Introduction

Health and health care provision continue to be top priorities of both individual Canadians and the Canadian government. In September of 2000, the First Ministers met to define goals and commitments regarding health in Canada. Their vision was that Canadians would have publicly funded health services that would provide quality health care and promote the health and well-being of Canadians in a cost-effective and fair manner.[1] Accountability was a key part of the realization of that vision. Understanding this, the First Ministers agreed to direct Health Ministers in each province and territory to regularly report to the public on a number of health and health care system indicators. It was believed that clear public reporting, with appropriate, independent, third party verification would enhance the performance of health care in Canada.

A framework of 14 health indicators with common methods of measurement and reporting was developed through collaboration and consultation with health care professionals and other experts across Canada. The result is the following report, which gives the people of Nunavut a variety of comparable indicators measuring health status (e.g. life expectancy), health outcome (e.g., reduced burden of disease and illness) and quality of service (e.g. patient satisfaction). This report's primary objectives are:

- to allow the people of Nunavut and Canadians as a whole to see how we are doing in attaining our goals and objectives
- to assist individuals, governments, and health care providers in making more informed choices
- to promote the identification and sharing of best practices within Nunavut and across Canada, contributing to continuous service improvement
- to help Nunavut residents understand how their publicly funded health services are being delivered

We are pleased to be able to report on the majority of the 14 health indicators for Nunavut and are committed to providing the people of Nunavut with comprehensive and regular reporting on the health programs and services that we deliver. See the Note to the Reader below for those indicators that are excluded. It is our hope that this report will stimulate and guide further discussion and serve as a framework for collaborative action toward a healthier Nunavut.

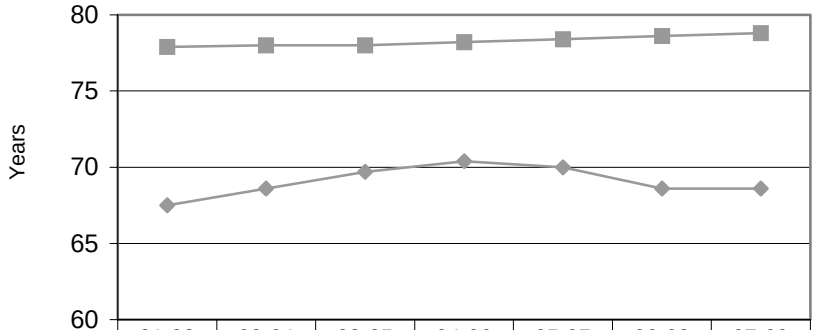
List of Figures

Indicator 1: Life Expectancy

Indicator 1a: Life Expectancy in Years at birth and at age 65

Life expectancy at birth is the number of years a person can expect to live, starting at birth, if current age-specific mortality rates continue to apply throughout his or her lifetime.

Figure 1a.1 Life Expectancy at Birth in Canada and Nunavut
1991-1999

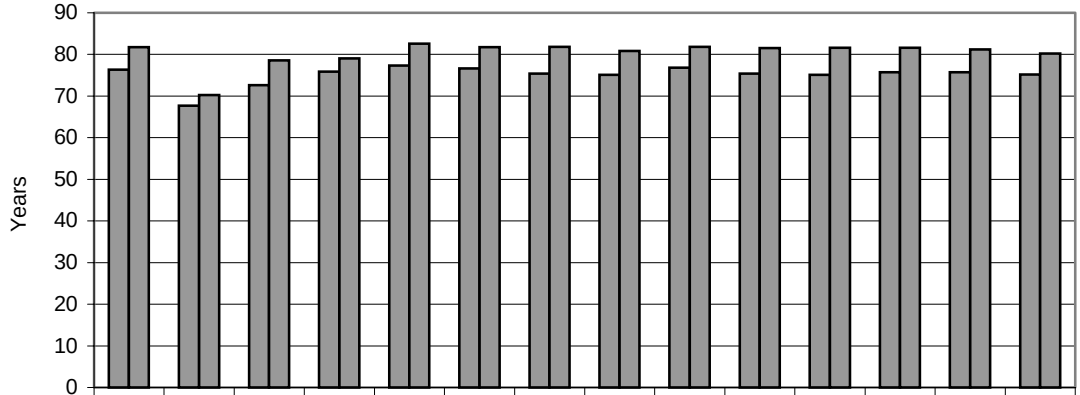


	91-93	92-94	93-95	94-96	95-97	96-98	97-99
Canada	77.9	78.0	78.0	78.2	78.4	78.6	78.8
Nunavut	67.5	68.6	69.7	70.4	70.0	68.6	68.6

Sources: Statistics Canada, Canadian Vital Statistics, Birth and Death Databases, and Demography Division (population estimates from census data); ISQ.
Three year rolling averages used. See notes 1,2.

Since 1991, there has been a net increase in life expectancy at birth for Nunavut residents by 1.1 years, similar to the net increase for Canadians in general.

Figure 1a.2 Life Expectancy at Birth
1999



	CAN	NU	NT	YK	BC	AB	SK	MB	ON	QC	NB	NS	PI	NF
Males	76.3	67.7	72.6	75.9	77.3	76.6	75.4	75.1	76.8	75.4	75.1	75.7	75.7	75.2
Females	81.7	70.2	78.6	79.0	82.6	81.7	81.8	80.8	81.8	81.5	81.6	81.6	81.2	80.2

Source: Statistics Canada, Canadian Vital Statistics, Birth and Death Databases, and Demography Division (population estimates from census data); ISQ.
See note 2.

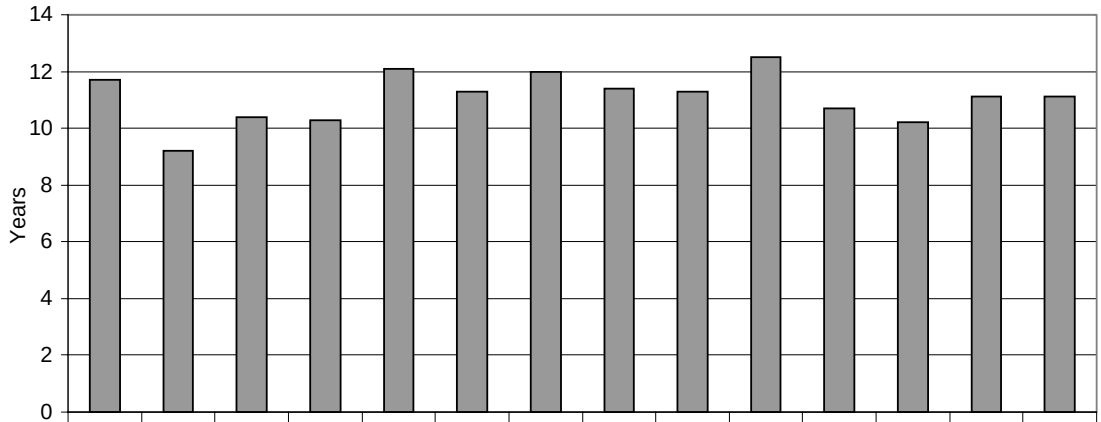
Life expectancy differs by gender. In all provinces and territories, females have longer life expectancies than males. Nunavut females, with a life expectancy of 70.2 years, exceed Nunavut males by 2.5 years.

For Nunavut residents, no gender difference can be seen in life expectancy at age 65. In 1999, Nunavut women could expect to live 7 years less than their Canadian counterparts, and Nunavut men could expect to live 3.2 years less.

Indicator 1b: Disability-Free Life Expectancy in Years at age 65

Disability-free life expectancy is the number of years an average individual would be expected to live free of moderate or severe disability, starting at age 65. Disability-free life expectancy emphasizes quality of life. It is used to distinguish between years of life free of any activity limitation and years experienced with at least one activity limitation. To that end, disability-free life expectancy establishes a threshold based on the nature of such limitations. Years of life lived in conditions above this threshold are counted in full. Those lived in conditions below the threshold are not counted.

Figure 1b.1 Disability-Free Life Expectancy at age 65
1996

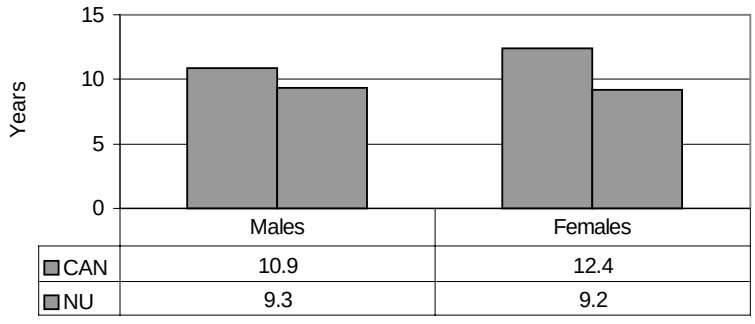


	CAN	NU	NT	YK	BC	AB	SK	MB	ON	QC	NB	NS	PI	NF
Years	11.7	9.2	10.4	10.3	12.1	11.3	12.0	11.4	11.3	12.5	10.7	10.2	11.1	11.1

Sources: Statistics Canada, Canadian Vital Statistics, Death Database and Demography Division; census (institutional population counts).
See notes 3.

On average, a 65 year old Nunavut resident can expect to live 9.2 years disability-free, two and a half years less than the Canadian average. Nunavut men and women share roughly the same disability-free life expectancy.

Figure 1b.2 Disability-Free Life Expectancy at Age 65
Canada and Nunavut
1996



	Males	Females
CAN	10.9	12.4
NU	9.3	9.2

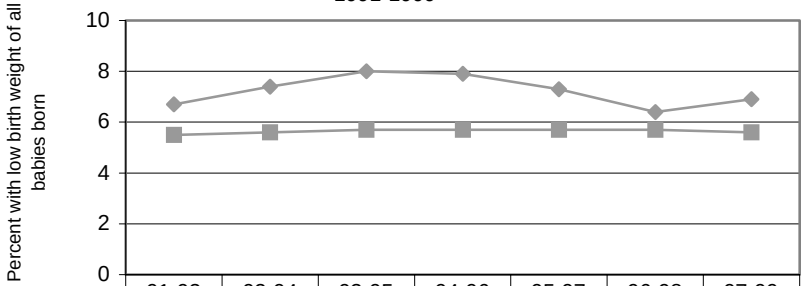
Source: Statistics Canada, Canadian Vital Statistics, Death Database and Demography Division; census (institutional census counts).
See notes 3.

In comparison to Nunavut, Canadian females can expect to live 3.2 more years disability-free, and Canadian males can live 1.6 more years disability-free.

Indicator 3: Low Birth Weight

Low birth weight is defined as live births with a birth weight less than 2,500 grams, expressed as a percentage of all live births with known birth weights. It has been adjusted for borderline viable births by excluding all birth weights under 500 grams.

Figure 3.1 Low Birth Weight in Canada and Nunavut
(500 to 2,500g)
1991-1999

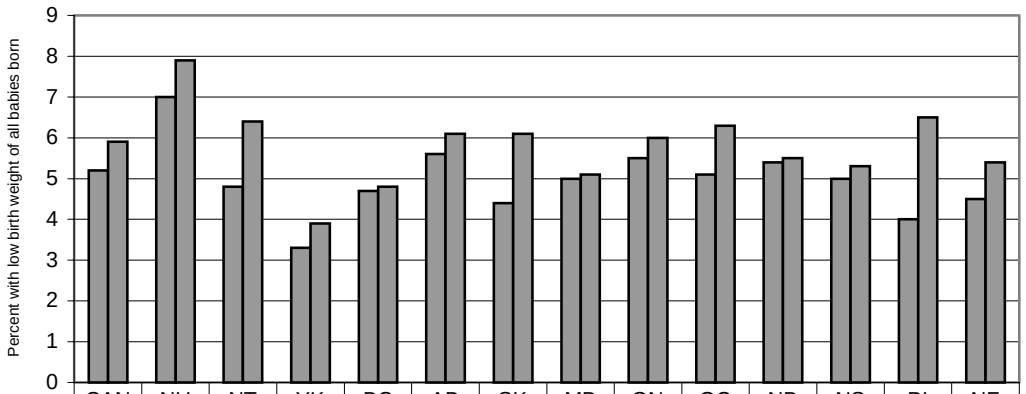


	91-93	92-94	93-95	94-96	95-97	96-98	97-99
Canada	5.5	5.6	5.7	5.7	5.7	5.7	5.6
Nunavut	6.7	7.4	8.0	7.9	7.3	6.4	6.9

Source: Statistics Canada, Canadian Vital Statistics, Birth Database; ISQ.
Three year rolling averages used. See notes 1, 5, 6.

Trends in low birth weight appear to have changed very little between 1991 and 1999 in both Nunavut and the whole of Canada.

Figure 3.2 Low Birth Weight (500 to 2,500g)
1999

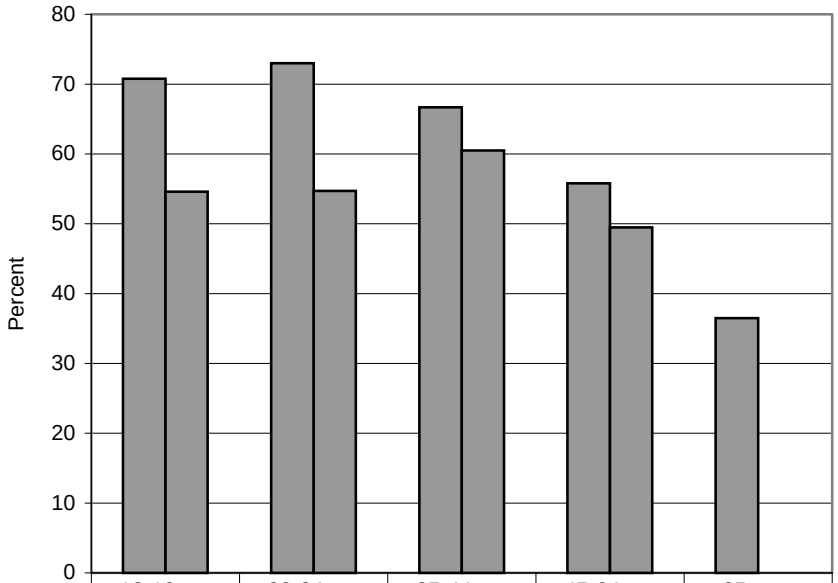


	CAN	NU	NT	YK	BC	AB	SK	MB	ON	QC	NB	NS	PI	NF
Males	5.2	7.0	4.8	3.3	4.7	5.6	4.4	5.0	5.5	5.1	5.4	5.0	4.0	4.5
Females	5.9	7.9	6.4	3.9	4.8	6.1	6.1	5.1	6.0	6.3	5.5	5.3	6.5	5.4

Source: Statistics Canada, Canadian Vital Statistics, Birth Database; ISQ.
See notes 5, 6.

Low birth weight tends to show a gender difference, with females in all jurisdictions experiencing a greater percentage of low birth weight. Low birth weight babies are more common in Nunavut than Canada as a whole. In 1999, about 35% more infants were born underweight in Nunavut compared to the rest of Canada.

Figure 4.2 Self-Reported Health by Age in Canada and Nunavut
(reported as very good or excellent)
2000-2001



	12-19 yrs	20-34 yrs	35-44 yrs	45-64 yrs	65+ yrs
CAN	70.8	73.0	66.7	55.8	36.5
NU	54.6	54.7	60.5	49.5	*

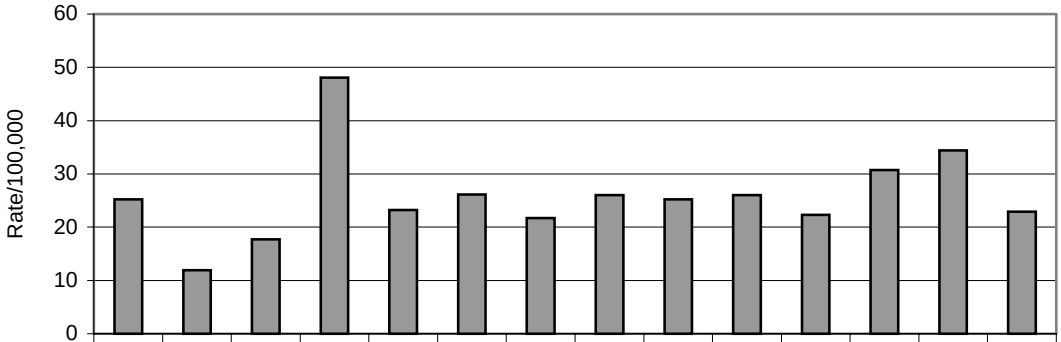
Source: Canadian Community Health Survey - Cycle 1.1, 2000/01.
*Numbers for Nunavut residents age 65+ are too small to be reported with confidence. See note 7.

Self-reported health differs by age group. Nunavut residents in the 35-44 year age bracket tend to consider their health the best, while 45-64 year olds consider their health the worst. This is slightly different from the national average, where the greatest percentage of people reporting very good or excellent health lies in the 20-34 year age bracket.

Female Breast Cancer Mortality Rates

Because there have been few cases of breast cancer in Nunavut relative to Canada as a whole, time trend data for breast cancer mortality is too unreliable to be published. It is very difficult in a small population to assess real trends because small increases or decreases become exaggerated.

Figure 5a.3 Breast Cancer Mortality Rates
1999



	CAN	NU	NT	YK	BC	AB	SK	MB	ON	QC	NB	NS	PI	NF
Rate	25.2	11.9	17.7	48.1	23.2	26.1	21.7	26.0	25.2	26.0	22.3	30.7	34.4	22.9

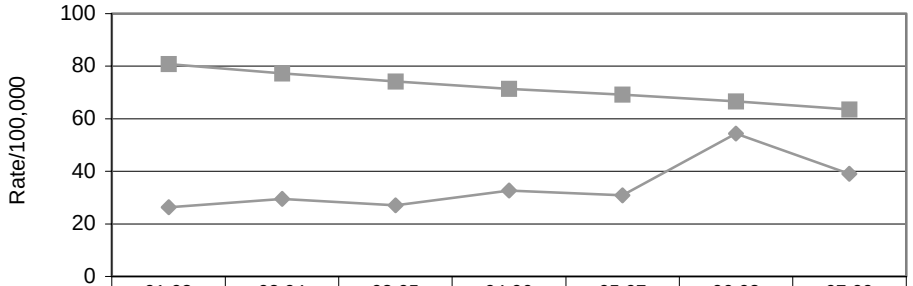
Source: Statistics Canada, Canadian Vital Statistics, and Demography Division; ISQ.
See notes 5, 8, 9.

Roughly half as many women in Nunavut die of breast cancer when compared to Canada. This may partially be explained by the higher breastfeeding and fertility rates in Nunavut, both of which have some protective effect against breast cancer.

Acute Myocardial Infarction Mortality Rates

Between 1991 and 1999, AMI mortality rates for Nunavut are lower than for Canada; however, the Nunavut rates are now approaching Canadian rates. As Canadian rates seem to steadily decline, Nunavut rates appear to be growing closer to the national average. This may reflect the changes in lifestyle in the past ten years among Nunavut residents that are bringing them closer to their counterparts across the country.

Figure 5a.4 Acute Myocardial Infarction Mortality Rates
Canada and Nunavut
1991-1999



	91-93	92-94	93-95	94-96	95-97	96-98	97-99
Canada	80.8	77.2	74.2	71.3	69.1	66.6	63.5
Nunavut	26.3	29.5	27.1	32.7	30.8	54.4	39.0

Source: Statistics Canada, Canadian Vital Statistics, and Demography Division; ISQ.
Three year rolling averages used. See notes 1, 8, 9 .

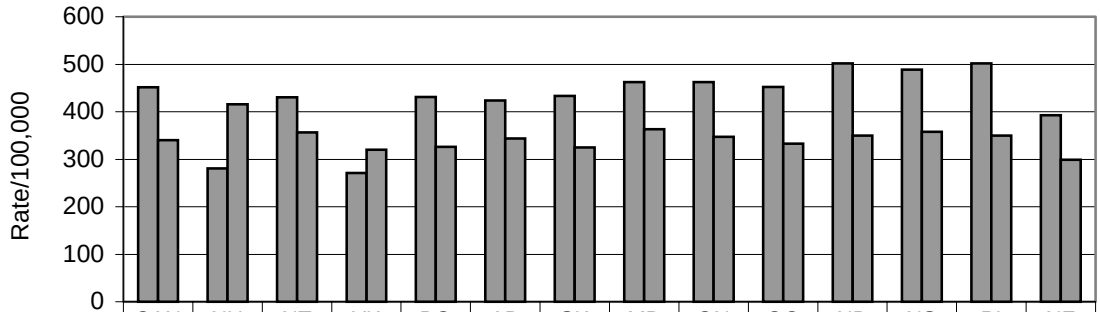
Indicator 7: Reduced Burden of Disease, Illness and Injury

Indicator 7a: Incidence Rates for all cancers and lung and breast cancers

All Cancer Incidence

All cancer incidence is defined as the number of newly diagnosed primary cancer cases of all types in a given year, per 100,000 population. Rates have been age standardized according to the 1991 Canadian population.

Figure 7a.1 All Cancer Incidence Rates
1997

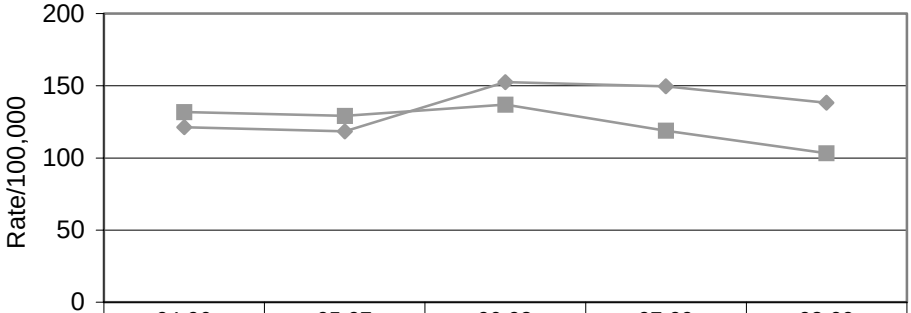


	CAN	NU	NT	YK	BC	AB	SK	MB	ON	QC	NB	NS	PI	NF
Males	451.8	280.8	430.8	271.1	431.2	423.4	433.1	462.3	462.1	452.3	501.9	488.8	501.8	392.6
Females	340.0	415.7	356.4	320.2	326.4	343.5	324.7	363.3	347.0	333.1	349.6	358.3	349.8	298.8

Source: Statistics Canada, Canadian Cancer Registry, and Demography Division (population estimates from census data); ISQ.
See note 5, 9.

In 1997, unlike most other Canadian jurisdictions, women in Nunavut were more likely to be diagnosed with any cancer than men,. The rate for Nunavut males was lower than the national average, but the rate for women was higher.

Figure 7a.2 All Cancer Incidence Rates in Nunavut
1994-2000



	94-96	95-97	96-98	97-99	98-00
Males	131.7	129.1	136.8	118.8	103.3
Females	121.4	118.5	152.4	149.6	138.3

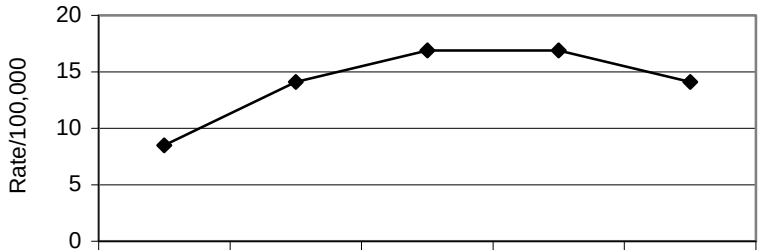
Source: Nunavut Cancer Registry.
Three year rolling averages used. Rates are not age standardized. See notes 1, 5, 10.

Between 1994 and 2000, incidence rates of all cancers in Nunavut seem to have declined slightly for males while increasing for females. 35% of all cancer diagnosed in women in Nunavut between 1991 and 1996 was cervical cancer.

Female Breast Cancer Incidence

Female breast cancer incidence is defined as the number of newly diagnosed primary breast cancer cases in a given year, per 100,000 population.

Figure 7a.5 Breast Cancer Incidence Rates in Nunavut
1994-2000

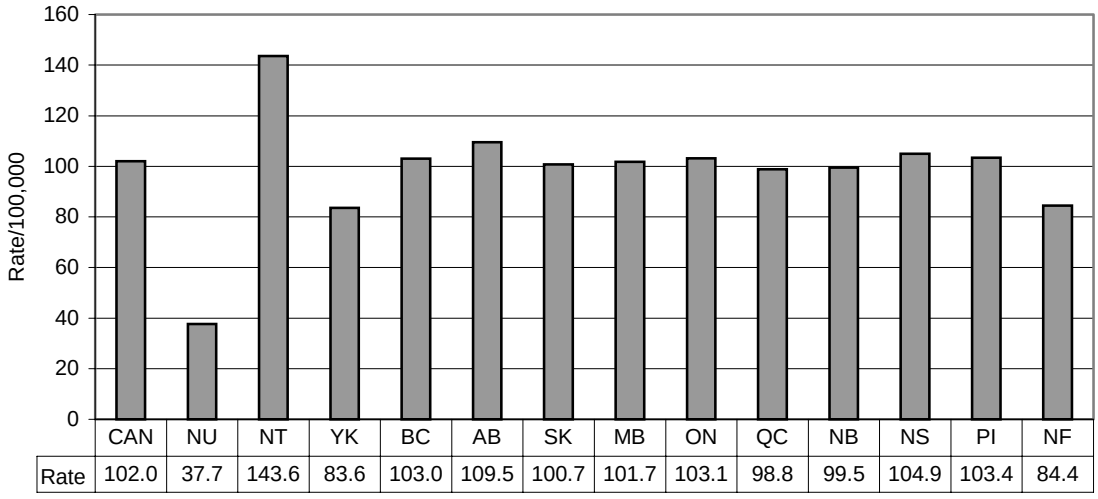


	94-96	95-97	96-98	97-99	98-00
Females	8.5	14.1	16.9	16.9	14.1

Source: Nunavut Cancer Registry.
Three year rolling averages used. See notes 1, 5, 10.

There appears to be an upward trend in breast cancer rates in Nunavut between 1994 and 2000.

Figure 7a.6 Breast Cancer Incidence Rates
1997



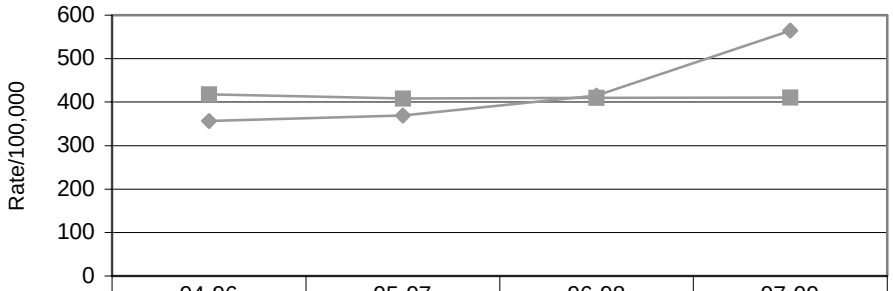
	CAN	NU	NT	YK	BC	AB	SK	MB	ON	QC	NB	NS	PI	NF
Rate	102.0	37.7	143.6	83.6	103.0	109.5	100.7	101.7	103.1	98.8	99.5	104.9	103.4	84.4

Source: Statistics Canada, Canadian Cancer Registry, and Demography Division (census population estimates from census data); ISQ.
See notes 5, 9.

However, in 1997, breast cancer rates were still much lower than the national average. In fact, women in Nunavut were almost three times less likely to be diagnosed with breast cancer than Canadian women as a whole. This may partially be explained by the higher breastfeeding and fertility rates in Nunavut, both of which have some protective effect against breast cancer.

Potential Years of Life Lost due to Lung Cancer

Figure7b.2 PYLL due to Lung Cancer in Canada and Nunavut
1994-1999

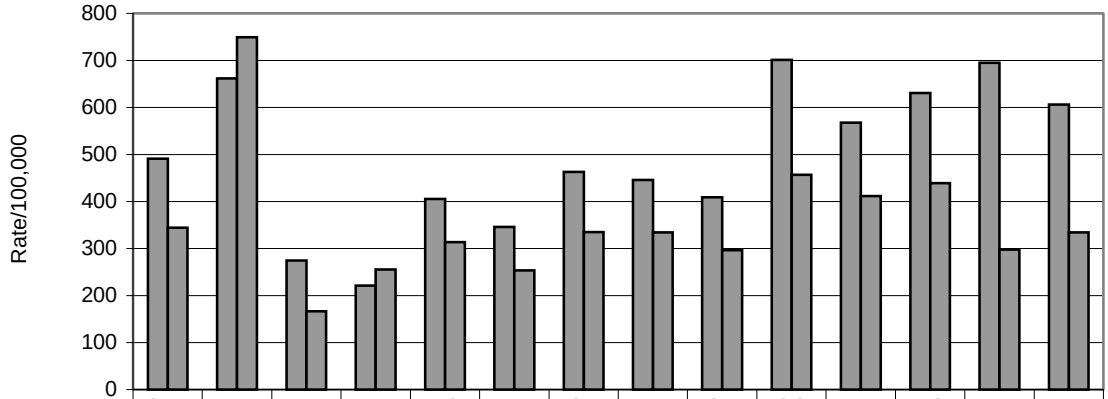


	94-96	95-97	96-98	97-99
Canada	418.1	408.7	410.1	410.4
Nunavut	356.4	369.0	415.1	564.8

Source: Statistics Canada, Vital Statistics, Death Database and Demography Division (population estimates from census data); ISQ.
Three year rolling averages used. See notes 1, 5, 8, 9, 10.

Between 1994 and 1999, potential years of life lost due to lung cancer appears stable for Canada, but increasing for Nunavut.

Figure 7b.3 PYLL due to Lung Cancer
1999



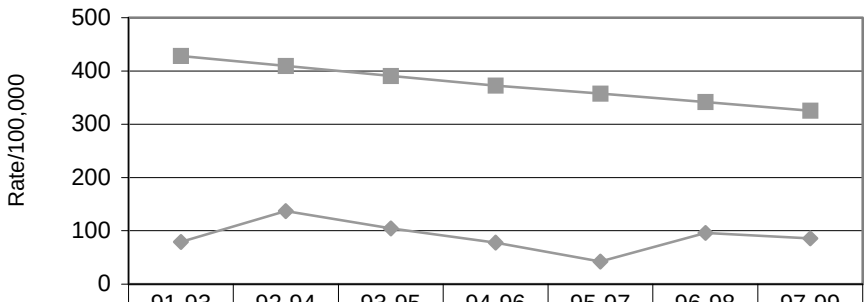
	CAN	NU	NT	YK	BC	AB	SK	MB	ON	QC	NB	NS	PI	NF
Males	490.9	661.6	274.8	221.3	405.4	346.0	462.7	445.9	408.6	701.1	568.0	630.5	694.9	606.2
Females	344.3	749.1	166.7	255.4	314.0	253.7	334.7	334.4	296.6	457.1	411.8	439.1	297.9	334.4

Source: Statistics Canada, Vital Statistics, Death Database and Demography Division (population estimates from census data); ISQ.
See notes 5, 8, 9.

In 1999, Nunavut had high rates for PYLL due to lung cancer when compared with the national average. This applies to both men and women: rates are 1.3 times higher for men and 2.2 times higher for women. Unlike most of the provinces, PYLL due to lung cancer is higher for women than men in Nunavut.

Potential Years of Life Lost due to Acute Myocardial Infarction (AMI)

Figure 7b.6 PYLL due to AMI in Canada and Nunavut
1991-1999

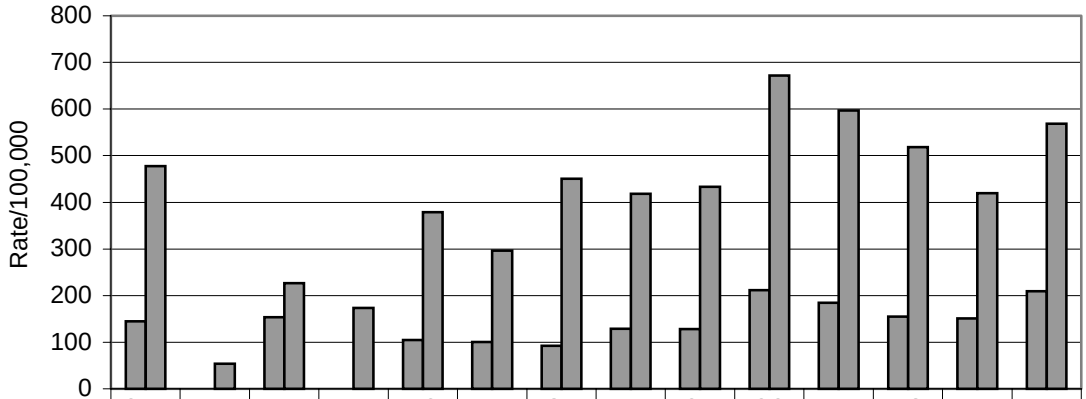


	91-93	92-94	93-95	94-96	95-97	96-98	97-99
Canada	428.0	409.7	390.4	372.8	357.2	341.6	325.7
Nunavut	78.9	137.1	104.2	77.7	42.2	96.1	86.0

Source: Statistics Canada, Vital Statistics, Death Database and Demography Division (population estimates from census data); ISQ.
Three year rolling averages used. See notes 1, 5, 8, 9.

Between 1991 and 1999, it appears that there was a steady decline in PYLL due to acute myocardial infarction in Canada. Rates in Nunavut appear fairly stable in this time period, but they are considerably lower than the national average.

Figure 7b.7 PYLL due to AMI
1999



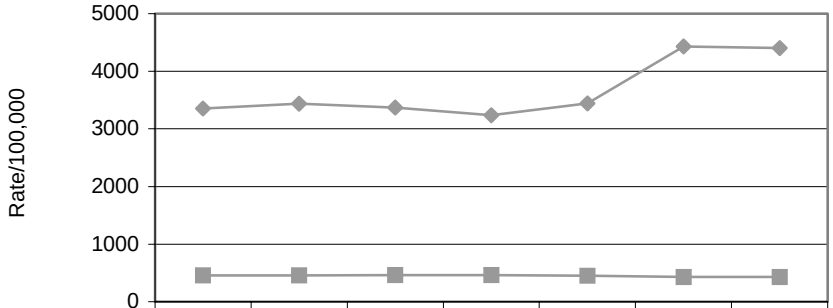
	CAN	NU	NT	YK	BC	AB	SK	MB	ON	QC	NB	NS	PI	NF
Females	144.9	0.0	153.9	0.0	104.6	100.3	92.3	128.6	128.2	211.2	185.0	155.0	150.9	209.6
Males	477.8	53.6	227.0	173.9	378.7	296.0	450.7	418.1	433.1	671.9	596.8	517.9	419.3	568.3

Source: Statistics Canada, Vital Statistics, Death Database and Demography Division (population estimates from census data); ISQ.
See notes 5, 8, 9.

PYLL due to AMI for Canadian males were almost nine times higher than rates for men in Nunavut in 1999. There were no cases of AMI among Nunavut women in 1999. Low rates among Nunavut residents are partially due to the traditional Inuit diet, which consists of large amounts of marine foods rich in n-3 fatty acids. Studies have shown that n-3 fatty acids have beneficial effects on key risk factors for cardiovascular disease.

Potential Years of Life Lost due to Suicides

Figure 7b.10 PYLL due to Suicides in Canada and Nunavut
1991-1999

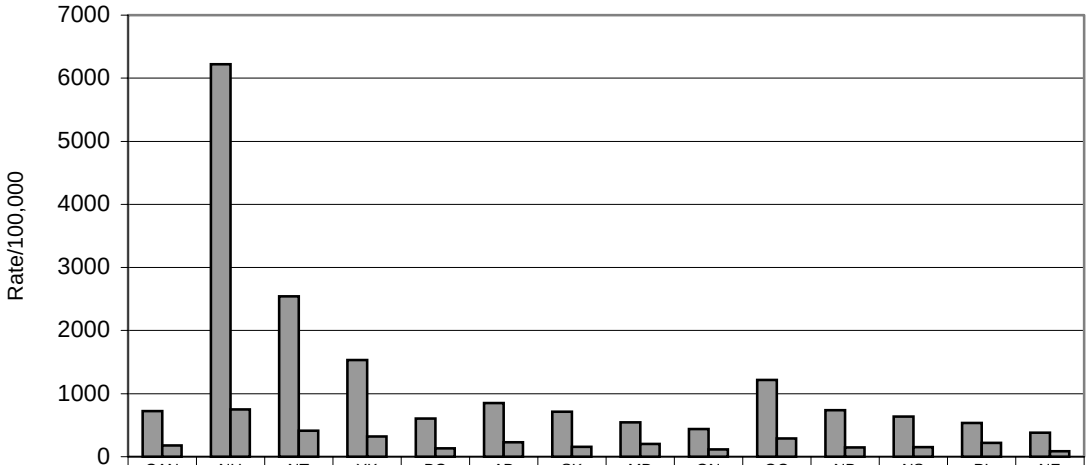


	91-93	92-94	93-95	94-96	95-97	96-98	97-99
Canada	459.8	458.9	462.7	460.9	450.3	431.9	430.8
Nunavut	3354.2	3435.6	3370.9	3238.2	3444.7	4430.2	4401.9

Source: Statistics Canada, Vital Statistics, Death Database and Demography Division (population estimates from census data); ISQ.
Three year rolling averages used. See notes 1, 5, 8, 9.

PYLL due to suicides were consistently higher in Nunavut than in Canada between 1991 and 1999, and while Canadian rates are stable, rates in Nunavut appear to be rising.

Figure 7b.11 PYLL due to Suicides
1999



	CAN	NU	NT	YK	BC	AB	SK	MB	ON	QC	NB	NS	PI	NF
Males	724.7	6222.3	2544.7	1533.2	603.8	848.9	714.6	543.0	437.8	1218.3	739.9	639.0	535.7	379.9
Females	179.4	749.1	410.4	323.5	131.0	228.7	157.5	203.4	117.8	290.5	149.5	153.9	220.5	86.8

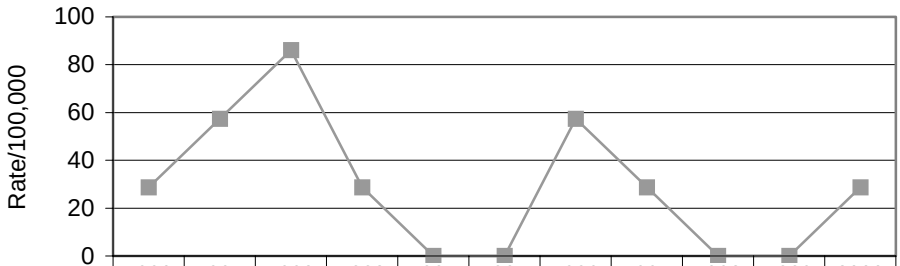
Source: Statistics Canada, Vital Statistics, Death Database and Demography Division (population estimates from census data); ISQ.
See notes 5, 8, 9.

As in all provinces and territories, more men in Nunavut commit suicide than women. In 1999, this resulted in PYLL due to suicides for men more than eight times that of women. As well, Nunavut men had PYLL due to suicides roughly eight and a half times higher than Canadian men in general. In the same year, Nunavut women had an approximately four times greater rate of PYLL than their national counterparts.

High PYLL due to suicide reflects the high suicide rate in Nunavut. Most suicides are committed by young single Inuit males by hanging. Many factors come into play, among them acculturation, alcohol abuse, depression, and impulsiveness.

Indicator 7c (iii): Haemophilus Influenzae b (invasive) Disease Incidence

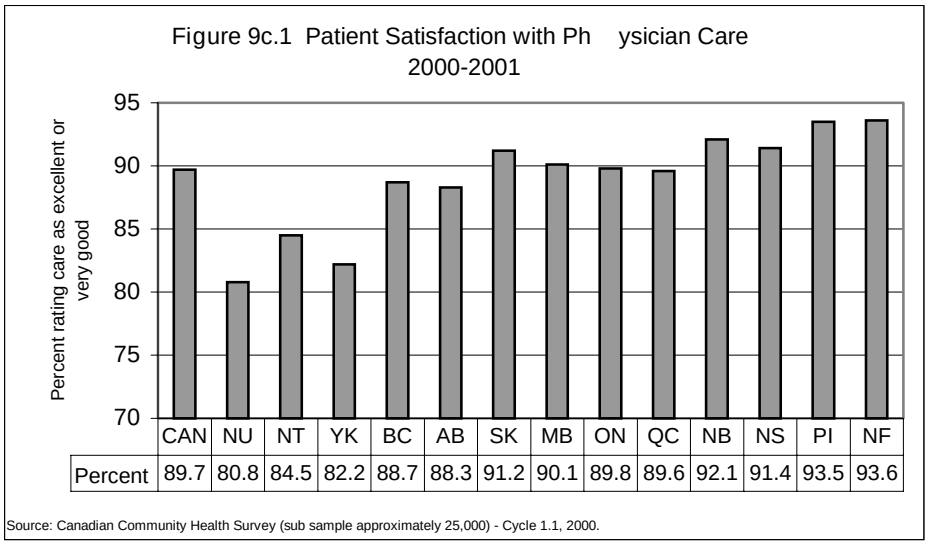
Figure 7c.3 Hib Incidence Rates in Nunavut
Children under Age 5, 1990-2000



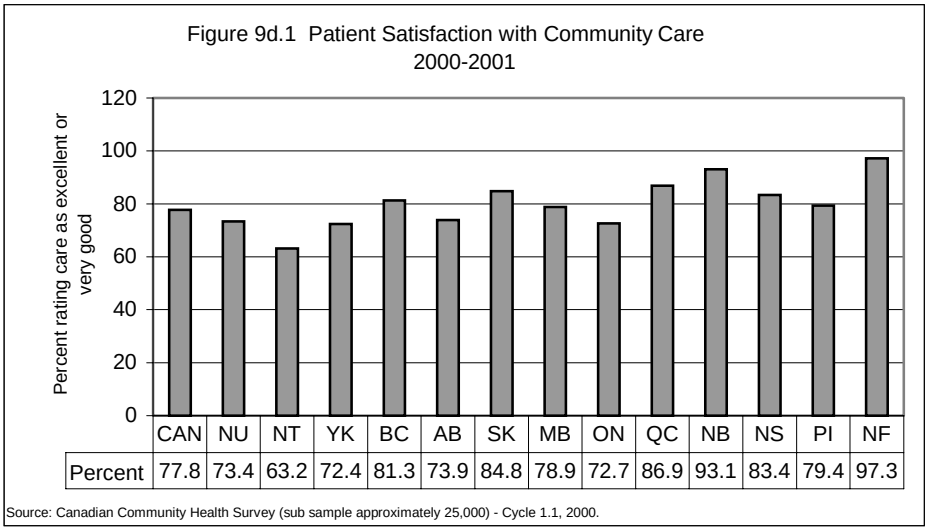
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Rate	28.7	57.4	86.1	28.7	0.0	0.0	57.4	28.7	0.0	0.0	28.7
Cases	1	2	3	1	0	0	2	1	0	0	1

Source: NWT Communicable Diseases Registry.
See note 13.

Haemophilus influenzae b (Hib) disease is expressed as the rate of new cases reported by year in children under 5, per 100,000 population. Invasive disease includes meningitis, bacteraemia, epiglottis, pneumonia, pericarditis, septic arthritis, or emphysema. Hib was the most common cause of bacterial meningitis and a leading cause of other serious invasive infections in children prior to the introduction of the Hib vaccine in 1988.[15] As an infectious disease, Hib tends to appear in outbreaks followed by periods of low incidence. When reported per 100,000, the rates look dramatic, however, they represent a small number of cases.



While the majority of Canadians are satisfied with the service provided by their family physicians and other doctors, satisfaction among Nunavut residents is lower than anywhere else. The difference is likely due to the fact that the model of health care delivery in Nunavut has primary care provided by the Community Health Nurse with physicians assisting. Few communities have a resident doctor.



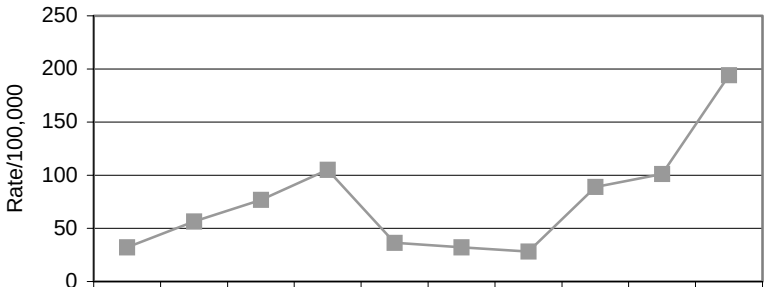
Across Canada as well as in Nunavut, the majority of patients surveyed were satisfied with the community-based care they received. Nurses in a community care setting provide most primary health care in Nunavut, and residents have indicated satisfaction with their care.

Indicator 13: Public Health Surveillance and Protection

Indicator 13a: Tuberculosis

Tuberculosis is reported as the rate of new active and relapsed infectious cases reported by calendar year, per 100,000 population.

Figure 13a.1 Tuberculosis Rates in Nunavut
1991-2000

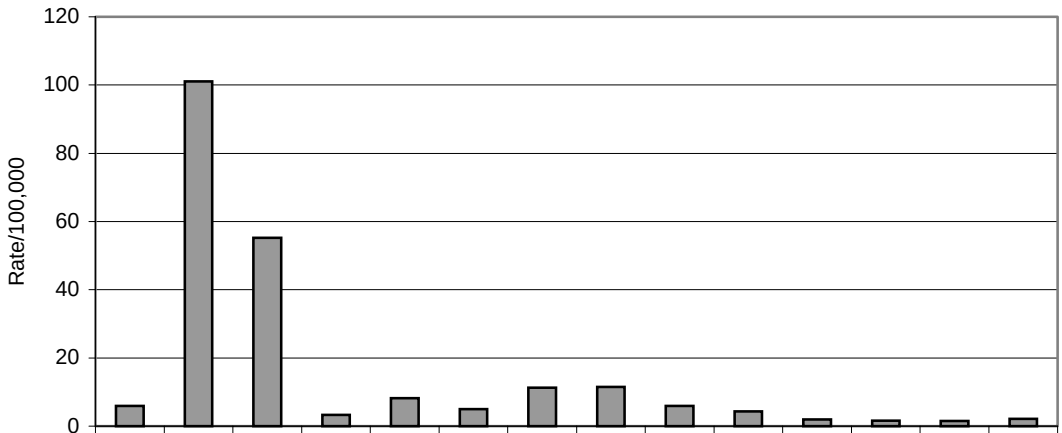


	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Rate	32.3	56.6	76.8	105.1	36.4	32.3	28.3	88.9	101.1	194.1

Source: NWT Tuberculosis Data Registry.
See note 15.

Tuberculosis rates in Nunavut appear to be climbing since 1991, reaching a peak of nearly 200 cases per 100,000 in 2000.

Figure 13a.2 Tuberculosis Incidence Rates
1999



	CAN	NU	NT	YK	BC	AB	SK	MB	ON	QC	NB	NS	PI	NF
Rate	5.9	101.1	55.2	3.3	8.2	5.0	11.3	11.5	5.9	4.3	2.0	1.6	1.5	2.2

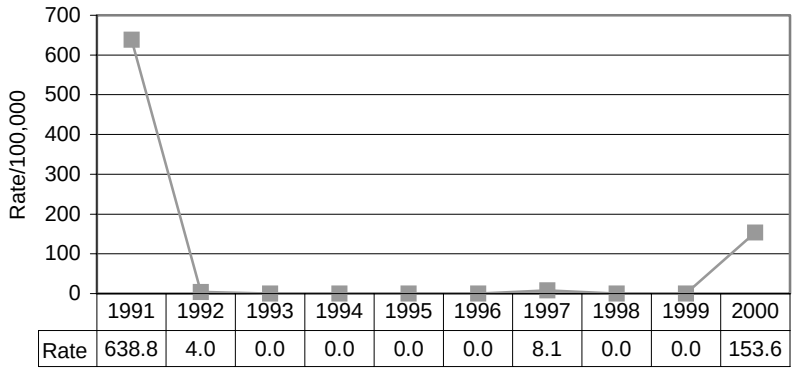
Source: Canadian Tuberculosis Reporting System (CTBRS).
See note 15.

In 1999, Nunavut's tuberculosis incidence rate was about 17 times higher than the Canadian average. The high rate is partly due to a large reservoir of latent tuberculosis from earlier cases that reactivate as Nunavut residents age.

Indicator 13c: Verotoxogenic *E. coli*

Verotoxogenic *E. coli* is expressed as the rate of new cases reported by year, per 100,000 population.

Figure 13c.1 Verotoxogenic *E. coli* Rates in Nunavut
1991-2000

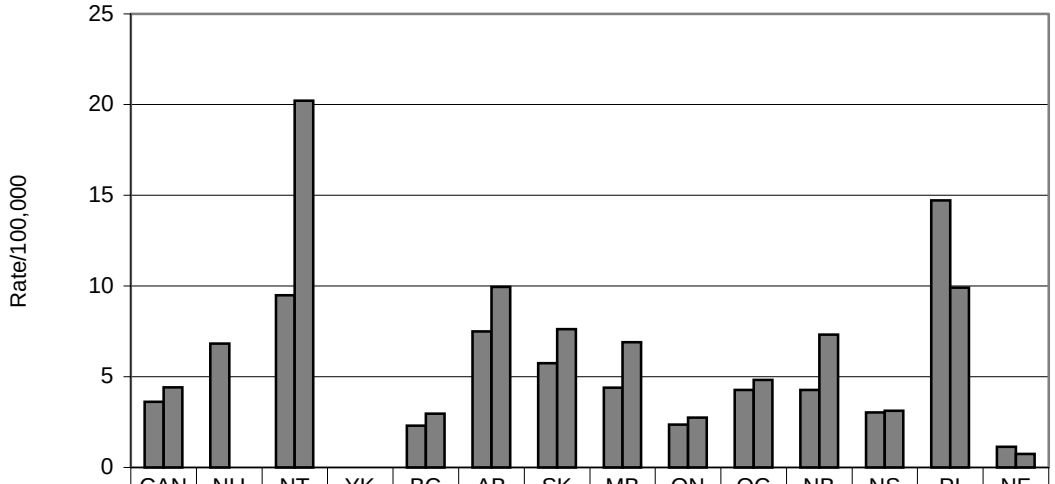


	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Rate	638.8	4.0	0.0	0.0	0.0	0.0	8.1	0.0	0.0	153.6

Source: NWT Communicable Diseases Registry.
Rates are not age standardized. See note 17.

Over the past ten years, reported cases of *E. coli* infection are relatively rare in Nunavut. An outbreak occurred in 1991 and 2000. In Nunavut, verotoxogenic *E. coli* is mainly spread through contaminated hamburger meat, appearing in occasional outbreaks.

Figure 13c.2 Reported Verotoxogenic *E. coli* Rates
2001



	CAN	NU	NT	YK	BC	AB	SK	MB	ON	QC	NB	NS	PI	NF
Males	3.62	6.83	9.49	*	2.31	7.50	5.75	4.39	2.35	4.27	4.27	3.03	14.72	1.14
Females	4.42	0.00	20.22	*	2.96	9.95	7.62	6.90	2.74	4.82	7.32	3.12	9.92	0.74

Source: Nunavut Communicable Diseases Registry
*Numbers for the Yukon Territory are too small to report with confidence. See note 17, 18.

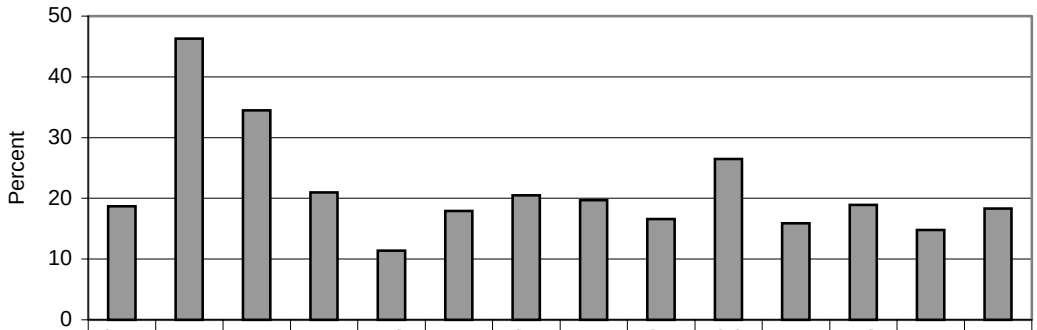
The graph above depicts the occurrence of E. coli cases in Canada in 2001. The rate is calculated per capita and although Nunavut is almost two times higher than the national average, this actually only represents one case in Nunavut.

Indicator 14: Health Promotion and Disease Prevention

Indicator 14a: Youth Smoking Rates

Smoking rates are expressed as the percentage of the population aged 12 and over who are current or daily smokers. Current smokers are those who reported smoking either on a daily or occasional basis when interviewed for the Canadian Community Health Survey. Daily smoking refers to smoking at least one cigarette per day for each of the 30 days preceding the survey. Occasional smoking refers to smoking at least one cigarette during the past 30 days preceding the survey, but not every day.

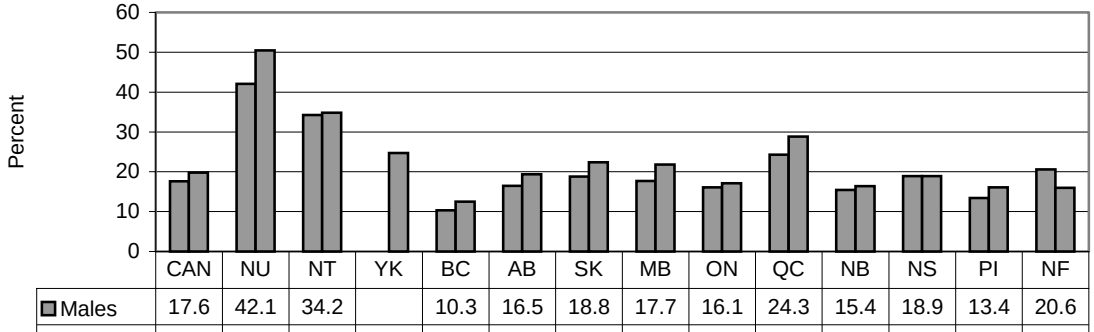
Figure 14a.1 Current Smoking Rates among Youth
(daily or occasional smokers age 12-19)
2000-2001



	CAN	NU	NT	YK	BC	AB	SK	MB	ON	QC	NB	NS	PI	NF
Percent	18.7	46.3	34.5	21	11.4	17.9	20.5	19.7	16.6	26.5	15.9	18.9	14.8	18.3

Source: Statistics Canada, Canadian Community Health Survey, 2000/01; ISQ.

Figure 14a.2 Current Smoking Rates among Youth by Gender
(daily or occasional smokers age 12-19)
2000-2001



	CAN	NU	NT	YK	BC	AB	SK	MB	ON	QC	NB	NS	PI	NF
Males	17.6	42.1	34.2		10.3	16.5	18.8	17.7	16.1	24.3	15.4	18.9	13.4	20.6
Females	19.8	50.5	34.8	24.7	12.5	19.4	22.4	21.8	17.1	28.8	16.4	18.9	16.1	16

Source: Statistics Canada, Canadian Community Health Survey, 2000/01; ISQ.
*Data for males in the Yukon Territory is too unreliable to be published.

The percentage of teenagers in Nunavut who currently smoke is nearly two and a half times the national average. In both Canada and Nunavut, teenage girls are more likely to smoke than teenage boys. The high smoking rate probably contributes to the lung cancer statistics for Nunavut. Nunavut has more new cases of lung cancer per year, more potential years of life lost to lung cancer, and higher lung cancer mortality rates than Canada as a whole.