2009

Annual Report

Child Death Review Unit

BC Coroners Service

BRITISH COLUMBIA

PSSG10-022

MESSAGE FROM THE DIRECTOR

Over the past three years, the Child Death Review Unit of British Columbia has issued a number of reports, and in keeping with those we begin with what we know - the death of a child is a profound loss not only to the child's parents and family, but also to the larger community. In order to reduce this burden, we must first understand how and why our children are dying. We strive to learn from those experiences and move that knowledge into action.

On behalf of the Chief Coroner of British Columbia, Dr. Diane Rothon, the men and women of the BC Coroners Service and the members of the Child Death Review Unit, I am pleased to introduce the 2009 Child Death Review Unit Annual Report.

This report reflects the activities the CDRU undertook throughout 2009, focusing on the completion of 262 child death case reviews, public reporting, and recommendation monitoring and support. In particular, 2009 saw the release of *Safe and Sound*, a five-year retrospective review of Sudden Infant Death in British Columbia. The work on recommendation implementation continues with the collaboration and participation from a significant number of stakeholders. This report further highlights the progress we have made in building relationships and partnerships with other child health and safety jurisdictions. This will remain a priority for 2010.

I encourage our stakeholders and the people of British Columbia to read this and other reports posted on our website. Your feedback will assist us in nurturing a child death review process that is meaningful and inclusive.

Kellie Kilpatrick
CDRU Director

Every death of a child in British Columbia matters. This report is dedicated to the 262 children and their families, friends and communities whose lives were changed forever.

OVERVIEW

This report provides a summary of the work conducted by the Child Death Review Unit (CDRU) in 2009. The report begins by situating the CDRU within government and outlining the unit's mandate, mission and legislative authority for action. An update on key activities undertaken in 2009 follows, organized across the CDRU's three core functions:

Case Review

A summary of the 262 cases reviewed in 2009 is provided, including a descriptive breakdown of the cases by demographics, circumstances and preventability. Case studies are provided to demonstrate key trends, risk factors and opportunities for prevention related to circumstances of child deaths reviewed throughout 2009.

Recommendations

Progress updates on recommendations previously issued by the CDRU are presented in order to highlight actions that target agencies have taken in support of implementation, and to share recent advancements in policy, practice and programs related to child health and safety.

Reporting

In addition to the 2008 Annual Report, a special report on sudden infant death was issued by the CDRU in 2009. Entitled *Safe and Sound: A Five Year Retrospective*, the report examined the lives and deaths of 113 infants who died suddenly and unexpectedly in sleep-related circumstances over a five year period in British Columbia (B.C.). This report summarizes the development, findings and recommendations of *Safe and Sound* and describes the CDRU's plans with respect to recommendation implementation.

As well as outlining activities relating to the CDRU's core functions, this report highlights collaborative projects and initiatives undertaken by the CDRU in partnership with stakeholders at the regional, provincial and national level.

This report concludes by awarding *Gold Stars* to five organizations that have demonstrated excellence in promoting and protecting child health and safety in 2009. The CDRU's *Gold Stars* are a testament to the province's collective commitment to reducing the number of preventable child deaths in British Columbia and beyond.

Key terms used throughout the report appear in **bold** and are defined in the Glossary on page 42.

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WHAT IS THE CHILD DEATH REVIEW UNIT?

The Child Death Review Unit is part of the BC Coroners Service, an agency within the Ministry of Public Safety and Solicitor General.

Under the Coroners Act, the Child Death Review Unit has a legislated mandate to review, on an individual or aggregate basis, the facts and circumstances related to the deaths of all children 18 years and under in B.C. The mission of the CDRU is to better understand how and why children die, and to translate those findings into action to prevent future deaths and to improve the health, safety and well-being of all children in B.C. Being placed within the BC Coroners Service, the CDRU is also well positioned to complete real-time **monitoring** of child deaths and facilitation of continued quality improvement on child death investigations.

The Child Death Review Unit consists of a Director, program assistant and case reviewers with backgrounds in paediatric medicine, forensics, investigation, child welfare and injury prevention. Appointed under the Coroners Act, case reviewers have the authority to exercise powers of investigation, including the ability to obtain additional information when required to complete a case review. The Coroners Act also makes provision for the Chief Coroner to prepare, publish and distribute materials for the purpose of informing the public on the prevention of child deaths.

Our mission:

To prevent future deaths and improve the health, safety and well-being of all children in British Columbia.

A LOOK AT THE CHILD DEATH REVIEW PROCESS

The methodology used by the CDRU is based on best practices for child death review from across North America and was developed with guidance from the National Center for Child Death Review in the United States. The review process consists of three main components: case reviews; recommendation development, implementation and monitoring; and reporting on CDRU activities and review findings.

Every child death in B.C. is reviewed by the CDRU, including both sudden and unexpected deaths and those of natural causes. Child death cases are sent to the CDRU for review when the coroner has completed his or her **investigation** or when an **inquest** into the death is complete. Each case is assigned to a primary reviewer within the unit who conducts an initial examination of the Coroner's file and gathers additional information required to ensure a full understanding of the case. This may include medical, school and law enforcement records, or conducting interviews with family members of the child. Once all of the necessary information has been obtained, the reviewer completes a protocol that captures data on demographics, circumstances and risk factors relevant to the child's death. Cases are then examined by the CDRU team, who collectively offer a multi-disciplinary perspective on the events leading up to the child's death and **risk factors** involved. Depending on the nature of the case, external content experts may also be brought into the multi-disciplinary review process. Following a case presentation by the primary reviewer, the team ensures that a thorough understanding of the case has been reached and confirms that protocol data have been captured accurately. Lastly, the team determines if a death was **preventable**.

Once case reviews are complete, data is analysed to generate findings related to demographics and **modifiable risk factors** both within and across different circumstances of child death. Examination of aggregate case findings allows the CDRU to identify trends or emergent issues that require targeted action. Based on these findings, the CDRU develops recommendations aimed at preventing similar deaths in the future.

When further examination of an issue is required, the CDRU may recommend that the Chief Coroner convene a **death review panel**. The purpose of a death review panel is to review the facts and circumstances of one or more deaths in order to provide advice and recommendations to the Chief Coroner with respect to medical, legal, social welfare and other matters that may impact public health and safety in the prevention of deaths. Individuals appointed to a death review panel may be content experts or those who have an intimate understanding of the case under examination (e.g. physician or social worker involved in service delivery). Under the Coroners Act, death review panels operate under certain privacy provisions intended to facilitate frank discussions about the events leading up to the child's death.

The CDRU may also recommend the case be referred to the Office of the Representative for Children and Youth. The Representative has a mandate to review the deaths of children in care of the **Ministry of Children and Family Development (MCFD)** or who were in receipt of **reviewable services** within 12 months of their death.

A key function of the CDRU is to move findings into preventative action through the development of recommendations that aim to protect and promote child health and safety. In preparation for recommendation development, the CDRU identifies best and most promising prevention practices by reviewing research literature and exploring interventions that have shown success in other jurisdictions. Stakeholder consultations are also conducted to ensure that recommendations are informed by the practical knowledge of administrators and professionals working in the field. Guided by empirical and experiential evidence, recommendations are crafted to address gaps in policies or programs, or to advance prevention efforts already underway in the province. Prior to being formally issued, a recommendation development tool created by the National Center for Child Death Review is applied to each recommendation to ensure it is evidence-based, feasible and linked to the CDRU's case review findings. The CDRU also considers recommendations in the context of the Spectrum of Prevention to ensure that proposed actions collectively reflect a multi-faceted approach (Cohen & Swift, 1999). The Spectrum of Prevention is endorsed by the National Center for Child Death Review as a framework that review teams can use to create long-lasting, positive changes within their jurisdictions.

The CDRU supports and monitors the implementation of recommendations on an on-going basis. Publicly reporting on the status of recommendations is a means of highlighting recent advancements in policy, programs and practice and gives recognition to the various agencies engaged in the improvement of child health and safety in B.C. Monitoring recommendations also assists with evaluating the impact of the province's child death review program.

The Coroners Act provides authority for the Chief Coroner to prepare, publish and distribute materials for the purpose of informing the public respecting prevention of child deaths. Information on the unit's activities and review findings is shared with the public and stakeholders on a regular basis. Starting in 2010, the CDRU will issue yearly statistical reports on the state of child death in B.C. These reports will examine annual trends in rates and risk factors and issue recommendations for prevention across all circumstances of death. The CDRU will continue to issue special reports focusing on a specific issue or circumstance of child death that demands more in depth analysis and targeted action (*e.g. Safe and Sound: A Five Year Retrospective*). Operational activities and updates on the implementation of past recommendations are reported by the CDRU on an annual basis, as demonstrated in this report.

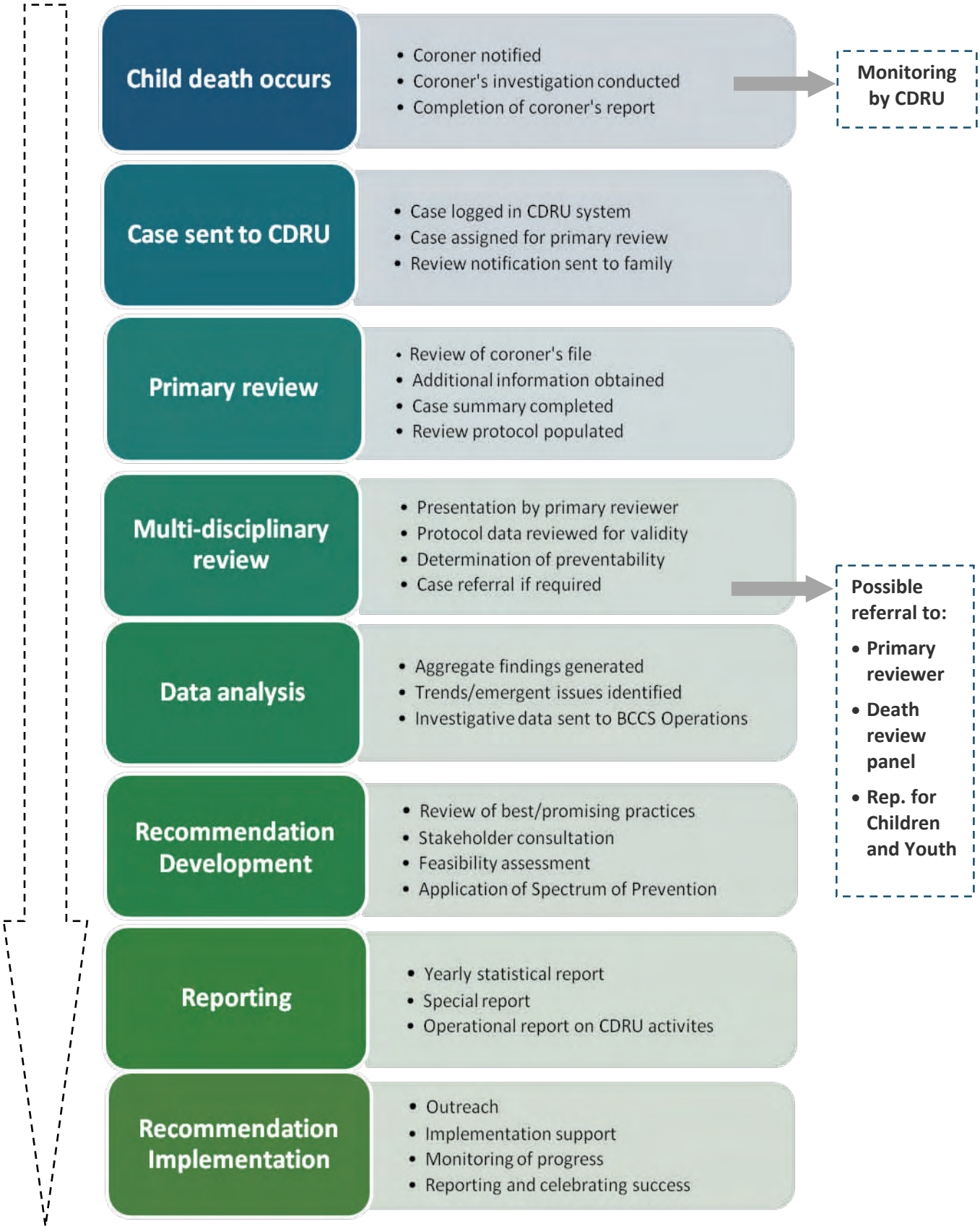


Figure 1.0. Summary of the child death review process, CDRU, 2009

CASE REVIEWS

Throughout 2009, the CDRU reviewed 262 cases of child death that occurred in British Columbia between 1995 and 2007. The majority of deaths occurred in 2006 and 2007 (see Table 1.0).

Although the CDRU monitors all child deaths that occur in B.C. in real time, the review process is not initiated until the coroner of jurisdiction has completed his or her investigation and closed the case with a Coroner's Report. Homicides and other complex cases require longer timelines for completion, thus resulting in a lengthier time period between the time of death and initiation of the CDRU's review.

This cluster of cases marks the completion of reviews on all child deaths reported to and investigated by the BC Coroners Service prior to and including December 31, 2007*. Reports on cases previously reviewed by the CDRU are available on the Ministry of Public Safety and Solicitor General website at http://www.pssg.gov.bc.ca/coroners/child-death-review/index.htm.

The following section provides demographic and circumstantial data on cases reviewed by the CDRU in 2009.

Demographics

- Figure 2.0 outlines the number and percentage of child deaths reviewed in 2009 by age group. Age groups used by the CDRU are neonate (birth to 28 days); infant (29 days to 365 days); preschooler (1 to 4 years); child (5 to 12 years) and youth (13 to 18 years). Youth accounted for the highest percentage of cases reviewed.
- Of the 262 deaths reviewed, 151 (58%) of the children were male; 111 (42%) of the children were female.
- The majority of children resided in the Vancouver Island region (74, 28%), followed by the Interior region (50, 19%); Fraser region (48, 18%); Northern region (44, 17%); and Vancouver Metro region (40, 15%). Six of the children (2%) resided outside of the province. A description of BC Coroners Service regional boundaries is provided on page 44.
- Sixty-five (25%) of deaths reviewed involved **Aboriginal** children (see Table 2.0).

* At the time of writing, 16 child deaths occurring prior to January 1, 2008, remained open and under investigation by the BC Coroners Service. These deaths will be reviewed and reported by the CDRU upon closure of the case by the coroner of jurisdiction.

Table 1.0. Cases reviewed by year of death, CDRU, 2009

Year of Death	Number of cases reviewed
1995	1
1997	2
2000	1
2002	1
2003	1
2004	10
2005	28
2006	68
2007	150
Total	262

Figure 2.0. Number and percentage of child deaths reviewed by age group, CDRU, 2009

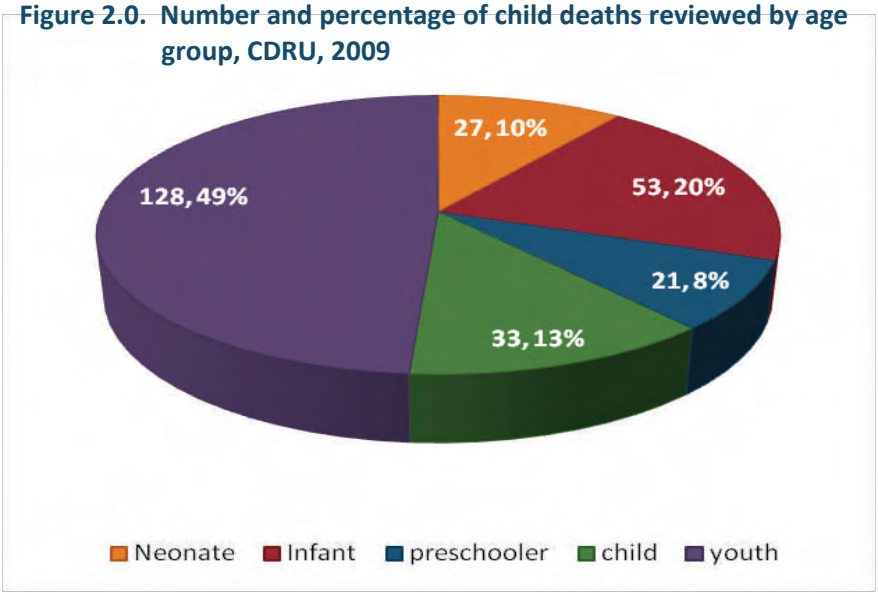


Table 2.0. Number (%) of child deaths involving Aboriginal children and other residents, CDRU, 2009.

	Number of cases reviewed (%)
Other residents of B.C.	197 (75.0)
First Nations (Status and non-Status)	63 (24.2)
Métis	1 (.4)
Aboriginal Ancestry Unknown	1 (.4)
Inuit	0 (0)
Total	262 (100)

Figure 3.0. Number of cases reviewed by region of incident and region of death, CDRU, 2009

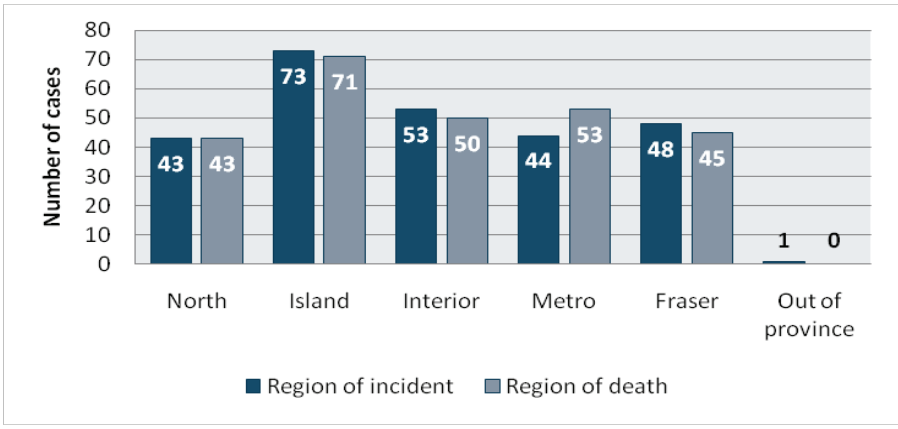


Figure 4.0. Percentage of deaths reviewed by circumstance, CDRU, 2009

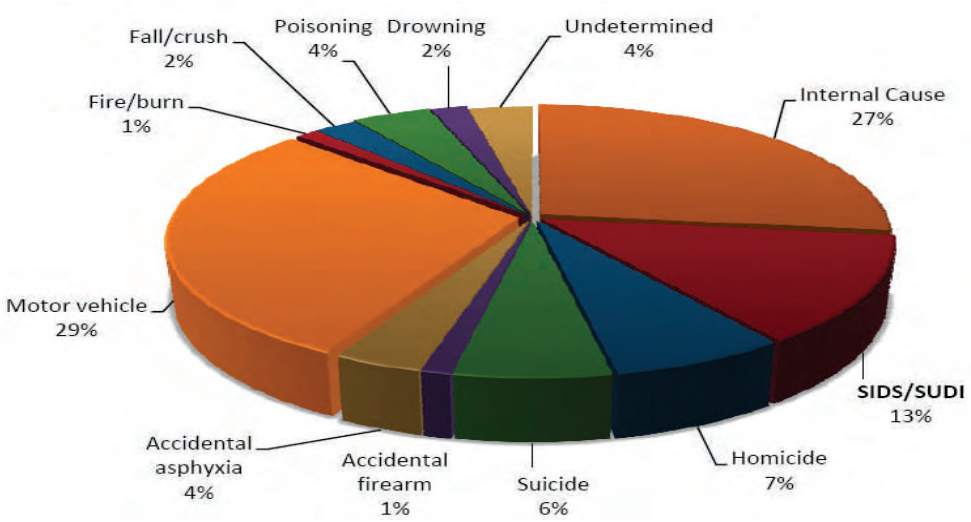


Table 3.0. Number of cases reviewed by age group and circumstance, CDRU, 2009

Age group	Motor vehicle	Internal Cause	SIDS/SUDI	Homicide	Suicide	Poisoning	Acc. Asphyxia	Undetermined	Fall/crush	Drowning	Fire/burn	Acc. Firearm	Total
Neonate	0	24	3	0	0	0	0	0	0	0	0	0	27
Infant	0	12	31	2	0	1	7	0	0	0	0	0	53
Preschooler	3	11	0	1	0	0	1	4	0	1	0	0	21
Child	11	8	0	4	1	0	1	2	4	0	2	0	33
Youth	63	15	0	12	15	10	0	3	2	4	1	3	128
Total	77	70	34	19	16	11	9	9	6	5	3	3	262

The Ministry of Children and Family Development is responsible for delivering a range of social services to families and communities. Of the 262 children:

- One hundred and eleven (43%) were involved with **Child and Family Services** at some point during their lives. Sixty-seven (26%) children were in receipt of Child and Family Services in the 12 months prior to their death. Sixteen (6%) of the 262 children were in care of MCFD at the time of their death.

- Eleven (4%) of the 262 children were in receipt of Child and Youth Mental Health (CYMH) services either at the time of their death or historically.

- Ten children (4%) had current or historical involvement with the Youth Justice system.

- Twenty-five (10%) children were served by **Community Living BC** and the At Home Support Services program, which provides respite, home support and other services that allow in-home care.

Circumstances

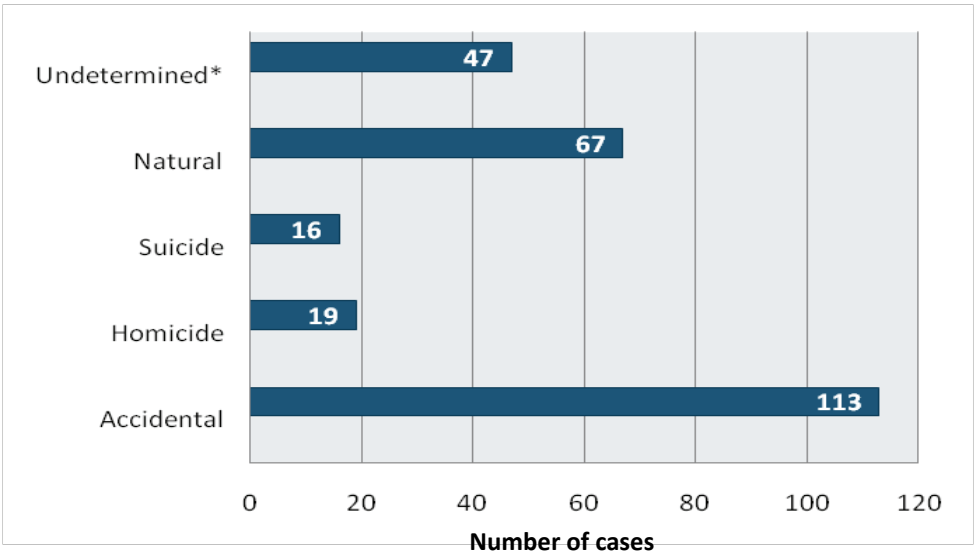
- Figure 3.0 outlines the number of cases reviewed by region of incident and region of death. The increased incidence of death in Vancouver Metro reflects the number of children who are transferred to the region for specialized paediatric care following the incident.

- Motor vehicle crashes accounted for the greatest percentage (29%) of cases reviewed in 2009, followed by natural deaths due to internal causes (27%) (See Figure 4.0). Table 3.0 outlines the number of cases reviewed by age group and circumstance.

- Upon conclusion of the coroner's investigation, a death is classified as either **accidental**, **homicide**, **suicide**, **natural** or **undetermined**. Accidental deaths accounted for the greatest number of cases reviewed by the CDRU in 2009, followed by natural deaths (see Figure 5.0).

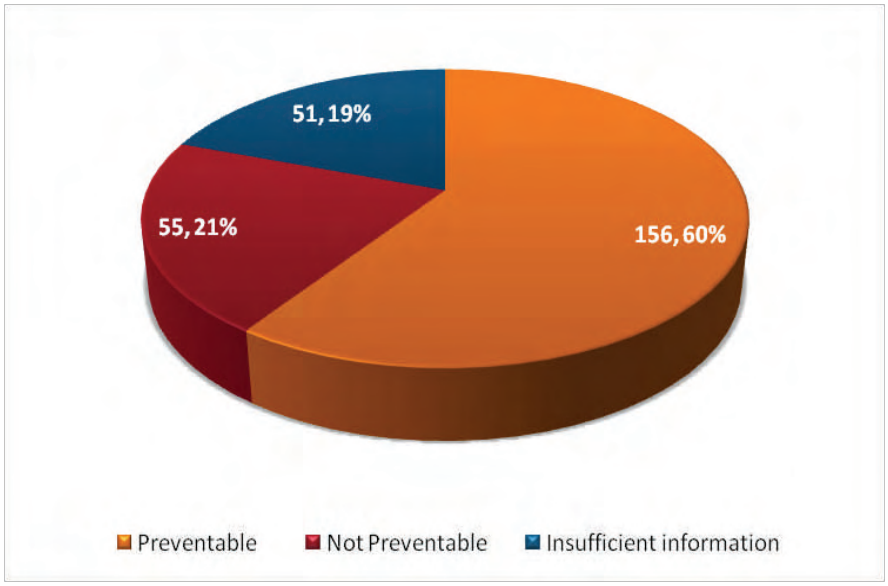
- Of the 262 cases reviewed in 2009, 156 (60%) deaths were determined to be preventable (see Figure 6.0). A preventable death is one in which, with retrospective analysis, it is determined that a reasonable intervention at the individual, community or system level may have prevented the death through modification of one or more risk factors. Deaths identified as **not preventable** are typically those of natural, expected causes due to illness or a congenital condition. In contrast, preventable deaths are generally injury-related (i.e. classified as accidental, homicide or suicide). Of the 148 fatal injuries reviewed by the CDRU in 2009, 137 (93%) were determined by the CDRU to be preventable.

Figure 5.0. Number of cases reviewed by classification of death, CDRU, 2009



* Distinct from undetermined circumstance. See glossary.

Figure 6.0. Number and percentage of child deaths reviewed by preventability, CDRU, 2009



Case Studies

The following case studies are reflections of real cases reviewed by the CDRU in 2009. They represent common scenarios in different areas of child death and are provided to demonstrate key trends, risk factors, and preventability across various circumstances. Each case study concludes with commentary on best practice interventions and provides examples of prevention in action.

Homicide

Jaden was born to young parents who lived in a basement suite of a family member. After recovering from childbirth, Jaden's mother returned to high school. His father had recently dropped out of school and took over responsibility for taking care of Jaden during the day.

At three weeks of age, Jaden began to experience daily bouts of inconsolable crying that lasted several hours. His father attempted to settle Jaden down by feeding and walking with him, but neither was successful. His father had little outside support from friends and family and felt increasingly exhausted and frustrated by Jaden's crying. Over the next two weeks, Jaden's crying bouts worsened. One afternoon, his mother came home from school and took Jaden out of his crib to feed him. Jaden was lethargic and unresponsive. Dried vomit was visible on his sleeper. Concerned by Jaden's appearance, Mom called 911 and Jaden was transported to hospital. Assessment determined that Jaden's injuries were indicative of abusive head trauma. Over the next 18 hours Jaden's condition deteriorated and he succumbed to his brain injury. Upon questioning, Jaden's father admitted to vigorously shaking his son in frustration when he wouldn't stop crying. He claimed that he was not trying to hurt Jaden – he just wanted the crying to stop.

Research demonstrates that some infants develop periods of inconsolable crying from about two weeks of age, for three or four months. This normal developmental stage may lead to parental exhaustion, frustration and anger, which has the risk of culminating in a shaking episode. Jaden's case highlights common risk factors associated with incidents of Shaken Baby Syndrome, including: a young infant, persistent and prolonged periods of inconsolable crying; and pre-existing parental stress from environmental, social, or financial circumstances.

The Period of PURPLE Crying® is an evidence-based Shaken Baby Syndrome (SBS) prevention program that aims to bring about a cultural change in our understanding of normal infant crying. Using an 11-page booklet and a 10-minute DVD, the PURPLE program helps parents understand the frustrating features of crying in normal infants that can lead to shaking and abuse, so they will have reasonable expectations for their baby and themselves as caregivers. In B.C., the delivery of the PURPLE program to families of new babies primarily occurs in maternity wards, paediatric and other primary health care practices, public health units and through nurse home visitor programs. The program is also delivered to the general public through a public education and media campaign. Studies conducted by the Child and Family Research Institute at BC Children's Hospital, in collaboration with Prevent Shaken Baby Syndrome BC, found that the PURPLE program increased parental knowledge about normal infant crying and understanding the dangers of shaking an infant. The findings also showed that parents who participated in the program were more likely to share information with others. For more information about the Period of Purple Crying program, visit www.purplecrying.info.

Suicide

Lucas was a 17 year old male who lived with his parents. Lucas was shy but well liked by his teachers and peers. Lucas had been diagnosed with depression at the age of 15, a condition his father also struggled with. Although Lucas had expressed thoughts of suicide in the past, his condition had remained relatively stable in recent months. The mental health care team providing treatment to Lucas was pleased with his progress. Towards the end of Grade 12, Lucas began a romantic relationship with a girl from school. This created significant tension between Lucas and his parents, who did not approve of the relationship. The conflict worsened when his parents denied Lucas permission to attend a graduation party at a friend's house. One morning before school, Lucas sent a text to his girlfriend, indicating he could not live with his unhappiness. He then failed to show up for school, sparking considerable concern. The school counsellor called Lucas' father, who left work immediately in attempt to find Lucas. His father searched the family home and found Lucas lifeless in his bedroom. A suicide note was later found on Lucas' laptop.

Although the youth suicide rate in B.C. has declined significantly over the past 20 years, suicide remains the second leading cause of death for British Columbians aged 15 to 18 years (BC Vital Statistics, 2009). Youth suicide is associated with a combination of acute and chronic risk factors related to the individual and their physical, social and cultural environments. Certain mental health conditions, such as anxiety and depression, are known to predispose youth to suicidal behaviour. In the presence of predisposing factors, suicide attempts are often triggered by an acute crisis or stressful life event, such as conflict with family and peers or loss of a loved one.

Youth suicide is a complex problem that requires a comprehensive response involving actions across a continuum of prevention strategies, including mental health promotion and the prevention of illness, early intervention and detection, targeted clinical interventions and postvention (White, 2008). Guided by contemporary and traditional understandings of evidence -based practice, prevention efforts must be youth-centered and focus on reducing risks and strengthening protective factors at the individual, community and system level. Coordinated efforts involving all levels of government, research bodies, and non-profit and community organizations continue to be undertaken in attempt to better understand and prevent child and youth suicide in B.C. Recently, the BC Medical Association initiated the East Vancouver Youth Mental Health Project, in collaboration with Killarney Secondary School, the Vancouver School Board, Ministry of Health Services, MCFD, Vancouver Coastal Health, family doctors, and East Vancouver community youth groups. The goal of the program is to close gaps in mental health care for youth by integrating family physicians into the local mental health community and Killarney Secondary School. For more information on the East Vancouver Youth Mental Health Project visit http://www.bcmj.org/east-vancouver-youth-mental-health-project.

Motor Vehicle Crash

Rafael was a 17 year old boy who had recently received his "N" driver's license. He occasionally borrowed the family car for work or to socialize with friends. Since receiving his license, Rafael had been pulled over by police twice for speeding and having too many occupants in the vehicle. On both occasions, Rafael was penalized for being in contravention of his "N" license. His parents were unaware of these events.

One Saturday night, Rafael went to watch friends play rugby. After the game, the group decided to attend a bonfire up an old Forest Service Road. Rafael drove his girlfriend to the bonfire, where they each had a few drinks. Shortly after 1 a.m., the crowd began to disperse. Rafael returned to his car, along with his girlfriend and two friends. The four youth entered the vehicle and began the drive home. Rafael's girlfriend was the only one wearing a seatbelt. On the highway approaching town Rafael was reported to be driving at 120 kph with the music blaring, his usual practice on this familiar stretch of road. As the vehicle approached a curve, Rafael lost control of the car, which left the roadway and rolled several times before landing on its roof. The vehicle suffered massive structural damage. Rafael and his two friends were ejected from the vehicle and did not survive. Rafael's girlfriend suffered non life-threatening injuries.

Motor vehicle crashes are the leading cause of death among British Columbian youth. Speeding, lack of seat belt use, driving impaired and underestimating dangerous situations are common contributing factors to motor vehicle injuries among young people. Youth at especially high risk for a motor vehicle crash include males, youth driving with youth passengers, and novice drivers, who are almost 45% more likely to be involved in a crash than experienced drivers (ICBC, 2004).

In April 2010, the Province introduced changes to give B.C. the toughest provincial impaired driving legislation in the country. Under changes to the Motor Vehicle Act (MVA), drivers who provide a failing breath sample or refuse to provide a breath sample at the roadside will face an immediate, 90-day driving ban and a $500 fine. As well, they will have their vehicle impounded for 30 days and may also face criminal charges. Drivers in the Graduated Licensing Program ("L" and "N" drivers) are subject to the regular impaired driving penalties in addition to GLP-specific consequences, including a 12-hour immediate roadside License Suspension, a review by the Superintendent of Motor Vehicles and a Driver's Licence Reinstatement Fee of $250. The changes to B.C.'s impaired driving laws come into effect on September 20th, 2010.

Pedestrian

Noah was three years old and lived with his parents and two older siblings on a quiet residential street.

On Sunday afternoon, Noah and his siblings were playing in the front yard while their parents were busy painting the hallway. The front door was open to allow for venting of paint fumes and some supervision of the children. Noah's father exited the home and told the kids he was going to buy more paint and he would be back in half an hour.

Noah's father followed the shrub-lined path to his pick-up, which was parked at the top of the driveway. He put his truck in reverse, checked his rear view mirrors and began to back up. Within moments he felt a bump and heard a cry. He immediately stopped and exited the vehicle. Noah was found lying behind the pick-up truck, pale and moaning.

His father called 911 and Noah was transported to hospital. Despite significant resuscitation efforts, Noah could not be saved. Investigation determined that Noah had entered the driveway unwitnessed and was attempting to climb into the back of the truck when the vehicle reversed. Analysis determined that Noah was several inches too short to be visible by his father in the rear view mirror.

Small children are particularly vulnerable to back-over injuries due to their lack of cognitive and developmental capacity and their small stature, which hinders their visibility to drivers. Back-over injuries commonly involve vehicles with large blind zones, such as pick-up trucks and sport utility vehicles. The majority of back-over injuries take place in residential driveways, with the driver often being the child's family member or neighbour. Parent education on the importance of adult supervision and vehicle checks prior to ignition is encouraged, in addition to the use of safety devices such as back up alarms and rear view cameras. In the United States, legislation has been introduced that will require the installation of safety technologies as standard equipment in all vehicles.

In 2011, the CDRU plans to issue a special report on child pedestrians. This report will include findings and recommendations resulting from the retrospective case review of child pedestrian deaths in B.C.

Drowning

Adam was four years old and lived with his parents and older brother. Late one afternoon, Adam was playing with his brother and a group of children in the street outside the family residence. At approximately 5:00 p.m., his mother called out for her two boys to come back to the house for dinner. Adam's brother returned alone, stating that he thought Adam had come home before him. His mother called for Adam a few more times before going outside to fetch him. He was not among the group of kids who were playing in the cul-de-sac. None of the children could remember when Adam had wandered off, or in what direction.

His mother entered the back yard of the home to continue her search and found Adam floating face down in the family's in-ground swimming pool. She carried Adam to the front yard and screamed for help. A neighbour began CPR on Adam while his mother called 911. Emergency services were on the scene within five minutes. Despite resuscitation efforts, Adam did not survive.

The swimming pool was enclosed by perimeter fencing that surrounded the property. The fencing was equipped with two locked gates. The only other means of accessing the pool was from within the family home. Investigation determined that Adam entered the backyard from inside the home via a sliding door in the office. His mother was busy preparing dinner for the family and believed that Adam was under the supervision of his older brother. She did not witness Adam entering the backyard.

Drowning is the second leading cause of injury-related death for young children in British Columbia. From 1991 to 2008, 24 preschoolers drowned in residential swimming pools in B.C., a rate of roughly one child every year. The majority of these incidents are predictable and preventable events that can be avoided by addressing two common modifiable risk factors – unrestricted access to the pool area and lack of adult supervision.

Since 2008, a number of recommendations have been issued by the BC Coroners Service that target the prevention of drowning incidents involving young children in backyard swimming pools. These recommendations resulted in the establishment of the BC Pool Safety Initiative, led by the Ministry of Housing and Social Development and Child Death Review Unit. Under this initiative, government has joined forces with drowning prevention experts, the non-profit sector and pool industry to develop a community action toolkit for backyard swimming pool safety. The toolkit will be a resource for local governments looking to improve the safety standard reflected in their swimming pool enclosure bylaws and to raise community awareness and knowledge about the risks of backyard swimming pools. The toolkit is expected to be ready for distribution by summer of 2011.

Poisoning

Charlie was 17 years old and lived with his mother and sister. He was a strong athlete who did fairly well at school and was well liked by his peers. He recently completed grade 11 and was working at his first summer job.

Charlie's grandfather was visiting from out of town. His grandfather suffered from chronic pain and had been part of the methadone program for several years. Charlie's family was well aware of his grandfather's methadone requirements and care plan.

One day after work, Charlie and two friends walked to a local beach to have a campfire. Charlie reportedly consumed 14 ounces of hard liquor. Shortly after 1 a.m., Charlie returned to his residence. He had something to eat and fell asleep on the couch. The next morning, a family member attempted to wake Charlie. He was unresponsive. Emergency health services attended but despite significant efforts, resuscitation was unsuccessful. Toxicological examination determined that the cause of death was a mixed overdose of alcohol and methadone.

Investigation determined that the grandfather's methadone was mixed with orange juice and stored in the refrigerator. It was suspected that Charlie had woken up in the night and consumed the mixture. Family speculated that given Charlie's alcohol intoxication and probable drowsiness, he was likely unaware of what he was drinking.

Between 1994 and 2009, 15 children have died due to an overdose of methadone. In some cases, like the one above, methadone is consumed by the child unintentionally due to a family member's methadone prescription being stored insecurely in the refrigerator. In other cases, methadone is used as a recreational drug without understanding the risk of overdose for a naive user. In some instances, methadone is used following the ingestion of other substances that have already impaired judgement and compromised decision-making ability.

All methadone related deaths occurring in the province are reported to the College of Physicians and Surgeons of BC. Their investigations determine, in part, if the methadone use was legal and consistent with the Methadone Manual Guidelines, or illegal. After an examination of individual cases or on aggregate, the College's Methadone Committee may issue recommendations. The CDRU will be meeting with the College of Physicians and Surgeons to examine all recent methadone related child deaths. These discussions may lead to a more in depth review of the cases or a recommendation for a death review panel.

Fire

Ana and Julie were cousins, aged five and nine, who lived in a First Nations community.

One evening, the children were staying at their grandmother's home, along with three adults and six other children. Shortly before midnight, the grandmother woke to a crackling sound. She arose to find the hallway filling with smoke. As there were no smoke detectors in the home, Grandma called out to awaken the other occupants who all escaped, except for Ana and Julie, sleeping upstairs.

The fire was determined to have originated in the main floor laundry room. The dryer exhaust was not properly vented to the outside, allowing for a build up of lint within the duct system. Once ignited, the fire spread quickly through the wood structure of the home. An incorrectly installed furnace system that drew smoke and heat upwards to the top floor where Ana and Julie were sleeping was also implicated in the fire.

Young children experience a higher rate of fire-related injury and death in Canada, as do males, seniors, visible minorities and low income populations. Living in a rural area or in substandard housing that lacks safety features are also risk factors for fire-related injury. Smoke alarms are cost effective tools that can alert occupants to a fire at its early stages, thereby preventing injuries and saving lives. Smoke alarm requirements were introduced into the BC Building Code in 1979, and have been mandatory in all dwellings and sleeping rooms since then. Recent changes were made to the BC Fire Code to more closely harmonize it with the National Fire Code of Canada. As of May 1, 2010, the BC Fire Code smoke alarm requirements were extended to homes and sleeping rooms that were built prior to 1979. This applies to all dwellings, whether owner-occupied or rented. This new law is aimed at increasing public safety and awareness; helping reduce health risks; and minimizing property damage in older buildings.

The Office of the Fire Commissioner is the senior fire authority in the province with respect to fire safety and prevention. The public education program of the Office of the Fire Commissioner provides leadership in fire safety education, with provincial initiatives such as the Getting To Know Fire program, National Fire Prevention Week activities and a Juvenile Firesetter Intervention program. In 2009, the theme for Fire Prevention Week was "Stay Fire Smart! Don't Get Burned". During the week, fire service personnel brought important safety messages to B.C. communities on burn awareness and prevention, how to keep homes safe and to be aware of the leading causes of home fires. For more information visit the Office of the Fire Commissioner's website at http://www.pssg.gov.bc.ca/firecom/.

Sudden Unexplained Death in Infancy (SUDI)

Joey was a three month old baby living with his 20 year old mother, 14 month old sister and four extended family members in a two bedroom home. His mom was a smoker who had cut back to five to seven cigarettes a day when she discovered she was pregnant. Joey was born at 37 weeks and went home with his mother the following day. He was seen twice by a clinic doctor, once for diaper rash and once for his two month immunizations, and was found to be thriving.

Joey routinely shared his mother's bed. There was no crib in the home and his sister slept on a foam pad on the floor beside his mother's double bed. Joey had been congested and cranky for a few days so his mother was happy when he breastfed well and settled relatively quickly. She lay on her side facing Joey, who was lying on his back beside her.

Joey's mother awoke at 5 a.m., surprised that he had not woken up to feed earlier in the night, as was his usual routine. Joey was still supine, about six inches from her. Joey's mother checked his forehead and noted he felt cold. Joey was unresponsive. His mother woke a family member up, who called 911 and began CPR. Despite resuscitation efforts, Joey could not be revived.

Joey's death highlights common risk factors found to have an association with **sudden unexplained death in infancy (SUDI)**. Risk factors may be categorized as intrinsic, extrinsic or maternal. Intrinsic risk factors include male sex, fetal exposure to cigarette smoke, recent viral illness, and Aboriginal ancestry. Extrinsic risk factors include being placed in a non-supine position, a cluttered sleep environment, bed-sharing, overheating, postnatal exposure to cigarette smoke, or sleeping on a soft surface not intended for infant sleep. Maternal factors include poverty, low maternal age and educational level, and inadequate prenatal care.

In *Safe and Sound: A Five Year Retrospective,* the CDRU recommended that safe sleep messages be simple, consistent, evidence-based, culturally appropriate and aligned across jurisdictions. Recent work in this area has been undertaken by the Public Agency of Canada (PHAC), the Vancouver Island Health Authority (VIHA), and the Ministry of Healthy Living and Sport (MHLS). More information can be obtained from the Public Health Agency of Canada at http://www.phac-aspc.gc.ca/dca-dea/prenatal/sids-eng.php, or on The Best Chance Website at http://www.bestchance.gov.bc.ca/you-and-your-baby-0-6/caring-for-your-baby/.

Undetermined

Raven was eight years old and lived with her parents and siblings in a First Nations community. Both of her parents worked and shared child care duties. Raven was an active, healthy child who enjoyed swimming and bike riding.

Just prior to her death, Raven was seen by a physician for nausea, vomiting and diarrhea. Her parents were advised to give her Gravol and fluids, and to return if she did not improve within 48 hours. The next day, Raven was still lethargic and not eating or drinking well. Her parents decided to take her back to the clinic in the morning for re-assessment. During the night Raven was heard falling in her room. Her Mom found her attempting to get up from the floor. Raven collapsed and could not be resuscitated.

Post mortem testing revealed no anatomical or toxicological cause of death. Metabolic testing, however, proved that Raven had a disorder known as CPT1a deficiency, a condition prevalent in First Nations and Inuit populations. The majority of people with this deficiency are unaffected and unaware of it. Most children with CPT1a deficiency never have symptoms and are only found to be affected after a brother or sister has been diagnosed.

CPT1a is an enzyme that aids in converting fatty acids to fuel for the body. It is inhibited in the presence of adequate glucose (sugar) and active only when glucose is unavailable, due to illness or fasting. If neither glucose nor fatty acids are available to fuel cells, a metabolic crisis can occur. This may lead to respiratory depression, seizures or death.

In Raven's case, it cannot be determined if the CPT1a deficiency was the cause of death, although it is known that she would have had minimal glucose in her system due to limited oral intake in the days prior to her death. As there were no findings on autopsy, cause of death was reported as Undetermined.

The CDRU has previously awarded a Gold Star to the BC Newborn Screening Program, in recognition of its commitment to reducing the incidence of child death in B.C. Research is ongoing to examine the historical deaths of Aboriginal infants and children in order to better understand a specific variant (P479L) of CPT1a deficiency, including its prevalence and implications on both Aboriginal and non-Aboriginal populations.

Internal Cause

Lily was a three year old girl with a genetic condition that left her with significant developmental and cognitive delays. She had multiple hospital visits and was well known in her small Northern community. Her five year old brother Ian suffered from the same genetic condition. In Lily's home community were a walk-in clinic and a hospital. During the day, physicians staffed the walk-in clinic while the nursing staff cared for inpatients at the hospital up the street. When the clinic closed for the day, medical care was transferred to the hospital.

Late one evening, Lily was taken to the hospital by her parents suffering from a high fever. She was assessed for a urinary tract infection and tests were run. Her parents were told to bring Lily back to the hospital in the morning for further assessment by a doctor. Lily's mother arrived at the hospital at 8:30 a.m., at which time the physicians had already left for the walk-in clinic. Lily's mother called the clinic and told them that Lily was ill and needed to be seen immediately. She was told to bring Lily in at 2:00 p.m. that afternoon, when they would fit her in. Her mother arrived on time and again told the clinic receptionist that Lily was very ill and needed to be seen. The receptionist was a non-medical person who did not relay Lily's mother's concerns, and there was a further delay before Lily was seen.

When the physician saw Lily, he immediately sent her to the hospital, following behind to admit her and begin treatment. Arrangements were made to transport Lily to BC Children's Hospital, the province's only specialized paediatric health centre. Unfortunately, prior to the arrival of the transport team, Lily arrested and died.

Although Lily died of natural causes, there were several modifiable risk factors within the circumstances of her final illness that may have led to a different outcome for Lily. These factors include suffering from a chronic condition and acquiring a superimposed acute illness, and limited access to timely paediatric care, a risk for children living in rural or remote areas.

Child Health BC is an example of the province's ongoing commitment to improve access to care for children with complex needs. Child Health BC is a province-wide initiative whose mission is to build an integrated and accessible system of care for the purpose of improved health status and health outcomes for BC's children and youth. Child Health BC brings together partners from all health authorities; the Ministries of Health Services, Healthy Living and Sport, Education, and Children and Family Development; the First Nations Health Council; and other provincial agencies and services. The purpose of the initiative is to work collaboratively and provide a quality of care beyond what any one agency can provide. The work of Child Health BC results in improved services, resources and capacity across the province, reduced travel time for families, and better health outcomes for B.C.'s children.

RECOMMENDATIONS

The following section provides a progress update on recommendations issued by the Child Death Review Unit since 2008. Publicly reporting on the status of recommendations is a means of highlighting recent advancements in policy, programs and practice and gives recognition to the various agencies engaged in the improvement of child health and safety in B.C.

Recommendation Update: Panel on Child and Youth Suicide (Issued December 2008)			
	Recommendation	**Target Agency**	**2009 Progress Update**
1	As government develops an updated 10-year mental health plan for B.C.: a) adopt a government wide approach to promotion, prevention and early intervention in mental health for children and youth, including detection and response to suicidal behaviour, similar to the province's approach to the promotion of positive physical health; b) call for targeted efforts to reduce the stigma and discrimination associated with mental disorders.	Ministry of Healthy Living and Sport (MHLS), Ministry of Health Services (MHS), Provincial Health Services Authority (PHSA)	MHS, MHLS, and MCFD collaborated on the draft 10-year Plan to Address Mental Health and Substance Use in BC. This draft plan reflects a renewed provincial response to mental health and substance use challenges that requires action across ministries, sectors and disciplines. The plan builds on the 5 year plan and emphasizes support of the mental health of children and families. Key components include the promotion of positive mental health across the lifespan, increased resiliency, reduced stigma and discrimination, and mitigation of vulnerability to potential problems. Proposed action builds on recommendations within the provincial Framework and Planning Template for Suicide Prevention, Intervention and Postvention (PIP).
2	Develop population-level mental health indicators to support effective delivery of population mental health strategies and enhanced knowledge of the mental health status of B.C. children and youth.	MHLS	MHLS, in collaboration with BC's health authorities, is working to ensure timely implementation of core public health programs that emphasize healthy early development and improved mental health and resiliency of children and youth. Indicators are proposed to track population-level improvements and reflect program performance. MCFD and other partners are supporting the Children's Health Policy Centre with the BC Children's Mental Health Monitoring Project, which includes review of availability and quality of data resources related to indicators. The Provincial Health Officer's future report on the health and well-being of children and youth will identify a suite of indicators to be tracked over time. MHLS will continue to work in collaboration with the PHO and Canadian Institute for Health information to determine appropriate indicators. MHLS is currently investigating the costs, associated processes and feasibility of adapting existing validated and reliable survey instruments to measure population level positive mental health.

3	To increase resiliency and coping skills in children and youth, deliver curriculum-based universal skill-building programs in all B.C. schools.	Ministry of Education (MEd), BC School Trustees Association (BCSTA)	Representatives from the MEd and Boards of Education participated in the development of the Suicide PIP Initiative, including a Planning Template. School districts provided an education perspective. Priority for the next year is ensuring materials are packaged for use by school districts in decision-making and implementation. The BCSTA is committed to supporting work underway and to raise awareness amongst the Boards to enhance uptake of resources.
4	Develop a mental health literacy tool to assist B.C. families in recognizing and responding to signs of mental health problems involving children and youth, and to distinguish these from normal developmental processes.	MCFD	The 10 year Plan to Address Mental Health and Substance Use in BC will include a focus on mental health promotion and prevention of mental health problems. MCFD and partners contribute to BC's Integrated Provincial Strategy to Promote Health Literacy in Mental Health and Addictions. Initiatives include the Child and Youth Healthy Living Program, improving access to mental health information, and the development of family and professional toolkits. MCFD and PHSA continue to support BC Partners for Mental Health and Addictions Information through education, peer support and system navigation.
5	Establish a web-based information clearinghouse that will serve as a centralized access point for resources on promotion, prevention and early intervention in mental health (including suicide prevention and postvention). Its development should include a communications plan that promotes use by both professionals and the public.	MCFD, MHLS	MCFD and MHLS are key stakeholders in the Provincial Child and Youth Healthy Living Strategy, and are helping identify appropriate sources of information that will be accessed online. MCFD maintains a Preventing Youth Suicide website that is updated annually to incorporate recent evidence on suicide prevention, intervention and postvention. The MCFD-sponsored Research Quarterly, issued by SFU, focussed a recent edition on youth suicide prevention. In addition, they videocast interviews by content specialists Dr. Charlotte Waddell and Bill Mussel.
6	Across B.C., deliver community-based gatekeeper training programs to improve recognition of and response to suicidal behaviour among those who have regular, non-clinical contact with children and youth. Programs should include an evaluation component and target a diverse group of potential interveners in the community - for example, teachers, coaches, employers, police officers, probation officers, clergy and other community leaders.	Crisis Intervention and Suicide Prevention Centre of B.C.	The Crisis Centre has developed gatekeeper training for non-clinical staff. This has been widely delivered as part of professional development to school staff across the province. The training is available for delivery to other populations however obtaining funding is a barrier.

7	Offer evidence-based peer recognition and response training to youth in all B.C. school districts. This training should be offered on a continual basis and be delivered as part of a holistic school-based approach to preventing suicide that incorporates other recommendations made by the panel, including universal systematic screening and the development of crisis response protocols.	MEd, MCFD, BCSTA, Crisis Intervention and Suicide Prevention Centre of B.C.	The Suicide PIP Framework and Planning template and the draft 10 year plan provide a framework to support school districts in determining appropriate, effective programs. Additional best practice material is found on the MCFD website and in the Children's Health Policy Centre Research Quarterly publications. Key approaches are defined through the MHLS core programs in public health. A collaborative committee involving MHLS, MCFD, the Joint Consortium of School Health, and other partners commissioned a literature review and consultation with key informants from school settings across Canada about the use of a "whole school approach" to promote positive mental health. This project links to the Mental Health Commission for Canada's School-based Mental Health and Addictions Project that will include a literature review on school-based interventions and a knowledge translation component.
8	To improve school connectedness, engagement and attendance among B.C. youth, implement systematic, school-based screening to identify students who require enhanced skills-based social support. This screening program should incorporate evidence-based suicide predictors and include measures to ensure that enhanced support and adequate follow-up are provided when a need is identified.	MEd, MHLS, BCSTA	The development of the 10 Year Plan to Address Mental Health and Substance Use in BC provides the foundation on which to proceed. The education sector has been included in consultations ensuring this perspective is addressed and as a result, efforts to improve school connectedness have been granted significant prominence. Further implementation will consider this priority in the context of comprehensive school health approaches and targeted, evidence-based programming.
9	Using a determinants of health approach to address emotional and behavioural problems among children and youth, implement provide-wide policies or programs that aim to improve school connectedness. Interventions should integrate both school-based and community-based strategies to improve a child or youth's connection with peers, teachers and the learning process.	MEd, MHLS, BCSTA	The development of the plan provides the infrastructure on which to support proceeding with this recommendation. In addition, the Joint Consortium on School Health research on effective promotion of resiliency has been shared with the school system. A protocol developed jointly by MHS and MCFD will support Boards of Education, Independent Schools, MCFD and health Authorities to use collaborative approaches to reducing child and youth suicide.

10	Improve means restriction efforts in BC by: a) retrofitting the five bridges in BC that are responsible for over 50 % of suicide deaths by jumping from 1991-2007 (Burrard St. Bridge, Granville St. Bridge, Iron Workers Memorial Bridge, Lions Gate Bridge, Patullo Bridge) with barriers to prevent future suicide deaths by jumping; b) developing policy that establishes criteria for determining when bridges should be outfitted with barriers to prevent suicide by jumping, and enforcing this policy in the construction of all new bridges in BC.	Ministry of Transportation and Infrastructure (MTI), City of Vancouver, Translink	MTI, along with the Crisis Centre, Vancouver/West Vancouver Police departments, E-Comm, and TELUS, installed six crisis phones on the Lions Gate bridge. A report will examine their usage after 12 months. The MTI had a consultant investigate potential suicide prevention/deterrent measures on the Ironworkers Memorial and Lions Gate Bridges and a second study involved railing issues on Ironworkers Memorial Bridge, including looking at suicide barriers. The Ministry will review these reports and any further analysis, and determine feasibility over the next year. This work may help establish criteria for when bridges should be outfitted with barriers. Translink has undertaken preliminary planning and functional design work on the Pattullo Bridge replacement project; suicide prevention initiatives remain a consideration.
11	Develop and distribute a policy handbook to support accurate, consistent interpretation and practice of confidentiality requirements among those working in child-serving jurisdictions. This handbook should address appropriate sharing of information within the circle of care, including families, when a child or youth is determined to be at risk to him/her or others, as dictated under relevant provincial and federal legislation.	Information and Privacy Commissioner (IPC)	The Ministries of Children and Family Development, Housing and Social Development and Citizen's Services are moving forward with the design and implementation of an updated information management system intended to be the technical foundation to support frontline practices. The new case management system, or "ICM", will enhance the ability to share information within improved privacy and security frameworks, and manage common information between ministries and contracted service providers. ICM is to be phased in over the next few years and will foster more client-centered service delivery supporting better outcomes.
12	Provide point-of-care practitioners across B.C. with ongoing yearly continuing professional education on effective recognition and treatment of adolescent depression and suicidal behaviour.	MCFD, MHS, BCMA, College of Registered Nurses of BC (CRNBC), BC School Counsellor's Association (BCSCA)	Since 2008, over half of CYMH staff have received competency-based training in suicide prevention and intervention. Since 2005 training in Dialectical Behavioural Therapy has been provided annually to CYMH clinicians working with high-risk youth. MCFD, MHS, MEd, and Health Authorities are contributing to the BCMA's development of training modules for primary care physicians, to include assessment, intervention, safety planning and referral. A pilot project on youth depression was completed. Staff education and training are components in the draft Provincial Suicide Clinical Framework, in response to the newly required Accreditation Canada practice. The framework is being developed through a steering committee led by the PHSA and including the MHS, physicians, and health authority reps. The BCSCA also contributed to the implementation of this recommendation by including suicide prevention workshops at their 2009 General Meeting.

13	Develop a suicide response protocol for B.C. hospital emergency rooms, to be initiated after an assessment of a child or youth in an ER when suicidal behaviour has been noted. The protocol should specify that at the point of discharge from the ER, the following occurs: a) notification of parent/guardian; b) education of family and caregivers on restricting access to suicidal means within the home; c) creation of safety plan; d) notification of the patient's community mental health team; e) sending of a discharge summary to the patient and family, the patient's family doctor and community mental health team. Upon receiving notification, the community mental health team should follow up with the child/ youth within 24 hrs.	MHS, MCFD	The draft Provincial Suicide Clinical Framework that responds to the new Accreditation Canada required practice is relevant to those emergency room services that have designated mental health staff/beds and requires "that clinically trained staff assess all clients for risk of suicide or self-harm at intake to the service and monitor and treat those clients at a level appropriate to their needs". Further, a section specific to the assessment of suicide risk in children and youth is included. Child Health BC is working with Health Authorities, MHS and MCFD toward development of a suicide assessment protocol for emergency departments and primary care clinics. This work and revisions to the MCFD suicide prevention and intervention policy will contribute to improving transitions between hospital and community for children and youth when suicidal behaviour has been identified.
14	Establish a provincial task-force that will advance suicide postvention efforts in B.C. by completing an environmental scan of crisis-response teams and/or suicide-response protocols that exist in B.C. municipalities, and: a) where response teams exist, determining their nature and membership, and b) in municipalities that currently lack them, supporting the establishment of crisis-response teams or protocols while encouraging the use of existing postvention models that have shown success in other jurisdictions.	PSSG, MEd, MCFD, MHS, MHLS, Crisis Intervention and Suicide Postvention Centre of B.C., First Nations Health Council	The Suicide Prevention Intervention and Postvention Initiative (PIP) has been completed and the Framework and Planning template released to the public. The template incorporated practice and research evidence resulting from a snapshot survey of BC service providers and organisational leaders in PIP, a literature review, and feedback from stakeholder engagement. This informed the development of suicide PIP strategies. Communities in BC are already using the resources to examine their existing approaches and identify additional strategies to address suicide risk for people of all ages. The PIP Initiative report lists those organizations providing suicide prevention intervention and postvention services across BC. Through the snapshot survey, postvention practices included community response teams, critical incident management, school district protocols, referral to hospices and referrals to other providers (psychiatrists, general practitioners).
15	As supported by the provincial Public Health Act, develop a surveillance system for suicide attempts in B.C. that brings together currently available data systems and draws from successful surveillance models in other areas.	MHS, MHLS	Throughout 2009 and into 2010, MHS, MHLS and the health authorities engaged in a process to update mandatory reporting requirements for mental health and addictions system services delivered by or through health authorities. Collection and reporting of data related to suicide has been discussed. A meeting with key stakeholders is planned to explore the feasibility of a dedicated provincial surveillance system for suicide attempts.

16	Adopt and ensure province-wide adherence to best practices for media coverage of suicide deaths, as outlined in currently available guidelines, such as the (US) Centres for Disease Control and Prevention's Reporting on Suicide: Recommendations for the Media.	B.C. Press Council; Radio-Television News Directors Association (RTNDA)	The RTNDA continues to work toward adding the best practice guidelines to a new section on the RTNDA Canada website "Best Practices". The proposal is under review by the Ethics Committee and will be on the agenda for the next board meeting. The issue of media reporting on suicides was the subject of a panel discussion at the Central Canada conference in May.
17	Following a suicide death, ensure that survivors receive existing postvention resources directly. Suicide survivors may include family members, friends, school peers, care providers, co-workers and others who have been affected by a suicide death.	Ministry of Public Safety and Solicitor General (PSSG)	PSSG ensures that following a suicide death, survivors receive postvention resources from victim service program workers. Support services include attendance during next of kin notification; acting as a liaison between the family and police/coroner and providing information about the investigative processes; providing emotional support to family and any other affected community members; and advising family about available community resources. Community resources may relate to crisis response, survivor support, faith-based groups or grief/bereavement. As a result of a broad consultation, PSSG recently revised the PBVS program contracts to clearly articulate crisis response to both victims of crime and of non-criminal trauma such as suicide or non-criminal motor vehicle crashes.

Recommendation Update: Panel on Alcohol-related Deaths of Aboriginal Children (Issued August 2008)			
Recommendation		**Target Agency**	**2009 Progress Update**
1	Sponsor a project that includes: (1) Engagement and consultation with Aboriginal youth to seek advice on how to increase care in community whereby no one is left on their own in a circumstance of high risk; (2) Development of a risk reduction strategy that is community designed, driven and implemented; (3) Piloting of this strategy; (4) Evaluation.	Ministry of Health Services (MHS); Ministry of Healthy Living and Sport (MHLS)	MHLS is in the early development stages of an Alcohol Strategy for B.C. and will work with partners in the development and implementation of this new strategy. Further development of the Health Actions of the Tripartite First Nations Health Plan has increased and will ensure that First Nations are participating at the strategic, planning and implementation levels of implementing each health action of the Plan.
2	Target specific funds to provide a spectrum of alcohol prevention and treatment services for Aboriginal youth in B.C., in collaboration with Aboriginal leadership at the community level.	Ministry of Health Services	MHLS will work with MHS and other Tripartite partners on implementing the new Alcohol Strategy for BC. Youth will be highlighted as a target group as the age of first alcohol consumption is about 13 years in B.C. The strategy will also address the type of alcohol consumed, media influence, product cost and prevention strategies. MHLS will work with Tripartite partners to address youth alcohol use at the provincial youth suicide prevention forum to be held in 2011.

3	Form a working group from across provincial and federal jurisdictions to explore the feasibility for supportive housing options developed specifically for Aboriginal youth in B.C. living with addiction.	MHSD, Ministry of Children and Family Development (MCFD), MHS and Health Canada	MCFD recognizes there are many factors that contribute to Aboriginal Youth having addiction problems. The first priority is to keep families together, but at times, it becomes necessary for youth to live outside the family home. Strong, Safe and Supported is MCFD's primary platform for engaging in cross-ministry work and is founded on 5 pillars: Prevention, Early Intervention, Intervention and Support, the Aboriginal Approach, and Quality Assurance. There is a coordinated effort between the province and federal government to support a full range of services to make families and communities stronger. Aboriginal youth and families who are struggling with addictions may choose to participate in one of many addictions and recovery programs throughout the province. These facilities are run in partnership with MCFD and provide treatment in a culturally sensitive manner.
4	In collaboration with MCFD, oversee the development of a community designed and delivered protocol intended to guide communities in cross-jurisdictional responses when critical issues related to child wellness arise.	Provincial Advisory Committee on First Nations Health (PACFNH)	The Provincial Advisory Committee on First Nations Health has not met. The new governance structure of the Tripartite First Nations Health Plan will be in place summer 2010. Recommendations from the PACFNH will be brought forward to the new governance structure with communication extending to each First Nations community through a communications plan.
5	Ensure policies reflect culturally sensitive practice, including: (1) HR and investigative policies; (2) training that addresses cultural awareness and sensitivity; (3) strengthening of relationships with local Aboriginal leadership.	BC Coroners Service	Basic Training for new Coroners included a section on working with Aboriginal families and communities. In addition, Chief Willie Charlie of the Chehalis Indian Band will be presenting to BCCS staff in September 2010 on First Nations death protocols with the focus on gaining a better understanding of cultural expectations with respect to death and the body.

Recommendation Update: 2007 Annual Report (Issued July 2008)			
Recommendation		**Target Agency**	**2009 Progress Update**
1	Assign demerit point penalties to the offence of failure to wear a seatbelt, to align B.C. with the majority of other provinces in Canada.	Office of the Superintendent of Motor Vehicles (OSMV)	OSMV continues to monitor the issue and explore policy solutions for increasing seat belt usage in B.C.
2	Change legislation and/or regulations to ensure that upon a review or intent to prohibit a young person's license in the Graduated Licensing Program, a young person's parents receive notification of that prohibition (or intent to prohibit).	OSMV	OSMV continues to monitor this issue in collaboration with ICBC.

3	Review current policy relating to excessive speed and other high risk driving infractions to consider longer prohibitions and that a combination of these infractions would result in a review of that license by the OSMV.	OSMV	The Motor Vehicle Amendment Act, 2010, contained a provision to allow police to impound the vehicle of any driver caught excessive speeding or participating in "stunt driving" (a high risk driving behaviour). The vehicle would be impounded for a minimum of 7 days (first time impoundment) and up to 60 days if the driver has had previous vehicle impoundments. These provisions will be brought into effect on September 20, 2010. OSMV continues to be committed to work on the High Risk Chronic Offender program, which is a priority for the upcoming year.
4	Review legislation to ensure that young persons who receive infractions within the Graduated Licensing Program (GLP) are unable to move to the next stage of licensing until that infraction has been adjudicated.	OSMV	OSMV continues to monitor the issue and consider the recommendation in collaboration with partners.
5	Implement the DRIVE program throughout the province to help educate and inform young drivers about the risks inherent as a young driver.	Insurance Corporation of BC	In 2009, ICBC piloted a targeted educational program called Trade Off as the next evolutionary step from the DRIVE program first piloted in Nanaimo. Trade Off was targeted at post-secondary students aged 19-25 and partnered with the trade department at Vancouver Island University for three pilot sessions. Students were able to connect the implications of high risk driving behaviour with real life career consequences. In 2010, Trade Off will be included in ICBC Road Safety's suite of educational tactics with four new presentations at various trade schools across BC.
6	Achieve a higher standard of safety on pleasure craft by: a) Establishing minimum standards for Rental Boat Safety Checklists that must be used by a person who makes a houseboat or other pleasure craft available for rent. When indicated that children will be on board the vessel, standards must ensure that operators are supplied with, at minimum, child-sized Personal Floatation Devices (PFDs) and barriers to restrict child access from the vessel to the water; b) Requiring that a person who makes a houseboat or other pleasure craft available for rent provide operator training and safety orientation prior to severing their connection to the vessel.	Transport Canada	Transport Canada is updating the rental Boat Safety Checklist Standard which will soon be available for public discussion and is on the agenda for the National Recreational Boating Advisory Council. Further, as of September 2009, anyone operating a motorized pleasure boat must carry proof of competency.

7	Following assessment of possible mechanisms for the regulation of pool fencing in B.C., establish a law requiring at minimum 1.2m high, four-sided pool fencing with self-closing and self-latching gates. This standard should apply to all forms of home pools with a depth of over 0.6m and require fencing that does not facilitate climbing.	Ministry of Housing and Social Development (MHSD), Building and Safety Policy Branch (BSPB)	In July 2009, MHSD established the BC Pool Safety Advisory group. This group includes broad representation from multiple agencies across government, the non-profit sector, the research community and industry. The group has examined options for preventing pool drowning and put forward a recommendation for the development of a policy and education toolkit that will serve as a resource for municipalities looking to enhance pool safety bylaws and awareness in their communities. The project has multiple phases with implementation scheduled for summer 2011.
8	Develop and distribute a practical barbeque safety resource for the B.C. public, in collaboration with relevant public and private sector agencies.	Office of the Fire Commissioner (OFC)	In March 2010, a working group of representatives from OFC, BCCS and BC Safety Authority issued a report that draws together findings of root cause analysis on propane-related injury and death and issues eight recommendations for prevention relating to the design and manufacture of portable propane equipment; the use of portable propane equipment; the collection and disposal of portable propane equipment; and the reporting of injuries and deaths involving the use of portable propane equipment. The BCSA, OFC and BCCS are now facilitating the implementation of these recommendations.
9	Expand the scope of the existing Safe Sleep Task Force to address infant safe sleep practices in all environments, from hospital to home, in a manner that is representational of all people and cultures across the province.	Provincial Health Officer, Ministry of Healthy Living and Sport (MHLS)	The provincial Safe Sleep Guidelines committee continues to work towards developing guidelines based on evidence and best practices.
10	Refer the case of male youth F.D. for further review of the medical treatment plan and care received at Burnaby General Hospital on May 10, 2005.	College of Physicians and Surgeons of BC	Clinical records were reviewed by the College in October 2008. No further action required.
11	Refer the case of male youth F.D. for further review of the medical treatment plan and care received at Burnaby General Hospital on May 10, 2005.	Burnaby General Hospital	Fraser Health is continuing to develop an area-wide Child and Youth Program team and In-patient care model. Age definitions have clarified "youth" category and a Life Limb Threatened Organ (LLTO) / No refusal policy has been developed to facilitate admission to the most appropriate bed.
12	Enhance the current complaint resolution and patient advocacy framework in all health authorities with a view to having a clearly defined, patient-centred and well communicated approach that is readily available to patients and their families.	Ministry of Health Services	In May 2008, the Patient Care Quality Review Board Act received assent. The purpose of the Act is to achieve a clear, consistent, timely and transparent approach to patient complaints and concerns within each, and across all, health authorities. Patient Care Quality Offices and Patient Care Quality Review Boards have been up and running since October 21, 2008.

REPORTING

Safe and Sound: A Five-year Retrospective

In August 2007, the CDRU observed a pattern of sudden infant deaths taking place on Vancouver Island. Five had occurred over a one month period, all within a small geographical area under apparently similar circumstances. Other child serving jurisdictions in British Columbia also noted this trend and a collaborative response was initiated. The Chief Coroner directed the CDRU to take a more detailed look at cases of sudden infant death, both on Vancouver Island and across the province. Preliminary examination found that the majority of deaths involved unsafe infant sleep practices such as placing infants to sleep on their stomachs, on adult beds and couches or in cribs cluttered with heavy bedding and toys. Sudden infant deaths were seen across the province, across socioeconomic levels and during both day and night time sleep.

Sudden infant death is the most common cause of death for infants between one month and one year of age, yet our understanding of the problem is limited by etiological uncertainty, lack of data specific to the B.C. population and jurisdictional differences in the way sudden infant deaths are classified and reported. These limitations, in combination with the findings, provided the rationale for a five-year, retrospective review on sudden infant death in sleep related circumstances. The report, entitled *Safe and Sound: A Five Year Retrospective*, was released in late November 2009. This report examined the lives and deaths of 113 infants who died suddenly and unexpectedly between January 1, 2003 and December 31, 2007. None of these infants reached their first birthday. They died during sleep – a time we may instinctively feel an infant is most safe from harm.

The *Safe and Sound* project required the development and application of a specialized protocol. Each case was presented to and examined by a multi-disciplinary team to ensure all aspects of the infant's life and death were considered. In some instances, information was obtained from family members who helped us better understand the losses they experienced. Their advocacy and generosity was offered in the hopes of making a difference to all children.

Consistent with findings from other studies, the majority of sudden infant deaths demonstrated practices consistent with unsafe sleep, in combination with intrinsic risk factors such as premature birth, male sex and Aboriginal ancestry.

The report closes with recommendations for action that governments, health and social systems, industries and community organizations can take to support risk reduction. Informed by both available prevention literature and the expertise of health practitioners and policy makers across B.C., the recommendations call for multi-level action in nine distinct target areas:

- Prenatal care
- Public Education
- Education/training for health professionals
- Infant death classification
- Social determinants of health
- Consumer product safety
- Home visiting
- Research
- Aboriginal infants

The recommendations were crafted to address gaps in policy, practice, programs and partnerships or to advance prevention efforts already underway. The CDRU supports a multi-level approach to risk reduction that is non-punitive, guided by evidence, culturally sensitive and family-centred. Although the underlying cause of many sudden infant deaths still remains unknown, there is a growing body of knowledge on how to mitigate the risk and improve outcomes for infants and families. The recommendations in *Safe and Sound* focus not only on downstream prevention activities but also on targeting upstream factors notable in cases of sudden infant death in the sleep environment.

The CDRU supports a multi-level approach to risk reduction that is non-punitive, guided by evidence, culturally sensitive and family-centred.

The CDRU has developed a plan of action to ensure effective information sharing and recommendation implementation following the formal release of *Safe and Sound*. Activities outlined in this plan include:

- Utilizing print and web-based communication channels available through its partner organizations and other sources as a means of connecting the target audience with key findings from Safe and Sound.
- Hosting of a live webinar for public health professionals, administrators and researchers interested in learning about and discussing key findings and recommendations from the report.
- Establishment of 'The Sound Board' – a virtual gathering place for individuals and agencies to share information on safe sleep research and best practices, collaborate on new and existing initiatives and monitor progress with respect to the recommendations of *Safe and Sound*.
- Consultation and collaboration with B.C.'s Tripartite partners and other Aboriginal organizations on ways to address the higher incidence of sudden infant death in the sleep environment that exists among Aboriginal infants.

In facilitating the implementation of recommendations from *Safe and Sound*, the CDRU will apply a community model that focuses on collaboration with all levels of stakeholders and balances top-down strategies with strengthening prevention capacity and expertise at the local and regional level.

In addition to *Safe and Sound: A Five Year Retrospective*, the Child Death Review Unit also released the following reports in 2009:

- **2008 CDRU Annual Report:** This report provides a summary of the Child Death Review Unit's work in 2008. This report is available on the CDRU web page at http://www.pssg.gov.bc.ca/coroners/child-death-review/docs/cdru-2008annualreport.pdf.

- **Death Review Panel Report: D.C. et al:** On April 18, 2008 and July 4, 2008, a Child Death Review Panel was convened in Burnaby, B.C. to examine the circumstances related to the alcohol-related deaths of six Aboriginal youths. To view the full report and panel recommendations, visit http://www.pssg.gov.bc.ca/coroners/child-death-review/docs/death-review-panel-aboriginal-youth.pdf.

COLLABORATING

The CDRU collaborates with stakeholders at the regional, provincial and national level. This collaboration involves both drawing on external expertise to inform the CDRU's work, in addition to lending support and knowledge to initiatives led by others. The CDRU is proud to have collaborated with the following agencies in 2009:

BC Council for Families
BC Injury Research and Prevention Unit
BC Medical Association
BC Perinatal Health Program
BC Safety Authority
BC School Counsellors Association
BC Vital Statistics Agency
Canadian Foundation for the Study of Infant Deaths
Children's Forum
First Nations Health Council
Fraser Health Authority
Health Canada
Interior Health Authority
Ministry of Children and Family Development
Ministry of Healthy Living and Sport
Ministry of Housing and Social Development
National Center for Child Death Review (U.S.)
Northern Health Authority
Office of the Chief Coroner of Ontario
Office of the Fire Commissioner
Office of the Representative for Children and Youth
Office of the Provincial Health Officer
Office of the Superintendent of Motor Vehicles
Public Health Agency of Canada
Safe Kids Canada
Safe Start – BC Children's Hospital
The Community Against Preventable Injuries
U.S. Centers for Disease Control and Prevention
Vancouver Coastal Health Authority
Vancouver Island Health Authority

The CDRU also collaborated with its partners on the following joint initiatives in 2009:

Building Public Service Capacity in Aboriginal Relations (BCAR)

In February 2009, the CDRU participated in a collaborative visioning session to explore how working relations can be strengthened between the provincial government and Aboriginal communities, organizations and people. Entitled 'Building Public Service Capacity in Aboriginal Relations (BCAR)', the initiative brought together representatives from Aboriginal organizations and government agencies to discuss and identify tools, resources and knowledge the BC Public Service needs to acquire in order to work more respectfully, knowledgeably and effectively with Aboriginal communities, organizations and people. The results of the visioning sessions informed the development of a three-year BCAR Strategy, which provides the background, context, vision and intended direction for the project.

Root Cause Analysis on Portable Propane Incidents

In response to a recommendation issued by the Child Death Review Unit in 2008, a committee was struck to analyze the root causes of propane-related injury and mortality in B.C. and to recommend an appropriate strategy for prevention. The team was comprised of representatives from the BC Coroners Service, the Office of the Fire Commissioner and the BC Safety Authority. The team has issued a final report that draws together findings of the root cause analysis, applies predictive models for future incidents and presents eight recommendations for prevention. The recommendations aim to enhance the safety of portable propane equipment from the perspective of design and manufacturing, use, collection/disposal, and reporting of injuries and deaths.

Shaken Baby Syndrome Steering Committee

In 2009, the CDRU continued its involvement on the BC Children's Hospital Steering Committee on Shaken Baby Syndrome. The Steering Committee was originally formed in early 2003 to examine the need and potential of a standardized prevention program for B.C. As a result of the Steering Committee's recommendations, Prevent Shaken Baby Syndrome BC, a program of BC Children's Hospital, was formed. This program has since implemented the Period of PURPLE Crying prevention initiative province-wide. The Steering Committee continues to provide guidance and advice at all stages of program implementation and evaluation. In addition to the BC Coroners Service, the Steering Committee is comprised of representatives from Fraser Health Authority, MCFD, University of British Columbia, BCIRPU, Child Health BC and the Provincial Health Services Authority.

PHO Report on Road Safety

In 2009, the Child Death Review Unit served on a working group of provincial stakeholders formed to contribute to the development of the Provincial Health Officer's upcoming report on road safety. The report will focus on road safety issues in British Columbia as reflected by historical trends, regional differences, contributing factors, stakeholder priorities and perspectives, and best practices, with a focus on recommendations to improve road safety in B.C. and reduce the personal and fiscal impact of injury and mortality due to motor vehicle collisions. To contribute to the development of the report, the CDRU and Policy, Research and Systems Unit of BCCS submitted recommendations for improving road safety in B.C., case studies demonstrating common road safety scenarios and a summary of data on restraint use in child motor vehicle fatalities.

BC Injury Research and Prevention Unit Teleconference Series

Each year, the BC Injury Research and Prevention Unit (BCIRPU) hosts a national teleconference series that includes presentations on research, programs and initiatives relevant to those working in the field of injury prevention. The CDRU was invited to speak as part of the teleconference series in 2009. Moderated by Safe Kids Canada, the CDRU's presentation explored how the practice of child death review can be used as a catalyst for preventive action, including improvements to policy, programs and practice that aim to enhance child health and safety. The presentation also highlighted how partnerships with families and stakeholders can strengthen the process.

BC Injury Prevention and Leadership Action Network (BC iPLAN)

BC iPLAN is an independent strategic alliance of organizations supporting injury prevention priorities and activities across British Columbia. BC iPLAN consists of representatives from the voluntary, professional and private sectors, industry, government agencies and non-profit organizations involved in injury prevention research, policy and program delivery. The intended outcome of BC iPLAN is coordinated, collaborative and integrated leadership and action on injury prevention across British Columbia that supports a decrease in preventable injuries.

BC Pool Safety Initiative

In 2009, the CDRU established a partnership with the Ministry of Housing and Social Development to address the incidence of child drowning in backyard swimming pools. The CDRU and MHSD are now leading the BC Pool Safety Initiative, which has brought together a number of regional, provincial and national stakeholders to develop a policy and education toolkit that will support community action on backyard swimming pool safety.

National Center for Child Death Review Symposium

In June 2009, the CDRU delivered a keynote presentation at the National Symposium on Child Death Review in Washington, D.C. The symposium was an opportunity to showcase British Columbia's framework to child death review teams from across the United States. The presentation discussed the evolution of British Columbia's child death review program and used the development of the CDRU's special report on child and youth suicide to demonstrate key components and unique features of the unit's review methodology.

GOLD STARS

Each year, the Child Death Review Unit awards Gold Stars as a means of recognizing agencies that have demonstrated excellence in promoting and protecting the health and safety of children across B.C. The CDRU congratulates the Gold Stars for 2009:

Vancouver Island Health Authority - Baby's Own Bed

Advocates for safe sleep are challenged to ensure that messaging is based on evidence and culturally relevant to the target populations they serve. One example of excellence in this area is Baby's Own Bed, an initiative underway on Vancouver Island. Vancouver Island has the highest infant mortality rate in B.C. With regard to infants who die suddenly and unexpectedly in sleep-related circumstances, unsafe sleep practices are identified in the majority of cases. In response to these deaths, a team led by the Medical Health Officer in North Island initiated a project that collaborated with Aboriginal communities to promote culturally appropriate messaging about safe sleep. Activities within this project include local meetings to engage Aboriginal people in their home communities, the development of a culturally sensitive safe sleep brochure and fridge magnet with key messages, and dialogue with partners, such as the Red Cross, to explore alternatives for providing safe sleep environments for infants within the social realities of Aboriginal life.

Crisis Intervention and Suicide Prevention Centre of B.C. - Suicide PIP Initiative

Suicide continues to be a significant public health concern in B.C. The Suicide Prevention, Intervention and Postvention (PIP) Initiative for BC was developed in response to national efforts by the Canadian Association for Suicide Prevention (CASP) and provincial efforts to strategically address suicide related mortality and morbidity. Led by the Crisis Intervention and Suicide Prevention Centre of BC, the goal of the PIP Initiative was to develop a framework and planning template for local, regional and provincial initiatives addressing suicide prevention, intervention and postvention across the lifespan. Based on the results of a stakeholder snapshot survey and evidence-informed practice review, the Framework and Planning Template was developed to provide guidance on developing, improving, implementing and evaluating PIP supports, services and programs in six priority areas. To view the Framework and Planning template and learn more about the Suicide PIP Initiative, visit http://suicidepipinitiative.wordpress.com/publications/.

Ministry of Tourism, Culture and the Arts - Off-Road Vehicle Framework

Injury prevention advocates, rider associations and the Child Death Review Unit have been calling for improvements to the regulation of off-road vehicles (ORVs) in the province. In November 10, 2009, the Ministry of Tourism, Culture and the Arts (MCTA) announced a new framework for the management of off-road vehicles in B.C. New rules for ORV registration and licensing, helmet use, youth safety and environmental measures will be implemented by November 2011. Under the new framework, all ORV riders using Crown land will require one-time registration with a licence plate for their machines, in addition to wearing helmets and using lights for low visibility conditions. Age-appropriate safety measures and adult supervision will be required for young riders. All ORVs will require registration at time of sale and re-sale. CDRU congratulates safety advocates and the MCTA for reaching a new milestone in off-road vehicle safety. For more information, visit http://www.tca.gov.bc.ca/tourism/orv/.

The Community Against Preventable Injuries

Though a grass-roots initiative, The Community Against Preventable Injuries has become a province-wide, multi-partner organization designed to raise awareness, transform attitudes, and ultimately change behaviours. Its goal is to significantly reduce the number – and severity – of preventable injuries in B.C. With a positive approach to prevention, The Community focuses on what British Columbians can do to prevent injury. The Community is committed to assisting all British Columbians in changing our thinking as a simple first step. The BC Coroners Service (BCCS) is proud to be a resource partner in the Community and acknowledges this example of excellence. For more information, visit www.preventable.ca.

Safe Kids Canada - Vancouver Charter on Skiing Safety

On November 20, 2009, the Vancouver Charter on Skiing Safety was publicly launched at Safe Kids Canada's 'Put a Lid on It' winter helmet forum in Vancouver. Created in the context of the 2010 Winter Olympic Games, the charter is designed to encourage the use of helmets during skiing and snowboarding activities. Head injuries are the most common cause of death among skiers and snowboarders. More specifically, traumatic brain injury, which appears to be increasing, has been reported to account for 67 per cent of skier deaths in children (Safe Kids Canada, 2010). The aim of the Charter is to promote a safe, healthy and active sporting and recreational culture, and to make its principles visible to the public, citizens and institutions. The Child Death Review Unit supports the adoption and implementation of the Charter, which was officially endorsed by the Government of BC in November 2009. Canadians can read and show their support for the Vancouver Charter on Skiing Safety on the Safe Kids Canada website at http://www.safekidscanada.ca/Professionals/Advocacy/Winter-Helmet-Safety/Index.aspx.

GLOSSARY

Aboriginal: refers to First Nations (Status and non-Status), Métis and Inuit people in Canada.

Accidental classification: Death due to unintentional or unexpected injury, including death resulting from complications reasonably attributed to the accident.

Child: Defined in the Coroners Act as an individual 18 years of age and under.

Child and Family Services: Child and family services includes both mandated programs (also known as child protection family services; supervision orders; risk reduction services plans) and voluntary supports (counselling; in-home/homemaker supports; respite care; parenting programs). Child and youth mental health and youth justice programs are separate and distinct.

CLBC (Community Living BC): Provides services to developmentally disabled children and their families. The service delivery framework allows for parents to be the case managers for the planning for their children with the intent of supporting them in their own homes. (Note: as of 2010, CLBC Children's Services has been transferred to MCFD).

Death Review Panel: Established panel of experts who are appointed to examine the circumstances of one or more deaths. Panel deliberations are protected under the Coroners Act and may result in advice or recommendations intended to reduce similar deaths in the future.

Homicide: Death due to injury intentionally inflicted by the action of another person. Does not imply fault or blame.

Investigation: The process a Coroner will use to determine who the deceased was, when and where he died and by what means. The death is then classified and documented in the Coroner's report, a public document that forms the official provincial record of the death. It may include recommendations to agencies to aid in the prevention of future deaths.

Inquest: A process whereby a jury is summoned to hear evidence related to a death. The public hearing of the circumstances is held in front of a Presiding Coroner; the Verdict at Inquest will confirm how the jury classified the death and may include recommendations.

Ministry of Children and Family Development (MCFD): The Ministry within government whose mission is to promote and develop the capacity of families and communities, and whose general responsibilities include: child protection; family development; adoption; foster care; early childhood development and childcare; child and youth mental health; youth justice; special needs children and youth and most recently, child community living services.

Modifiable Risk Factors: risk factors that can be modified by intervention, thereby reducing the probability of occurrence of disease, injury or other specified outcomes.

Monitoring: The intermittent performance and analysis of routine measurements, aimed at detecting changes in the environment or health status of populations and responding in light of observed measurements. Monitoring is not to be confused with surveillance, which is a continuous process (Last, 2001).

Natural classification: Death primarily resulting from disease of the body and not resulting secondarily from injuries or abnormal environmental factors.

Not Preventable: Typically those deaths that are natural and expected due to chronic or congenital illness.

Perinatal Period: The time between 20 weeks gestation and 28 days of age.

Preventable: A death in which, with retrospective analysis, it is determined that a reasonable intervention at the individual, community or system level may have prevented the death through modification of one or more risk factors.

Risk Factors: An aspect of personal behaviour or lifestyle, an environmental exposure, or an inborn or inherited characteristic, that, on the basis of epidemiologic evidence, is known to be associated with health-related condition(s) considered important to prevent; not necessarily a causal factor (Last, 2001).

Reviewable Services: Means any of the designated services including services and programs under the Child, Family and Community Service Act and Youth Justice Act; mental health services for children; addiction services for children; and additional services prescribed under the Representative for Children and Youth Act.

Sudden Infant Death Syndrome (SIDS): The sudden and unexpected death of an infant under one year of age that remains unexplained after autopsy, an examination of the scene of death and review of the case history.

Sudden Unexplained Death in Infancy (SUDI): The sudden, unexpected and unexplained death of an infant under one year of age where external risk factors are noted as possibly contributory to the death.

Suicide: Death resulting from self-inflicted injury with intent to cause harm.

Undetermined: Death, which because of insufficient evidence or inability to otherwise determine, cannot reasonably be classified as Natural, Accidental, Suicide or Homicide.

BC CORONERS SERVICE REGIONAL BOUNDARIES

Fraser Region
Burnaby to the Coquihalla Highway Tool Booth, east to Manning Park and north to Jackass Mountain bordering Merritt.

Interior Region
North to and including 100 Mile House and Blue River, east to Alberta border, south to the United States border and west to the Manning Park gate, including Ashcroft, Lytton and Lillooet.

Vancouver Island Region
Vancouver Island, the Gulf Islands and Powell River.

Northern Region
North, east and west from Williams Lake to all provincial borders, and the Queen Charlotte Islands/Haida Gwaii.

Vancouver Metro Region
Includes Sunshine Coast, Sea to Sky Corridor, North Shore, Vancouver, UBC, Delta and Richmond.

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