deaths without CAS involvement;
- conducting an analysis of data about paediatric deaths where there has been CAS involvement; and
- providing recommendations in an effort to prevent future deaths in similar circumstances.

Historically, the PDRC – Child Welfare's annual report has focused on an analysis of PDRC case reviews. More can be learned from considering all paediatric deaths with CAS involvement, using the information provided by CASs in relation to those deaths.

The PDRC – Child Welfare and the OCC believe that this data is valuable to gain a better understanding of paediatric deaths with CAS involvement in Ontario. It is hoped that this additional analysis will assist CASs, policy makers, researchers and the public to identify relevant areas to develop strategies and policies that help to prevent future deaths in similar circumstances.

A note on data…

There are a number of factors to consider regarding the data available for PDRC analysis, including but not limited to:

- The data is primarily collected by coroners from across the province. Limits in standardization and non-confirmation of data accuracy may affect the analysis.
- There is variable presentation of data provided by CASs to the PDRC. Data collection would benefit from a standardized set of definitions and a common format to support consistent data collection.
- The lack of comparator data from other sources. Data from different sources is collected with varying sets of parameters, depending on the needs of the organization. Some of the data required for effective comparison is unavailable. Other data sets are incomplete, or measured in ways that do not align with the data that the OCC and the PDRC collect.
- Paediatric death investigations are complex processes and can take a long time to complete. Some of the 2013 cases are still in progress at the time of the writing of this report, so some data sets are incomplete.
- There are inconsistent reporting practices amongst CASs, because there are varying interpretations of the Joint Directive on Child Death Reporting and Review. For example, some CASs report the deaths of youth over the age of 18 when the youth is in receipt of Continued Care and Support for Youth (formerly Extended Care and Maintenance).

The OCC is collaborating with the child welfare sector and MCYS to address many of these challenges.

A note on statistical analysis…

The chi-square goodness-of-fit test was used to determine how "close" observed rates of paediatric deaths are to that expected in the context of one of two standard populations –paediatric coroner's investigations, or child deaths in Ontario. In others, the Fisher's exact test was used to examine the association between two variables.
In some cases, no statistical analysis could be completed because of limitations arising from the nature of the data, the size of the populations, or challenges with data as discussed above.
The OCC is at the beginning of a journey toward data driven public safety. In this section of the annual report basic statistical analyses have been utilized to support the presentation of available data. In the future additional data analysis is anticipated.

2013 Paediatric Deaths with CAS Involvement Compared to Other Paediatric Deaths in Ontario

In 2013, there were 1,083 paediatric deaths in Ontario (aged 0 – 18 inclusive). Of these, 35% (382) met the criteria for coroners' investigation and the majority of deaths, 65% (701) did not.

Of the 382 coroners' investigations, 96 were reported by a CAS to the PDRC – Child Welfare, accounting for 25% of all paediatric coroners' investigations[1].

This is consistent with data from previous years.
MCYS does not track individuals that receive services from CASs. Instead, the number of families served by CASs is reported, so it is not possible to determine whether the rate of paediatric deaths in Ontario is the same as, or different from, the rate of paediatric deaths in the population of children and youth served by CASs.

A note on natural deaths…

By policy, coroners in Ontario investigate all paediatric deaths that occur where CAS has been involved with the child, youth or family within 12 months of the death. Consequently, some paediatric deaths that would not ordinarily meet the criteria for a coroner's investigation are investigated solely because of the involvement of CAS. These deaths include natural deaths occurring in hospital that under normal circumstances would not likely be investigated by a coroner. In 2013, 20 coroner's investigations fell into this category. These 20 deaths have been excluded from some of the analysis undertaken in this report to allow a true comparison against the broader population of paediatric coroner investigations (which would not include natural hospital deaths free of other concerns). In some cases, the total number of coroner investigations of paediatric deaths is therefore reflected as 362, with the total number of paediatric deaths with CAS involvement reflected as 76.

1. There are 3 2013 cases for which Child Fatality Case Summary Reports have not yet been received. They are included in the pending cases, however other data calculations are based on a total number of cases of 93.

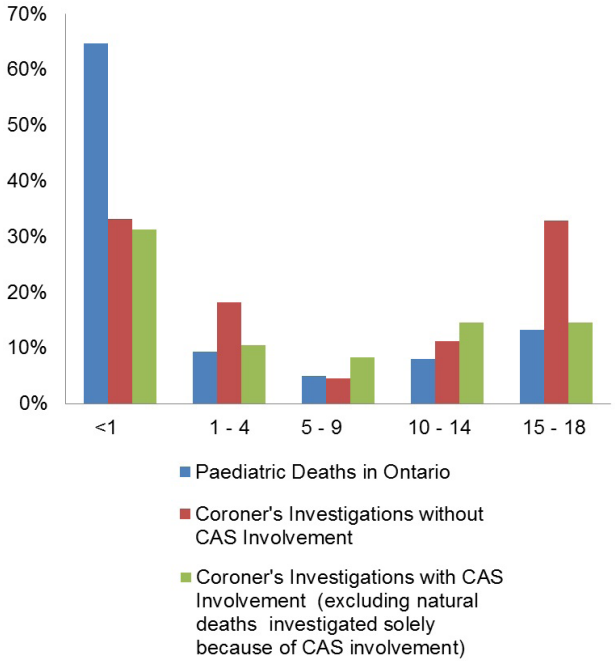
Coroner's Cases with CAS Involvement Compared with Coroner's Cases without CAS Involvement – Gender and Age

The association between male and female paediatric decedents investigated by a coroner, with and without CAS involvement, was not statistically significant[2]. In other words, there was no significant relationship between gender and the prior involvement of a CAS with paediatric decedents that were the subject of coroner investigations.

Chart 13 demonstrates the proportion of paediatric deaths across age groups [3] in Ontario overall, compared to coroner investigations with and without CAS involvement.

The number of deaths with CAS involvement was compared to the number of coroner investigations without it, across age groups . The number of CAS involved deaths across age groups differed from what would be expected if the CAS involved population was the same as population of paediatric deaths that are the subject of a coroner investigation without CAS involvement.

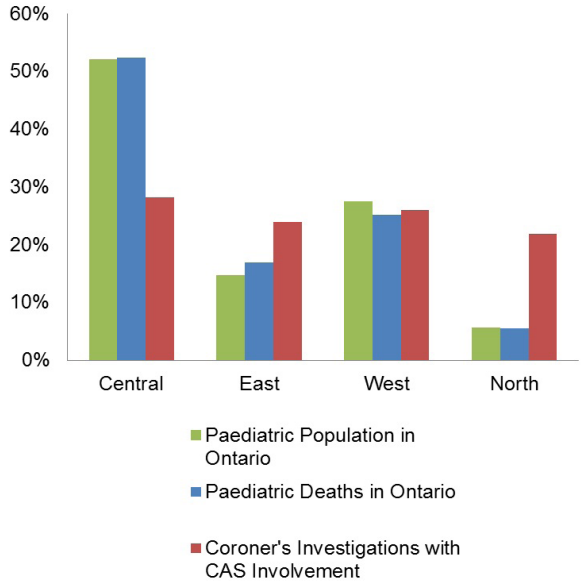
Chart 13: Proportion of Deaths across Age Groups in 2013



The 2013 data analysis, within the context of limitations noted earlier, demonstrated that the 5-9 year old decedents were more likely to have CAS involvement prior to their death and 15-18 year old decedents were less likely to have CAS involvement prior to their death. While the data suggests more 5-9 year olds and fewer 15-18 year olds receive services from a CAS relative to their peers in other age categories, the significance of this is unknown as there are many variables that may impact these outcomes. Additional research is necessary to determine the significance of these findings.

Chart 14 illustrates that the percentage of paediatric deaths occurring in each region of the province is almost the same as the percentage of children and youth across Ontario, by region. However, analysis of the available data shows that there is a significant difference between the number of deaths with CAS involvement occurring in each region and the number of child and youth deaths in Ontario overall occurring in each region[4] . More deaths with CAS involvement appear to occur in the North, when compared to the overall number of child deaths in Ontario. Five per cent of paediatric deaths in Ontario occurred in the North, while 22% of paediatric deaths with CAS involvement occurred in that region.

Chart 14: Regional Distribution of Paediatric Deaths in Ontario in 2013



* The Ministry of Community Safety and Correctional Services Central Region includes Toronto.

2. Fisher's exact test was performed, p = 0.15.
3. Chi-square test was performed. Relation between the variables was significant, $\chi 2$ (4, N=362) = 19.12, p < 0.001.
3. Chi-square test was performed. Relation between the variables was significant, $\chi 2$ (3, N=1179) = 59.86, p < 0.001

There are a number of potential reasons that may be associated with the apparent overrepresentation of child and youth deaths in the North, including but not limited to: lower health status, challenges to accessing healthcare services and higher mortality rates that increase with remote place of residence[5]. Available data indicated that 71% of the deaths with CAS involvement that occurred in the North region were Aboriginal children and youth. In the absence of comparator data on the number of individual children and youth served by CASs across the various regions, it is not possible to determine whether this information may reflect higher rates of child welfare service delivery in the North, or some combination of other variables. Notably, 13% of all paediatric coroner investigations took place in the North – greater than the percentage of paediatric deaths in that region (5%), and less than the percentage of paediatric deaths with CAS involvement in that region (22%). This may suggest that the higher percentage of paediatric deaths with CAS involvement in the North relative to other regions may arise from a combination of several factors.

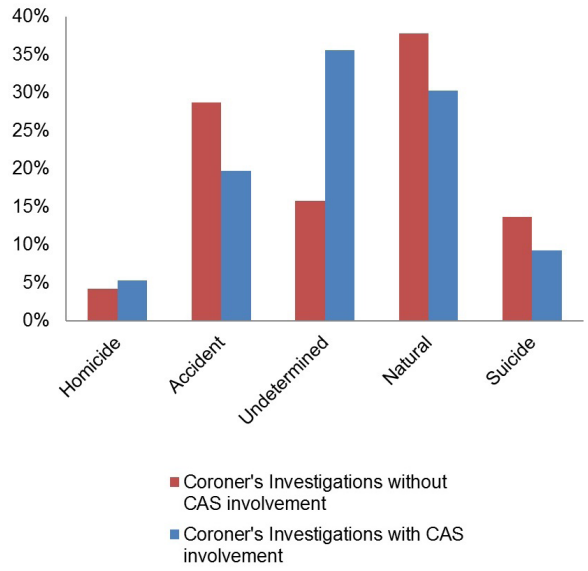
Manner of Death – Coroner's Cases with CAS Involvement Compared with Coroner's Cases without CAS Involvement

The manner of death indicates how children and youth in Ontario die. If the well-being of children and youth across Ontario, with or without CAS involvement, were equal, it would be expected that the number of paediatric deaths occurring from a given manner of death would be the same in each category.

It is recognized that vulnerable children and youth receive services from CASs. The manner of death may provide valuable insight into the impact of services provided, but it cannot be used as an indicator of the effectiveness of service to the exclusion of many other indicators because CASs provide services in the broader context of a number of variables, and are generally not the only service providers engaged with this population of children and youth.

A significant difference was noted between the number of deaths with CAS involvement compared to the number of deaths investigated by a coroner without CAS involvement, by manner of death[6]. **Chart 15** illustrates that natural deaths and deaths occurring as a result of homicide, suicide or

Chart 15: Manner of Death of Coroner Investigations with and without CAS Involvement - 2013



5. The Northern and Rural Healthcare Panel (2011, March 30). Rural and Northern Healthcare Report Executive Summary. Retrieved from http://www.health.gov.on.ca/en/public/programs/ruralnorthern/docs/exec_summary_rural_northern_EN.pdf
6. A chi-square test was performed. Relation between the variables was significant, $\chi 2$ (4, N=362) = 23.47, $p < 0.001$.

accident were neither more nor less likely to occur with CAS involvement. However, circumstances where the manner of death was undetermined appear to be more prevalent where a CAS was involved with the child, youth or their family prior to the death.

What do we know about deaths where the manner of death is undetermined?

When a complete investigation, including an autopsy, clinical history and evaluation of the scene, does not allow for identification of a specific manner of death, or there are competing manners of death, the death will be classified as undetermined. Most paediatric deaths that are classified as undetermined occur in of children under one year of age, with a smaller proportion occurring in children under five and even fewer in the older age group (see **Chart 16**).

Chart 17 shows the percentages of undetermined deaths in each age category, with and without CAS involvement prior to the death. Among cases where the manner of death is undetermined, there is no significant difference resulting from the involvement of a CAS [7].

Chart 16: Undetermined Deaths by Age Group

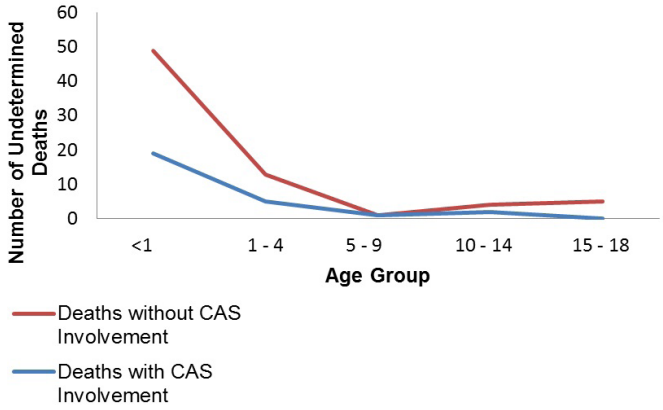
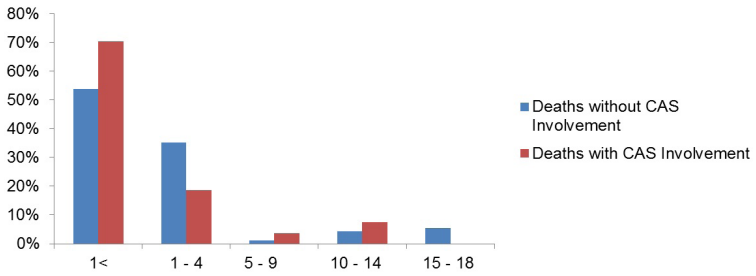


Chart 17: Paediatric Deaths Classified as Undetermined - With vs. Without CAS Involvement



Presence of Sleep Associated Circumstance as a Potential Contributing Factor in Undetermined Deaths

In 2013, sleep circumstances were identified in 51% (37) of the 72 paediatric deaths where the manner of death was classified as undetermined. 38% (14) of these children or their families received services from a CAS within 12 months of their death, and 62% (23) did not.

There was no significant difference between CAS involved and non-CAS involved populations when considering the cases where sleep circumstances were identified[8].

This is particularly relevant as the over the years, the PDRC – Child Welfare has made recommendations to CASs relating to safe sleep education for staff and families. In response, CASs have enhanced training and provided additional resources and supports to families, with a view to prevention of deaths in unsafe sleep environments.

Many variables require consideration in interpreting this finding. For example, CASs are not the only organizations promoting safe sleep environments in communities. The independent impact of CAS practice on the number of paediatric deaths occurring in unsafe sleep environments is unknown; however, the absence of a significant difference between CAS involved deaths and those without CAS involvement may suggest that the practices of CASs have potentially contributed to the overall prevention of paediatric deaths where sleep environment may be factor.

7. Fisher's exact test was performed, p = 0.15.
8. A Fisher's exact test was performed. The relation between the variables was not significant, p = 1.00.

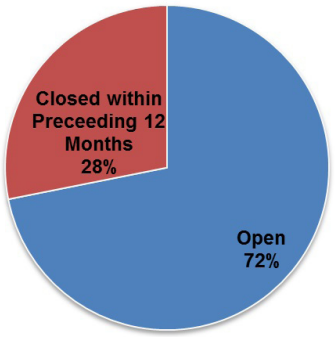
2013 Deaths with CAS Involvement – Status of Children and Youth

Approximately 85% of the children and youth that died in 2013 where a CAS was involved with the child, youth or family within 12 months of the death were not in the care of a CAS.

- 77% (72) of the deaths occurred while children were living at home with their parent(s) or other regular caregivers (not the subject of a CAS placement);
- 1% (1) child had been placed in residential services under a supervision order;
- 15% (14) children or youth were in the care of a CAS – 11 were Crown wards, one was a Society ward, two were subject of temporary care agreements. Of the 14, four were placed in residential services; and
- 2% (2) youth aged 18 and under were receiving Continued Care and Support for Youth (CCSY) (formerly Extended Care and Maintenance) support while living independently.

*Information provided by the CASs from Child Fatality Case Summary Reports supports a greater understanding of the circumstances surrounding the deaths of children and youth.

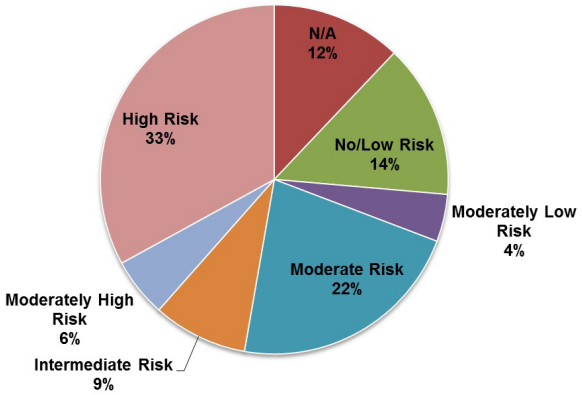
Chart 18: Case Status at Time of Death - CAS Involved Cases in 2013



What does the available data tell us?

- Approximately 70% of cases where a child or youth that had been receiving services from a CAS were open files CAS at the time of death (see **Chart 18**).
- More than 30% of the cases were rated as high risk at the time of death (see Chart 19). The Ontario Child Protection Standards released in February 2007 require that "Cases with a high or very high risk rating, or where a safety plan is being managed and the child continues to reside in the home, should receive more intensive service (frequency of visits)" (Standard 10, p. 71). Requirements of the Standards would suggest that in these cases, the CAS would have been engaging with the family with some frequency prior to the death.
- Verified abuse and neglect of the child or youth that died and/or their sibling was the most commonly reported vulnerability factor (see **Chart 20**). 26% of CAS reports regarding the deaths of children and youth in 2013 indicated that the child or youth had been the subject of verified abuse or neglect, and 41% indicated that a sibling of the child or youth had been the subject of

Chart 19: Overall Risk Rating at Time of Death/ Case Closure - CAS Involved Cases - 2013

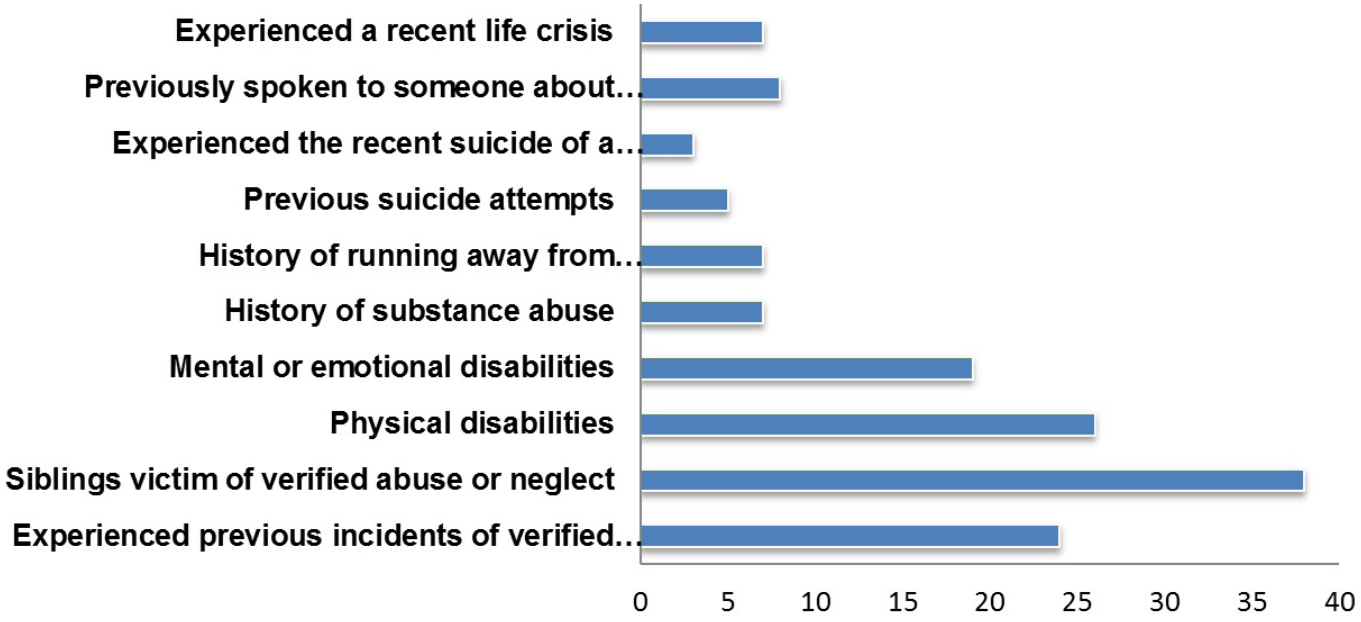


verified abuse or neglect. In 17% of cases, both of these vulnerability factors were present.

- Disabilities are the second most commonly reported vulnerability factor (see **Chart 20**). 27% of the children and youth that died had physical disabilities, and 20% of them had mental or emotional disabilities. In 13% of cases, both of these vulnerability factors were present.
- Suicide was found to be the manner of death for seven youth receiving services from a CAS. Of these, five were Aboriginal children and youth. There were three known or suspected vulnerability factors related to suicide reported on the Child Fatality Case Summary Report by CASs – child/youth has previously attempted suicide, recently experienced the suicide of a friend or relative, and/or had spoken to someone about suicidal thoughts. For three of the seven youth, there was more than one of these vulnerability factors present. Two of the youth had previously attempted suicide, two of the youth had recently experienced the suicide of a friend or relative, and two had previously spoken to someone about suicidal thoughts.

While the CAS provides valuable information when a child or youth dies because the information often identifies particular vulnerability factors, there may be other risk factors for children and youth that are not reported through the Joint Directive reporting process. These are not collected in a standardized way, despite both factors being identified as potential risk factors for children and youth in Ontario.

Chart 20: Known Vulnerability Factors - CAS Involved Cases - 2013



Deaths of Aboriginal Children and Youth with Children's Aid Society Involvement Investigated by the Office of the Chief Coroner in 2013

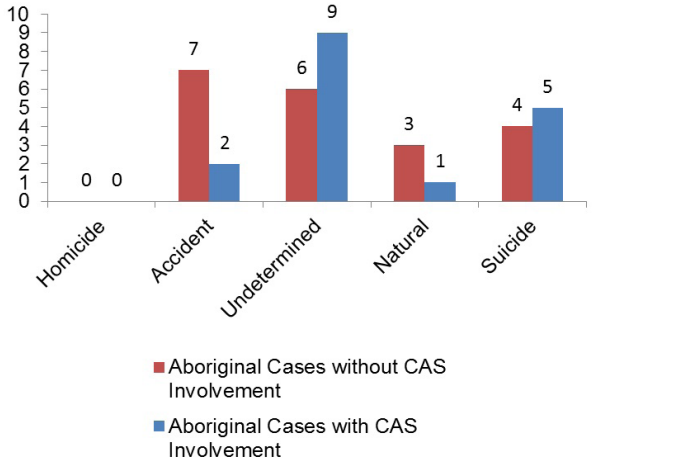
The ability to undertake meaningful analysis of the deaths of Aboriginal children and youth served by CASs is affected by the limited data available to the OCC. The coroner may not identify children and youth as Aboriginal as they rely on the information available in the course of their investigation (information sources include but are not limited to family members, community service providers, the police). This affects the determination of the true number of Aboriginal children and youth whose deaths were investigated by the OCC in 2013. In addition, the number of deaths of Aboriginal children and youth where a CAS has been involved is small, preventing meaningful statistical analysis. Furthermore, the data available from other sources also has limitations (for example, CASs do not report ethnicity).

The available data has been provided; however, given the noted limitations, meaningful inferences cannot be made. In the future, the OCC and PDRC – Child Welfare hope that the quality and availability of data on Aboriginal children and youth may be enhanced to support analyses that may inform prevention strategies targeted to Aboriginal children and youth.

What does the available data tell us?

- Of the 37 coroner investigations into deaths of Aboriginal children and youth, 17 (46%) were Aboriginal children and youth that had received the services of a CAS within the 12 months prior to their death.
- Of 21 deaths where the CAS had been involved with the child, youth or their family within 12 months of the death in the North Region, 15 (71%) were identified as Aboriginal children and youth.
- Of the 17 Aboriginal children and youth, 10 were involved with designated Aboriginal children's aid societies. The other seven were involved with non-Aboriginal CASs.
- Of the total number of coroner investigations into the deaths of children and youth in the care of a CAS or in receipt of Continued Care and Support for Youth (formerly Extended Care and Maintenance) (16), three were Aboriginal children and youth. None of the Crown wards (11) that died in 2013 were Aboriginal children and youth.
- The number of deaths of Aboriginal children and youth that had involvement of a CAS is too small to allow analysis of the manner death. **Chart 21** provides available information on the manner of death of these 37 children and youth.

Chart 21: Comparison of Manners of Death of Aboriginal Children and Youth in 2013



Children and Youth in the Care of a CAS or Receiving CCSY at the Time of Death

Chart 22 (following page) illustrates that fourteen children and youth in the care of a CAS at the time of their death, along with the two youth receiving CCSY, ranged in age from 2 months of age to 18 years.

Chart 23 (following page) shows the manners of death of children and youth in care or receipt of CCSY.

Chart 22: Age Breakdown of Children and Youth in Care or in Receipt of CCSY at Time of Death in 2013

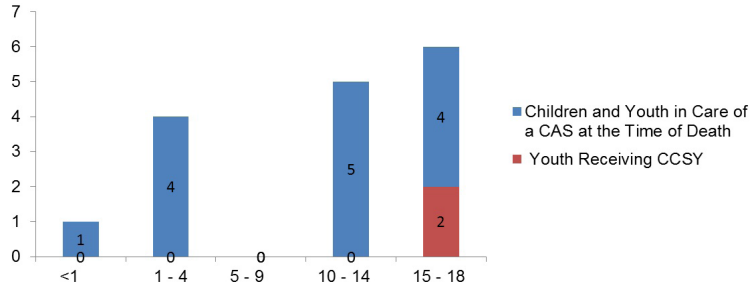
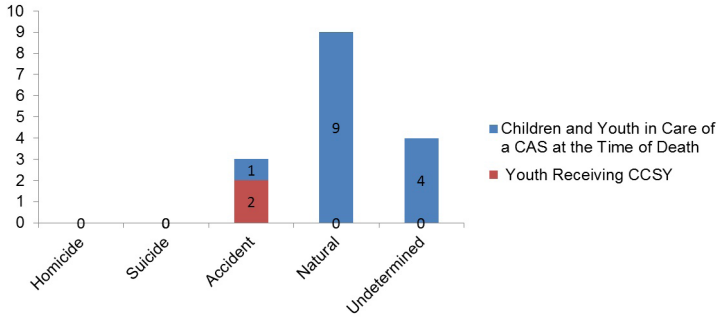


Chart 23: Manner of Death of Children and Youth in Care or in Receipt of CCSY at Time of Death



PDRC – Child Welfare Reviews of Cases with Children's Aid Involvement in 2013

All child deaths are tragic and typically have a number of contributing factors. Occasionally, the actions or inactions by those in a care-giving role (e.g. family members or the child welfare system) may have played a part in the circumstances of the death. The PDRC – Child Welfare reviews the circumstances of the death and may make recommendations to the health care sector, child welfare systems and others with a goal to reduce the number of child deaths and/or to improve the services and care provided to families. It is anticipated that by examining these cases in a non-blaming manner, we can learn from these deaths to improve the lives of other children in the future.

Reports Received by the PDRC – Child Welfare in 2013

PDRC – Child Welfare cases reported to the Committee are usually not reviewed within the same calendar year with those reviewed spanning a number of years. This results from a number of factors, including: complexity of the investigation, time allotment for completion of other reviews (for example, DU5C), case volume, and other ongoing parallel investigations or proceedings, including involvement of the criminal justice system.

In 2013, as required by the Joint Directive, 96 deaths of children and youth aged 0-18, where the child and/or family had CAS involvement within 12 months of the death, were reported by a CAS to the PDRC. These cases are at various stages of the PDRC review process (Chart 24).

Chart 24: PDRC Status of 2013 Deaths with CAS Involvement

Status	Number of Cases
Closed A PDRC Executive Review has taken place, and no full PDRC review is planned. This occurs when the circumstances surrounding the child's death do not relate in any way to the reasons for services and/or the CAS' involvement.	63 (66%)
Pending Decision Cases may be pending a decision regarding PDRC review because additional information is required or because there are other pending investigations or criminal justice system	9 (9%)
Full PDRC Review to be Undertaken An internal child death review has been requested from the CAS, and the PDRC will undertake a full review of the case.	18 (19%)
Full PDRC Review Completed An internal child death review was requested from the CAS, and the PDRC has undertaken a full review of the case.	6 (6%)

Reports Reviewed by the PDRC – Child Welfare in 2013

In 2013, following the process outlined in Chart in Appendix A the PDRC - Child Welfare reviewed the deaths of 34 children and youth who had involvement with CAS within the twelve month period leading up to their deaths. None of the deaths that were reviewed occurred in 2013. **Chart 25** identifies the year of death for all 34 cases reviewed.

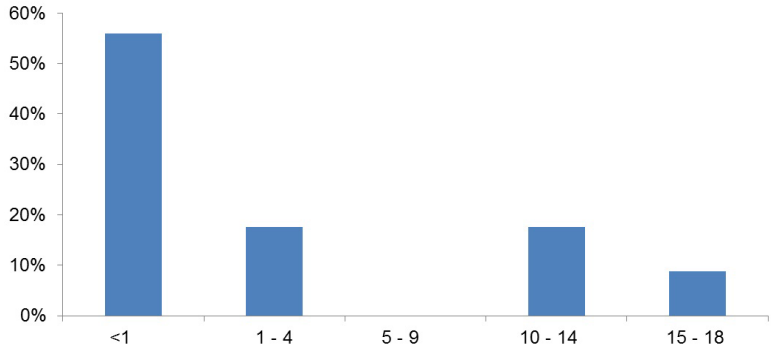
Eighteen of the children and youth were male (53%) and 16 were female (47%).

Chart 25: Year of death of 2013 PDRC Case Reviews

Year of Death	PDRC Cases Reviewed
2008	2
2009	0
2010	4
2011	9
2012	19
TOTAL	34

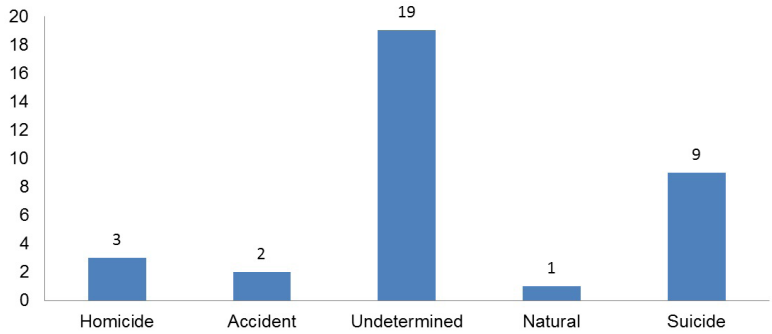
The age of the children and youth ranged from one month to 17 years. Historically, a greater proportion of reviews completed by the PDRC – Child Welfare involve children under one, and adolescents. **Chart 26** demonstrates the age categories for the cases reviewed. This information illustrates that in 2013 the PDRC – Child Welfare continued to focus upon deaths of children under the age of one, and on adolescents.

Chart 26: 2013 PDRC - Child Welfare Reviews Across Age Groups



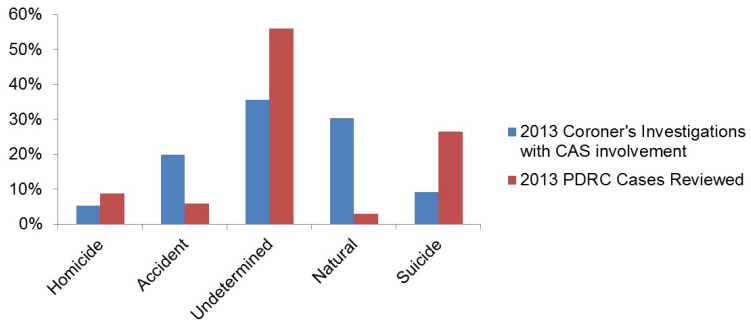
The manner of death of children and youth whose cases were reviewed by the PDRC – Child Welfare in 2013 are identified in **Chart 27**.

Chart 27: Cases Reviewed by PDRC - Child Welfare in 2013



The manner of death distribution is different from the manner of death in 2013 coroner investigations of child and youth deaths with CAS Involvement (see **Chart 28**). This is consistent with past PDRC – Child Welfare review approaches, in which the focus for review was primarily on deaths where the manner was undetermined, homicide and suicide.

Chart 28: 2013 PDRC - Child Welfare Reviews Across Manner of Death as Compared to 2013 Coroner Investigations with CAS Involvement

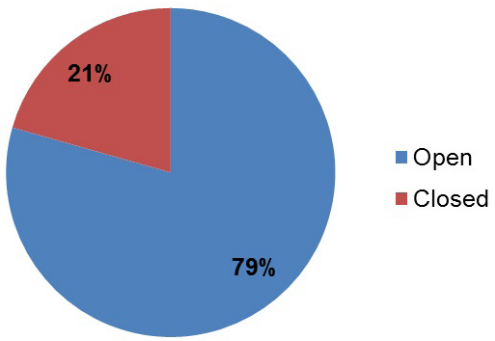


Of the 19 deaths reviewed by the PDRC – Child Welfare in 2013 where the manner of death was undetermined, sleep circumstances were identified as a potential contributing factor in 11 cases (58%). This is consistent with the proportion of undetermined deaths with sleep circumstances identified as a potential contributing factor in the population of infant deaths investigated by a coroner.

Of the 34 cases reviewed by the PDRC – Child Welfare in 2013, the majority were open to the CAS at the time of death (see **Chart 29**).

Of the open cases, one case was open at intake and five were the subject of supervision orders. One case was open for the provision of non-protection services. Four children and youth were in the care of the CAS at the time of their death – two were the subject of Temporary Care Agreements, one was a Crown ward with access, and one was receiving Extended Care and Maintenance (now called Continued Care and Support for Youth).
The manner of death for the four children and youth in care was suicide (three) and natural (one).

Chart 29: PDRC - Child Welfare Cases Reviewed in 2013 - Open vs. Closed



PDRC – Child Welfare Case Reviews in 2013 – Analysis of Factors Identified through Case Reviews

Through case reviews, the PDRC – Child Welfare collects information that, when tracked over time, may identify emerging trends. This knowledge can help contribute to understanding how services may be enhanced to better ensure the safety of children who come into contact with the child welfare system. Definitions which identify the criteria for these factors can be found in Appendix B.

In addition to the factors identified by the PDRC – Child Welfare as part of the case review process, CASs report on vulnerability factors associated with the child, youth or their family as part of their submission of the Child Fatality Case Summary Report. These vulnerability factors have similarities to the factors tracked by the PDRC – Child Welfare. Neither the vulnerability factors nor the factors that are tracked through PDRC case review are necessarily predictive of death, however; both sets of data are collected and help evaluate trends over time.

In the future, the OCC hopes to align the approach to tracking both sets of information.

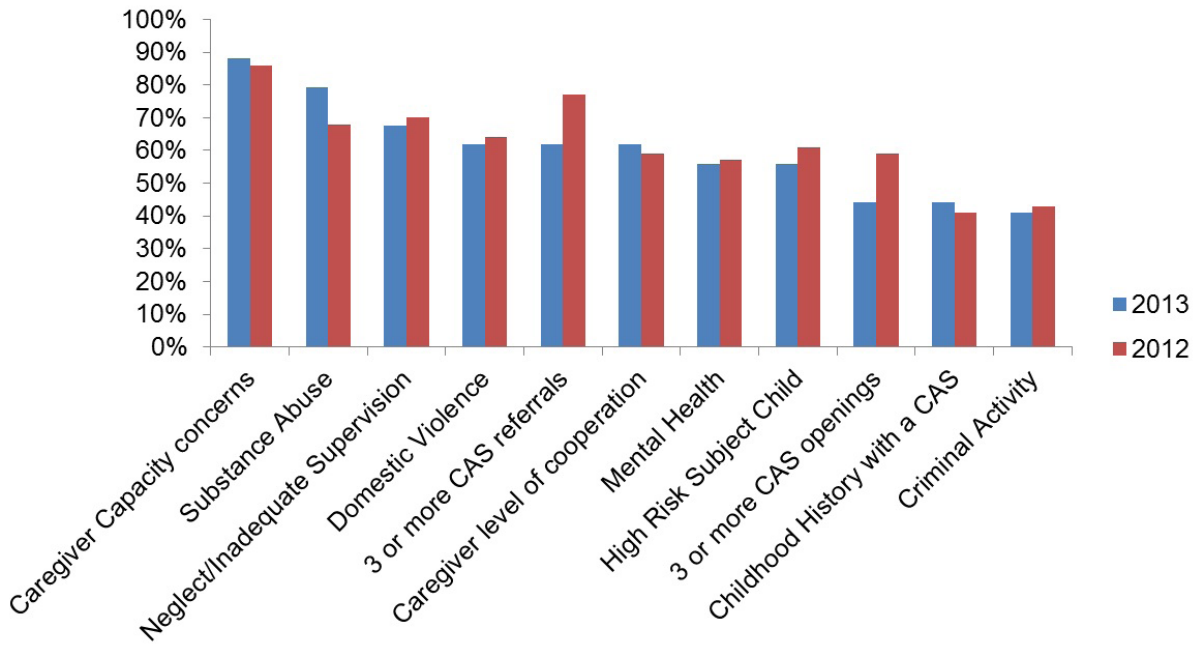
The factors identified most frequently in the 2013 PDRC – Child Welfare case reviews were consistent with those identified in previous years. **Chart 30** identifies the factors most frequently identified through case review in 2012 and 2013, in descending order.

Of particular interest are findings related to the presence of multiple factors:

- 74% (25) of the cases reviewed by the PDRC – Child Welfare in 2013 had five or more of the ten most frequently identified factors present.
- In 35% (12) cases, all of the five most frequently identified factors were present (caregiver capacity concerns, substance abuse, neglect/inadequate supervision, domestic violence and three or more CAS referrals).
- In 3% (1) case, all ten of the most frequently identified factors were present. In 15% (5) cases, nine of the top themes were identified as present. An additional 30% (10) cases had eight of the most frequently identified factors present.

The prevalence of these factors in cases reviewed by the PDRC – Child Welfare may warrant additional investigation to determine whether or not these factors speak to an increased risk of death.

Chart 30: Top Ten Factors Identified in PDRC - Child Welfare Case Reviews



PDRC – Child Welfare Recommendations

The PDRC – Child Welfare offers recommendations to CASs arising from review of the case materials. The recommendations are aimed at the prevention of future deaths in similar circumstances including suggestions for enhancement or change in practice and/or procedures that could improve service delivery and potentially impact child safety.

In 2013, the PDRC – Child Welfare reviewed 34 cases and issued a total of 53 recommendations. These recommendations provided by the PDRC were in addition to recommended changes identified by the involved CASs during the internal review process.

Recipients of recommendations were: 17 individual CASs, the Ministry of Children and Youth Services, the Ontario Association of Children's Aid Societies, the Ontario Hospital Association, a Public Health Department and four Regional Supervising Coroners in the Office of the Chief Coroner.

A number of similar recommendations were made in more than one case. Four reports were accompanied by no recommendations while in one case five recommendations were made.

Categories of Recommendations to CASs in 2013 & MCYS Response

The section below outlines the categories of recommendations most frequently made to the CASs by the PDRC – Child Welfare in 2013. Responses from the Ministry of Children and Youth Services (MCYS), which has responsibility for oversight of CASs, have been provided for each recommendation grouping.

1. Improve training and practices related to safe sleep environments for infants.

Over the past five years the largest single category of deaths reviewed by the PDRC was infants in unsafe sleep environments. Over 10% of the recommendations made by the PDRC – Child Welfare in 2013 were directed toward CAS policies and training for staff on the risks associated with unsafe sleep practices, including bed sharing, and to enhance strategies in educating and monitoring caregivers' provision of safe sleep environments for infants.

MCYS Response

The Ontario Safety Assessment in the Ontario Child Protection Tools Manual (2007) requires consideration of physical living conditions including a child's sleeping arrangements (Safety Indicator #8, e.g. adult sharing a bed with an infant or an unsafe crib) when protection staff conduct a safety assessment.

The ministry funds the Ontario Association of Children's Aid Societies (OACAS) to provide the Education Services curricula which includes a training module on Working with Infants at Risk and their Families. This module includes training on the dangers of bed-sharing and the necessity of appropriate sleeping environments for infants.
In 2013/14 OACAS also developed a practice note for child welfare practitioners to assist in providing information to families, colleagues and other community professionals on safer sleeping environments for infants.

2. Obtain and incorporate all relevant information into risk assessment and case management.

Of the 2013 cases reviewed by the PDRC – Child Welfare, 62% had a history of three or more referrals to a CAS and 44% had three or more case openings. In addition, 44% of the caregivers had known involvement with a CAS during childhood. These children, youth and their families were the subjects of multiple child welfare interventions, sometimes over a period of many years and across jurisdictions. PDRC – Child Welfare reviews also revealed that in some cases, record checks were not completed on new members of a family unit. Record checks and a full review of previous child welfare history may be of value to inform a comprehensive assessment of patterns of behavior, risk to children and future planning.

In some cases, PDRC – Child Welfare reviews identified potential benefit of improved application of the Child Protection Standards when assessing potential risks to children and youth.

More than 10% of the PDRC – Child Welfare's recommendations in 2013 were directed toward improvement in risk assessment and case management.

MCYS Response

Child Protection Standards in Ontario
The purpose of the Child Protection Standards in Ontario (February 2007) is to promote consistently high quality service delivery to children, youth and their families receiving child protection services from children's aid societies (CASs) in Ontario.

Standard #1 requires CASs to assess all referrals from the community by conducting internal and provincial record checks, and if the reporter has alleged the child may have suffered or be suffering abuse, a check of the Ontario Child Abuse Register.

If the check of the provincial database reveals there has been previous contact between a CAS and the child, any member of the child's family, and/or the alleged perpetrator that may be relevant to the child protection investigation, the information concerning the contact is included in the case record. Similarly, if the check of the Ontario Child Abuse Register reveals a relevant record, the results of the search are to be documented on the case record within 3 days.

In addition, Standard #3 requires CASs to develop an investigative plan following a thorough review of all current and historical information known about the family.

The ministry is currently undertaking a review of the Child Protection Standards in Ontario (February 2007) and is considering ways to further emphasize the importance of incorporating historical child welfare information into child welfare decision making.

Child Protection Information Network
In November 2010, the ministry announced a plan to modernize CAS and ministry information systems through the implementation of a single information system called the Child Protection Information Network (CPIN). The system provides a full range of integrated functionality, including: case management, financial management, document/records management, and reporting.

The development of CPIN is complete and the system has been implemented at three CASs. CPIN meets established business requirements, and has been accepted and well-received by the child welfare sector. At all three CASs, CPIN is performing extremely well and as expected. A full support and maintenance capacity is in place to support these three CASs and meet the needs of future CASs using CPIN.
As well, extensive data cleansing, training and change management work has largely been completed at two more CASs (Children's Aid Society of Toronto and the Catholic Children's Aid Society of Toronto.

The ministry has established a plan for the sustainment of the CPIN system, and a plan for deploying CPIN across the province by fiscal year 2019/20. The Ministry intends to further assess the viability of an accelerated deployment of CPIN in a shorter timeframe.

3. Facilitate case discussions with other involved community service providers after the death of a child or youth has been reviewed.

While the death of a child or youth is tragic, these occurrences provide unique opportunities for CASs and other involved community service providers to benefit from lessons learned through a review of a child or youth's death. Approximately 10% of the PDRC – Child Welfare's recommendations in 2013 were directed to CASs with the intent of recommending facilitating collaborative case discussions with other service providers, including schools, other involved CASs and others to identify and improve through a lessons learned approach.

MCYS Response

The Ministry encourages CAS to create strong linkages with community partners to allow for collaborative approaches.

The Child Protection Standards in Ontario (February 2007) emphasize the role of the CAS in facilitating communication amongst service providers.

4. Develop, enhance and provide training on suicide prevention strategies for children and youth, and collaborate with the mental health sector.

In almost 10% of the cases reviewed by the PDRC – Child Welfare in 2013, the manner of death was suicide. Approximately 10% of the PDRC – Child Welfare's recommendations related to suicide prevention strategies and collaboration with the mental health sector. Areas of focus in this category of recommendations included: the importance of discharge and safety planning for youth considered to be at risk of suicide when being released from hospital, and a need for guidelines for CAS staff and foster parents on responding to the use of social media and online bullying.

MCYS Response

Comprehensive Mental Health and Addictions Strategy

In June 2011, the government announced Open Minds, Healthy Minds, a Comprehensive Mental Health and Addictions Strategy which in its first three years, focused on children and youth. Investment started in 2011 and grew to $93 million in 2013-14 and is committed as annual base funding.

The services and supports focused on three key areas:

- fast access to high-quality services;
- early identification and support; and
- helping vulnerable kids with unique needs.

The Strategy recognizes that First Nations, Métis, and Inuit children and youth have unique needs and that culturally appropriate supports are needed. Additional resources have been allocated to help address the mental health needs of First Nations, Métis, and Inuit children and youth, their families and communities under the Strategy.

These additional supports include allocating resources to hire more than 80 Aboriginal mental health and addictions workers in high needs Aboriginal communities, and developing and implementing training supports to increase the supply of trained mental health and addictions workers for Aboriginal communities.

These workers provide services to 4,000 more First Nations, Métis, and Inuit children and youth each year.

The Moving on Mental Health plan will improve the experience of children, youth with mental health problems, and their families, and provide clarity about how to access mental health services within their respective service areas.
In August 2014, MCYS announced the first 14 child and youth mental health lead agencies. Beginning fall 2014, the first 14 lead agencies will be starting to outreach to their broader sector partners, such as hospitals, to develop more coherent pathways. The remaining lead agencies are expected to be announced in 2015.

Youth Suicide Prevention Plan

Ontario's youth suicide prevention plan supports Ontario's Comprehensive Mental Health and Addictions Strategy. It is a three year plan that began in 2013-14. The plan focuses on supporting communities to enhance their local youth suicide prevention efforts so they can better respond to young people in crisis. It consists of:

1. Local mobilization, enabled through:
- funding for 34 communities across the province, to build awareness, enhance capacity and strengthen local youth suicide prevention efforts ($1M in 2014-15); and
- dedicated First Nations, Métis, Inuit and urban Aboriginal supports to develop culturally appropriate and community-driven approaches to suicide prevention ($750,000 in 2014-15);

2. Coaching through the Ontario Centre of Excellence for Child and Youth Mental Health to support local community mobilization groups to plan, implement, and evaluate youth suicide prevention efforts across agencies and sectors; and

3. Annual provincial mobilization forums (including one Aboriginal-specific forum) for adults that young people naturally confide in and go to for help.

Also as part of the plan, in 2013-14, the Ontario Centre of Excellence for Child and Youth Mental Health launched a web-based guide/toolkit to support mobilization efforts. Together to Live/ Vivons, Ensemble (www.togethertolive.ca), is now online. It is a growing collection of stories, evidence informed practices and resources to help communities develop an approach to suicide prevention, risk management and to support those affected by the suicide of a young person.

5. Improve practices related to closing protection cases when follow up is expected or when risk factors may recur.

Several of the PDRC – Child Welfare's recommendations in 2013 related to reviewing the approach by CASs to case closure, particularly in high risk cases. Specifically, the PDRC – Child Welfare recommended that CASs:
- review their approach for inclusion of risk assessment ratings at the time of contemplation about case closure and consider what other action may be beneficial prior to closing a case, such as a consultation with legal services and contact with collaterals such as the treating physician, school etc.; and
- review the approach to case closure of high risk cases (e.g. premature newborn twins with medical needs in a family with multiple stressors).

MCYS Response

The Child Protection Standards in Ontario (February 2007) require the use of the Ontario Family Risk Assessment tool during all family-based child protection investigations.

If after a child protection investigation is concluded a CAS provides ongoing services to a family and a child remains in the home,

a Risk Reassessment would be undertaken in specified circumstances and at least once every 6 months and when a case closure is considered.
The Ontario Risk Assessment and Risk Reassessments are actuarial (statistically driven) instruments which identify families whose characteristics place them at a higher likelihood of future child maltreatment than other families.
Standard #11 – Case Closure with the Child Protection Standards in Ontario (February 2007) sets out the minimum criteria to be met when a CAS makes a decision to close a case. This standard states that one of the minimum criteria which must be met is that "a recent Risk Reassessment confirms that factors that were identified as contributing toward risk in the earlier risk assessment/risk reassessment documents no longer exist, or have been reduced significantly enough that they no longer pose direct safety and/or child well-being concerns." In addition, this standard outlines the requirement for the child protection worker to inform collateral agencies of the intended case closure and the date on which the closure will take place.

6. Improve discharge planning practices with hospitals for children and youth at risk of suicide and medically vulnerable children and youth.

Clear protocols defining roles and communication responsibilities would be beneficial to assist hospital and CAS staff to enhance safe transition of children and youth from hospital.

With respect to high risk infants, the PDRC – Child Welfare made a recommendation regarding development of suggested minimum requirements, including:

- a clear process to guide the intersection of hospital staff and child welfare personnel to discuss discharge plans for high risk infants including a comprehensive post discharge medical care plan;
- education provided to caregivers with respect to safe sleep practices;
- clear description of medical needs and outstanding medical concerns including which community organization would take the lead ; and
- confirmation that the community resources are in place and have initiated a working relationship with the family.

MCYS Response

CASs may participate in collaborative discharge planning with respect to youth at risk of suicide and medically vulnerable children and youth from hospitals, and local protocol development.

The Child Protection Standards in Ontario (February 2007) emphasize the role of the CAS in facilitating communication amongst service providers.

Standard #4 – Conducting a Child Protection Investigation, in the Child Protection Standards in Ontario (February 2007), outlines that one of the investigative steps during a family-based child protection investigation is to obtain releases of information and gather of evidence from other professionals involved with the child/and or family (e.g. medical, law enforcement, legal, educational).

In addition, Standard #9 – Initiation of Ongoing Service, and #10 – Case Management, outline requirements to include collateral service providers in the development of the service plan and throughout the case management process whenever possible.

7. Improve knowledge of and response to the impact of chronic substance use on parenting, with an emphasis on the use of random drug testing of parents where substance use is a presenting concern.

Of the 2013 cases reviewed by the PDRC – Child Welfare, approximately 80% involved caregiver substance use.
The PDRC – Child Welfare directed recommendations to CASs to ensure safety planning for children and youth where caregiver substance use is a known concern.
The Committee also made recommendations to support the use of random drug testing to inform case management in circumstances where caregivers have a known history of substance use.

MCYS Response

The ministry funds the Ontario Association of Children's Aid Societies to provide an Education Services curriculum to child welfare professionals which includes a course on supporting families affected by substance misuse. This course was developed by the Centre for Addiction and Mental Health. Some of the course topics include screening and assessment as well as the development of safety plans for children where caregiver substance misuse may be a concern.

Implementation Status of 2012 PDRC – Child Welfare Recommendations to CASs

The Ministry of Children and Youth Services monitors the implementation status of the PDRC – Child Welfare recommendations and the actions taken by CASs to respond to specific recommendations. MCYS reports that CASs have implemented or were in the process of implementing 92% of the PDRC – Child Welfare's recommendations directed to them in 2012.

Recommendations to MCYS in 2013 & MCYS Response

1. The Ministry of Children and Youth Services should continue their efforts to develop a strategic plan for aboriginal child welfare.

It is evident in some case reviews that there can be a tension between CASs and Aboriginal communities in the delivery of child protection services. Recognizing this, and also that the Ministry has plans for service initiatives, the PDRC – Child Welfare made this recommendation in support of a strategic plan to address these issues.

MCYS Response

Supporting Culturally Appropriate Practices
In 2013-14, MCYS:

- released a practical guide and provided training to CASs and First Nations across Ontario to increase their understanding and use of formal customary care as a culturally appropriate placement option for Aboriginal children and youth
- provided funding to the Association of Native Child and Family Services. Agencies of Ontario to develop a cultural awareness training module for CAS workers and a culturally appropriate home study tool to support the safe placement of Aboriginal children and youth.

Aboriginal Designation
The ministry is currently working with six Aboriginal organizations seeking to become designated as CASs.

Ensuring current CASs are providing appropriate supports to these six Aboriginal organizations is a ministry priority.

Aboriginal Children and Youth Strategy
Since January 2013, the ministry has been engaging with First Nation, Métis, Inuit and urban Aboriginal partners on the development of an Aboriginal Children and Youth Strategy that will look at the system of services, including child welfare, being provided to Aboriginal children and youth in the province in order to improve outcomes.

Building on the work of the Commission to Promote Sustainable Child Welfare , and the Children First report from former Aboriginal Advisor John Beaucage, the Strategy will seek to support community-driven, integrated and culturally appropriate supports for Aboriginal children and youth so that services can better meet their needs.

2. The Ministry of Children and Youth Services should consider a requirement for the development of Fire Safety Protocols between Children's Aid Societies and their respective Fire Services.

Within the past five years the PDRC – Child Welfare has reviewed the fire- related deaths of 26 children where there was involvement with child welfare. In all cases, inoperable smoke alarms were documented by fire investigators. This finding is well in excess of recent research findings, which indicated that in just over 50% of fatal residential fires there was absence of an operable smoke alarm.

MCYS Response

The ministry funds the Ontario Association of Children's Aid Societies (OACAS) to provide an Education Services Curriculum, which in 2010-11 included funding for OACAS to develop a Fire Safety Resource Guide. OACAS and other stakeholders, including the ministry, Office of the Fire Marshal, Office of the Chief Coroner, and CAS representatives developed the Fire Safety Resource Guide to be used by child welfare professionals. The guide was developed for the purposes of:

- Educating and enhancing child welfare professionals' awareness about the risk factors associated with home fires;
- Identifying safety and prevention strategies that can be used by families; and
- Providing a list of resources that are available to child welfare professionals and the families they work with.

The OACAS continues to make the resource guide available both in hard copy and on their public website.

While the majority of the recommendations made by the PDRC – Child Welfare are directed toward individual CASs or the MCYS, the Committee may make recommendations to other organizations. Chart 31 summarizes the recommendations made by the PDRC – Child Welfare in 2013 to other organizations.

Chart 31: Summary of PDRC – Child Welfare Recommendations to Other Organizations in 2013

Organization	Recommendation
Ontario Association of Children's Aid Societies	**OACAS should consider the development of best practice guidelines for Children's Aid Societies to guide the approach to case closure within the context of identified maternal pregnancy.** This practice issue has been identified in a number of the PDRC – Child Welfare's reviews. Although recommendations have been provided to individual societies to develop plans and/or practices to guide staff when closing cases when the mother is pregnant, this issue is one that would benefit from consideration across the child welfare system. Province wide practice guidelines would support a consistent approach.
Ontario Association of Children's Aid Societies	**The Ontario Association of Children's Aid Societies should review the content of core child protection training and either enhance or create as applicable, training on working with hard to serve / resistant clients.** The unique challenges associated with service delivery to resistant clients within the context of establishing supportive working relationships, juxtaposed against the legal mandate of CASs, has been identified as a theme within the field of child welfare during case review by the Paediatric Death Review Committee . Consequently, if not already provided in core training, enhancement of training to assist and support staff in more effectively managing hard to serve clients has been recommended.
Ontario Hospital Association	**Hospitals should work with Children's Aid Societies, outpatient children's mental health services and other relevant community professionals to ensure there is information sharing, including safety planning, through a case conference / discharge planning meeting prior to discharge of children or youth at risk of suicide from hospital.** This recommendation was consistent with a theme identified in the Paediatric Death Review Committee and Deaths Under Five Committee 2012 Annual Report, regarding the importance of information sharing between and amongst health care professionals and CASs in order to support safety planning for children or youth at risk of suicide.

Organization	Recommendation
Public Health Department (specific department has not been identified to protect the privacy of the individual that was the subject of the review)	**That Public Health and other community based professionals, as deemed appropriate, utilize this case to facilitate a lessons-learned meeting to discuss safe sleep expectations and messaging to parents in the community.** A meeting with a lessons-learned focus could facilitate a discussion of Public Health Agency of Canada and Health Canada's safe sleep recommendations. This could be of benefit to informing the establishment of a shared position amongst service providers leading to a more consistent safe sleep message to the community. The inclusion of a Health Canada Product Safety Officer in the discussion may be helpful.
Regional Supervising Coroners, Office of the Chief Coroner	Regional Supervising Coroners should review the processes and approach to child death investigation with investigating coroners to ensure consistency and best practices are followed. It is important that Regional Supervising Coroners follow the identified procedures associated with child death investigation. Specifically: • Prompt record checks and notification of CASs after the death of a child, as early Society knowledge about the death of a child that is receiving service from the CAS allows early opportunity for involvement of the society in the death investigation and an opportunity to provide support to the family; and • Accurate sharing of information with CASs about cause and manner of death. Information shared with CASs about cause and manner of death can influence child welfare decision making and assessment of the circumstances surrounding the death or potential risk to any surviving siblings. Investigating coroners may identify preliminary investigative findings, including those of the post mortem examination; however, it is important to remember that case completion occurs after case review by the Deaths Under Five Committee.
Regional Supervising Coroner, Office of the Chief Coroner	**The Regional Supervising Coroner should consider convening a case conference including, but not limited to, CASs involved in a case, MCYS and other community partners where the death of a child or youth has occurred.** Depending on the circumstances of the case, where service delivery to a child, youth or their family was complex and involved multiple partners there may be value in bringing all service providers together to discuss the case in an effort to identify lessons learned, inform provincial practices and potentially reduce the likelihood of a similar circumstances reoccurring with other children or youth.
Regional Supervising Coroner, Office of the Chief Coroner	**The Regional Supervising Coroner should bring this case to the attention of the involved Emergency Medical Services as a reflective learning opportunity to potentially inform future service delivery.** Regional Supervising Coroners should facilitate learning and information sharing with community partners, where appropriate, where doing so could enhance future practice and improve the safety of children and youth.

Committee Membership

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Det. Mike McKenzie
Coroners Investigators

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Det. Sgt. John Braybrook
York Regional Police

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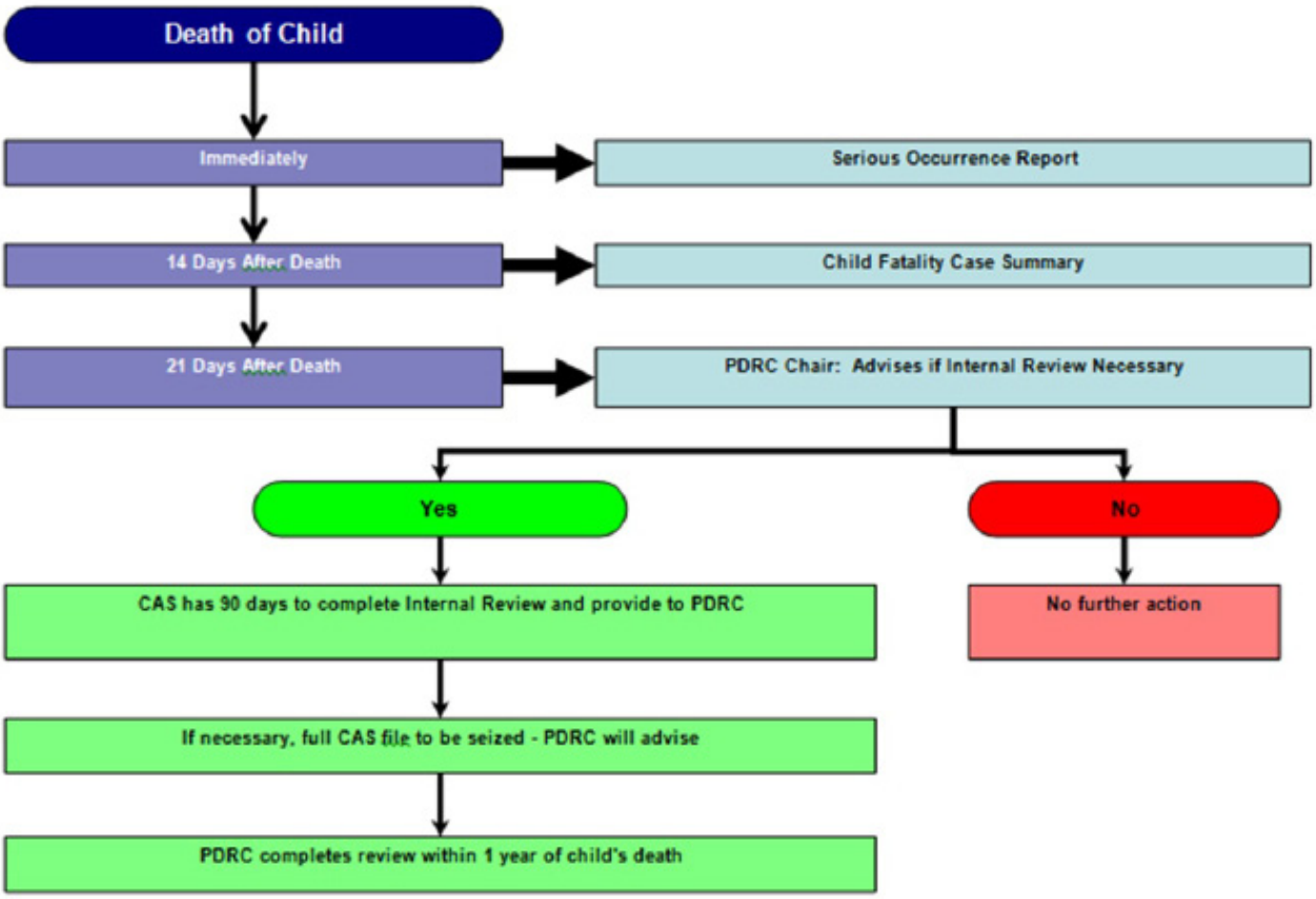
Appendix A – Joint Directive on Child Death Reporting and Review

Chart 32 shows the process and timelines arising from the 2006 Joint Directive between the OCC and MCYS for Child Death Reporting and Review.

Chart 32: Joint Directive Flow Chart – Office of the Chief Coroner and Ontario Children's Aid Societies



CAS Internal Child Death Reviews

When is an internal child death review requested?

The Chair of the PDRC reviews the CAS Child Fatality Case Summary Report and the Coroner's Investigation Statement (CIS) and considers the following criteria when deciding if a CAS will be requested to conduct and forward an Internal Review to the PDRC:

- Meets the criteria of the 2006 Joint Directive (CAS involvement within 12 months of the death)
- When a child dies as a result of questionable circumstances; and
- Where the circumstances surrounding the child's death may relate in any way to the reasons for service and/or CAS involvement.

Why is an internal child death review requested?

An internal child death review is requested by the Chair of the PDRC for the purposes of conducting an analysis of the context within which the death occurred. Internal child death reviews provide an opportunity for individual CASs, and the child welfare sector as a whole, to learn from child deaths with a view to identifying areas of potential improvements to CAS policies, practices and procedures.

Who completes the CAS internal child death review?

When the Chair of the PDRC requests that a CAS undertaken an internal child death review, the CAS is required to establish a review team which must include an independent external reviewer with appropriate clinical expertise to participate in the review.

Levels of PDRC – Child Welfare Reviews

There are three levels of PDRC – Child Welfare review:
Executive Review: These cases which upon review by the Executive Committee of the PDRC, it is determined that no further review by the CAS or PDRC – Child Welfare is required, as the circumstances surrounding the child's death do not relate to the reasons for services and/or CAS involvement. For example, cases where the child's family had no CAS involvement until the injury leading to the death, or the child was known to CAS, but the death was natural and not unexpected, or the child died as the result of an incident unrelated to the reasons for the family's involvement with CAS.

Pending DU5C: On occasion, the decision to request an internal child death review from a CAS is postponed pending the completion of the Coroner's investigation and/or review by the DU5C, to await additional information and context regarding the child's death.

Internal and PDRC Review: If the PDRC – Child Welfare requests an internal child death review, CASs are requested to submit their report within 90 days, and the PDRC – Child Welfare has up to 12 months to review the case and issue a report that may contain further recommendations. All cases in which an internal child death review has been completed are reviewed by at least two members of the PDRC – Child Welfare – one police representative and one child welfare representative – review the following case material for each death with CAS involvement: the Serious Occurrence Report, Child Fatality Case Summary Report, the Internal Child Death Review, police report, Coroner's Investigation Statement, Report of Post Mortem Examination, toxicology reports (if applicable) and any other investigative reports provided (e.g. report from the Office of the Fire Marshal). After discussion at a committee meeting, a final case report is prepared consisting of a summary of events, discussion and recommendations (if any), with a goal to inform the prevention of future deaths in similar circumstances. The report is forwarded to the involved CAS, MCYS and the referring Regional Supervising Coroner who may conduct further investigation (if indicated).

Recommendations are also distributed by the Committee Chair to agencies and organizations who may be in a position to effect implementation. Organizations are asked to respond back within one year with the status of implementation of recommendations.

CAS Response to PDRC – Child Welfare and Internal Review Recommendations

Following receipt of PDRC – Child Welfare reports, individual CAS agencies consider the report and implement recommendations as appropriate. Progress reports are submitted to MCYS Regional Offices outlining agency responses to the recommendations addressed to them. Ministry Regional Offices are responsible for follow-up with individual agencies on a quarterly basis regarding the actions taken to respond to the Internal Review and PDRC recommendations.

Findings and recommendations from these reviews have been utilized to change practices, develop training, policy and procedures and to initiate new approaches and programs.

Appendix B - PDRC – Child Welfare Case Review Themes - Definitions

Category	Definition
Substance Abuse	CAS documented that at least one of the caregivers suffered from substance abuse issues.
Mental Health	CAS documented that at least one of the caregivers suffered from mental health issues.
Domestic Violence	CAS documented that the caregiver(s) had been involved in at least one partner violence incident.
Criminal Activity	CAS and/or PDRC have information that the caregiver (s) has a history of criminal activity.
Physical Abuse	It was suspected and/or verified by a CAS on at least one occasion, that the child/children in the family were victims of physical abuse.
Emotional Abuse	It was suspected and/or verified by a CAS on at least one occasion, that the child/children in the family were victims of emotional abuse.
Sexual Abuse	CAS documented history of sexual abuse within the family (caregivers were victims or perpetrators) and/or the CAS has suspected and/or verified on at least one occasion that the child/children in the family were victims of sexual abuse and/or perpetrators.
Neglect/Inadequate Supervision	It was suspected and/or verified by a CAS on at least one occasion, that the child/children in the family were victims of neglect or inadequate supervision.
3 or more CAS Openings	A CAS had opened a file relating to the caregiver(s) on at least three separate occasions
3 or more CAS Referrals	A CAS had received at least three separate referrals relating to the caregiver(s) (referrals could have been received during one opening, or during a number of openings or could have been reports received, not investigated).
Previous Death of a Child	The caregiver(s) have experienced a previous death of a child.
Caregiver Capacity Concerns	CAS or PDRC has noted concerns about the caregiver(s) parenting capacity either before or after the death of the child.
Childhood History with CAS	One or both of the caregivers has had involvement with the CAS as a child.
Youth of Primary Caregiver	The primary caregiver is 24 years old or younger
High Risk Subject Child	The deceased child was "high risk" meaning < 1 year of age; and/or had special needs
Unsafe/hazardous Living Conditions	Home environment may have placed a child at risk of harm and/or contributed to the death of the child (very cluttered, dirty, dangerous)
Problems with caregivers' level of motivation or cooperation with intervention	Pattern of avoidance, lack of follow through, aggressive and/or unmotivated to cooperate.

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