

# 2012 Annual Report

## BC Coroners Service



**Coroners Service**  
Ministry of Public Safety and Solicitor General

Posted: September 1, 2016

<http://www2.gov.bc.ca/gov/content/life-events/death-and-bereavement/coroners-service/reports>

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## Vision

Safe and Healthy Communities

## Mission

The Coroners Service is committed to conducting a thorough, independent examination of the factors contributing to death in order to improve community safety and quality of life in British Columbia.

## Values

Integrity, Respect, Accountability,  
Healthy and Dynamic Work  
Environment, Quality Service

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# Message from the Chief Coroner



It is my pleasure to present the Coroners Service 2012 Annual Report. This information in this document reflects the dedicated efforts of our staff across the province, from those working from their homes in small rural communities, to those located in our central regional and provincial offices. The Coroners Service is a small group with a mighty mandate and we are committed to providing compassionate, professional service to the deceased, their families, and the stakeholders with whom we work.

BC's full and part-time coroners responded to 8,067 reports of death in 2012 and assumed jurisdiction in 3,877 cases. The data gathered by coroners in these investigations helps to inform the practices and policies of those working in support of public health and safety across the province, and our Research Unit ensures that our public reporting is timely and accurate. We also alert the public to dangerous practices and trends. The Coroners Service held 20 inquests in 2012, providing an opportunity for public review of the facts of these deaths and for meaningful recommendations by the juries. We also released a report of the Death Review Panel into *Four Fatal Aviation Accidents Involving Air Taxi Operations on British Columbia's Coast*, which resulted in important recommendations to improve safety in this industry.

The commitment of our staff supports the safety of all British Columbians and I thank the men and women of the Coroners Service for their significant efforts. We will continue to serve the public by diligently investigating the causes of sudden and unexpected deaths of members of our community to support better outcomes in the future.

A handwritten signature in black ink, appearing to read 'L. Lapointe'.

**Lisa Lapointe**  
Chief Coroner

# Our Organization

## About the BC Coroners Service

The BC Coroners Service (BCCS) investigates non-natural, sudden and unexpected deaths of adults, and all deaths of children, to establish the circumstances of death and determine if anything can be done to prevent future deaths. Coroners are quasi-judicial investigators, whose investigations are independent from law enforcement agencies, health authorities, and all other ministries of government. Coroners do not assign fault or blame, but rather conduct a fact-finding investigation into deaths that are unnatural, unexpected, unexplained or unattended.



A coroner's investigation entails a careful examination of the circumstances surrounding a death, to determine identity, and understand how, when, where and by what means an individual died. Pathologists, toxicologists and specialized investigators may be consulted to provide assistance in an investigation. Identification of trends and risk factors to help prevent future deaths forms a critical part of the overall mandate of the BCCS.



The BCCS supports public safety by:

- **Determining the facts** of all sudden, unnatural and unexpected deaths, all children's deaths, and all deaths in designated institutions.
- **Reviewing all children's deaths** to discover and monitor trends.
- **Ensuring that no death is concealed, overlooked or ignored.**

- **Producing either a Coroner's Report or a Verdict at Coroner's Inquest**, a report on the findings of the investigation or public inquest.
- **Making recommendations**, where appropriate, to both public and private agencies, to improve public safety and reduce the risk of future injury and death.
- **Conducting inquests** when mandated by the Coroners Act, when there is a strong public interest in the circumstances of the death, or when there is potential for prevention of death in similar circumstances in the future.
- **Convening death review panels** for the aggregate review of deaths with similar circumstances, to identify opportunities for intervention to prevent future deaths.
- **Collecting information** regarding the circumstances of death and conducting statistical analysis to identify risks to public safety and trends over time.
- **Supporting research** by sharing information with public and private agencies, academic institutions and other jurisdictions.
- **Releasing Public Safety Bulletins** when warranted, to warn the public about risks to public safety.
- **Providing statistical information and analysis** to agencies, government ministries, and other decision-makers to inform policies and legislation in support of public safety.
- **Supporting criminal investigations** by confirming identification of the deceased and cause and manner of death.
- **Maintaining sophisticated missing persons/found human remains database and applying innovative geospatial, DNA, dental and/or other comparative analyses** to support the identification of found human remains for critical legal, criminal, or estate purposes, and to bring closure for families of missing persons.
- **Collaborating with other provinces and jurisdictions** to exchange information, support research and develop recommendations and uniform responses to policy and classification questions.

## Structure of the BCCS

The Chief Coroner is the head of the BCCS, operating out of offices in Victoria and Burnaby. There are also five regional offices, each managed by a Regional Coroner.



**Northern Region:** Includes the region north, east and west from 100 Mile House to all Provincial borders, and Haida Gwaii.



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



**Fraser Region:** Includes Coquitlam and Surrey to the Coquihalla Highway summit, 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:** All of Vancouver Island, the Gulf Islands, and Powell River.

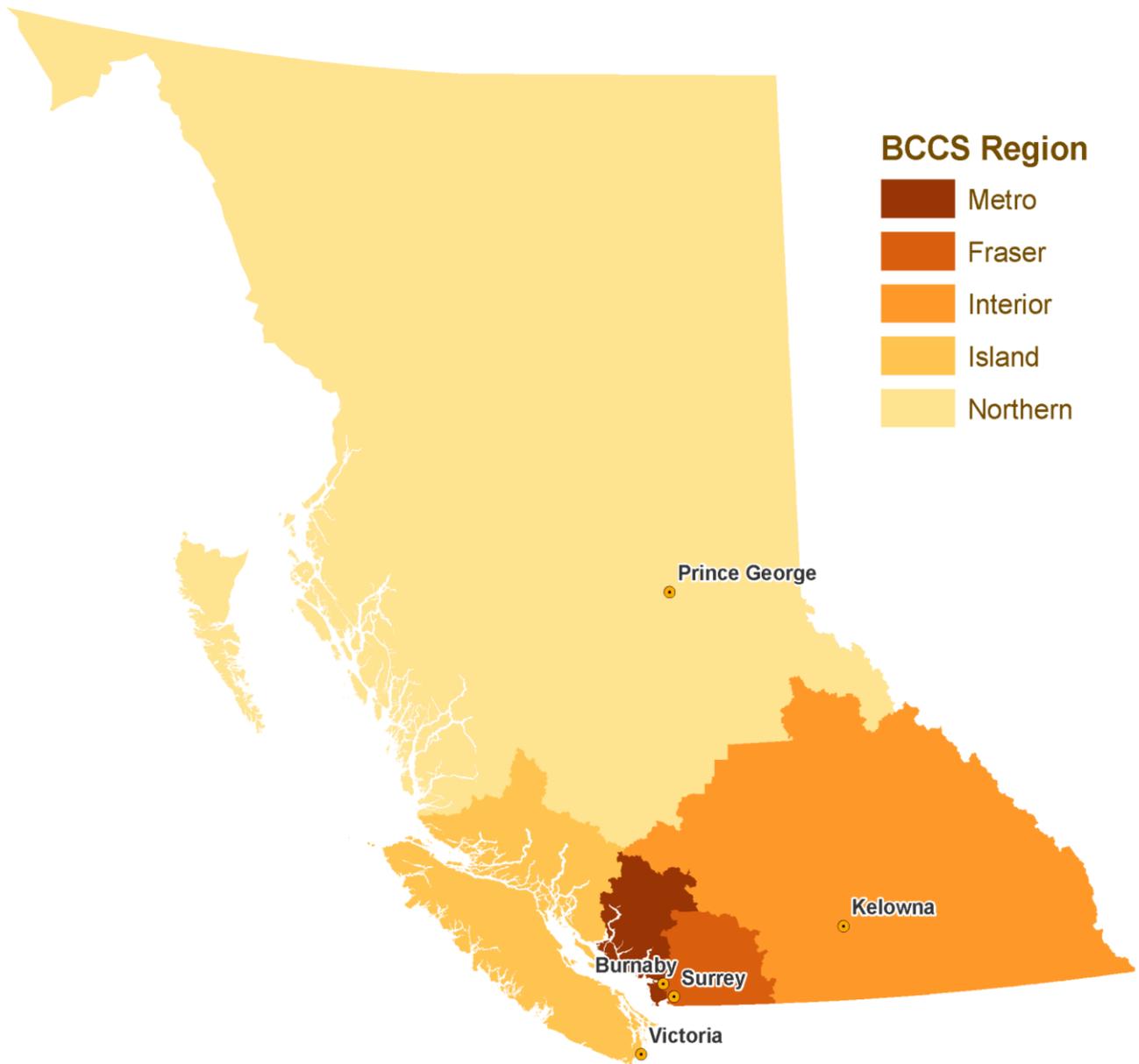


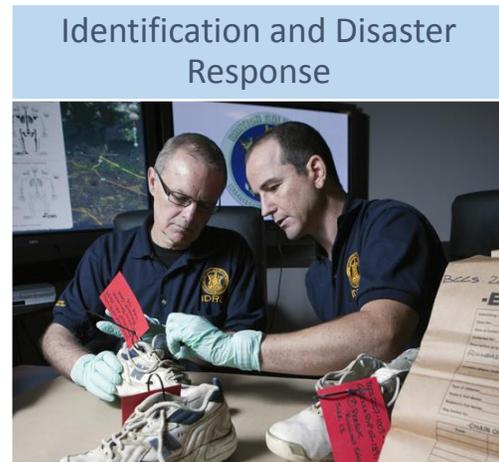
Figure 1. Regions of the BCCS.

## Specialized Units

Because of the complexity of many death investigations, the BCCS has specialized units to assist with investigations.



The physicians of the Medical Investigation Unit provide coroners with guidance and consultation in the investigation and analysis of the medical aspects of cases. The Unit also works to identify common factors contributing to unexpected deaths, which may require in-depth review to inform prevention strategies and supports the specialized units of the Coroners Service. Other functions include liaison with the medical community, health authorities, the College of Physicians and Surgeons of BC, and the BC College of Pharmacists, and participation in evidence-based policy development.



The Identification and Disaster Response Unit (IDRU) provides support and expertise in identification, disaster response, and business continuity planning. The IDRU also actively investigates all unidentified human remains cases. When unidentified remains are found, or missing persons cases are queried by law enforcement, the IDRU is able to compare data from several sources, including conventional personal descriptor and case information databases, in conjunction with its Geographic Information System and DNA database, and the Provincial Dental Databank. In addition, IDRU participates in the development of provincial and national missing persons and unidentified remains policies, procedures and programs.

## Child Death Review



The Child Death Review Unit (CDRU) is legislated under the *Coroners Act* to review, on an individual or aggregate basis, the facts and circumstances related to the deaths of all persons under the age of 19, including both sudden and unexpected deaths and those of natural causes. Their objective is to better understand how and why children die, and to translate that information into recommendations to prevent future deaths and to improve the health, safety and well-being of all children in B.C. Child death cases are sent to the CDRU for review when the coroner's investigation or inquest into the death is complete. Additionally, the CDRU provides support and consultation to coroners with respect to child death investigations. The Unit's reports can be seen at: <http://www2.gov.bc.ca/gov/content/safety/public-safety/death-investigation/child-death-review/reports-publications>

## Resource Industry Coroner



The Resource Industry Coroner is focused on the forestry sector. In addition to examining the circumstances related to specific deaths, the Resource Industry Coroner considers forestry fatalities within the historical and provincial context. This role includes administration of inquests and death review panels undertaken to fully examine the circumstances in forestry related deaths in order to develop recommendations to reduce the likelihood of similar deaths in the future.

## Special Investigations Coroner



The Special Investigations Coroner is primarily responsible for investigating deaths which have occurred following interactions with municipal police forces and / or the RCMP. These cases generally include police shootings and any scenarios involving ERT teams, use of force, use of restraints, police pursuits and deaths in custody. The Special Investigations Coroner is occasionally assigned to or provides consultation for other cases of a particularly complex nature, and often provides investigation support to cases that are to be examined before the public at inquest.

# Our Operations

## Achievements in 2012

In 2012, the BC Coroners Service:

- **Investigated the 8,067 deaths** reported across BC.
- **Held 20 Coroners' Inquests** to publicly review the circumstances of 22 deaths, including cases involving police custody, mental health issues, and commercial agriculture.
- **Distributed 110 recommendations** made by inquest juries and coroners, following the investigation of 33 deaths, in efforts to prevent future deaths under similar circumstances.
- **Issued 3 Public Safety Bulletins** on the topics of mobile home fire safety, pedestrian safety, and pool drowning deaths of preschool-aged children, to increase awareness of preventable injury and death.
- In conjunction with BC Parks, **unveiled improved safety measures** at Elk Falls Provincial Park, which were developed following two fatal accidents in the preceding five years.
- **Confirmed the identities** of two men who had been listed as missing persons for 25 and 27 years, respectively.

“HAVING EXAMINED THE VARIOUS ENVIRONMENTAL, TECHNOLOGICAL, ORGANIZATIONAL AND HUMAN FACTORS INVOLVED IN THE FATAL INCIDENTS . . .

. . . AND HAVING CONSIDERED THE OUTSTANDING AREAS OF RISK THAT CONTINUE TO POSE A CHALLENGE TO AVIATION SAFETY . . .

. . . THE PANEL SUBMITS TO THE CHIEF CORONER THE FOLLOWING RECOMMENDATIONS . . .”

*-from the report of the 2011 death review panel convened to examine four seaplane accidents.*

- **Released the 19 recommendations and full report of a 2011 death review panel** that had been convened to examine the circumstances surrounding four commercial seaplane accidents. Their report, including the recommendations and the responses to those recommendations, can be viewed online at: <http://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/death-investigation/death-review-panel/aviation.pdf>
- **Led a challenging and technical recovery operation** at the Johnsons Landing landslide site, in which four people lost their lives.



Recovery effort at Johnsons Landing, July 2012.

## Performance

The BCCS is committed to conducting timely and thorough investigations and inquests. Timeliness is a measure of our effectiveness as an agency. These performance indicators guide our organization in planning and decision making and, through the annual reporting process, enable us to remain open and accountable to the people of B.C.

When setting annual targets, we consider several factors including our historical performance, changing caseload, desired service levels, operational requirements, and resources available for achieving short- and long-term goals. We also consider external factors that may affect performance.

## Caseload

In 2012, 8,067 cases were reported to the BCCS. Of these, 4,094 were found to meet the criteria for investigation by the BCCS, that is, they were unexpected or unnatural deaths. The remaining 3,973 were deemed non-reportable (natural, expected deaths that were certified by a physician; non-human remains; etc.)

<b>Deaths Reported to the BCCS, 2008-2012</b>					
	2008	2009	2010	2011	2012
<b>Total</b>	<b>7,945</b>	<b>7,729</b>	<b>7,806</b>	<b>7,945</b>	<b>8,067</b>
Reported but did not meet legal mandate for investigation	4,068	3,844	3,746	3,780	3,973
Coroners' Investigations	3,877	3,885	4,060	4,165	4,094
Natural	1,736	1,637	1,698	1,621	1,664
Accidental	1,374	1,448	1,590	1,769	1,718
Suicide	486	509	533	530	509
Undetermined <sup>1</sup>	158	159	150	152	123
Homicide	123	132	89	93	80
Table 1					

<sup>1</sup> Some deaths classified as Undetermined may become otherwise classified as investigations proceed.

## Coroners' Investigations

The 2012 target for the median time to completion of investigations was 130 days (4.3 months). This target was based on the historical average time to case completion and an assessment of current resources.

Days to case completion is calculated as the number of days between the date a coroner is notified of a death and the date the case is concluded at the regional level. Deaths reported to the BCCS which are subsequently determined to be non-reportable under our legislation (i.e. natural, expected deaths) are not included in this measure.

The median days to case completion in 2012 was 159, 22.3% higher than the target of 130 days.

Individual cases may sometimes experience significant delay. Causes of delay in investigations may include factors such as pending criminal charges, the need for other agencies to complete their investigations prior to the BCCS completing its report, and the complexity of the investigation.

### Performance Measure

<b>Timeliness of Coroners' Investigations</b>			
Performance Measure	2012 Target	2012 Actual	2013 Target
Median days to case completion	130 days (4.3 months)	159 days (5.2 months)	130 days (4.3 months)

Table 2

## Coroners' Inquests

In 2012, the expectation for commencement of inquests was set at 620 days (1.7 years) from the date the death was reported to the BCCS. This target reflects both the desired service level, and the external factors that influence inquest timeliness.

Inquest timeliness is greatly affected by factors external to the BCCS, such as the length of criminal and other participating agencies' investigations (e.g., WorkSafeBC, Transport Canada). The BCCS most often waits for these investigations to be complete, as their outcome will form part of the evidence presented at Inquest.

Another factor is the complexity of many of the types of cases that go to inquest (e.g. police-involved deaths). Such cases tend to have longer investigations, and often require a large volume of evidentiary materials to be prepared and analyzed in advance of Inquest proceedings.

Days to inquest is calculated as the number of days between the date a coroner is notified of a death and the date the inquest commences.

The median number of days to inquest commencement was 663, 6.9% above the target of 620 days.

### Performance Measure

Timeliness of Coroners' Inquests			
Performance Measure	2012 Target	2012 Actual	2013 Target
Median days to inquest	620 days (1.7 years)	663 days (1.8 years)	620 days (1.7 years)

Table 3

## Budget

Operating expenditures for the BCCS in the 2012/13 fiscal year (April 1, 2012 to March 31, 2013) were \$12.009 million. The budget for the same period was \$12.170 million.

Salaries and benefits of \$5.8 million made up the largest component of expenditures, comprising 48.3% of the total. In 2012, the BCCS employed 63 part-time coroners and 31 full-time coroners, as well as 17 other staff members.

The total amount paid to external suppliers for services directly supporting coroner investigations, including autopsy, toxicology, and body management (transportation, storage, and body recovery) was \$5.0 million (41.8% of the total). The reduction of \$0.7 million from the previous year is attributable to a reduction in the number of autopsies performed. Other direct costs of \$0.6 million (4.9%) include expenses related to coroners' inquests, vehicles/travel, and equipment & supplies.

Other support costs include items such as systems, communications, external contracts, amortization and office expenses. These made up the other \$0.7 million (5.5%).

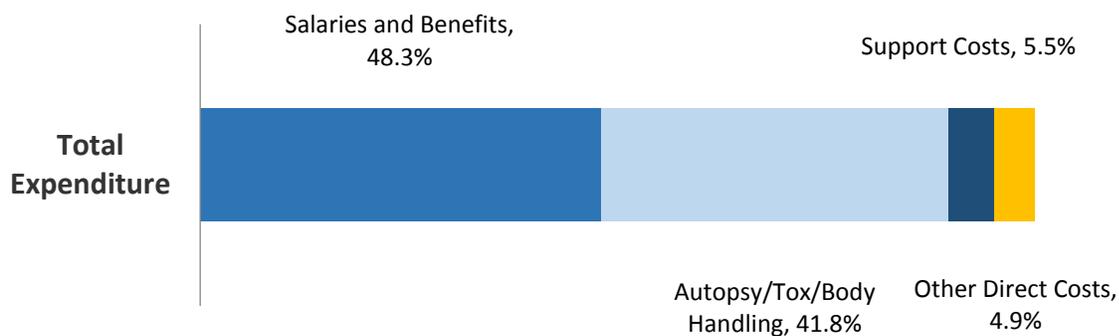


Figure 2. Total expenditure for the 2012/2013 fiscal year

# Inquests

## The Inquest Process

Inquests are formal court proceedings, held with a jury, to publicly review the circumstances of a death. Witnesses are subpoenaed and testify under oath to supply the jury with the information they need to make their determinations. The presiding coroner is responsible for overseeing the general conduct of the inquest and for ensuring that the jury maintains the goal of fact finding, not fault finding.

Upon conclusion of the inquest, a written report, the *Verdict at Inquest (Verdict)* is prepared. It includes the classification of the death and any recommendations of the jury aimed at preventing a similar death. The *Verdicts* for all inquests from 2007 forward are available on the Coroners Service website at:

<http://www2.gov.bc.ca/gov/content/life-events/death-and-bereavement/coroners-service/inquest-schedule-jury-findings-verdicts>

Following the inquest, the jury's recommendations are distributed to the appropriate persons, agencies and government ministries. The *Coroners Act* provides no legal authority for the BCCS to compel an agency or individual to implement a recommendation. We request that all those to whom recommendations are directed provide a written response, either explaining what steps are being taken to implement the recommendations, or why the recipient does not find it feasible to adopt them.

There are several reasons to hold an inquest, which are outlined in the *Coroners Act*. An inquest is generally required for all deaths in police custody. In all other deaths, the decision to hold an inquest is at the discretion of the Chief Coroner. An inquest may be held if there appears to be significant public interest in the circumstances of the death, or where the death resulted from a dangerous practice and recommendations could be made to prevent similar deaths.

The Legal Services and Inquests Unit is responsible for the administration of coroner inquests in the province. A schedule for upcoming inquests is available online at:

<http://www2.gov.bc.ca/gov/content/life-events/death-and-bereavement/coroners-service/inquest-schedule-jury-findings-verdicts#schedule>

## 2012 Coroners' Inquests

Twenty inquests were held into 22 deaths in 2012 (one inquest addressed a multiple fatality incident). Statistics on inquest deaths reflect the year of inquest and not the year of death.

A complete copy of the jury's *Verdict* for each of the 2012 inquests is available online at:

<http://www2.gov.bc.ca/gov/content/life-events/death-and-bereavement/coroners-service/inquest-schedule-jury-findings-verdicts/2012>

Inquests Held in 2012	
Type of Death	Total
Police Custody/Other Police Involvement	7
Police Shooting	6
Occupational	5
Mental Health Issues	2
Care Facility	1
Corrections	1
Total Number of Deaths	22
Total Number of Inquests	20

Table 4

Number of Inquests and Deaths by Inquest Year, 2003-2012 <sup>2</sup>										
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Inquests	11	13	15	23	26	17	11	11	15	20
Deaths	13	19	15	24	29	17	17	11	20	22

Table 5

<sup>2</sup> Inquests may be held for incidents that resulted in multiple fatalities, e.g. one inquest into an event that caused three deaths. As a result, some years have a higher number of deaths than inquests.

**Number of Deaths and Classification of Death by Inquest Year, 2003-2012**

Classification	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Accidental	5	11	7	11	19	12	8	8	10	12
Homicide	2	6	3	7	6	5	4	2	7	7
Suicide	5	-	2	6	-	-	4	-	2	1
Natural	-	1	3	-	1	-	-	1	-	1
Undetermined	1	1	-	-	3	-	1	-	1	1
<b>Total</b>	<b>13</b>	<b>19</b>	<b>15</b>	<b>24</b>	<b>29</b>	<b>17</b>	<b>17</b>	<b>11</b>	<b>20</b>	<b>22</b>

Table 6

*Data are subject to change and are not directly comparable to published counts from previous years.*

# Prevention

## Recommendations

Following the investigation to determine the circumstances of a death, coroners and juries may make recommendations in an effort to prevent future deaths in similar circumstances. Recommendations focus on improving systems and standards, and may be issued to both public and private agencies. A coroner or jury can make one of two types of recommendations:

*Action:* A change is recommended to the agency and a response to this recommendation is requested by the BCCS. Recommendations may be directed to one or more agencies/individuals. A response is requested within 90 days of distributing the recommendation.

*Information:* No changes are recommended, but the findings of the investigation are brought to the agency or individual's attention for information purposes. A response is not requested.

The Chief Coroner is responsible for bringing the findings and recommendations from coroners' investigations and inquest juries to the attention of appropriate individuals, agencies, the public and ministries of government. Although the BCCS has no statutory authority to order change or otherwise ensure that recommendations are carried out, it is expected that recommendations will be given serious consideration by the agencies to which they are directed.

The BCCS has been broadly successful in having recommendations considered and implemented in the past. Policies and procedures have been changed in response to coroner and jury recommendations, helping to make our communities safer.

### Recommendation Statistics

The BCCS distributed recommendations on 33 deaths in 2012. These 33 deaths occurred in 28 separate incidents. Nineteen deaths were investigated by a coroner, and 14 were reviewed at inquest. The majority were accidental deaths.

There were a total of 110 distributions. One recommendation may be distributed to multiple recipients. Each distribution is counted in the following statistics; if a recommendation is issued

to three separate agencies, it is counted as three recommendations/distributions. Of the 110 recommendations distributed in 2012, 28 were made by coroners and 82 were made by inquest juries.

Approximately two-thirds of the recommendations, 62.7%, were distributed to one of the six agencies that received five or more recommendations in 2012 (see Table 8). The BCCS had a 63.8% response rate to Action recommendations distributed in 2012.

Number of Recommendations Distributed by Year of Distribution, 2005-2012					
Year	Deaths	Incidents	Rec. Type	# of Recs. Distributed	Total
2005	73	64	Action	228	274
			Information	46	
2006	68	67	Action	149	187
			Information	38	
2007 <sup>3</sup>	129	120	Action	615	684
			Information	69	
2008	89	86	Action	451	506
			Information	55	
2009	50	43	Action <sup>4</sup>	321	321
2010	44	32	Action	234	234
2011	49	41	Action	203	203
2012	33	28	Action	105	110
			Information	5	

Table 7

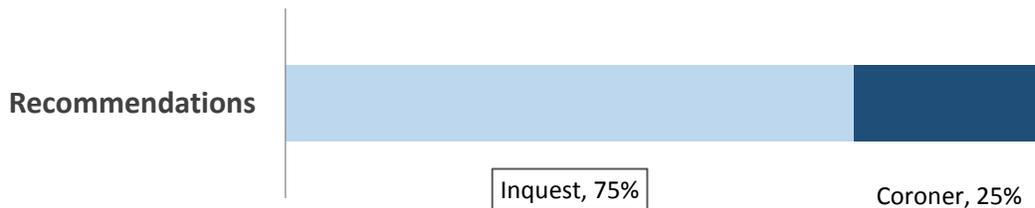


Figure 3. Percentage of recommendations distributed in 2012 by source.

<sup>3</sup> The large number of recommendations distributed in 2007 and 2008 is due in part to an increased number of inquests and/or the number of recommendations issued per inquest during these years.

<sup>4</sup> The BCCS did not distribute Information recommendations in 2009, 2010 or 2011.

### Agencies Receiving Five or More Recommendations in 2012

Agency	#
RCMP "E" Division	26
WorkSafeBC	17
Vancouver Police Department	8
Ministry of Health	7
Shell Canada	6
BC Ambulance Service	5

Table 8

### Coroner and Jury Recommendations Distributed in 2012 by Topic Area

Topic	Coroner	Jury	Total
Policing	-	39	39
Occupational	10	22	32
Health Care	7	4	11
Emergency Response	4	5	9
Mental Health & Addictions	-	7	7
Community Care/Supportive Housing	1	3	4
Child Care	2	-	2
Coroner Investigations	-	2	2
Other	4	-	4
<b>Total</b>	<b>28</b>	<b>82</b>	<b>110</b>

Table 9

## Coroners' Recommendation Cases

The following case summaries represent a selection of cases investigated by coroners for which public safety concerns were identified and recommendations were made to prevent future injuries and deaths occurring in similar circumstances. A total of 28 coroner recommendations were made with respect to 19 cases in 2012.

Recommendations related to child deaths will be reported in the Child Death Review Unit Annual Report. Recommendations made by juries can be found on the BCCS website at: <http://www2.gov.bc.ca/gov/content/life-events/death-and-bereavement/coroners-service/inquest-schedule-jury-findings-verdicts#schedule>

### Occupational

#### Case 1: Mobile Crane Safety



In August of 2010, a construction worker at a building site was killed when a loaded mobile crane failed and fell onto the site. Investigation determined that the crane had fallen due to previously incurred structural failures. Routine maintenance and proper inspections were not carried out, and thus the structural failure was not detected. The death was classified as Accidental.

One recommendation was issued to Professional Engineers and Geoscientists of BC, to develop guidelines for the inspection and certification of mobile cranes. No response was received.

#### Case 2: Safety Procedure at Gas Plants

In November of 2010, a worker at a gas plant was killed when he entered a building where there was an oxygen-deficient atmosphere. The investigation found that the worker had not received mandatory training on the hazards associated with working at a gas plant, and was not familiar with the personal gas monitor he had been provided. Further, access to the oxygen-deficient building had not been restricted. The death was classified as Accidental.

A total of six recommendations were issued to Shell Canada, to: 1) ensure access to oxygen-deficient buildings is restricted; 2) ensure workers, contractors and visitors are shown how to use and understand the importance of personal gas monitors; 3) review the work permit process to ensure compliance with job stoppage and supervisor evaluation when a safety device is released; 4) ensure that all workers on a multi-employer worksite are aware of hazards and controls in place to prevent access to oxygen-deficient buildings; 5) ensure workers, contractors, and visitors receive an orientation to the worksite and hazards typically present; and 6) ensure workers and contractors have completed the required H<sub>2</sub>S Alive course prior to being permitted to work onsite.

The worker was employed by a private Edmonton-based company offering machine vibration specialist services. Two recommendations were issued to this company: to 7) ensure that safety courses required by regulation are successfully completed by new employees, and 8) ensure that contractors/subcontractors comply with attendance at orientations with the Prime Contractor, and comply with Prime Contractor safety regulations.

THERE WERE 42  
ACCIDENTAL DEATHS IN  
THE WORKPLACE IN B.C.  
IN 2012.

Shell Canada responded that all recommendations had been implemented.

### **Case 3: Use of Restraining Devices While Operating a Forklift**

In January of 2011, a worker was killed when his forklift overturned and landed on him. The investigation determined that he had not been wearing a seatbelt, and his forklift certification ticket had lapsed. The death was classified as Accidental.

One recommendation was issued to WorkSafeBC: to amend the *Operational Health and Safety (OHS) Regulation* to ensure that a restraining device be required at all times while operating mobile equipment.

WorkSafeBC responded that they planned to amend the *Regulation* as recommended.

## Aviation

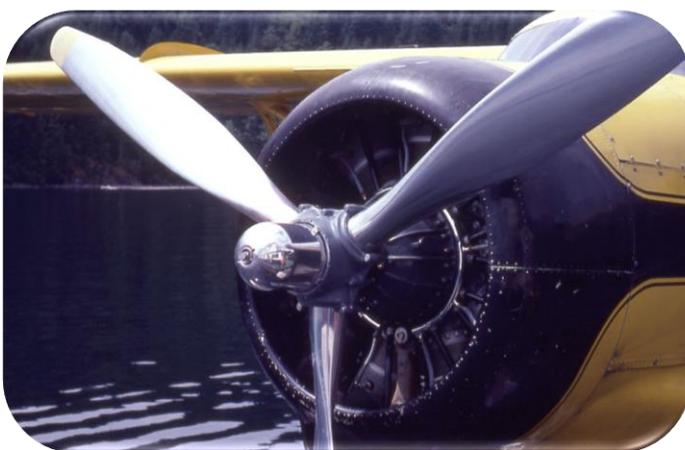
### Case 4: Aviation Safety

In May of 2010, the pilot and three passengers of a commercial float plane died when the plane crashed in the ocean. Evidence suggested that the pilot and two of the three passengers were not wearing seatbelts, and that some type of altercation may have occurred between the pilot and one of the passengers. Toxicology analysis found that all three passengers were intoxicated with alcohol at the time of the flight. The deaths were classified as Accidental.

ON AVERAGE, THERE WERE  
17 ACCIDENTAL AVIATION  
DEATHS PER YEAR IN B.C.  
BETWEEN 2008 AND  
2012

One recommendation was issued to Transport Canada: that all commercial air operators be required to establish policy, procedure and training for all personnel, to assist in identifying intoxication in passengers and taking the necessary action to mitigate risks.

Transport Canada responded that the *Canadian Aviation Regulations* require that all air operators prohibit the transport of a person whose behaviour indicates that they may present a safety risk and that Advisory Circular No. 700-010: Guide for Implementing Regulations Regarding Unruly Passengers and Incidents of Interference with a Crew Member, also provides extensive guidance to all air operators regarding passengers that may present a safety risk.



Transport Canada stated that the Advisory Circular would be reviewed to ensure that it included guidance that would allow air operators to develop materials on this subject, with the aim of helping air operators reach a desirable level of efficiency in the assessment of their passengers' behaviours and improve the safety of these flights.

## Community Care

### Case 5: Safe Use of a Bathing Chair

In October of 2011, a female resident of a community care facility fell from a bath chair while being assisted out of a bath by a staff member. She struck her head, sustaining a head injury, and died several days later. The death was classified as Accidental.

One recommendation was issued to the Ministry of Health: to consider developing a video and/or online resource about safety in bathing residents in community care facilities, suitable for classroom instruction in the Health Care Assistant program and for in-service training or periodic review by staff.

The Ministry of Health responded that they intended to work with the Ministry of Advanced Education (AVED), which has responsibility for the Health Care Assistant Program curriculum, to develop the additional training materials as recommended. These materials were to be included in the curriculum and to be made available for in-service training and periodic review by facility staff.

## Emergency Response

### Case 6: Ground Transport of Patients

In August of 2011, a patient died when the ambulance she was in was struck by a vehicle it was attempting to pass. The patient was not completely secured to the stretcher because of her previous injuries, and her ventilator was not secured to the ambulance. She was thrown from the stretcher and became detached from the ventilator at the time of the crash, sustaining further injuries. The death was classified Accidental.



One recommendation was issued to Northern Health: to ensure that ventilation support equipment used during ground transfer can be firmly secured and meets the operational

requirements of the BC Ambulance Service (BCAS). Two further recommendations were issued to the BCAS: to use only ventilator equipment designed for securing in a ground transport vehicle, and to consider installing high-pitched, low frequency sirens on their fleet vehicles.

Northern Health responded that a policy had been developed to ensure that the patient, stretcher, and any medical devices brought on board were securely fastened. The BCAS responded that they were working with all health authorities to standardize equipment used for patient transport, with the goal of ensuring that all such equipment is able to be fully secured. BCAS is currently considering the use of low-frequency sirens.

## Health Care

### Case 7: Safety of Patients on Overnight Passes

In November of 2011, a man who had been in rehabilitation following a stroke several months prior, fell in the shower during an overnight pass from the hospital. He was unattended at the time, and unable to rescue himself from the position he was in. He died of asphyxiation, and the death was classified Accidental.

One recommendation was issued to the Vancouver Island Health Authority (VIHA): that all members of the rehabilitation unit at Victoria General Hospital review the circumstances of this case with a view to revising, as necessary, the practise and protocol around preparation of patients and their care-givers for temporary absence from hospital.

VIHA responded that the review had taken place and had resulted in a revision of the communication to the caregiver and patient regarding the risks and recommendations for passes, as well as the scope of activities deemed inadvisable and those that would be encouraged and seen as therapeutic.

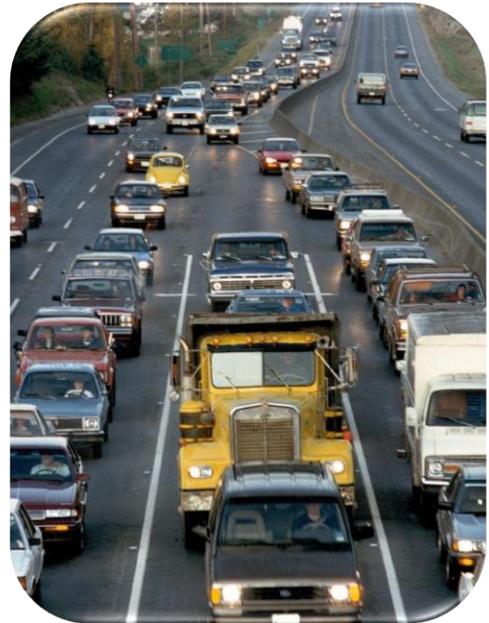


## Pedestrian Safety

### Case 8: Infrastructure Improvements to Improve Pedestrian Safety

In January of 2011, a woman walking along the shoulder of a highway at night was struck by a vehicle, and died of her injuries shortly after. The vehicle had been speeding and the area was not well lit, nor was there a sidewalk for pedestrian travel. The death was classified as Accidental.

Once recommendation was issued to the Ministry of Transportation and Infrastructure: to improve the overhead lighting along Highway #99, in the populated residential areas where there is heavy pedestrian traffic. A second recommendation was issued to the Municipality of Whistler, to consider strategies that would increase the usage of the Whistler Valley Trail by pedestrians. No responses were received.



## Death Review Panels

The purpose of a death review panel is to review the facts and circumstances of deaths in order to provide advice to the Chief Coroner with respect to matters that may have an impact on public health and safety and the prevention of deaths. Typically, a death review panel is established following a series of deaths with similar circumstances, and for which there may be an opportunity for intervention to prevent further such deaths.

Once the Chief Coroner has decided to establish a panel, a chairperson and members are appointed. A panel typically consists of experts and advocates drawn from a variety of disciplines, which could include health, education, policing, judicial services, public health, social services, injury prevention, and professional bodies.

The panel meets to review trends, patterns and themes and to discuss the circumstances and preventability of the deaths. A primary goal of the review panel process is to identify gaps, failures or shortcomings in services and systems, and other opportunities for intervention that may prevent similar deaths in the future.

Following the review, the panel may make recommendations. Like an inquest jury, members of the death review panel must not make any finding of legal responsibility or express any conclusion of law. Upon conclusion of the review, the chair will report to the Chief Coroner any findings and recommendations. Recommendations are then distributed by the Chief Coroner.

In March of 2012, the death review panel report on four fatal aviation accidents involving air taxi operations was released to the public, and can be viewed at:

<http://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/death-investigation/death-review-panel/aviation.pdf>

The letters received in response to the recommendations issued by the panel, as well as other death review panel reports, are posted on the BCCS website at:

<http://www2.gov.bc.ca/gov/content/safety/public-safety/death-investigation/death-review-panel>

## Public Safety Bulletins

The BCCS issues public safety bulletins in response to single incidents, environmental conditions, and recent trends in preventable deaths. These bulletins are released to media province-wide, and can be found on the BCCS website at:

<http://www2.gov.bc.ca/gov/content/safety/public-safety/death-investigation/public-safety-bulletins>

There were three public safety bulletins issued in 2012:

### January 5, 2012: [Coroner and Fire Commissioner Urge Mobile Home Fire Safety](#)

The BCCS and Office of the Fire Commissioner urged owners of mobile homes and operators of mobile home parks to take special care to prevent fires in the wake of a calamitous New Year's weekend for fire deaths in British Columbia.

From Dec. 29, 2011 to Jan. 2, 2012, seven British Columbians lost their lives in five separate fires. Three of those fires and five of the deaths occurred in mobile homes or travel trailers. While mobile homes provide a source of housing for many British Columbians, studies show that fires in such housing, especially older units, tend to be more devastating than those in other forms of residence.

Information on how to reduce the risk of fire, and how to prepare your family in the event of a fire, was provided. The bulletin can be found at:

[https://archive.news.gov.bc.ca/releases/news\\_releases\\_2009-2013/2012PSSG0001-000002.htm](https://archive.news.gov.bc.ca/releases/news_releases_2009-2013/2012PSSG0001-000002.htm)

### July 11, 2012: [You Are Not Expecting Your Child to Drown Today](#)

Two pool-related toddler fatalities in the early summer of 2012 were a sobering reminder that with the warm weather, the risks around pools in public places and backyards increases. The BCCS strongly urged everyone to be extra-vigilant in keeping their children safe around water. BCCS statistics show that close to 30% of pool-related fatalities involved preschool-aged children (ages 1-4 years). All preschooler pool deaths occurred in residential pools (backyard or townhouse/apartment complexes).

Pool drowning among young children is preventable. Information was provided on how families could reduce the risk of drowning for young children. The bulletin can be found at:

<http://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/death-investigation/public-safety-bulletins/2012-july-11-child-drown.pdf>

#### December 6, 2012: [BC Coroners Service Urges Pedestrian Safety](#)

The BCCS cautioned both pedestrians and motorists to take extra care in the wake of 13 pedestrian fatalities during the preceding five weeks. The total number of pedestrian deaths in 2012 was already higher than for each of the past three years, with more than three weeks in one of the highest risk months remaining.

BCCS statistics show that the elderly are the most at risk, as the death rate in pedestrian accidents for those aged 70 and over is almost triple that for any younger age group. Additionally, almost 40% of deaths occurred at intersections or crosswalks, where pedestrians were likely to believe they were making a safe crossing. Safety tips for pedestrians were provided, including a caution to remain alert when using a crosswalk or crossing with a pedestrian light. The bulletin can be found at:

[https://archive.news.gov.bc.ca/releases/news\\_releases\\_2009-2013/2012jag0310-001972.htm](https://archive.news.gov.bc.ca/releases/news_releases_2009-2013/2012jag0310-001972.htm)

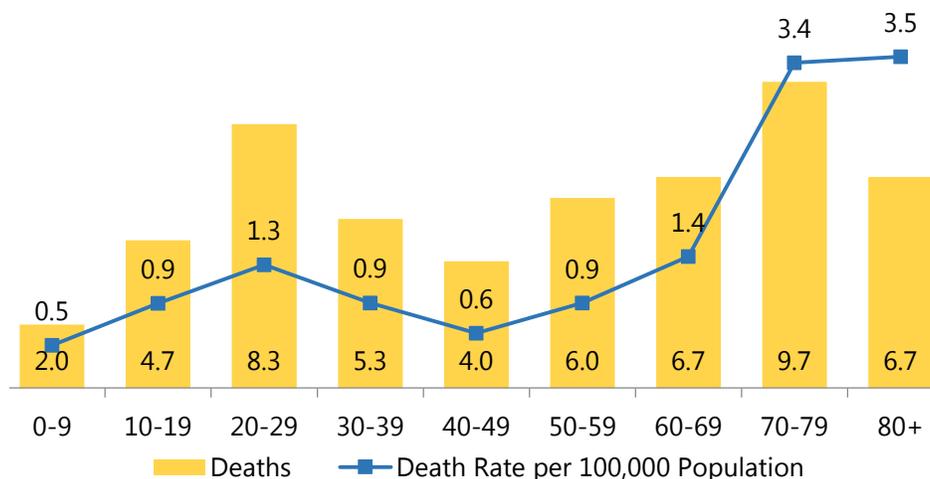


Figure 4. Traffic-related pedestrian deaths and death rate by age group, 2012.

## Research

The BCCS is active in research, both within our organization and in collaboration with outside agencies. The purpose of our research is to inform injury and death prevention, with the ultimate goal of improving public safety. We review deaths in B.C. on an ongoing basis with the aim of identifying trends and contributing factors. When such issues are identified, we try to identify effective and practical preventative measures, and/or pass the information on to those who can take action. In addition, the BCCS responds to requests for information from the public, media, academic researchers, and a variety of organizations with an interest in public health and injury prevention. We also provide statistical information and analysis to other government agencies and ministries. An example of research work completed in 2012 is summarized below: an in-depth study of residential structure fire deaths in B.C.

### Residential Structure Fires Deaths in B.C., 2007-2011

In 2012, the BCCS undertook a detailed review of the 164 residential structure fire deaths that occurred in our province between 2007 and 2011. The study had two primary objectives: to determine who was most likely to be fatally injured in a residential fire, and to understand the circumstances under which the fires occurred.

The key findings were:

- The overall average annual death rate for structural fire deaths was 7.4 per 1 million population, with an average of 32.8 deaths each year.
  - Unlike very young children in other jurisdictions, those in B.C. did not have an elevated risk of residential fire death (3.6 per million).
  - Older adults, as in other jurisdictions, did have an elevated risk of residential fire death (from 12.0 to 21.0 per million).
- The Northern region had the highest rate of death (13.3 per million), despite having the fewest deaths (average of 3.8 per year).
- Smoking materials caused 32.6% of fires and 30.5% of deaths.
- In 36.3% of deaths, a smoke alarm either was not present or did not activate.
- Alcohol and/or drug use was a contributing factor in 39.0% of all deaths.

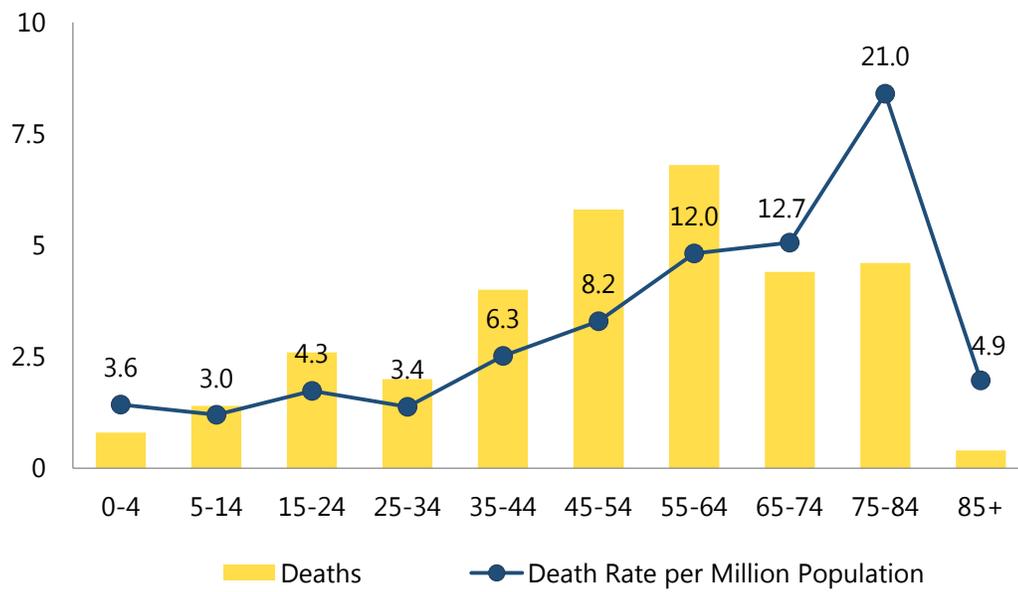


Figure 5. Average number and rate of residential fire deaths by age group, 2007-2011

The entire report can be viewed on our website at:

<http://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/death-investigation/statistical/fire.pdf>

# Appendix I: Glossary

**Autopsy:** An examination of the body of a deceased person to assist in determining the cause and manner of death and to evaluate any disease or injury that may be present.

**Cause of Death:** The immediate medical cause of death, e.g., head injury resulting from a motor vehicle accident, asphyxiation due to avalanche.

**Classification of Death:** Categorization of death as one of the following:

**Accidental:** Death due to unintentional or unexpected injury. It includes death resulting from complications reasonably attributed to the accident.

**Homicide:** Death due to injury intentionally inflicted by the action of another person. Homicide is a neutral term that does not imply fault or blame.

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

**Suicide:** Death resulting from self-inflicted injury, with intent to cause death.

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

**Coroner's Report:** The coroner's official record of the circumstances of the death, which confirms the identity of the deceased and how, when, where and by what means he or she died. By policy, it is a public document available upon request. It may include recommendations to agencies to aid in prevention of future deaths.

**Means of Death:** The event responsible for the Cause of Death, e.g., motor vehicle incident resulting in a head injury, avalanche causing asphyxiation.

**Toxicology:** The study of the adverse effects of chemicals on living organisms, particularly the symptoms, mechanisms, treatments and detection of the poisoning of people.

**Verdict at Inquest:** A summary of the jury's findings regarding how, when, where and by what means the deceased died. A synopsis of the evidence presented at the inquest, and the recommendations made by the jury, are also included in the Verdict at Inquest. It is a public document and is posted on the BCCS website.

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