



Message From The Chairperson

In the April 1999 issue I addressed some of the strategic initiatives that the Vital Statistics Council for Canada is undertaking over the next five years. One of these initiatives is the positioning of the national vital statistics system as a key component of an integrated health information system.

As federal and provincial/territorial senior management and administrators are becoming increasingly aware of the importance of having both accurate and timely information for operational, strategic planning, and decision-making purposes, there is increasing pressure to make integrated information available in the healthcare sector.

Currently the ability for vital statistics programs to be a key component of an integrated health information system is limited since each province/territory maintains its own business processes and systems for the registration, collection, verification, storing and retrieval of vital event information.

While there are many commonalities between provincial/territorial systems there are also many differences including legislation and policy, and availability and use of technology.

The Council recognizes that there is an opportunity to strengthen and integrate health care services in the provincial/territorial and national setting while at the same time creating a strategic information resource on a national basis. To this end, at the annual meeting held in Charlottetown this past June, the Council approved a report for a proposed project that would create an electronic National Vital Event Data Capture and Routing System of vital event information among provinces/territories and the national repository. In brief, the system would create a community of vital event information routers connected to the existing vital event systems in each province/territory and the national repository. These routers would be used to facilitate transmission of vital event data within the province/territory, between jurisdictions and to the national repository. Each province/territory would tailor its own implementation in order to take advantage of provincial or territorial system components already in place or under development.

By taking a national approach to the routing of vital event information, the Council recognizes that a number of business benefits might be obtained. First, there would be an improvement in the usefulness of the vital event information to stakeholders. By streamlining registration processes, relying more on electronic transmission of data and

distributing validation of data to the point of capture, this infrastructure would enable all provinces/territories to improve the timeliness and quality of the vital event information that they collect. In turn, data could be routed more rapidly to stakeholders for health surveillance purposes and for whom timeliness of information is critically important.

Second, the electronic capture of vital event data at its source and the improvement of data accuracy at the point of it first being collected would result in some cost savings which could include data entry, data correction and mailing costs. Third, it would support Internet technology and networks that are rapidly being looked at and used by many administrative agencies to improve data collection processes and service delivery. Lastly, it would assist in reducing fraud since provinces/territories could cross-reference and verify vital event data in a more timely and accurate manner.

The opportunity to create a National Vital Event Data Capture and Routing System also supports the views and actions being taken by other federal and provincial/territorial agencies who subscribe to a national vision and action plan for strengthening Canada's health information system. In the *Health Infoway*¹ report, the Minister's Advisory Council on Health Infostructure recommended a national strategic approach to the development of an infrastructure which should support, among other things, the strengthening and integration of health care services, and the creation of strategic information resources.

The realization of such a system for vital statistics will involve the participation and resources of a number of federal and provincial/territorial agencies who, by doing so, will contribute to strengthening Canada's health information system.♦

¹ *Canada Health Infoway, Paths to Better Health*. Advisory Council on Health Infostructure. Feb 1999.

*Shelley Ann Gibson, Chairperson,
Vital Statistics Council for Canada*

In this issue:

Message from the Chairperson	1
In Memory Gord Meiklejohn	2
The Crash of Swissair Flight 111	2
A Look Back: History of the National Vital Statistics System	3
A Review of the Value of Vital Statistics	4
In a Typical Month in Yukon in 1997	6
Council Member Listing	6

In Memory

Gord Meiklejohn, 1950 - 1999

This issue of Vital News is dedicated to the memory of Gord Meiklejohn who passed away September 2, 1999.

As Editor of Vital News, Gord will be remembered for his contributions in helping to keep this newsletter a first-rate publication.

Gord had a great sense of humour and was well respected by all those who worked with him.

Gord will be sadly missed. On behalf of the Vital Statistics Council for Canada we would like to express our deepest sympathies to his family.

The Crash Of Swissair Flight 111

*Elizabeth Crowley Meagher, Deputy Registrar General
Nova Scotia Vital Statistics*

On the night of September 2, 1998, Swissair Flight 111 crashed off the coast of Nova Scotia, killing all 215 passengers and 14 crewmembers on board. The plane, en route to Geneva, Switzerland from New York, was attempting to make an emergency landing at Halifax International Airport when it disappeared from radar and plummeted violently into the ocean off Peggy's Cove, a small coastal community that is one of Nova Scotia's most popular tourist havens.

The Swissair disaster, as it came to be known, touched the lives of many Nova Scotians, from those who went out immediately in their boats to help, to the military personnel who had the grueling task of recovering wreckage, debris and remains, to those involved in identifying the victims. Along with many others in the province, the Nova Scotia Vital Statistics office and its staff had an important role to play following the crash.

Rescue attempts began immediately, but it soon became apparent that there could be no survivors. The high impact crash shattered the aircraft, making retrieval and identification of the victims a difficult undertaking.

Dr. John Butt, Nova Scotia's Chief Medical Examiner, working with the Emergency Measures Organization, faced the onerous task of assembling a team to handle the identification process. A hanger at CFB Shearwater was converted to a massive makeshift morgue where Dr. Butt would supervise a team of dentists, doctors, nurses, pathologists, radiologists, military personnel and RCMP. This team had the daunting task of collecting, categorizing, and identifying remains of the passengers and crew. Before the process was complete, over 400 individuals would work out of Hanger B.

Within a day of the crash, Vital Statistics began to receive calls from officials representing Swissair and various consulates requesting information on the matter of death registration in the absence of identifiable remains. In some cases there was an urgent need for immediate proof of death; however, the *Vital Statistics Act* of Nova Scotia does not provide for the registration of a death without a body or remains.

Lawyers representing Swissair, acting on information supplied by Vital Statistics staff and its own legal counsel, applied to the courts for Presumption of Death Orders for victims of the crash. These orders satisfied the immediate need in some countries but were unacceptable in others. With the passengers and crew originating from many different countries, with differing legal systems, the importance of identifying remains of all the victims to allow the deaths to be officially registered with Vital Statistics soon became apparent. Dr. Butt and his team would be the key in this matter.

Dr. Butt, ranked as one of North America's top 20 forensic pathology administrators, employed the assistance of his colleague, Ontario's Chief Coroner, Dr. Jim Young, to assist with the many administrative issues in the two weeks following the crash. With his team assembled, Dr. Butt developed a process and protocol for identification of remains, notification to next-of-kin and filing of the death records that would meet the legal requirements of the courts in any country. The long process of identifying the victims then began.

Unfortunately, visual identification was possible in only one instance. Fingerprints, X-rays, dental records and DNA would hold the key to the identities of the remaining 228 victims. To help in this process, family members were contacted and asked to provide dental and medical records. Blood samples for DNA matching were collected from families by local authorities and RCMP officers stationed at embassies and consulates throughout Europe. RCMP DNA analysis labs in Halifax, Vancouver, Regina and Ottawa worked on matching samples taken from families to those collected from remains recovered at the crash site. The lab at the Ontario Centre for Forensic Science analyzed DNA from personal items where no family DNA was available.

As soon as bodies were identified through dental, DNA, X-ray or fingerprint information, the findings were presented to the Chief Medical Examiner, who validated the identification and completed and signed the medical certificates of death.

The next step involved notification to next-of-kin. This task was handled for the Medical Examiner by police, usually the RCMP. In some countries, the notification process was more complicated than

others, involving local police authorities who worked with the RCMP liaison. Families then received a package requesting instructions for interment of the remains, along with a personal letter from Dr. Butt and a Medical Examiners Report. Family members had three options: keep the remains in Nova Scotia until the recovery and identification process was completed and then be contacted again to determine wishes for disposition; arrange interment in Nova Scotia; or have the remains returned to them. They were also asked to give direction in the event that additional remains were recovered at a later time.

In addition, Swissair mailed packages to all next-of-kin requesting personal information on the victims for completion of the death registration. Kenyon International Emergency Services Inc, an organization that provides services in cases of mass fatalities, was engaged to facilitate the repatriation of the bodies based on the families' wishes. Local funeral directors were contracted to prepare the remains for interment with Kenyon Emergency Services handling the actual shipments.

Meanwhile, Vital Statistics staff set up a method for handling the immediate registration of the deaths and issuance of the burial permits. Ten certified copies of each death registration were provided to Kenyon for shipment of the remains and used by the next-of-kin in handling estate matters. Burial permits were issued, with certified copies retained in case additional remains were identified and had to be repatriated at a later date. As well, various consulates had supplied lists of their citizens who were passengers on Flight 111. In turn, Vital Statistics agreed to notify these consulates when a death record was filed and provide copies of the death registration needed to process the necessary paperwork in their home country.

Finally, on December 11, 1998, the last definitive identification was completed. The final death certification was completed by the Medical Examiner on December 15, more than three months after the crash.

But it was still not possible to register all the deaths. Some family members could not arrive at decisions regarding final interment, perhaps because an immediate decision was just too painful, or because of on-going discussions among family members. As a result the final death registration was not filed until almost one year after the tragic event.

In future years, statisticians examining mortality data will notice a dramatic increase in the number of accidental deaths having occurred in Nova Scotia in the year 1998. But for staff of Vital Statistics who handled the death registrations process, and for the hundreds of volunteers, military personnel, RCMP and medical professionals who contributed to the retrieval and identification operation, the heart-

wrenching pain of family members as they visited the crash site will be forever etched in their memories, making the events of September 2, 1998 and the months that followed much more than just a statistical anomaly. ♦

A Look Back: History Of The National Vital Statistics System

*Alice Garner, Register General
New Brunswick Vital Statistics Branch*

Eighty years ago this year, in 1919, a Privy Council Order was signed at Government House in Ottawa to establish a National System of Vital Statistics. Although vital records had been collected by the provinces for varying numbers of years prior to this, few if any, efforts to integrate these individual provincial efforts into a national system had occurred.

In June of 1918, and again in December of 1918, two conferences were held in Ottawa between officers of the Dominion Bureau of Statistics (DBS) and the Vital Statistics branches of the provincial governments for the purpose of devising means to collect, compile and publish statistics of births, deaths and marriages on a national basis.

It was agreed that the Model Vital Statistics Act ratified at those conferences should form the basis of vital statistics legislation of the provinces, that the provinces should undertake to obtain the returns of the births, deaths and marriages on the forms prescribed, as adopted at the December conference, that the DBS supply the forms free of charge, that the provinces should forward to the DBS the original returns of births, deaths and marriages (or certified transcripts) at such times as might be agreed upon, and that the DBS undertake the mechanical compilation and tabulation of same.

At the same time, in order to provide a mutually satisfactory basis of co-operation between the Minister (of Trade and Commerce) and the Registrars General of the several provinces, His Excellency the Governor General in Council approved a set of regulations to guide these activities.

These provisions were set out in Privy Council Order 693 dated April 22, 1919, and signed by A.D.P. Heeney, Clerk of the Privy Council.

This was the first document setting forth an agreement on a system of collecting, compiling and publishing birth, death and marriage statistics between the DBS and the Vital Statistics branches of the Provincial Governments.

Again, on September 28, 1944, officers of the DBS, the Dominion Treasury, the Dominion Council of Health, and representatives of the provincial Vital

Statistics offices met for the purpose of “co-ordinating and improving the efficiency of the national system of vital statistics in relation to prospective social security measures”, among other things. The new provisions agreed upon are set out in Privy Council Order 4851, signed on July 31, 1945, at Government House in Ottawa.

At that meeting, it was agreed to establish the Vital Statistics Council for Canada to facilitate co-operation between Dominion and Provincial Governments respecting the use of vital records and statistics and to “ensure the creation and maintenance of a system that is adequate to meet increasing demands both for Dominion and Provincial purposes”. A Constitution for the Vital Statistics Council for Canada was developed and approved at the meeting, and is reproduced at the end of this item.

In order to modernize the National System of Vital Records and Statistics, it was agreed that, in place of the hardcopy transcripts the provinces were required to supply each month to the DBS, these transcripts would now be submitted in microfilm form. A new set of regulations to assist the provinces in these efforts was agreed upon, including the purchase for each province by the DBS of a microfilm camera and film reader, payment to each province for each microfilm image, and arrangements put in place to capture microfilm copies of all vital records dating back to January 1, 1925.

Other provisions in the agreement restricted the use of the national system for verification and statistical purposes, and required the approval of each province for any further use. These provisions are still in effect in 1999.

This long-standing partnership between the federal and provincial governments was in place long before it became fashionable to refer to partners and stakeholders, which have become by-words of the 90s. Although methods of data collection have evolved significantly since then, most of the principles on which the original agreement was modelled are still in place, an example of a well-conceived document that has stood the test of time.

Constitution Of Vital Statistics Council For Canada

For the purpose of carrying out and giving effect to the provisions of the “Statistics Act” of the Dominion, in connection with securing uniform methods of collecting, compiling and publishing the Vital Statistics of Canada and the provinces, and other matters related thereto, under an agreement with the Provinces and the Dominion, agreed to at a conference between officers of the Dominion Bureau of Statistics and the Dominion Treasury, the Dominion Council of Health and representatives of

the Provincial Vital Statistics offices, held in Ottawa on September 28th, 1944, the Minister of Trade and Commerce, pursuant to Section 9 of the said Act, does hereby constitute a Vital Statistics Council for Canada under the following terms:

1. The Council shall comprise one representative for each province (the officer actively in charge of the Provincial Vital Statistics office), one representative for Yukon and the Northwest Territories (to be designated by the Minister of Mines and Resources) and the Chiefs of the Vital Statistics and the Census Branches in the Dominion Bureau of Statistics.
2. The Chairman of the Council shall be the Dominion Statistician and the Vice-Chairman shall be elected annually from the representatives of the Provinces, and Yukon and the Northwest Territories.
3. The Secretary shall be a member of the Council and shall be appointed for a term to be determined by the Council.
4. The Vital Statistics Council shall meet at least once a year for the purpose of discussing and advising on problems arising out of the administration of the Vital Records system and relative statistics.
5. The expenses of the Vital Statistics Council shall be borne jointly by the Dominion and the Provinces on the following basis:
 - (a) by the Dominion, transportation expenses of all Council members to and from the place of meeting and other expenses incidental to the meeting; and
 - (b) by the Provinces, the living expenses of the respective Provincial Council members while at the place of meeting.

APPROVED by Council this first day of June, A.D. 1945. ♦

A Review Of The Value Of Vital Statistics

*Sylvia Kitching, Deputy Registrar
Yukon Vital Statistics*

What are vital statistics? They are records of births, deaths and marriages. The records in Yukon were first kept by the churches, RCMP and government agents. These written records incorporated stories, documents, and the oral history of the First Nations People.

So what do statistics, in particular, vital statistics offer? Knowing the cause of death hasn't prevented disease and we do know that the number of births and marriages has been decreasing for the past few

years. It does provide interesting reading, but do we really need to know how many people died, were born and married?

Yukon has an important, interesting and exciting history. The First Nations people were in Yukon when Yukon was only a blank spot on the map and even though some people thought they had “discovered” the Yukon, archeologists have established that native populations were living in the Yukon about 8,000 BC.¹

Many people passed through the Yukon and many put down roots, and as a result there are numerous descendants of these adventurous and tenacious pioneers. The past, whether oral or written, offers a glimpse of life which enriches our knowledge of who and how people lived in times gone by. Genealogy is one of the fastest growing uses of vital statistics and people are using these registrations to write histories and find long lost family members. Perhaps there is a lost gold mine belonging to Uncle Jim who died in Yukon in 1899.

Not only do vital statistics offer a glimpse of the past, they provide information for private businesses, research projects, budget planning, government programs, health research and general interest. Birth, death and marriage statistics offer demographic information. Not only is this important for health and social issues, it does offer interesting reading.

Did you know that in 1898 Dawson was the capital of Yukon and it had a population of 30,000 people? Did you know that each claim on Eldorado Creek produced more than \$1 million? And that was when gold was \$20 an ounce. Of the 30,000 people that floated to Dawson (some did use boats) to “obtain” this gold, only 28 died of drowning.

Of the first 250 recorded deaths, 80 were from typhoid. Other common causes of death were pneumonia, scurvy, peritonitis, accidents and heart disease. There were cases of opium poisoning (some accidental and possibly some on purpose), as well as suicides by guns and arsenic, murders, drownings and mining accidents. It is interesting to note that cancer was rarely noted as a cause of death. One death even occurred as a result of “teething” and there was a hanging of someone who had committed murder.

As the 20th century draws to a close, the common causes of death have changed only slightly. Diseases of the circulatory system is still at the top of the list, followed by neoplasm (cancer), injury, accidents, poisoning and respiratory diseases.

Many advances have occurred during this century. Vital Statistics has been collecting information all during that time and the information has been used

continuously. While many of the ailments may not have changed significantly, the average life expectancy has increased tremendously. Knowing the causes of death has helped researchers in their studies of population health. Birth weight, another indicator collected by Vital Statistics, is generally considered one of the best indicators of a newborn’s chances of survival.² Teen pregnancies have decreased.³ Deaths from pneumonia and influenza are highly seasonal, paralleling the elevated incidence and prevalence of these diseases in the winter months.⁴ Vital statistics are used in measuring maternal deaths, provincial differences, birth rates, aging populations and many demographic differences and changes.

Records of birth, death and marriage are the basis of many studies and programs, and utilizing Vital Statistics information in this way contributes to the well being of the population. ♦

¹ Spotswood, Ken, Klondike Gold Rush Centennial Media Kit. Whitehorse, 1996.

² Nault, François. “Health Reports” Winter 1997 Vol. 9 No 3.

³ Wadhwa, Surinder and Millar, Wayne J. “Health Reports” Winter 1997 Vol. 9 No 3.

⁴ Trudeau, Richard. “Health Reports” Summer 1997 Vo. 9 No 1.

IN A TYPICAL MONTH IN YUKON IN 1997

The following events were recorded:

- 38 LIVE BIRTHS OCCURRED IN THE TERRITORY TO YUKON RESIDENTS:**
- 20 males and 18 females were born
 - 18 were born to parents not married to each other
 - 1 low-birth weight baby was born
 - 5 were born to teenage mothers every two months
 - 1 multiple birth every two months

9 DEATHS OCCURRED IN THE TERRITORY TO YUKON RESIDENTS:

- 11 males and 7 females died every two months
- 3 deaths every two months were due to accidents or violence
- 1 infant death every six months

14 MARRIAGES WERE SOLEMNIZED IN YUKON:

- 4 civil ceremonies and 10 marriages performed by religious representatives
- 8 marriages where both parties were marrying for the first time
- 1 marriage in the year where both parties were teenagers

1997 VITAL STATISTICS

	Year 1997	Mean/month
Births		
Total	450	38
males	236	20
females	214	18
teenage mother	30	3
unmarried parents	212	18
low birth weight (<2500g)	17	1
multiple births	7	1
Deaths		
Total	110	9
males	68	6
females	42	4
infants (<1 year old)	2	**
accident/violent	17	1
Marriages		
Total	167	14
both teenagers	1	**
both marrying for first time	97	8
civil	119	10
religious	48	4

** Amount too small to be expressed.

*Source: Data from Yukon Vital Statistics Office
Report prepared by Yukon Bureau of Statistics*

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