



OFFICE OF THE CHIEF CORONER Child Death Review Unit REPORT ON DROWNING

Special Report 2007



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Message from the Chief Coroner



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While we cling to the belief that children are not supposed to die, we are faced with the reality that they do. When our best efforts fall short of preventing the unthinkable, we are prompted to redouble our efforts in seeking answers to avoid future tragedies.

This report is an analysis of children's death by drowning. It was compiled by a dedicated team of staff members who bring a multiplicity of training, skills, and experience to the task. They are committed to making a difference for the children of British Columbia. You will note that the parents of some of the children willingly collaborated with the team. I am sure it was unspeakably painful for those parents however, they too seem convinced that we must continue to make every effort to learn from the events of the past.

What we have presented here are some insights into the causative and contributory factors in child drowning, as well as analysis and key messages for parents and caregivers, in fact, for all of us. We hope that British Columbians will take the time to read our report and that it will serve as a useful guide to all those charged with the supervision of children playing in, near, and around water.

I have been impressed with the dedicated efforts of staff and the incredible courage of the parents who collaborated with them in the completion of this report. On behalf of all of them, I urge you to use the lessons these children have left us with.

Terry P. Smith
Chief Coroner

Ministry of Public Safety
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Message from a Parent

I dedicate this excerpt to our daughter Francis Marie Wharton Loeppky, who walked this earth for a very short period of time, from November 15, 1995 to September 20, 2003.

From the moment she arrived, to her time of passing, Francis was a very special soul. I'm sure all mothers say this about their babies, but truly, Francis was a very beautiful baby right from day one. I used to be just amazed that she was a part of me.

Francis was a free spirit who loved being around people. She touched everyone she met in some unique way that only those who knew it, can speak to. She loved to read and grew to become very smart for her age. She once told her dentist when he asked, that her favourite TV channel was 'The Knowledge Network' - totally took him by surprise - she was just around five years old then. She watched that channel and was most interested in the animals, critters, sea life, and sick and injured children. Francis was not skittish or squirmish about anything, be it watching the neighbour clean fish to trying something physical, that I could never have brought myself to do. At times, I had to look away or try not to say anything so I wouldn't put that fear of whatever into her.

Francis grew to love sports and she was a natural - that came from her dad's gene pool. Her dad was involved with her in all her sports activities from swimming, to soccer, to curling to her new found love - hockey, and she loved beating the boys at whatever. Francis was the instigator of all physical activities and games, including board games that would get others involved and engaged. She loved laughter and she loved life, she lived it to her fullest, she gave it all she had, every day.



Francis

Marie Wharton Loeppky

Generally we all go together whenever we go on the road, but that day I made a very last minute decision not to go. I told my husband just before they left to be careful, that something was going to happen and it wasn't going to be him - it was going to be Francis. Our son at the last minute said he'd stay home with me. When I asked him later why he didn't go, he said he didn't want me to be alone; Francis was going to be with dad, so he would be with me. If I 'knew' something was going to happen that day, why didn't I stop them from going? Because, I was being an idiot - nothing's going to happen, stop thinking like that!

But something did happen, something that has forever changed us. An incident occurred at about 4:00 that afternoon, that I didn't remember had happened until about two weeks after the accident. At 4:00 that day, I was cleaning the kitchen when I got this overwhelming feeling that something had just happened. It stopped me in my tracks. I remember distinctly praying and begging that it wasn't Francis, and then using paper towel to wipe my tears and telling myself to stop this silliness. It was much later, when I read the Coroner's report that said that Francis had died at approximately 4:00 pm.

Although I was able to function after and somehow deal with the situation, I know now that I was in shock. Almost immediately, I could not remember who Francis was. What she looked like, what her personality was like, nothing. It's taken me about 3 and a half years, it's just recent, that I have been able to really recall who she was and what she was like. I feel very fortunate that I have had vivid dreams from time to time of her. Francis doesn't come to me in my dreams as often, perhaps she senses my needs have lessened.

Through all my reading, at the end of the day, it's all about what you believe that gives you comfort and hope and the impetus to put one foot in front of the other every day after an experience that we have gone through. It's not easy and no one but those who have gone through an experience of losing a child can even begin to think they know what we're going through.

I think about the accident that took Francis from us and so much of it was preventable, if only this or that had occurred, or not occurred. I could essentially drive myself to the brink of insanity with guilt, lack of forgiveness, and 'if onlys'. Perhaps she was here to help me, and possibly others, if they are willing or ready, on our spiritual journey. I know that we were tremendously fortunate to have had the pleasure and honour of her physical presence for as long as it was.

At the beginning I dedicated this excerpt to Francis. On behalf of Francis, I dedicate this to all parents who have lost children. We will never know the good they would have done for the world had they lived on. We can only honour them in their passing by committing to continue with our lives in their spirit. I wish this to provide some hope and comfort to you on your journey. I leave you with one last thought:

Life and Death are a changed existence

I am in death

As you are in life,

Connected to Everything.

Dedication to the Children

“Children are our most valuable resource.”

-Herbert Hoover

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 the numbers of these tragic losses, we must first understand how and why our children are dying. We must learn from their stories and take that knowledge forward.

If it was possible, what would these children tell us today that might prevent a similar death of a child in the future? What would they want us as parents, grandparents, siblings, educators, physicians, administrators and friends to know about the circumstances that lead to their deaths and the things we (and they) might have done to alter the most tragic of outcomes?

Circumstances surrounding child death are reviewed by child death review teams across North America. These teams vary in size, constellation and budget, and are located within Departments of Public Health, Social Services and Medical Examiners offices. In British Columbia, the Child Death Review Unit is situated within the BC Coroners Service. Our mandate is to review all child deaths so that those deaths may be understood in order to prevent harm to other children.

As part of the review process, we had the opportunity to speak with family members, and we are grateful for the insight, perspective and memories they so generously shared. These children came from all areas of the province. From the information that was made available for review, it was evident that these children were well-loved in life, and greatly missed in death.

Every death of a child in British Columbia matters. This Special Report is dedicated to the 33 children, their families, friends and communities whose lives were changed forever. In working to improve the health and safety of all British Columbian children, we have much to learn from these children, who they were in life and in death. We honour their memories.

Kellie Kilpatrick
Director, Child Death Review Unit
Office of the Chief Coroner

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Introduction

The Child Death Review Unit (CDRU) reviews all child deaths in the province of British Columbia. This includes children who die unexpectedly or through natural disease processes. The results of these reviews are reported through annual reports and through the issuing of special reports.

The CDRU selected drowning as the focus of this special report. Drowning is the second leading cause of accidental death of children in B.C. The majority of these deaths are preventable.

With the arrival of both summer holidays and warmer weather, children will be engaging in a variety of water-based activities and will spend a great deal of time either in or near water. The time is right to highlight the risks that water-based activities present and provide meaningful key messages to mitigate these risks. The deaths examined in this report occurred across the province and involved children who found themselves either intentionally or unintentionally in contact with water.

To ensure accurate and comprehensive data collection, the CDRU developed a Child Death Review Protocol specific to child drowning. This protocol was informed by considerable research into other protocols currently being used by child death review teams across North America¹. Further, the Director of the National Center for Child Death Review in Michigan met with the BC Coroners Service CDRU to participate in the application of the protocol to ensure the work completed was consistent with best practices.

Thirty-three child death review protocols were completed by individual CDRU staff based on available information found in the coroner's case file. In preparation for the internal multidisciplinary review, CDRU staff reviewed the case files and the completed protocols. Over three days, the cases were reviewed by the unit: a Paediatric-Medical Specialist, Case Review and Investigation Specialist, Outreach and Prevention Specialist, Best Practices and Policy Specialist, Program Analyst and Director. This was an opportunity to complete the identification of known risk factors and to determine the level or degree of preventability.

The findings in this report are reflective of the cases that were reviewed. The intent is to identify areas of risk within intentional and unintentional injuries that resulted in drowning deaths. The report will focus on best practices associated with Water Safety, Boat Safety, Motor Vehicle Incidents and Suicide Prevention.

First, it is important to know who the 33 children were.



PART 1: The Children

Twenty-eight of the 33 deaths were determined to be accidental. Four were determined to be suicide. In one case, the manner of death was undetermined. The term "undetermined" indicates a death which, because of insufficient evidence or inability to otherwise determine, cannot reasonably be classified as natural, accidental, suicide or homicide. It was important to focus on the children, not only in death, but also in life. Each child was unique in their age, gender, family structure, cultural background and developmental abilities. Together, these children told a story that provided insight into why children drown in B.C.

The term "undetermined" indicates a death which, because of insufficient evidence or inability to otherwise determine, cannot reasonably be classified as natural, accidental, suicide or homicide.

Group	Age Range	Percentage
neonate	0 – 28 days	0%
infant	29 – 365 days	3%
preschooler	366 days – 4 years	30%
child	5 – 12 years	9%
youth	13 – 18 years	56%

Table 1 – Age groups, corresponding age ranges and representing percentage of the 33 drowning deaths reviewed (2003-2006)

Their Age

The children ranged in age from nine months to 18 years at the time of death. The CDRU used a system of age classification with five age groupings (*see Table 1*) revealing one infant, ten preschool, three children and 19 youth drowning deaths. There were no cases of neonate drowning referred to the Child Death Review Unit between 2003 and 2006.

Their Gender

Male children accounted for 75 per cent of all deaths reviewed. According to the data, male children were three times more likely to drown accidentally. This finding related to accidental drowning is reflected in Canada-wide research that shows male children are two to three times more likely to die from accidental drowning than female children². Data also shows that males are four times more likely to drown as a result of suicide.

Their Families

Of the 33 children, 23 were living in a two-parent household. In two of these cases, the child was under the care of foster parents, either on a permanent basis or on a shared schedule with the biological parents. Eight of the children lived in a single parent household. Of these, one of

the children lived with a relative other than a parent. In the one case where the death was undetermined, the youth was a child in care living with an adult. This non-relative placement was considered room and board and was approved by the delegated Aboriginal agency. Twenty-one of the 33 children were cohabiting with other children including siblings, step-siblings, foster siblings or other relatives at the time of death. Information regarding the child's family structure was unknown in one case.

Their Unique Challenges and Risks

Male Youth and Preschoolers

Male youths between the ages of 13 and 19 were at the highest risk for drowning, accounting for 42 per cent of all reviewed cases. Male preschoolers between one and four were also at high risk, accounting for 24 per cent of drowning deaths reviewed (see Figure A). Combined, male youth and preschoolers account for 66 per cent of all drowning deaths reviewed. These findings are echoed in the multi-year report conducted by the Canadian Red Cross between 1996 and 2000³.

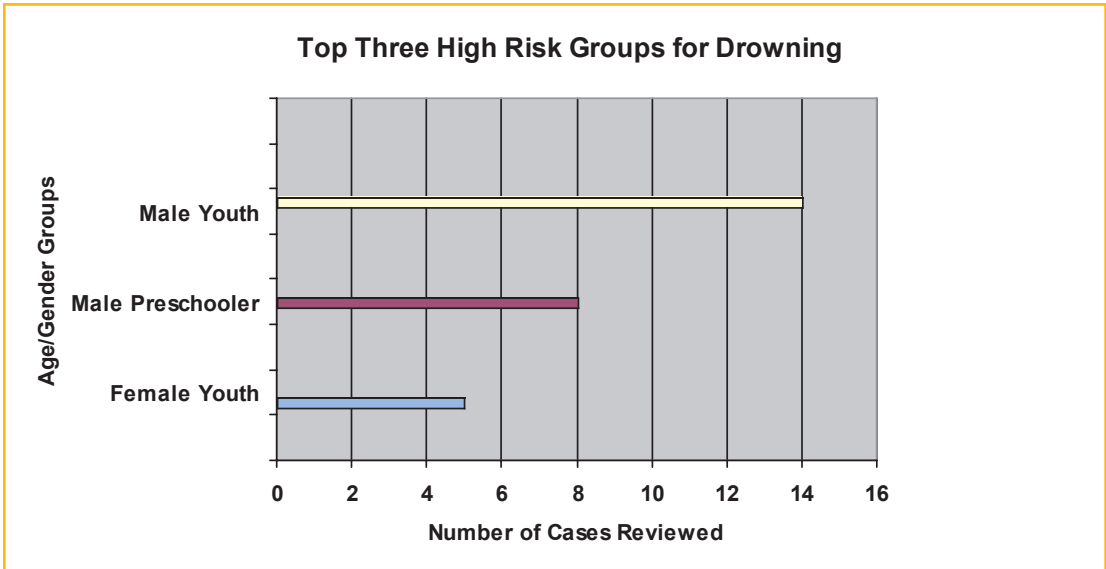


Figure A – 33 drowning deaths reviewed (2003 - 2006) revealing three high-risk groups

Aboriginal Children

Eighteen per cent of the children who drowned were Aboriginal. While this percentage may seem low, Aboriginal children constitute only seven per cent of the general population of children between the ages of 0 and 19 in B.C.⁴

Of the six Aboriginal child deaths reviewed, four were accidental, one was suicide and one was undetermined. Three of the accidental deaths occurred while the child was swimming in a natural body of water where hazards such as drop-offs and currents were present. The remaining accidental death was the result of a motor vehicle incident in which the vehicle went off the road and became submerged in a lake.

Aboriginal children are not only a high risk group within B.C., they are at high risk across Canada. According to a national study that looked at rates of drowning between 1991 and 1996, Aboriginal children under the age of five in Canada drown at a rate that is 15 times higher than the national average⁵. Two studies (one national and one specific to BC) suggested that Aboriginal children may be at a higher risk of drowning as Aboriginal communities tend to be located in close proximity to natural bodies of water. Community members may encounter limited access to swimming lessons and water and boat safety training⁶.

Children Involved with the Ministry of Children and Family Development (MCFD)

Eight of the 33 children who drowned were known to Child and Family Services within the Ministry of Children and Family Development. This means that eight were receiving services or had been in receipt of services within the previous 12 months.

Three of the eight children were in care. One was the subject of a Continuing Custody Order. This means he was in permanent care with MCFD as his guardian. Two were in care through a Special Needs Agreement. This means the parents were the guardians but day to day care was provided by MCFD through a foster parent.

MCFD conducted reviews on five of the eight cases. These resulted in 23 recommendations that have been completed.

Children with Disabilities

Two of the children who drowned had developmental disabilities that may have put them at increased risk. Both children drowned in natural bodies of water. One of these deaths was accidental; it was likely that a seizure was a contributory event. The other drowning was classified as suicide.



Figure B – B.C. map showing geographical breakdown of where the 33 investigations took place.

Where the Event Occured

Geographic Regions

The children represented in this report came from communities across the province (see Figure B).

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

Interior Region: Includes the region north to 100 Mile House and Blue River, east to the Alberta border, south to the USA border and west to the Manning Park gate, including Ashcroft, Lytton and Lillooet.

Island Region: includes all of Vancouver Island, the Gulf Islands and Powell River.

Northern Region: includes the region north, east and west from 100 Mile House to all borders, and the Queen Charlotte Islands.

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

When considering the prevalence of drowning deaths in different regions of the province, it is important to look beyond the total number of deaths and take the size of the respective population into account. Based on the numbers of children living in each region, the Northern region has the highest rate of drowning in the province with 4.5 drowning deaths for every 100,000 children. The term "rate" indicates that in a population of 100,000 children in the Northern region, an average of four to five children will die from drowning each year. The Northern region has the highest overall rate of child death when all five types of death are considered⁷.

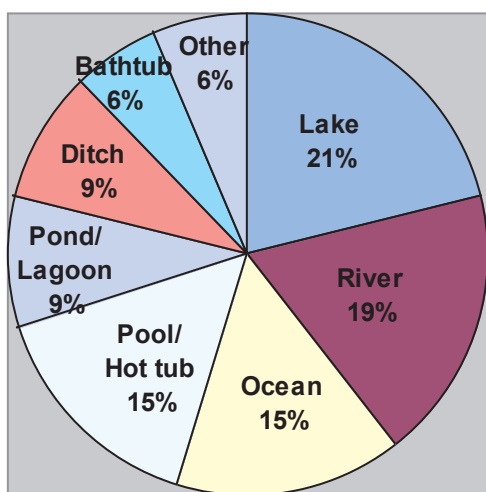


Figure C - Location of Child Drowning Deaths (2003 - 2006)

The Island region has the second highest rate with 3.2 deaths for every 100,000 children followed by the Vancouver Metro region with 3 deaths for every 100,000 children.

Body of Water

Children can drown anywhere there is water (*see Figure C*). Of the cases that were reviewed, 21 per cent of the children drowned in a lake; 19 per cent in a river or creek; 15 per cent in the ocean; 15 per cent in a pool or hot tub; nine per cent in a pond or lagoon; nine per cent in a water-filled ditch and six per cent in a bathtub. Of the remaining six per cent, one occurred in a slough and the other occurred in a gardening tub. Youths were more likely to drown in a natural body of water. Preschoolers and infants were more likely to drown in an artificial body of water such as a bathtub or a swimming pool.

What the Children were Doing

Children were engaged in various activities at the time of their accidental death (*see Table 2*). The activity of the child prior to an accidental drowning was unknown in a substantial number of the cases. This was often attributable to the child entering the area of water unattended at the time of the incident.

Swimming Ability

Information regarding the swimming ability of the child was recorded in just over half (56 per cent) of the cases reviewed. Where the child's swimming ability was known, 11 per cent were deemed competent swimmers, 26 per cent were weak swimmers and 63 per cent were non-swimmers. In several of the cases where the person who was supervising the child was not a parent, the child's swimming ability was not accurately known.

Activity at time of Drowning	Number of Cases
Motor Vehicle Accident	9
Unknown	6
Swimming	4
Boating	3
Playing	2
Bathing	2
Other	2
ACCIDENTAL CASES	28

Table 2 -Activity at Time of Accidental Death

Contributory Factors

Of the cases where a contributory incident was listed, 56 per cent were the result of a motor vehicle incident. Twenty-five per cent were the result of an intentional fall from a height and were determined to be suicide. Nineteen per cent were the result of a boat capsizing.

In four cases, toxicology indicated that the youth had blood alcohol levels that exceeded the legal limit of 0.08%. Additionally, in two of the drownings, an adult individual who was operating the motorized vehicle at the time of the incident was known to be intoxicated. It is likely that alcohol was a contributory factor in these deaths.

Risk Factors and Preventability

The CDRU determined the level of preventability for each drowning based on an examination of risk factors. Of the 33 cases reviewed, 88 per cent (29 cases) were determined in all

Risk Factors	Percentage
Environmental	76%
Social	66%
Behavioural	55%
Developmental	48%
Drugs / Alcohol	24%
Medical	21%
Economical	7%
Product Safety	3%

Table 3 – Risk Factors

(Note: percentages do not equal 100% as many cases had multiple risk factors.)

likelihood to be preventable. A preventable death is one in which, with retrospective analysis, it is determined that a reasonable intervention may have prevented the death at the primary, secondary or tertiary level (*see Table 5 for examples*). Two of the cases lacked sufficient information to adequately determine preventability. Two others were determined in all likelihood to be "not preventable".

Risk Factors

A number of risk factors appeared to have contributed to the deaths of these children. (*See Table 3 for percentages and Table 4 for examples.*) In all cases, more than one risk factor was present. In the majority of the 29 preventable deaths, there were three or more risk factors identified. The combination of Environmental, Social and Developmental risk factors was the most common and was found in 24 per cent of the preventable deaths.

Preventability

Deaths were determined to be preventable before the drowning (primary level), as the drowning was occurring (secondary level) or after the drowning (tertiary level).

Of the deaths that were determined to be preventable, 31 per cent were preventable on the primary level, 62 per cent were preventable at the primary and secondary levels and seven per cent were preventable at the primary, secondary and tertiary levels (*see Table 5 for examples*).

These findings tell us that in order to prevent children from drowning we must focus on strengthening primary and secondary levels of prevention.

A preventable death is one in which, with retrospective analysis, it is determined that a reasonable intervention may have prevented the death at the primary, secondary or tertiary level.

After reviewing the cases, the review team found that the circumstances surrounding all but one of the drownings could be grouped into four natural clusters: Water Safety, Boat Safety, Motor Vehicle Incidents and Suicide. One case was undetermined.

In the one case where the manner of death was undetermined, the male youth experienced significant challenges that put him at increased risk. He had shown periods of suicidal ideation just prior to his death. The Coroner considered the possibility of death by suicide, however given other factors related to the death, it was classified as undetermined.

It was important for the members of the Child Death Review Unit to understand and show who these children were.

Risk Factors	Definition	Example
Environmental	An individual's surroundings that are generally out of the individual's control	Proximity to a body of water
Social	An individual's social network (family, peers, community) and culture	Lack of active supervision
Behavioural	An individual's lifestyle and actions/reactions to other people and events	Consuming alcohol while boating
Developmental	An individual's level of physical and mental maturity.	Inability to swim due to young age

Table 4 – Risk Factors Identified

Level of Preventability	Definition	Example
Primary (pre-event)	The death could have been prevented before the event* occurred.	If there had been a 1.2 m high isolation fence around the pool, the child wouldn't have fallen in.
Secondary (event)	The death could have been prevented as the event* was occurring.	If the child had been wearing a PFD on the boat she wouldn't have drowned.
Tertiary (post-event)	The death could have been prevented after the event* occurred.	The child might have survived if he had received CPR after he was pulled from the lake.

Table 5 - Levels of Preventability

* In the case of this Special Report, the "event" refers to drowning



Part 2: Water Safety

What Did We Learn?

Of the 33 drowning deaths reviewed by the CDRU, 17 cases involved factors related to water safety. The majority of children (11 out of 17) drowned in an artificial body of water (i.e. pool, decorative pond, bath tub, hot tub) while six children drowned in a natural body of water (i.e. ocean, lake, creek).

In 13 of the 17 cases, supervision was determined to be a critical factor, required because of the physical, mental and/or developmental abilities of the child. Ten of these children were preschoolers; two were children. One youth required adult supervision due to special developmental and medical needs. Of these 13 children, 12 were males and one was female. They came from a variety of ethnic backgrounds and were from communities across the province. One of the children was Aboriginal and lived on reserve with his family.

The four remaining cases where supervision was not a factor related to male youths who were between 14 and 18 years of age. Two of the youths were Aboriginal, one of whom lived off reserve. These male youths were of healthy development and given their ages, it was reasonable to assume that supervision was not required and was found not to be a contributory factor in their deaths. In three of the four cases, environmental hazards such as strong current, waves and cold water contributed to the deaths.

The review of these 17 cases found:

- Sixty-five per cent of the children drowned in an artificial body of water owned by the child's family.
- In sixty percent of the cases where children were not known to be near water, the children drowned in an outdoor artificial body of water that was surrounded by a fence; 67 per cent of these children gained access through a gate that was left open.
- In less than half of the cases, CPR and/or First Aid was performed by a supervisor or bystander.
- Where information about swimming ability was recorded, six percent of the children were competent swimmers while 27 per cent were weak swimmers; 67 per cent were non-swimmers.
- Of the children who drowned in a natural body of water, the hazardous water conditions included sudden drop offs, wind, rocks, currents, cold water, and a waterfall.

The review of the 13 cases where supervision was required found:

- Sixty percent of the children drowned while one or both parents were responsible for supervision of the child at the time of the incident. In 30 per cent of the cases,

supervision was the responsibility of another adult while the remaining 10 per cent of the children were thought to be under the supervision of a sibling. In 60 per cent of these cases, the child entered the area of water unattended and the supervisor was unaware.

- In cases where the children drowned in artificial bodies of water, the depth of water ranged from 15cm to 1m (six inches to three feet).
- Forty per cent of the children were seen less than three minutes before they were found unresponsive in the water.
- In the case of both children who drowned in a bathtub, the parent responsible for supervision reported that they were in another room.

What are the Risks?

The above findings regarding safety while swimming or playing around water strongly correspond to the risk factors identified in other jurisdictions across Canada and the United States. What are these trends and, more importantly, why are they a risk to our children's safety?

Supervision

Lack of effective supervision is widely reported as the most significant risk factor in drowning-related fatalities across North America. Similar to the CDRU's findings, a review of child drowning deaths by the Washington State Department of Health found that 68 per cent of the drowning deaths in 2005 were the result of "inadequate supervision".⁸ Parental attitudes around supervision and perception of risk are of great importance when considering drowning related fatalities of preschoolers and children. A recent poll by Safe Kids Canada revealed that only 39 per cent of parents said that they stay within sight and reach of their children and 11 per cent of parents said that checking their children every ten minutes was more than adequate.⁹ These results are concerning, as even a brief lapse in supervision can have fatal consequences for children. A child can drown in as little as ten seconds.¹⁰ The time that it takes to answer the phone or type an email is all that is needed for a child's lungs to fill with water rendering them helpless and unable to call for help.

Access

Access to water of any size and depth can be a risk to preschoolers and young children who are curious and are unable to understand and recognize dangers. Drowning can occur in less than six centimetres (two inches) of water and can happen in pools, ponds, bathtubs, gardening tubs and even toilets.¹¹ The Washington State Department of Health found that in 13 drowning deaths that occurred at private residences, only two homes had a locked gate and in those cases, gaps existed in the fence or gate where a child could easily gain access.¹² While parents assume that they have safe-proofed their backyards, Safe Kids USA report that 61 per cent of pool and spa owners did not have isolation fencing and 43 per cent had no self-closing or self-latching gates.¹³

Swimming Ability

While swimming lessons are a means for developing skills and comfort around water, research shows that swimming lessons alone do not prevent drowning especially for those under the age of five.¹⁴ The Canadian Paediatric Society reports that children under the age of four "do not

have the developmental ability to master water survival skills and swim independently".¹⁵ Furthermore, taking swimming lessons between the ages of two and four years does not prepare a child to swim on their own as they are unable to act accordingly in an emergency. Swimming ability does not make one "drown proof".¹⁶ Safe Kids USA reports that many parents feel it is appropriate for their child to swim without adult supervision if the child is swimming with a friend, is an excellent swimmer or if the child has had swimming lessons.¹⁷

First Response

In many instances, responding quickly and effectively to an emergency can help save the life of a child - drowning is no different. Drowning can happen quickly and quietly. A child will lose consciousness in two minutes after submersion. Irreversible brain damage can occur within four to six minutes of submersion. Unfortunately, the majority of children who die are found after ten minutes.¹⁸ Waiting for help to arrive is not the answer. The BC Ambulance Service has a standard response rate of 8:59 minutes.¹⁹ While in many cases it may be faster, emergency response in areas may take longer because of traffic, inclement weather, or geography.

Environment

Whether you are in a backyard pool or the local beach, not being aware of environmental hazards such as currents, tides, waves and sudden drop-offs can place yourself or your children at risk. Placement of signage and buoys in the water to mark hazardous areas are helpful, but are not always present. Environmental hazards can be a risk to all children, regardless of age or swimming ability. Although these hazards are often associated with the outdoors, environmental risks can also be present in areas of your home. Risks while bathing a child can include exposure to hot water and slippery surfaces.

What Can We Do to Reduce the Risk?

With the warm weather and the schools out for the summer, the number of people in pools, parks, and backyards will increase substantially. The CDRU strongly recommends Safe Kids Canada's "Five Layers of Protection" as a way of eliminating unnecessary risk and keeping your children safe around water.

Actively Supervise!

Active supervision means staying "within reach or sight of your child at all times". Whether in your own home or at the local lake or beach, always know where your child is and be close enough to see, hear and reach them if necessary. Actively supervising means avoiding distractions like answering the phone or talking to a friend. Consider getting in the water with your child and enjoying the summer time together.

Get Trained!

Planning to spend time at the pool or beach this summer? Educate yourself! If you are a pool owner, have an emergency action plan for your home and keep a phone nearby so you can make that 911 call. If an incident does occur, knowing First Aid and CPR will allow you to help your child until emergency services arrive. Getting trained can also include becoming a competent swimmer. If you feel you could benefit from swimming lessons, contact your local community centre or Red Cross office (www.redcross.ca) and learn about adult swim programs available in your area.

Create Barriers!

Safe Kids Canada recommends that pools have four-sided fencing that is at least 1.2 metres (four feet) high as well as having self-closing and self-latching gates. The fence should also be close enough to the ground to prevent a small child from squeezing through any gaps and include vertical bars to deter him or her from climbing it. Not sure if your pool fencing is appropriate?

Contact your local municipality to ensure that your fencing has the right safety features and meets related by-laws.

Remember, drowning can happen in only a few inches of water. When not in use, empty water-filled containers such as gardening tubs or inflatable pools and turn them upside down.

Wristband alarms, activated when a child enters the pool, the pool area or any other body of water, can supplement the protection offered by pool fencing. The Consumer Safety Commission (CSC) in the United States conducted a study of these alarms and found the following :

- Wristband alarms must be secured on the child's wrist with a key that prevents the child from removing the band on their own.
- If the device comes in contact with water, a signal will be sent to the external receiver which will immediately emit a loud alarm alerting the supervisor.
- Wristband alarms should not be used as a substitute for other best practices for prevention.

To view the CSC evaluation of wristband alarms, visit: www.cpsc.gov/library/alarm

Certain wristband alarms can be connected directly to the pool fencing and will alert if a child wearing the wristband enters the pool area via a fence or a gate. For more information on wristband alarms, enter "immersion alarms" into your internet search engine.

Use Lifejackets!

Make sure that your child wears an approved PFD or lifejacket and that it fits your child properly. Always have a weak swimmer or non swimmer wear a life jacket when in or near the water. Air-filled swimming aids such as water wings or inner tubes do not prevent your child from drowning. For more information about life jackets and PFDs go to www.redcross.ca or www.boatsmartcanada.com.

Teach Kids to Swim!

Swimming lessons can promote confidence and increase awareness of water safety. But remember, preschoolers do not have the developmental ability to recognize signs of danger nor are they physically able to get themselves out of trouble in the event of an emergency. Know your child's limits. Stay within reach of your child at all times regardless of their level of swimming ability. Get active and be in the water with your child!

For more information on strategies for keeping your kids safe in and around water, visit Safe Kids Canada at: www.safekidscanada.ca

Isolation Pool Fencing

... surrounds the immediate area of the pool on all sides, completely separating it from the house and property. In comparison, perimeter fencing does not surround the immediate pool area but rather borders the whole property. Although perimeter fencing may prevent pool access by those outside the property, it does not restrict a child's access to pools in their own backyard. Studies show isolation fencing to be much more effective in reducing the risk of drowning, in comparison to perimeter fencing.

Source: Harbourview Injury Prevention and Research Center. *Best Practices: Drowning Interventions.* <http://depts.washington.edu/hiprc>



Photo courtesy of Aboriginal Tourism Association of Canada by photographer Jill Devoshire, The Coast Reporter

Part 3: BOAT SAFETY

What Did We Learn?

Of the 33 drowning deaths reviewed, three children were boating recreationally at the time of their injury. All were male youths between the ages of 17-18 years. This is consistent with current research that identifies males over the age of 15 as accounting for the majority of boating-related drowning fatalities within Canada.²²

The deaths of these youths all resulted from an unexpected fall into the water when their boats capsized. Two of these cases involved overturned canoes while the remaining case involved a small motor boat. In all three cases, the youth survived the boating incident but later drowned while attempting to swim to safety.

The review of these three deaths found:

- All of the youths were boating with friends or family at the time of the incident. These individuals witnessed the drowning but were unable to assist in keeping the youth afloat.
- One of the youths was identified as a non-swimmer, although friends present at the time of the incident were unaware of his inability to swim. Of the remaining two youths, one was believed to be a weak swimmer; the other, a competent swimmer.
- Lifejackets or Personal Floatation Devices (PFDs) were not worn by any of the three youths. In two of the cases, floatation devices were also not worn by any of the other boat passengers, nor were they present in the boat. In the third case, a PFD was not worn by the youth who drowned but was worn by another youth in the boat who swam to the shore and survived the incident.
- Cold water was a known contributory factor in two of the three deaths, including one youth who drowned in water that was 11° Celsius.
- Adverse weather conditions, including wind, choppy water and decreasing daylight, were known contributory factors in two of the three deaths. In addition to contributing to the boating incident itself, poor weather conditions and decreasing daylight were also found to have hampered rescue efforts.
- Alcohol was a known contributory factor in one of the deaths, in which both the youth who drowned (who was a passenger) and boat driver were legally intoxicated at the time of the incident. Alcohol could not be determined as a contributory factor in the remaining two cases.
- Boater behaviour was identified as a factor in all three of the deaths. Contributory risk behaviours included overloading the boat with passengers or baggage and/or abrupt movements such as standing up while the boat was in motion.
- CPR was administered in one of the cases, where attempts to retrieve the youth shortly after submersion were successful. This youth was taken to hospital where he subsequently died. In the remaining two cases, initial rescue efforts to reach the victim were initiated but postponed due to decreasing daylight and adverse weather conditions.

What Are the Risks?

Although the above findings are based on a small number of cases, it is important to note their strong linkage to risk factors and trends frequently seen in boating-related drownings across Canada. What factors are putting our children's safety at risk and why?

Lif jackets and PFDs - What's the difference?

Lif jackets are designed to keep a person buoyant in the water and also turn the wearer, whether conscious or unconscious, to a supported, face-up position. Lif jackets must be red, orange or yellow in colour to ensure visibility. Personal Floatation Devices (PFDs) are able to keep a person afloat with their head above water but are not designed to turn the wearer to a face-up position. PFDs are generally less bulky than lif jackets and come in a variety of colours and styles. PFDs are best used by confident swimmers in calm conditions.

Source: Canadian Red Cross. *PFD & Me: Lif jackets and PFDs*. Available at: www.boatsmartcanada.com/cmslib/general/bookoflessonplans-english.pdf

Absence of a Lif jacket or PFD

Failure to wear a PFD or lif jacket is widely reported as the most significant causative factor in boat drownings across the country. A recent study of boating-related fatalities over a ten year period in Canada found that an alarming 90% of boaters who drowned were not wearing a PFD or lif jacket at the time of the incident.²³ Studies have also shown that the rate of lif jacket/PFD wear decreases with age, dropping from 70 per cent for children aged six to nine to a wear rate of only 37 per cent for youth.²⁴

Cold Water

Cold water immersion is a significant risk factor associated with both child and adult drowning deaths across B.C. and Canada. The Canadian Safe Boating Council reports that 99 per cent of those who drown in Canada each year do so in water that is colder than 20° Celsius.²⁵ Sudden immersion in cold water can have various effects on the body which greatly impact a person's swimming ability and potential for self-rescue, including hyperventilation, increased heart rate, muscle spasms and numbing of the limbs and hands.

Adverse Weather Conditions

Adverse weather conditions, such as waves, wind and poor visibility all have the potential to put a person's safety at risk while boating. In addition to making the boat more difficult to control, poor weather conditions can also impact boat stability, increase the possibility of capsizing, and make rescue attempts more challenging should an unexpected fall into the water occur.

Alcohol

Although consuming alcohol while boating is illegal, the Canadian Red Cross reports that 37 per cent of boaters in Canada admit to consuming alcohol every time they boat.²⁶ Alcohol use has many effects on the body which do not mix safely with boating, including reducing vision and balance, impairing judgement, slowing reaction time and accelerating hypothermia.²⁷

Boater Behaviour

Lack of judgement and careless action by boat drivers and passengers are often identified as contributory factors in boating fatalities. Risky boater behaviour is not just a concern while out on the water, but can also be a factor while planning and preparing for a boat trip. A study of boating-related drowning fatalities in 1999 found that the boat was overloaded in 10 per cent of all drowning deaths. Standing up in the boat, abrupt turns by the boat driver and speed were also identified as causative factors.

What Can We Do to Reduce the Risk?

Recreational boating doesn't have to be risky. This summer, promote fun and prevent injuries by taking a few simple steps towards safety. The Child Death Review Unit of BC strongly supports the following tips for avoiding water-related injuries, issued by SMARTRISK and the Canadian Red Cross.

BUCKLE UP! Lifejackets and PFDS – For recreational boats in Canada, regulation requires that one Canadian approved PFD or lifejacket of appropriate size is present for each person on board. Having a lifejacket close by is not enough to prevent drowning. Our ability to stay afloat and put a PFD or lifejacket on when already in the water can be greatly impacted by the effects of cold water shock, poor weather conditions and any injuries resulting from the incident itself. Lifejackets or PFDs should be worn by all boaters of all ages, regardless of swimming ability or boating experience. In addition to keeping you afloat in an emergency, lifejackets and PFDs also act as an extra layer against cold water.

STEP TOWARDS SAFETY! – Learn more about lifejackets and PFDs, including how to choose and fit the right one for you or your kids, by visiting www.wearalifejacket.com.

DRIVE SOBER! Alcohol Awareness – The risks of boating under the influence of alcohol are just as serious as drinking and driving your car. It is also an offence under the Criminal Code of Canada. There is no safe way to mix alcohol and boating. Be responsible this summer and don't put yourself, your friends or your family at unnecessary risk. Boat Smart...Boat Sober!

STEP TOWARDS SAFETY! – Are you aware of the risks of using alcohol while boating? Test your knowledge by taking the Boat Sober Quiz at www.boatsmartcanada.com.

LOOK FIRST! Weather Conditions – Planning ahead is an important step to any boat trip, no matter how long the ride. Being prepared includes checking the weather forecast before you leave, working together to ensure everyone has appropriate gear and clothing for the trip and notifying a friend or family member about your plan. Remember that weather can change quickly. Keep an eye on the conditions and head safely to shore in the event of a developing storm or other signs of hazardous weather.

STEP TOWARDS SAFETY! – Running through a pre-departure checklist is an efficient and easy way to ensure a safe boat trip.

Download your free Red Cross Pre-Departure Checklist from:

www.redcross.ca/article.asp?id=015200&tid=024

WEAR THE GEAR! Safety Equipment – Law requires all boaters to carry marine safety equipment on board. In addition to wearing your lifejacket or PFD, make sure you are carrying all recommended safety equipment before going out on the water.

STEP TOWARDS SAFETY! – Is your boat equipped with all the required gear you want to stay safe this summer?

For a list of everything you need on board and more, contact the Office of Boating Safety, Transport Canada, at www.tc.gc.ca/boatingsafety

GET TRAINED! Boater Competency and Emergency Response – Improving your boating and water safety skills, including receiving training in emergency response, is a smart choice for anyone who enjoys boating and spending time around the water. Learning the rules and regulations of boating in Canada is a crucial part of reducing the risks. As a means of ensuring boater competency, Transport Canada now requires all operators of motorized pleasure craft to obtain a Pleasure Craft Operator Card. For more information on how and when to obtain your Pleasure Craft Operator Card, contact the Office of Boating Safety, Transport Canada, at www.tc.gc.ca/boatingsafety.

STEP TOWARDS SAFETY! – In the event of an emergency, knowing how to respond can be the difference between life and death. Be prepared! Sign up for the next First Aid and CPR training course in your area by contacting your local Red Cross office or visit www.redcross.ca.

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Part 4: MOTOR VEHICLE INCIDENTS

What Did We Learn?

Of the drowning deaths reviewed, nine children died as a result of eight motor vehicle incidents in which the vehicle became submerged in water. In one incident there were two deaths. All of the incidents involved a single vehicle. In the majority of cases, the child was not the driver. In half the cases, alcohol and/or drugs were factors. In one third of the cases, bystanders immediately attempted a rescue, but were hampered by water that was cold, deep and /or murky, and by lack of emergency equipment. In at least one third of the cases, children were conscious as the vehicle submerged, but could not escape.

Seven of the nine deaths resulted from a **moving** vehicle leaving the road and becoming submerged in water. The remaining two deaths were attributable to a **parked** vehicle lurching off a dock into deep water with a child trapped inside. All but one of the deaths were determined in all likelihood to be preventable.

The review of the seven deaths involving a moving vehicle found:

- In five cases, the driver survived.
- In three deaths, the driver was a parent; one of the three parents also died
- In five cases, the vehicle rolled and overturned.
- Five of the children had seatbelts on; one did not and in one case it is unknown if the child was restrained.
- Three vehicles entered a ditch, with the remaining vehicles entering a slough (wetland), a creek and a lake.
- Excessive speed and/or driver error was a contributory factor in five deaths.
- Road conditions were a contributory factor in two of the deaths.

The review of the two deaths involving a parked vehicle found:

- Two children were in trucks with standard transmissions that had been parked on a dock in first gear without application of the emergency brake. Neither child intended to drive: one had intended to start the truck to turn the heater on; the second was a preschooler who had been left alone in the vehicle with the keys in the ignition. In both cases when the child turned the key, the truck unexpectedly lurched forward.

What Are the Risks?

The possibility of being trapped in a sinking or submerged car may seem unlikely, yet statistics from the United States show that a vehicle accidentally enters water every four hours.²⁹ What are the risks for drowning secondary to a motor vehicle incident?

Proximity

Cars and water are a dangerous combination. B.C. has 25,725 kilometres of coastline and 18,000 square kilometres of fresh water, not including areas with drainage or irrigation ditches.³⁰ If an accident occurs along a waterway, the driver and passengers of the vehicle may be at risk for drowning.

Driver Error

Driver error encompasses deliberate behaviours such as speeding, lack of seatbelt use, or impaired driving as well as accidental events such as falling asleep at the wheel.

Motor vehicle accident rates increase with impaired driving.³¹ Transport Canada reports that seat belt use is lowest at night, when drinking is likely to occur. Research shows that wearing a seatbelt decreases the likelihood of dying in a crash by 50 per cent.³²

Speed kills. In 2005, there were 8,200 unsafe speed-related crashes in B.C., resulting in almost 5,600 injuries and 167 deaths.³³ Research further notes that 90 per cent of drivers occasionally speed and 75 per cent admit to speeding regularly.³⁴

The Traffic Injury Research Foundation reported that in 2004, 4.1 million Canadians fell asleep at the wheel.³⁵ Public perception holds that drowsy driving happens after hours at the wheel or late at night, but 44 per cent of people who survive falling asleep at the wheel report they had been driving for only one hour, and 35 per cent fell asleep in the afternoon.³⁶ In the case reviewed by the CDRU, the accident happened in the late afternoon.

Standard Transmission

Unlike automatic vehicles, those with standard transmissions have no locked parking position. There is only the internal friction of the non-running motor to maintain the car in position, so the car is usually parked in first gear or reverse. It is imperative the emergency brake is ALWAYS applied.

Inability to Escape

If a vehicle enters water, escape may be difficult for a number of reasons. Doors may not open due to the pressure of the water outside. Electric windows may be stuck closed. There may be a child restrained in the back seat who needs to be brought forward. You have only a few seconds or minutes, depending on whether your windows are open or closed, and how airtight your vehicle is. Statistics show that approximately 500 people a year die in the United States as a result of their inability to escape a sinking vehicle.³⁷

Unattended Children

Although only one of the deaths related to a child being left alone in a vehicle, statistics from Kids in Cars (US) show that from 2002-2006 there were 2471 incidents involving children left unattended in and around cars, leading to 665 fatalities.³⁸

What Can We Do to Reduce the Risk?

British Columbia is a province rich in natural beauty such as oceans, lakes, and rivers. There are often no barriers between our vehicles and the water, leading to increased vulnerability for accidental drowning if a motor vehicle incident occurs. Taking action to reduce this risk includes being aware of safety concerns and being prepared for action in case of an emergency:

BE AWARE!

What are the Environmental Hazards where I am Driving/Parking?

Pay attention. An alert driver is a safe driver. Ask yourself: What are the dangers where I am driving? Are there barriers between the road and the water? Pay particular attention on docks, bridges, boat launches, roads that run alongside waterways, or any place where access to water is fairly open and unrestricted. Be aware of road conditions (pot holes, loose gravel, ice) that may impact control of your vehicle. Watch for signage that informs of steep grades or curves ahead. Adjust your speed to match road and weather conditions, which may require you to slow below the posted speed limit. And remember, parking safe is as important as driving safe.

Where are the Keys and the Kids?

Never leave your keys in the ignition. As the driver, safety of your passengers rests with you. If you are driving a car with a standard transmission, do not give the keys to a person, including other drivers, who is unfamiliar with standards. Keeping control of the keys keeps people safe.

Children should never be left unattended in a vehicle, particularly if they are not restrained. Children like to mimic adults, and have spent many hours watching mom and dad drive the car. Given the chance, they may want to try it for themselves. Do not give them the opportunity!

Are Your Safety Systems in Good Working Order and Engaged?

All internal safety systems of a car must be kept in good working order. Emergency brakes must be engaged when the vehicle is parked, even if the stop is brief. Parking a standard vehicle in gear, even on level ground, is no substitute for applying the emergency brake.

BE PREPARED!

Do You Know How To Be or Raise a Safe Driver?

Novice drivers: B.C.'s graduated licensing program showed a 25 per cent decrease in new driver crashes in its first two years. Despite this, novice drivers are still about 45 per cent more likely to be involved in a motor vehicle incident and 25 per cent of their crashes result in an injury or fatality.³⁹ Prepare your child to drive by enrolling him in a licensed, ICBC-approved driver training program.

Experienced Drivers: Be aware of driver behaviours that put you and your passengers at risk such as failing to heed posted safety signs, driving while drowsy, driving aggressively or speeding.

To All Drivers: Learn more about the dangers of driving while impaired or drowsy by visiting:
www.icbc.com/road_safety/roadsafety_drinkdrive.asp
www.safety-council.org/info/traffic/wake-up.html

Keep Safety Equipment on Hand – Save Yourself or Others

If you live or drive around water, spend time learning about safety equipment and exit strategies in case of accidental submersion. There are excellent resources on-line for escape from a sinking car. Watch the following videos about sinking cars:

www.flixxy.com/escape-sinking-car.htm
www.cbsnews.com/sections/i_video/main500251.shtml?id=1954560n

Develop a Plan of Your Own

Build a plan so you know what to do should your vehicle become submerged in water using some tips you can find online, such as:

- Keep engine on, so that electric windows may be opened.
- Roll down windows for immediate escape or to allow pressure to equalize, depending on water level.
- Hold onto something such as the window to orient yourself if the vehicle rolls.
- Bring children into the front seat with you.

Consider Investing in Safety Equipment

You can buy specialized safety equipment such as a seatbelt cutter or window punch from some hardware stores or various on-line retailers. Seatbelt cutters may be used if your belt does not retract, or to quickly remove a child from their car or booster seat. Window punches create escape routes if windows and doors cannot be opened. Many of these devices are small, light-weight and designed to fit on a key ring or be carried inside your car.



Part 5: SUICIDE BY DROWNING

What Did We Learn?

Of the 33 drowning cases reviewed (2003-2006), four were determined to be suicide — all were youths between the ages of 13 and 18, and three of the four youths were male. In a survey of 15,000 grade seven to 12 students in B.C., 34 per cent knew someone who had attempted or died by suicide.⁴⁰ Youth suicides account for an average of 25 per cent of all youth deaths in Canada each year.⁴¹

- All of the youths exhibited warning signs such as suicide ideation and/or threats of suicide. Two of the youths had attempted suicide in the past. All had either attempted suicide in a water environment previously or had expressed thoughts of suicide associated with water. Half had a history of self-harming or self-mutilating.
- Three of the four youths were known to have mental health issues (depression, impulse disorder, social phobia) at the time of death. All had received mental health services in the past. Half were receiving mental health services at the time of their death; two were taking prescription medication for their condition.
- All of the youths had been subjected to extremely stressful situations in the past. Of these, three of the four experienced family discord or displacement from the family. Two of the youths had a history of substance abuse. One had been sexually abused. Two of the youths had experienced the suicide of a peer in the recent past. These two youths completed suicide in the same method as was chosen by their peers (intentional jump from a height).

What Are the Risk?

Although the findings came out of a relatively small number of youth suicide cases, they are highly reflective of what is happening with youth suicide at both the national and international levels. What factors put our youth at greater risk for suicide?

Intention

Eight out of ten people in Canada who complete suicide gave some previous "warning" of their intention such as expressing thoughts of suicide and making threats.⁴² Research indicates that youth are more likely to discuss their thoughts of suicide with a friend.⁴³

What is bipolar disorder?

Bipolar disorder is an illness in which there are periods of serious depression, followed by episodes of markedly elevated or irritable moods or "highs" (in the absence of drugs or alcohol).

Source:

The Canadian Mental Health Association (2007). Bipolar Disorder. www.cmha.com

Mental Illness

Youth suffering from mental illness such as depression, bipolar disorder, impulsive behaviour and anxiety disorders are more likely to complete suicide.⁴⁴ The risk increases when the illness is left untreated or is not treated consistently. According to a recent national study, only one in every six Canadian youth who needs mental health services is able to access those services.⁴⁵

Life Stressors

Issues such as family discord, family instability, substance abuse, difficulties at school and interpersonal conflict are precipitating stressors in many youth suicides and suicide attempts.⁴⁶ A child dealing with these difficult situations who also suffers from a mental illness is left with poor personal resources to cope with feelings of pain and hopelessness.

Male Youth

Canadian research shows that male youth are four times as likely to complete suicide as female youth and are much less likely to obtain help when dealing with thoughts of suicide.⁴⁷

What Can We Do to Reduce the Risk?

Youth suicide can be PREVENTED! The Child Death Review Unit strongly supports community education and advocacy with regards to youth suicide in BC. Friends, family members, teachers, coaches, doctors, mental health service providers, media professionals; we can all do something to prevent youth suicide in our communities. What can communities do to prevent youth suicide?

Look for warning signs

- Always take warning signs such as suicide ideation (thoughts pertaining to the act of suicide) or threats of suicide seriously. A recent study indicates that it can be very difficult to distinguish between a youth who is trying to "get attention" and one who is seriously contemplating suicide.⁴⁸
- Male youth are at particular risk so special care should be taken to identify and act on warning signs.

Educate yourself

- If you are a student, educate yourself to recognize warning signs in your friends and classmates. Learn what to do and who to talk to if you think your friend is at risk.⁴⁹
- If you are a parent or caregiver, educate yourself to recognize warning signs in your child. Know what you can do and where you can go to get help for your child and yourself.⁵⁰
- Teachers, coaches, doctors, daycare providers and all others who interact with children need to be able to recognize the warning signs and provide resources to those at risk.
- If you are a member of the media, partner with the community to provide suicide intervention education. When a youth suicide occurs in the community the media should take the opportunity to provide information about warning signs and risk factors. Distribute a list of services where youth can go to get help (i.e. suicide hot lines, counselling centers).⁵¹ For more information please see the following document:

www.who.int/mental_health/media/en/426.pdf

Advocate for mental health care

If you are a parent, familiarize yourself with your child's mental health care plan and educate yourself on your child's diagnosis.

- If your child is taking prescription medication, know what to expect. Learn how to monitor your child's medication and to identify adverse side effects that may put your child at risk
- If you are a mental health care service provider, encourage open communication between yourself, the child, the parents and all other involved service providers when developing and maintaining the mental health care plan. Ensure that communication is culturally appropriate and culturally sensitive.

Where Can I Learn More?

For Kids and Concerned Friends

... Click

www.youthinbc.com
www.youthsuicide.ca
www.suicideinfo.ca

... Call

Kids Help Line: 1.800.668.6868
BC Crisis Center Help Line:
1.866.661.3311 or
1.866.872.0113 (24 hour TTY access)

For Parents and Concerned Adults

... Click

www.crisiscentre.bc.ca
www.suicideinfo.ca
www.youthsuicide.ca

... Call

BC Mental Health Info Line: 1 800 661-2121

Teachers/Coaches

... Click

www.who.int/mental_health/media/en/62.pdf

Acknowledgement

The 33 child drowning death cases reviewed for this special report were investigated by the men and women of the BC Coroners Service. These 90 field coroners come from across the province and have diverse backgrounds in disciplines such as medicine, law enforcement, social sciences, education, business, and law. Most are community coroners who are on call 24 hours a day, seven days a week. The work they do is not always understood. They are tasked with identifying who the deceased was and how, when, where and by what means he or she died.

They are also the mothers, fathers, spouses and grandparents who have missed birthday parties, soccer games, music concerts and family dinners in order to respond to the sudden and unexpected death of a child. Most would agree it is a difficult profession and the CDRU is grateful for the commitment, sensitivity and dedication demonstrated by our colleagues in the field.

Follow Up

Of the 33 cases reviewed:

- recommendations were made in two drowning deaths where children were known to the Ministry of Children and Family Development (MCFD) — in both cases, the coroners recommended MCFD follow through on the recommendations from the MCFD Director's and Deputy Director's Case Reviews. This was done.
- in two cases, the coroner met with local officials and signage was erected to warn people of the water hazards associated with the area and to warn drivers to reduce their speed.
- in one case, local officials acted independently to place shoulder rumble strips on a section of highway where a driver had fallen asleep at the wheel.
- in some cases following a death, there appeared to be an understanding that actions would be taken to prevent future deaths. One case related to the drowning of a child in a provincial park where there had been a delay in placing buoys to alert swimmers of a dangerous drop off point. For the purposes of this review, CDRU contacted the contractors responsible for maintaining the provincial park and confirmed that once again, while the park was open, the buoys had not been placed at the drop off.
- in another case, a child slipped while crossing a shallow creek. He drowned despite aggressive rescue attempts. The coroner documented that a sign would be posted in the area. CDRU further confirmed that signage at the shallow creek had not been erected.

The Child Death Review Unit will be reporting out on the status of outstanding coroner's recommendations related to child deaths in subsequent annual reports. We believe that it is vital to ensure that recommendations are completed in a timely manner. It is in this way that we can honour the lives and memories of the children who have died.

**Remember ... Awareness and preparation
may one day save your life, or the life of your child.**

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