2014 Annual Report

BC Coroners Service

BRITISH COLUMBIA | Coroners Service
Ministry of Public Safety and Solicitor General

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

The BC Coroners Service is pleased to present its 2014 Annual Report. Coroners in B.C. investigated the circumstances of 8,273 deaths in 2014, establishing the identity of the deceased and when, where, how and by what means each death occurred.

One of the most important responsibilities of the Coroners Service is to hold inquests into deaths where there is significant public interest or when a death resulted from a dangerous practice and make recommendations from an inquest to prevent similar deaths. In 2014, the Coroners Service held 15 inquests to review the circumstances of 17 deaths. These included deaths in the custody of police, provincial and federal correctional facilities and Canada Border Services Agency, as well as a workplace fatality. Inquests provide families and others the opportunity to hear first-hand from subpoenaed witnesses about the circumstances leading to a death. Family members themselves are invited to provide evidence to the presiding coroner and jury, and often share a picture of their loved one. This ensures that the focus remains on the individual who has died and keeps their interests in the forefront. Inquests also provide an opportunity for a jury, drawn from members of the community, to make recommendations to prevent a similar death in the future. This allows for the public's voice to be heard, and ensures accountability and transparency.

The Coroners Service Death Review Panel process is another way to ensure representation from a broad spectrum when reviewing deaths. These panels bring together subject-matter experts from across the province to examine, in aggregate, the circumstances of deaths and make recommendations to the chief coroner respecting medical, legal, social welfare and other mattes that may impact public health and safety and the prevention of deaths.

In 2014, Coroners Service Death Review Panels were held to examine both unexpected infant deaths and the fatal drownings of children and youth. The panels' reports and recommendations support evidence-based change and are a valuable way to enhance public safety through collaboration. In its investigations, inquests and Death Review Panels, the Coroners Service will continue to gather information to assist meaningful and valuable measures to support public safety.

Lisa Lapointe
Chief Coroner

Our Organization

About the BC Coroners Service

The BC Coroners Service is responsible for determining the circumstances of all unnatural and unexpected deaths, all children's deaths, all medically assisted deaths, all deaths in custody, and all deaths in designated institutions. The coroner must establish the identity of the deceased, and when, where, how, and by what means death occurred. Coroners then report their findings in writing to the Chief Coroner. The BC Coroners Service additionally reviews all children's deaths to discover and monitor trends and determine whether further evaluation is necessary or desirable in the public interest.

One of the agency's most important responsibilities is the advancement of recommendations aimed at preventing future deaths in similar circumstances. The agency maintains a database and conducts ongoing surveillance of common causes and circumstances of death in order to identify public health and safety risks and trends. When such issues are identified, the agency may conduct additional reviews and studies aimed at establishing effective and practical prevention measures.

In British Columbia, the Chief Coroner is appointed under the *Coroners Act* by the Lieutenant-Governor in Council, and the Service is an agency within the Ministry of Public Safety and Solicitor General. Through its independent investigations, inquests and death review panels, the BC Coroners Service continues to support the Ministry vision for a safer British Columbia by providing the public with information about individual deaths, producing public safety bulletins about health and safety risks, and supporting evidence-based public safety initiatives.

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 and risks.
- **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 improve public safety and reduce the risk of future injury and death.

- **Conducting inquests** into deaths in the custody of peace officers or when there is strong public interest in a death or a need to review a dangerous practice or circumstance.

- **Convening death review panels** for the aggregate review of deaths with similar circumstances in order to identify opportunities for intervention to prevent future deaths.

- **Collecting information** regarding the circumstances of death and conducting statistical analyses 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 the justice system** by providing critical information regarding identification and cause and manner of death for criminal investigations.

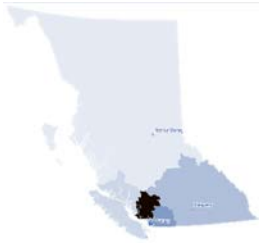
- **Maintaining a sophisticated missing persons/found human remains database** and **applying innovative geospatial, DNA, dental and/or other comparative analyses** to support the identification of found human remains for critical legal, criminal, or estate purposes, and to bring closure for families of missing persons.

- **Collaborating with other provinces and jurisdictions** to exchange information, support research, and develop recommendations.

Structure of the BCCS

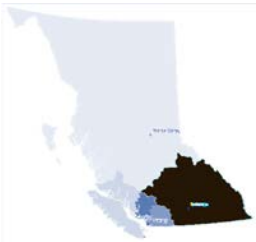
The Chief Coroner is the head of the BCCS, operating out of offices in Victoria and Burnaby. There are also five regional offices, each managed by a Regional Coroner.

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



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

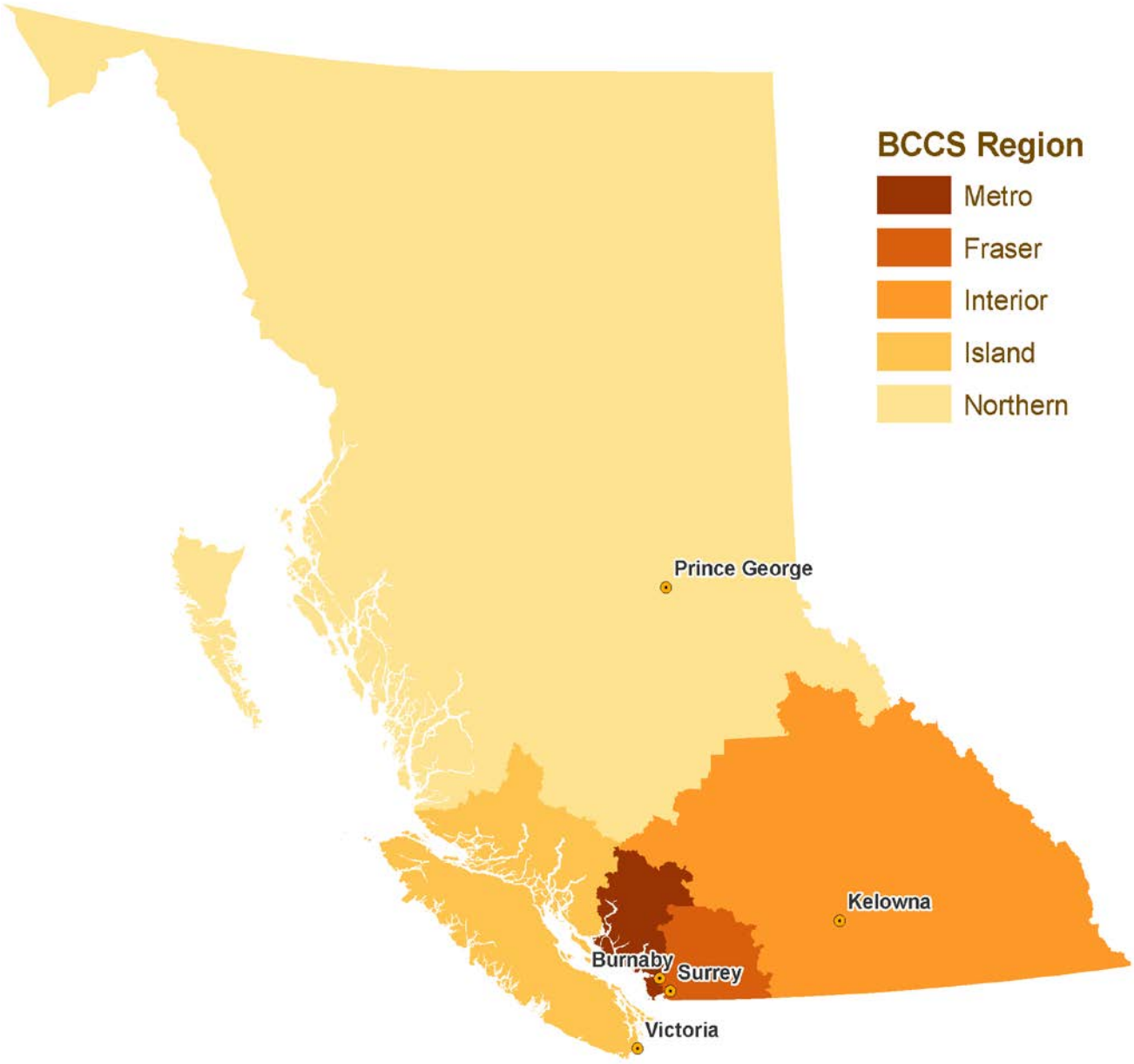


Figure 1. Regions of the BCCS.

Specialized Units

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

Medical Investigation Unit

The Medical Investigation Unit provides coroners with guidance in investigating medical issues, and consistency in the investigation of deaths with complex medical issues. The Unit also works to identify common factors contributing to death, which may require in-depth review to inform prevention strategies. The unit provides these services in part by acting as a liaison with the medical community, health authorities, the College of Physicians and Surgeons, and the College of Pharmacists. In addition, the Unit represents the BCCS on the Perinatal Mortality Review Committee and the BC Patient Safety Quality Council.

Identification and Disaster Response

The Identification and Disaster Response Unit (IDRU)[1] 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.

[1] As of 2016, the functions of the IDRU were assumed by the new Special Investigations Unit.

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 BC. 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 viewed online 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[2] is focused on the forestry sector. In addition to examining the circumstances related to a specific death, the Resource Industry Coroner also 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.

[2] As of 2016, the Resource Industry Coroner works within the new Special Investigations Unit.

Special Investigations Coroner

The Special Investigations Coroner[3] 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.

[3] As of 2016, the Special Investigations Coroner works within the new Special Investigations Unit.

Our Operations

Achievements in 2014

In 2014, the BC Coroners Service:

- **Investigated the 8,273 deaths** reported across BC
- **Held 15 Coroners' Inquests** to publicly review the circumstances of 17 deaths, including cases involving correctional facilities, workplace safety, police, and the Canadian Border Services Agency.
- **Distributed 355 recommendations** made by inquest juries and coroners, following the investigation of 44 deaths, in efforts to prevent future deaths under similar circumstances.
- **Issued three Public Safety Bulletins** on avalanche safety, illicit fentanyl, and pedestrian deaths.
- **Released the full reports and recommendations of two Child Death Review panels** that were convened in 2013 to examine the circumstances surrounding unexpected infant deaths and fatal drownings. The reports, recommendations, and responses can be viewed online at http://www2.gov.bc.ca/gov/content/safety/public-safety/death-investigation/child-death-review/reports-publications.

"Trying to determine the cause of unexpected infant deaths is usually a process of exclusion . . .

Panel members specifically identified opportunities for enhancing:

- the **investigation** of unexpected infant deaths,
- the **use of genetic testing**,
- and the importance of **public messaging around safe sleep**."

-from 'BC Coroners Service Child Death Review Panel: A Review of Unexpected Infant Deaths, 2008-2012'.

- Held an inquest (presided over by the Resource Industry Coroner) into the **death of a young sawmill worker** in the Interior region. The inquest ran for five days and heard testimony from 21 witnesses. **The jury ultimately delivered seven meaningful recommendations aimed at preventing similar deaths.** The full verdict and recommendations can be viewed at http://www2.gov.bc.ca/assets/gov/birth-adoption-death-marriage-and-divorce/deaths/coroners-service/inquest/2014/haslam-bradley-michael-thomas-2013-5008-0011-verdict.pdf.

- **Received more than 200 consultations on complex cases from the Medical Investigation Unit.** The Medical Investigation Unit also served on multiple Child Death Review Panels, liaised with health authorities (including the First Nations Health Authority) and the medical community, obtained a federally funded Public Health Officer from the Public Health Agency of Canada, and **led a public health surveillance project** focusing on methodologies for temporal and geographic trend analysis using BCCS data.

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 BC.

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 2014, 8,273 deaths were reported to the BCCS. After preliminary investigation, 3,941 were found to meet the criteria for investigation by the BCCS; that is, they were unexpected or unnatural deaths. The remaining 4,332 deaths reported did not require further investigation. While the rate of coroners' investigations per 100,000 population trended downward from 2011 to 2014, the total number of coroners' investigations remained relatively stable as a result of the province's growing population.

Deaths Reported to the BCCS, 2010-2014					
	2010	2011	2012	2013	2014
Total	**7806**	**7,945**	**8,067**	**8,222**	**8,273**
Reported but did not meet legal mandate for investigation	3746	3,780	3,974	4,230	4,332
Coroners' Investigations	4060	4,165	4,093	3,992	3,941
Natural	1698	1,622	1,664	1,535	1,438
Accidental	1590	1,769	1,718	1,685	1,625
Suicide	533	530	509	523	641
Undetermined[4]	150	151	123	163	130
Homicide	89	93	79	86	107

Table 1

[4] Some deaths classified as Undetermined may become otherwise classified as investigations proceed.

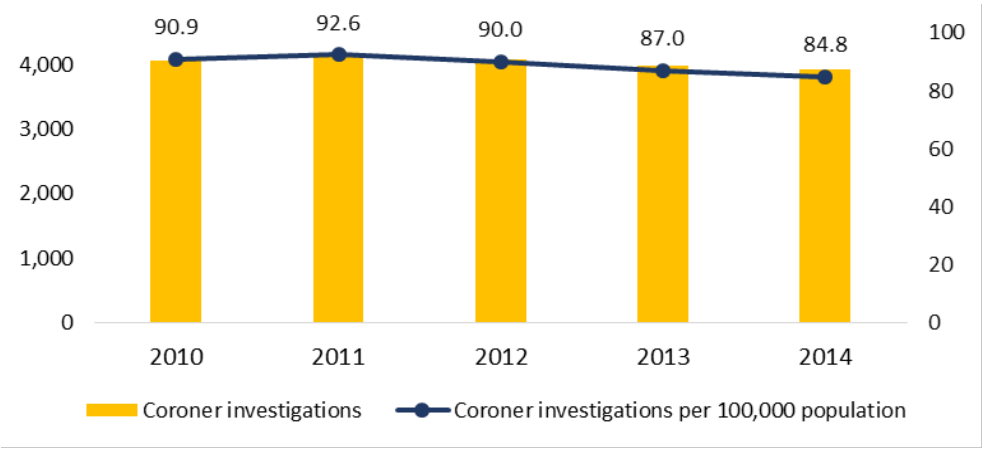


Figure 2. Coroner investigations per 100,000 population, 2010-2014.

Coroners' Investigations and Inquests

Days to case completion for coroners' investigations 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 (before being sent to the Chief Coroner's Office to be filed). 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. In 2014, the median days to case completion for coroners' investigations was 166.

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.

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 in 2014 was 634

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 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. child maltreatment, police-involved deaths). Such cases tend to have longer investigations, and often require a large volume of evidence to be prepared and analyzed in advance of inquest proceedings.

Performance Measure

Timeliness of Coroners' Investigations and Inquests						
Performance Measure	*Classification of Death*					All Deaths
	Natural	*Accidental*	*Suicide*	*Undetermined*	*Homicide*	
Median days to case completion for coroners' investigations	115	209	172	254	280	166
Median days to case completion for inquests	752	705	598	-	616	634

Table 2

Budget

Operating expenditures for the BCCS in the 2014/15 fiscal year (April 1, 2014 to March 31, 2015) were $12.2 million. The budget for the same period was $12.3 million. The $132 thousand dollar budget surplus (1.1% of budget) was used to cover pressures elsewhere in the Ministry.

Salaries and benefits of $6.4 million made up the largest component of expenditures, comprising 53.2% of the total. A 3% general wage increase was granted to management level staff as of March 24, 2014. The number of Full-Time Equivalents (FTE) was 80.6 (79.4 in the previous fiscal year). In 2014, the BCCS employed 89 part-time (community) coroners and 35 full-time coroners, as well as 22 other specialized and administrative staff members.

The total amount paid to external suppliers for services directly supporting coroner investigations, including autopsy, toxicology analysis and body handling (transportation, storage and body recovery) was $4.3 million (35.4% of the total). This is a reduction of $0.7 million from the previous year, largely the result of a lower number of autopsies performed, and to a lesser extent a reduced number of body transports.

Other direct costs of $0.7 million (5.4%) include expenses related to coroners inquests, vehicles/travel, and equipment & supplies. Other support costs include items such as systems maintenance, communications, external contracts, training, amortization and office expenses. These made up the other $0.7 million (5.9%).

There was no capital spending during the year.

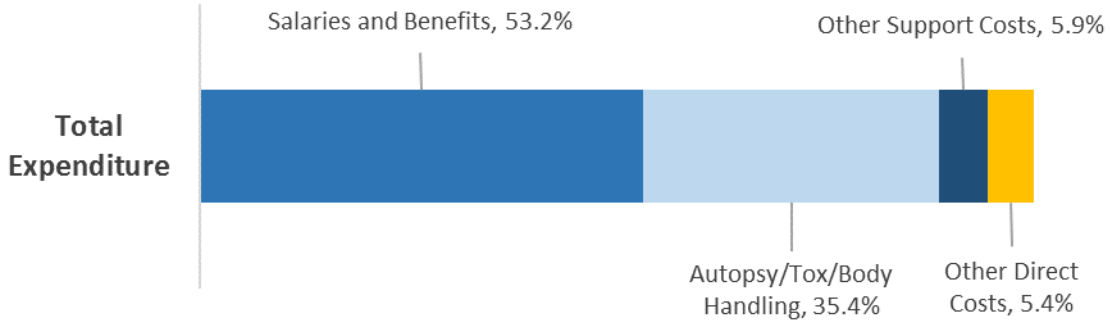


Figure 3. Total expenditure for the 2014/2015 fiscal year.

Inquests

The Inquest Process

Inquests are formal 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 similar deaths. The *Verdicts* for all inquests from 2008 onward 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 individuals, 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 those to whom recommendations are directed provide a written response, explaining either 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

2014 Coroners' Inquests

Fifteen inquests were held into 17 deaths in 2014 (one inquest addressed multiple deaths). 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 15 inquests is available online at http://www2.gov.bc.ca/gov/content/life-events/death-and-bereavement/coroners-service/inquest-schedule-jury-findings-verdicts/2014

Inquests Held in 2014	
Type of Death	Total
Corrections	8
Federal	*5*
Provincial	*3*
Police-Related	7
Police Custody	*3*
Police Shooting	*3*
Other Police-Related	*1*
Workplace	1
In Custody of the Canadian Border Services Agency	1
Total Number of Deaths	17
Total Number of Inquests	15

Table 3

Number of Inquests and Deaths by Inquest Year, 2005-2014[5]										
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Inquests	15	23	26	17	11	11	15	20	13	15
Deaths	15	24	29	17	17	11	20	22	15	17

Table 4

[5] 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, 2005-2014										
Classification	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Accidental	7	11	19	12	8	8	10	12	9	6
Homicide	3	7	6	5	4	2	7	7	4	3
Suicide	2	6	-	-	4	-	2	1	1	7
Natural	3	-	1	-	-	1	-	1	-	1
Undetermined	-	-	3	-	1	-	1	1	1	-
Total	15	24	29	17	17	11	20	22	15	17

Table 5

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 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 or 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 inquests 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 44 deaths in 2014. Twenty-two deaths were investigated by a coroner, and 22 were reviewed at inquest. The majority were classified as 'Accidental'. The 44 deaths occurred in 42 separate incidents.

In total, there were 355 distributions of recommendations. One recommendation may be distributed to multiple recipients. Each distribution is counted in the following statistics. If the same recommendation is issued to three separate agencies, three distributions are counted.

Of the 355 recommendations distributed in 2014, 48 were made by coroners and 307 were made by inquest juries.

Approximately half of the recommendations (50.4%) were distributed to one of the seven agencies that received 10 or more recommendations in 2014 (see Table 8). The BCCS had a 77.7% response rate to Action recommendations distributed in 2014.

Number of Recommendations Distributed by Year of Distribution, 2005-2014					
Year	Deaths	Incidents	Rec. Type	#	Total
2005	73	64	Action	228	274
			Information	46	
2006	68	67	Action	149	187
			Information	38	
2007[6]	129	120	Action	615	684
			Information	69	
2008	89	86	Action	451	506
			Information	55	
2009	50	43	Action[7]	321	321
2010	44	32	Action	234	234
2011	49	41	Action	203	203
2012	33	28	Action	105	110
			Information	5	
2013	34	30	Action	183	190
			Information	7	
2014	44	42	Action	327	355
			Information	28	

Table 6

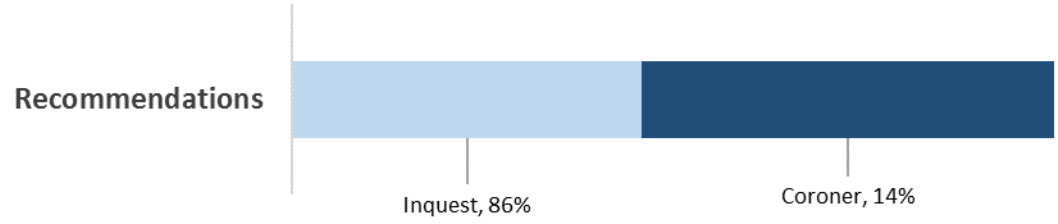


Figure 4. Percentage of recommendations distributed in 2014 by source.

[6] 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.

[7] The BCCS did not distribute Recommendations for Information in 2009, 2010 or 2011.

Agencies Receiving Ten or More Recommendations in 2014	
Agency	#
Ministry of Justice	52
RCMP	38
Correctional Services Canada	34
Vancouver Police Department	15
College of Physicians and Surgeons of BC	15
Ministry of Health	15
Community Living BC	10
Table 7	

Coroner and Jury Recommendations Distributed in 2014 by Topic Area			
Topic	Coroner	Jury	Total
Policing	-	124	124
Corrections	-	79	79
Health Care	21	36	57
Mental Health & Addictions	15	17	32
Residential Care & Assisted Living	1	19	20
Emergency Response	-	13	13
Search & Rescue	-	12	12
Worker Safety	2	7	9
Aviation	5	-	5
Water Safety	2	-	2
Traffic Control	1	-	1
Education	1	-	1
Total	48	307	355
Table 8			

Coroners' Recommendation Cases

The following case summaries represent a selection of cases investigated by coroners in which public safety concerns were identified and recommendations were made to prevent future injuries and deaths occurring in similar circumstances. A total of 48 coroner recommendations were made with respect to 22 deaths in 2014.

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

Motor Vehicles

Case 1: Medical Fitness to Drive

In March 2013, a driver was killed when his car crossed the centre line of the highway and collided with a charter bus travelling in the opposite direction. The death was classified as 'Accidental'. Investigation revealed that the driver had experienced seizures in the past and was not fully adherent to his recommended treatment regime. Although he had seen numerous physicians, the Superintendent of Motor Vehicles had no record of reports from medical professionals concerning his fitness to drive.

The coroner made one recommendation to the College of Physicians and Surgeons of BC: 'To remind physicians that they are required to report a patient who has a medical condition that makes it dangerous for them to drive and who continues to drive to the Office of the Superintendent of Motor Vehicles. Where a patient refuses to attend for follow-up testing and treatment, consideration should be given to whether this may be as a result of their intention to continue driving'. No response was received.

IN 2014, 120 DRIVERS OF NON-COMMERCIAL VEHICLES DIED IN MOTOR VEHICLE ACCIDENTS.

Community Care

Case 2: Choking

In February 2012, a resident of a group home died after choking on food that he had accessed while unsupervised in the facility's kitchen. The death was classified as 'Accidental'. The coroner's investigation found that the individual had a history of choking incidents and that his care guidelines stated that he required assistance with eating and was not to be left alone with food. In addition, it was apparent that there had been a delay in the staff's provision of first aid.

At the time of the coroner's investigation, the Ministry of Health was in the process of implementing various measures to promote safe eating in community care facilities as the result of previous recommendations from the BC Coroners Service. The coroner made one further recommendation to the Ministry of Health: 'Require all facilities under Community Care Facilities Licensing's jurisdiction to provide regular practice and review of first aid and CPR training to ensure employees respond quickly and appropriately to recognize and manage common emergencies, including choking. Staff should be required to complete a minimum number of reviews/practical exercises per year, and this should be documented in their employee files'.

The Ministry of Health responded that they had been unable to identify any best practices for the frequency of practicing first aid skills, but that they had developed a Safety Bulletin 'to promote and encourage review and practice of skills throughout the period during which first aid certification is in place'.

Occupational

Case 3: Use of Self-Retracting Lifelines

In February 2012, a construction worker fell from a structure at his job site and sustained fatal injuries. The death was classified as 'Accidental'. The worker was wearing a fall protection system that included a full body harness and a self-retracting lifeline. However, a WorkSafeBC investigation determined that the system had not been set up in accordance

with the manufacturer's guidelines and that workers had been inadequately trained in its use.

The coroner made one recommendation to WorkSafeBC: to 'issue a 'hazard alert' to all construction industry contacts advising them to scrutinize all manufacturer guidelines regarding the use of self-retracting lifelines, and to stop work and document that they are in compliance. Ensure that the 'hazard alert' advises that a fatal outcome has resulted when the self-retracting lifelines in operated contrary to the manufacturer's stated guidelines may highlight the importance of compliance'. WorkSafeBC replied that a hazard alert had been released prior to the completion of the Coroner's Report.

Aviation

Case 4: Post-Impact Fires

In October 2011, a small twin-engine airplane returning to Vancouver international Airport crashed onto a major roadway in Richmond, BC. Both the pilot and the first officer died as a result of the incident. Their deaths were classified as 'Accidental'.

Investigation suggested that the individuals may have survived if not for the fire that broke out on the plane after impact. The difficulty of extinguishing the fire was increased by the arcing of the plane's electrical system, which continued until the system's battery was disconnected. The coroner identified several previous recommendations from the BC Coroners Service and the Transportation Safety Board of Canada on the prevention of post-impact fires.

The coroner issued two recommendations as a result of the investigation. The first recommendation was that the Coroner's Reports on the incident 'be provided to the Director General of Civil Aviation, Transport Canada, for information purposes and in support of previous recommendations made by the British Columbia Coroners Service with respect to reduction of post-impact fires. As well, Transport Canada is encouraged to continue being attentive to advances in technology that may be beneficial in reducing post-impact fires in airplane crashes in both new aircraft development and the current fleet'. The second recommendation was that the Coroner's Reports be forwarded to the U.S. Federal Aviation Administration for information purposes. Responses to the recommendations were not required.

Prescribing Practices

Case 5: Accidental Overdoses

In May 2013, a man died as a result of methadone intoxication. The death was classified as 'Accidental'. The individual had a history of chronic pain and addiction and had recently begun methadone maintenance therapy. His daily dose was still being titrated when he chose to travel from the city in which he had enrolled in the program to his home in another region of BC. No formal transfer of care occurred. On the day of his move, the individual ingested two doses of methadone: one in the morning, at the hospital in which treatment had been initiated; and one in the evening in his city of residence. Symptoms consistent with opioid intoxication were observed prior to his death.

The coroner recommended that the coroner's report be forwarded to the appropriate health authority and hospital review board for informational purposes. In addition, it was recommended that (1) 'the College of Physicians and Surgeons of British Columbia review the prescribing practices of the physicians involved with particular emphasis on the initiation of methadone'; and (2) 'the College of Pharmacists of British Columbia review the report and that consideration be given to providing community pharmacists with access to hospital pharmacy records for the coordination of care in the community upon discharge'.

The College of Physicians and Surgeons responded to state that their investigation of the case had concluded. The College of Pharmacists of BC replied that the technological infrastructure for the recommended data sharing did not yet exist, and suggested contacting the Ministry of Health to discuss the potential of electronic health records in addressing the recommendation.

IN 2014, 48 PEOPLE DIED AFTER ACCIDENTALLY OVERDOSING ON THEIR OWN PRESCRIPTION MEDICATION.

Mental Health

Case 6: The *Mental Health Act*

In August 2013, a woman died of self-inflicted injuries. The death was classified as 'Suicide'. Investigation revealed that she had a lengthy history of suicide attempts and had been admitted to hospital under the *Mental Health Act* on multiple occasions. Her most recent admission had been to St. Paul's Hospital several days before her death. She had been released on the morning of her death after denying suicidal ideation.

The hospital identified several quality of care issues in an internal review of the case and made a number of recommendations. The coroner sent one recommendation to Providence Health Care and the Vancouver Coastal Health Authority: 'In support of the SPH [St. Paul's Hospital] Mental Health Program Morbidity and Mortality Rounds recommendation, consider designating an expert in the Mental Health Act at each hospital in Vancouver Coastal Health and Providence Health Care. This expert should be available for consultation by clinicians as needed'. The recipients replied to state that the recommendation had been implemented.

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 impact public health and safety and the prevention of deaths. Typically, a Death Review Panel is established following a series of deaths with similar circumstances when there is an opportunity for intervention to prevent further such deaths.

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, 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. 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 any findings or recommendations to the Chief Coroner for distribution.

In 2014, the BC Coroners Service held two child death review panels.

The report of the first panel, 'A Review of Unexpected Infant Deaths (2008-2012)', was released in April. When an infant dies unexpectedly, many questions are raised regarding what, if anything, could have been done to prevent it. To learn more about these deaths and what can be done to prevent them, a panel was appointed. The panel reviewed, in aggregate, 117 cases from 2008 to 2012 where infants died unexpectedly. Research literature on unexpected infant deaths was also reviewed.

Identifying actions to prevent unexpected infant deaths is challenging because there is no single cause of all unexpected infant deaths. In spite of these challenges, the panel was able to identify several key areas for enhancement. Three recommendations on investigative practices, genetic testing, and safe sleep messaging were forwarded to the Chief Coroner for consideration. The full report, as well as letters of response to the recommendations issued by the panel, can be found on the BCCS website at http://www2.gov.bc.ca/gov/content/safety/public-safety/death-investigation/child-death-review/reports-publications.

The second panel's report, 'A Review of Drowning (2007-2013)' was published in June. Although child and youth drownings are relatively rare, the loss is profound and, in many cases, compounded by the fact that it could have been prevented. To better understand drowning and opportunities for prevention, a panel was appointed. The panel reviewed 35 drowning deaths of children and youth between 2007 and 2013. On the basis of this review, young children and males aged 15-18 were identified as being particularly vulnerable to drowning. The panel made three recommendations on messaging to male youth, messaging to parents, and bylaws requiring four-sided fencing around backyard pools.

The full report and its recommendations, as well as letters of response to the recommendations, can be viewed on the BCCS website at http://www2.gov.bc.ca/gov/content/safety/public-safety/death-investigation/child-death-review/reports-publications.

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 2014:

January 24, 2014: Avalanche Death Prompts Safety Reminder

After the death of a snowmobiler in an avalanche near Valemount, BC, the BC Coroners Service and Avalanche Canada (formerly the Canadian Avalanche Centre) issued a joint safety bulletin to remind winter backcountry users of the importance of carrying an avalanche transceiver and knowing how to use it. According to information provided by Avalanche Canada, an avalanche victim's chance of survival is 80% if found and dug out within 10 minutes. The odds of a positive outcome fall steeply thereafter.

Backcountry users were also urged to take an Avalanche Skills Training course in order to learn essential safety skills when travelling in avalanche terrain.

The bulletin can be found at http://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/death-investigation/public-safety-bulletins/2014-jan-24-avalanche-safety.pdf

June 4, 2014: BC Coroners Service Warns of Deaths Related to Illicit Fentanyl Use

Preliminary drug overdose data for 2014 prompted the BC Coroners Service to warn illicit drug users to make their use as safe as possible. At the time of the bulletin, fentanyl had been detected in 13 illicit drug overdose deaths in the Fraser region. The BCCS advised that fentanyl was significantly more toxic than morphine and may have been sold to users as heroin or oxycodone. The bulletin also described the signs of a fentanyl overdose and provided information on obtaining medical assistance in the event of a suspected overdose.

The bulletin can be found at http://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/death-investigation/public-safety-bulletins/2014-june-04-illicit-fentanyl-use.pdf

November 19, 2014: Pedestrian Safety Highlighted

The BC Coroners Service released the results of a review of pedestrian deaths occurring from 2008 through 2012. Data showed the number of pedestrians killed annually had remained roughly constant over the five years studied despite a substantial decline in the number of driver and passenger deaths.

A detailed analysis of 142 deaths revealed that almost half of the incidents occurred at intersections. In the majority of cases, the pedestrian had the right of way or was waiting to cross. Pedestrians with the right of way were most often struck by vehicles making left turns. A variety of contributing factors were identified, including environmental conditions and driver and pedestrian behaviours.

The bulletin can be found at http://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/death-investigation/public-safety-bulletins/2014-nov-19-pedestrian-safety-highlighted.pdf

Research

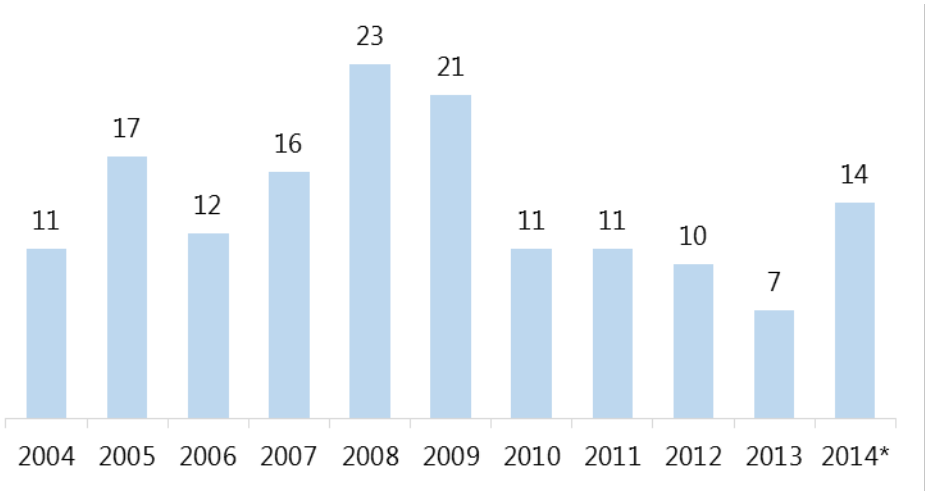
The BCCS is active in research, both within our organization and in collaboration with outside agencies. The purpose of our research is to inform injury and death prevention, with the ultimate goal of improving public safety. We review deaths in BC on an ongoing basis, aimed at identifying trends and contributing factors. When such issues are identified, we identify effective and practical preventative measures, 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.

Topics addressed in reports published in 2014 included intimate partner violence and all-terrain vehicles (ATVs). A review of deaths attributed to intimate partner violence identified 153 deaths from January 1, 2004, to December 15, 2014. There were 14 deaths per year on average, with a high of 23 (2008) and a low of seven (2013). Roughly 75% of fatal injured victims of intimate partner violence were female. The full report can be found at http://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/death-investigation/statistical/intimate-partner-violence.pdf.

Figure 5. Deaths attributed to intimate partner violence: January 1, 2004-December 15, 2014.

A second report summarized data on deaths related to ATV use between January 1, 2006, and July 30, 2014. In total, there were 111 deaths during this time period. The majority of incidents occurred in the Northern (38%) and Interior (36%) regions. Roughly 80% of decedents were male. Substance impairment (alcohol and/or drug use) was identified as a contributing factor in 55% of the deaths.[8]

The BC Coroners Service posts statistical reports to its website on an ongoing basis. Other topics of interest include suicide, illicit drug overdoses, motor vehicle accidents, drowning, and deaths among inmates of correctional facilities. For more details, see http://www2.gov.bc.ca/gov/content/safety/public-safety/death-investigation/statistical-reports.



[8] This report is no longer available on the BC Coroners Service website. For a more recent version of the report, see http://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/death-investigation/statistical/atv.pdf.

Health and Safety Partners

Information gathered by coroners in individual death investigations is used by the Coroners Service's research team to provide valuable aggregate mortality data for the public and key stakeholders. These data help in identifying trends over time and risks to public health and safety, and are used by researchers and public and private agencies to support practices, policies and/or the need for regulatory or legislative change.

Through Death Review Panels, Memorandums of Understanding, Information-Sharing Agreements, and involvement in a wide variety of groups and committees focused on enhancing public health and safety, the Coroners Service provides key information to support meaningful death prevention efforts.

The BC Coroners Service's partners in health and safety include, but are not limited to, the following organizations:

- Avalanche Canada
- First Nations Health Authority
- Ministry of Children and Family Development
- Ministry of Health
- College of Physicians and Surgeons of British Columbia
- College of Pharmacists of British Columbia
- RoadSafetyBC
- WorkSafeBC
- British Columbia Police Association
- BC Centre for Disease Control (BC Drug Overdose and Alert Partnership (DOAP))
- BC Injury Research and Prevention Unit
- The Red Cross
- Traffic Injury Research Foundation

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.

Appendix II: List of Tables

Appendix III: List of Figures