Population Health Snapshot

Winter 2014-2015

New Brunswick Health Council | Conseil de la santé du Nouveau-Brunswick

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New Brunswickers have a right to be aware of the decisions being made, to be part of the decision-making process, and to be aware of the outcomes delivered by the health system and its cost.

The New Brunswick Health Council will foster this transparency, engagement, and accountability by engaging citizens in a meaningful dialogue, measuring, monitoring, and evaluating population health and health service quality, informing citizens on health system's performance and recommending improvements to health system partners.

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How to cite this document:

New Brunswick Health Council, *Population Health Snapshot, winter 2014-2015* (NBHC, 2014/2015).

Cette publication est disponible en français sous le titre *Portrait de la santé de la population, hiver 2014-2015 (CSNB 2014-2015).*

New Brunswick Health Council | Conseil de la santé du Nouveau-Brunswick

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Focus: Causes of avoidable deaths for New Brunswick and Zones to focus our efforts on population health

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The **Population Health Snapshot Winter 2014-2015**, is the 6th report of this type by the New Brunswick Health Council. Similar to our past reports, it seeks to inform individuals, communities and organizations about the health outcomes of the population based on the area or zone in which they live. The snapshots also help to highlight some areas of health determinants that can be influenced or improved to have a positive impact on health outcomes.

Each indicator in our Snapshot falls within one of two categories:

- Health Outcomes; and
- Health Determinants (grouped into: Health Services, Health Behaviours, Social and Economic Factors, and Physical Environment).

The new Winter 2014-2015 provincial and zone snapshots are updated with the most recent information available to us. Some indicators could not be updated because the information is obtained through surveys that follow a three-year cycle or due to unavailability of the data from the source. In addition to presenting the latest indicator data, the snapshots include a trending column that allows the reader to quickly assess the direction of change as compared to last year's snapshots.

A green arrow pointing up (▲) signals an improvement in the indicator value.

A red arrow pointing down (▼) signals a worsening in the indicator value.

An equal sign (=) shows no change in the indicator value.

The snapshots also include a section for every zone displaying provincial or zone characteristics that builds on the demographic profile. We have included the prevalence rates of chronic health condition and the top 10 hospital admissions from the people in this zone, classified by case mix group (grouping together acute care inpatients that are similar clinically and in terms of resource use) and by area of residence.

In addition to the individual provincial and seven zones snapshots, a Summary table provides an overview of all the indicators for all jurisdictions (the seven zones, New Brunswick, and Canada).

The report also includes a "Focus" section providing a detailed analysis of the causes of New Brunswick's avoidable mortality. Measuring the rates of premature mortality (death before age 75) and the causes of premature mortality can provide insights about how healthy the population is, and where to focus our efforts.

Further details about the Population Health Snapshot description, methodology, definitions and trending of the 43 indicators can be found in the Technical Document which is a separate document.

Provincial Highlights:

- The 10 leading causes of death that accounted for more than 70% of avoidable deaths per population annually in New Brunswick were (in order), lung cancer, ischaemic heart disease, suicide and self-inflicted injuries, chronic obstructive pulmonary disorder (COPD), transport accidents, colorectal cancer, diabetes, cerebrovascular diseases, breast cancer and accidental poisoning.

- New Brunswickers continue to demonstrate the lowest value (ranking 10 out of 10 Canadian provinces) of self-rating their general health as being very good or excellent for the 5th year in a row.

- Some health services show improvements such as increase in medical doctor visits within the last year, fewer avoidable hospitalizations, as well as better access to pap and mammography tests. However, flu shots for our elderly seem to be trending in the wrong direction.

- Some health behaviours or risk factors (known to be factors contributing to chronic conditions) such as healthy eating, obesity, and smoking are starting to trend in the right direction. Other risk factors such as physical activity, and alcohol consumption, are trending in the wrong direction.

- Unemployment rate is increasing slightly from 10.2% last year to 10.4% this year. Violent crimes and property crimes seem to be trending in the right direction. Sense of community belonging is demonstrating an improving trend.

- Physical environment factors related to air quality (Second-hand smoke at home and in vehicles and public places, and self-rating of indoor air quality) are showing a slow trend in the right direction.

In general, provincial trends may mask a wide variability across the health regions/zones with some zones exhibiting trends that are opposite to those of the province. Understanding the geographic variability in health determinants and health outcomes is essential to better understand the possible underlying inequities in population health and quality of health services, thus to effectively plan health programs and initiatives based on the needs of a given population.

Snapshots

2014-2015

Population Health Snapshot 2014-2015

New Brunswick

		NB Male	NB Female	NB Average	Canadian Average	Rank (NB to Canada)	Trend compared to last NB snapshot
POPULATION HEALTH OUTCOMES							
See their health as being very good or excellent	(%, 2013)	54.0	53.9	**54.0**	59.4	♦ **10/10**	▼
See their mental health as being very good or excellent	(%, 2013)	67.0	66.4	**66.7**	71.1	♦ **10/10**	▼
Pain or soreness that prevents activities (physical or emotional)	(%, 2013)	13.3	19.2	**16.3**	14.7	● **7/10**	▼
Life satisfaction, satisfied or very satisfied	(%, 2013)	92.7	91.5	**92.0**	91.7	● **6/10**	▼
Expected years of life	(age, 2007-2009)	77.5	82.8	80.2	81.1	● 5*/10	=
Infant with less than average birth weight	(%, 2010-2012)	5.6	5.9	**5.6**	--	--	▲
Infant deaths	(rate per 1,000 live birth, 2010-2012)	4.1	2.7	**3.4**	--	--	▲
Premature deaths from heart and stroke	(years of life lost, rate per 10,000 2008-2012)	132.3	55.0	**93.6**	--	--	▼
Premature deaths from cancer	(years of life lost, rate per 10,000 2008-2012)	183.4	158.8	**171.1**	--	--	▲
Premature deaths from breathing diseases	(years of life lost, rate per 10,000 2008-2012)	26.5	18.0	**22.3**	--	--	▲
Premature deaths from injuries	(years of life lost, rate per 10,000 2008-2012)	105.8	36.2	**70.9**	--	--	▲
Premature deaths due to suicides/self-inflicted injuries	(years of life lost, rate per 10,000 2008-2012)	65.7	18.0	**41.8**	--	--	▼
HEALTH DETERMINANTS							
Health Services - accounts for 10% of the health determinants							
Has a regular medical doctor	(%, 2013)	89.8	94.1	**92.0**	84.5	● **1/10**	▼
Medical doctor visit within the last year	(%, 2013)	74.5	84.3	**79.6**	80.8	● **5/10**	▲
Dental professional visit within the last year	(%, 2013)	--	--	**63.6**	66.5	● **4/10**	▲
Avoidable hospitalization	(aged-standardized rate per 100,000, 2012-2013)	463	387	**425**	289	♦ **8/10**	▲
Adults 65 years and up who have received the flu shot in the last year	(%, 2013)	66.3	64.4	**65.2**	64.1	● **3/10**	▼
Females (18 to 69 years old) who had a pap test within the last 3 years	(%, 2013)	--	73.5	**73.5**	--	--	▲
Females (50 to 69 years old) who had a mammogram in the last 2 years	(%, 2013)	--	75.5	**75.5**	--	--	▲
Overall hospital rating	(%, 2013)	76.0	74.8	75.4	--	--	▼
Satisfaction/experience rating for healthcare	(%, 2011)	63.0	60.2	61.5	--	--	--
Health Behaviours – account for 40% of the health determinants							
Physical activity during free-time, moderately active or active	(%, 2013)	53.8	45.7	**49.6**	55.2	♦ **8/10**	▼
Eat 5 or more fruits or vegetables a day	(%, 2013)	29.1	42.0	**35.9**	40.8	● **6/10**	▲
Adults with unhealthy weight (obese)	(%, 2013)	24.4	27.4	**25.9**	18.8	● **7/10**	▲
5 or more drinks at one time, at least once a month in the past year (heavy drinking)	(%, 2013)	36.1	14.8	**25.1**	18.9	♦ **10/10**	▼
Seeing your stress as being a lot	(%, 2013)	19.3	20.8	**20.1**	23.0	● **5/10**	▼
Current smoker, daily or occasional	(%, 2013)	25.8	18.0	**21.8**	19.3	♦ **9/10**	▲
Number of sexually transmitted infections (genital Chlamydia)	(crude rate per 10,000 population, 2013)	15.7	30.9	**23.4**	--	--	▲
Teens who gave birth	(rate per 1,000 females, 2012)	--	20.2	**20.2**	--	--	▲
Always wears a bicycle helmet while on a bike	(%, 2013)	47.0	61.5	**53.2**	41.5	● **4/10**	▲
Social and Economic Factors – account for 40% of the health determinants							
No high school diploma (25-64 years old)	(%, 2011)	18.6	15.0	16.8	12.7	♦ 8/10	--
Unemployment (15+ years)	(%, 2013)	--	--	**10.4**	7.1	♦ **8/10**	▼
Divorced	(%, 2011)	4.6	5.7	5.2	6.0	● 2*/10	--
Single parent family (of total number of census families in private households)	(%, 2011)	3.3	12.8	16.1	16.3	● 4*/10	--
Low income	(%, 2011)	15.4	18.8	17.2	14.9	♦ 8/10	--
Violent crime	(rate per 100,000 population, 2013)	--	--	**1,232**	1,092	● **5/10**	▲
Property crime	(rate per 100,000 population, 2013)	--	--	**2,837**	3,146	● **3/10**	▲
Total impaired driving under the influence (drugs or alcohol)	(rate per 100,000 population, 2013)	--	--	**247**	223	● **3/10**	▲
Sense of belonging to your community, somewhat strong or very strong	(%, 2013)	69.8	72.7	**71.3**	65.9	● **5/10**	▲
Physical Environment – accounts for 10% of the health determinants							
Coming in contact with second-hand smoke at home	(%, 2013)	5.7[E]	5.1[E]	**5.3**	4.5	● **7/10**	▲
Coming in contact with second-hand smoke in the past month in vehicles &/or in public place	(%, 2013)	15.2	13.8	**14.5**	16.0	● **3/10**	▲
Dwellings rated as having excellent, very good or good indoor air quality	(%, 2011)	--	--	90.3	90.6	♦ 8/10	=
Occupied dwellings requiring major repairs (NEW)	(%, 2011)	--	--	**9.8**	7.4	● **7/10**	--

* Rating by best (1) to worst (10); Includes all provinces (10). [E] = Use data with caution, sample size too small, * = another province has the same ranking, -- = data unavailable, **Bold = Updated indicator**

Trend comparison with the last NB Population Health Snapshot

- ▲ **New Brunswick Provincial indicator value has improved**
- ▼ **New Brunswick Provincial indicator value has gotten worse**
- = **New Brunswick Provincial indicator value has stayed the same**
- -- **Trending is not available**

Provincial rank in Canada

- ● **Doing well (ranked 1, 2, 3)**
- ● **Caution (ranked 4, 5, 6, 7)**
- ♦ **Lagging (ranked 8, 9, 10)**

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New Brunswick

Population Health snapshot

2014-2015

Top 10 most frequent hospital admissions for New Brunswick (2013-2014)

Hospital admissions	# of cases	Rate per 10,000
1- Newborn	3,217	42.6
2- COPD (Chronic Obstructive Lung Disease)	2,945	39.0
3- Heart attack (Myocardial Infarction)	1,616	21.4
4- Heart Failure without Cardiac Catheter	1,524	20.2
5- Vaginal Birth without Anaesthetic	1,508	19.9
6- Viral/Unspecified Pneumonia	1,504	19.9
7- Enteritis (inflammation of small intestines)	1,459	19.3
8- Palliative Care (end of life)	1,459	19.3
9- Arrythmia (Abnormal Heartbeat)	1,421	18.8
10- Newborn/Neonate 2500+ grams, Other Minor Problem	1,385	18.3

Top 10 most common chronic health conditions in New Brunswick (2011)

Top 10 chronic health conditions	Prevalence (%)
1 - High Blood Pressure	25.7
2 - Arthritis	18.0
3 - GERD (Acid Reflux Disease)	16.1
4 - Chronic Pain	15.0
5 - Depression	12.7
6 - Asthma	10.3
7 - Diabetes	9.2
8 - Heart Disease	8.3
9 - Cancer	7.0
10 - Emphysema or COPD	2.7

SPECIFICS ABOUT NB

Age distribution of the population

Total population = 751,170

*0- 19 years old = **21.2%***

*20-39 years old = **23.7%***

*40-64 years old = **38.6%***

*65 + years old = **16.5%***

Median age = 43.7

Language spoken at home:

*French =**27.9%***

*English= **68.2%***

Immigrant population = 3.9%

Aboriginal population = 3.1%

(source: 2011 National Household Survey, Statistics Canada)

What is avoidable mortality?

Avoidable mortality refers to untimely deaths that should not occur in the presence of timely and effective health care or other public health practices, programs and policy interventions. It can be divided into two causes:

- Avoidable mortality from ***preventable*** causes: Premature deaths that could potentially have been prevented through primary prevention efforts (e.g. screening, vaccination, healthy lifestyles, air quality, etc.)

- Avoidable mortality from ***treatable*** causes: Premature deaths that could potentially have been avoided through secondary or tertiary prevention (e.g. treatment and interventions that can reduce the fatality of the health condition).

Top causes of avoidable deaths in New Brunswick:

1. Lung Cancer
2. Heart Disease
3. Suicide
4. Chronic Obstructive Pulmonary Disorder
5. Transport Accidents

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Population Health Snapshot 2014-2015

Zone 1: Moncton / South-East Area

		Zone 1 Male	Zone 1 Female	Zone 1 Average	NB Average		Rank (Zone 1 vs. other zones)	Trend compared to last zone 1 snapshot
POPULATION HEALTH OUTCOMES								
See their health as being very good or excellent	(%, 2013)	48.6	56.2	**52.4**	54.0	●	**4/7**	▼
See their mental health as being very good or excellent	(%, 2013)	70.6	67.8	**69.2**	66.7	●	**1/7**	▲
Pain or soreness that prevents activities (physical or emotional)	(%, 2013)	11.3[E]	16.5	**13.9**	16.3	●	**1/7**	▼
Life satisfaction, satisfied or very satisfied	(%, 2013)	92.2	94.7	**93.5**	92.0	●	**1/7**	=
Expected years of life	(age, 2007-2009)	78.7	83.9	81.4	80.2	●	1/7	▲
Infant with less than average birth weight	(%, 2010-2012)	6.0	6.3	**6.2**	5.8	♦	**6/7**	▲
Infant deaths	(rate per 1,000 live birth, 2010-2012)	4.8	2.7	**3.8**	3.4		**2/4**	▼
Premature deaths from heart and stroke	(years of life lost, rate per 10,000, 2008-2012)	99.64	47.9	**73.8**	93.6	●	**1/7**	▼
Premature deaths from cancer	(years of life lost, rate per 10,000, 2008-2012)	167.1	152.2	**159.7**	171.1	●	**2/7**	▲
Premature deaths from breathing diseases	(years of life lost, rate per 10,000, 2008-2012)	18.7	12.6	**15.6**	22.3	●	**2/7**	▲
Premature deaths from injuries	(years of life lost, rate per 10,000, 2008-2012)	106.4	34.1	**70.3**	70.9	●	**3/7**	▲
Premature deaths due to suicides/self-inflicted injuries	(years of life lost, rate per 10,000, 2008-2012)	63.1	15.4	**39.3**	41.8	●	**3/7**	▲
HEALTH DETERMINANTS								
Health Services - accounts for 10% of the health determinants								
Has a regular medical doctor	(%, 2013)	92.1	96.4	**94.3**	92.0	●	**3*/7**	▼
Medical doctor visit within the last year	(%, 2013)	73.1	84.8	**79.1**	79.6	●	**4/7**	▼
Dental professional visit within the last year	(%, 2013)	--	--	**64.2**	63.6	●	**3/7**	▲
Avoidable hospitalization	(aged-standardized rate per 100,000, 2012-2013)	413	297	**354**	425	●	**1/7**	▲
Adults 65 years and up who have received the flu shot in the last year	(%, 2013)	71.3	68.6	**69.7**	65.2	●	**3/7**	▲
Females (18 to 69 years old) who had a pap test within the last 3 years	(%, 2013)	--	75.8	**75.8**	73.5	●	**2/7**	▲
Females (50 to 69 years old) who had a mammogram in the last 2 years	(%, 2013)	--	78.9	**78.9**	75.5	●	**3/7**	▼
Overall hospital rating	(%, 2013)	74.8	75.4	75.1	75.4	●	5/7	▼
Satisfaction/experience rating for healthcare	(%, 2011)	63.3	60.0	61.6	61.5	●	4/7	--
Health Behaviours – account for 40% of the health determinants								
Physical activity during free-time, moderately active or active	(%, 2013)	54.9	47.5	**51.0**	49.6	●	**3/7**	▼
Eat 5 or more fruits or vegetables a day	(%, 2013)	27.3	45.5	**36.7**	35.9	●	**3/7**	▲
Adults with unhealthy weight (obese)	(%, 2013)	24.6	25.7	**25.1**	25.9	●	**3/7**	▲
5 or more drinks at one time, at least once a month in the past year (heavy drinking)	(%, 2013)	34.6	17.8[E]	**26.0**	25.1	●	**5/7**	▼
Seeing your stress as being a lot	(%, 2013)	21.6[E]	21.0	**21.3**	20.1	●	**5/7**	▼
Current smoker, daily or occasional	(%, 2013)	24.0	13.1[E]	**18.4**	21.8	●	**1/7**	▲
Number of sexually transmitted infections (genital Chlamydia)	(crude rate per 10,000 population, 2013)	19.8	38.5	**29.2**	23.4	♦	**6/7**	▲
Teens who gave birth	(rate per 1,000 females, 2012)	--	21.2	**21.2**	20.2	♦	**6/7**	▼
Always wears a bicycle helmet while on a bike	(%, 2013)	46.8[E]	71.4	**58.2**	53.2	●	**3/7**	▲
Social and Economic Factors – account for 40% of the health determinants								
No high school diploma (25-64 years old)	(%, 2011)	17.6	13.0	15.3	16.8	●	3/7	--
Unemployment (15+ years)	(%, 2013)	--	--	**8.7**	10.4	●	**2/7**	▼
Divorced	(%, 2011)	4.5	5.9	5.2	5.2	●	5/7	▲
Single parent family (of total number of census families in private households)	(%, 2011)	3.0	11.8	14.9	16.1	●	3/7	▲
Low income	(%, 2011)	13.2	16.1	14.7	17.2	●	1/7	--
Violent crime	(rate per 100,000 population, 2013)	--	--	**--**	1,232		**--**	--
Property crime	(rate per 100,000 population, 2013)	--	--	**--**	2,837		**--**	--
Total impaired driving under the influence (drugs or alcohol)	(rate per 100,000 population, 2013)	--	--	**--**	247		**--**	--
Sense of belonging to your community, somewhat strong or very strong	(%, 2013)	61.3	71.0	**66.3**	71.3	♦	**7/7**	▼
Physical Environment – accounts for 10% of the health determinants								
Coming in contact with second-hand smoke at home	(%, 2013)	--	--	**5.9[E]**	5.3		**3/4**	▲
Coming in contact with second-hand smoke in the past month in vehicles &/or in public place	(%, 2013)	19.4[E]	16.9[E]	**18.0**	14.5	♦	**7/7**	▼
Dwellings rated as having excellent, very good or good indoor air quality	(%, 2011)	--	--	--	90.3		--	--
Occupied dwellings requiring major repairs (NEW)	(%, 2011)	--	--	**7.9**	9.8	●	**1/7**	--

* Rating by best (1) to worst (10); Includes all provinces (10). [E] = Use data with caution, sample size too small, * = another province has the same ranking, -- = data unavailable, **Bold = Updated indicator**

Trend comparison with the last zone 1 population Health Snapshot
- ▲ Zone indicator value has improved
- ▼ Zone indicator value has gotten worse
- = Zone indicator value has stayed the same
- -- Trending is not available

Zone rank in New Brunswick
- ● Doing well (ranked 1, 2)
- ● Caution (ranked 3, 4, 5)
- ♦ Lagging (ranked 6, 7)

Zone 1: Moncton / South-East Area

Population Health Snapshot 2014-2015

Top 10 most frequent hospital admissions for Zone 1 (2013-2014)

Hospital admissions	# of cases	Rate per 10,000
1- Newborn	969	46.2
2- Chronic obstructive lung disease(COPD)	574	27.4
3- Vaginal birth with anaesthetic	515	24.5
4- Vaginal birth without anaesthetic	457	21.8
5- Angina / chest pain	456	21.7
6- Newborn/neonate 2500+ grams, other minor problem	455	21.7
7- Inflammation of small intestines (enteritis)	446	21.3
8- Heart failure without cardiac catheter	432	20.6
9- Heart attack (myocardial infarction)	420	20.0
10- Abnormal heartbeat (arrythmia)	377	18.0

Top 10 most common chronic health conditions for Zone 1 (2011)

Chronic health conditions	Prevalence (%)
1 - High blood pressure	24.6
2 - Arthritis	16.2
3 - GERD	16.1
4 - Chronic Pain	13.9
5 - Depression	13.3
6 - Asthma	9.6
7 - Diabetes	8.8
8 - Heart Disease	7.6
9 - Cancer	7.0
10 - Emphysema or COPD	2.2

What is avoidable mortality?

Avoidable mortality refers to untimely deaths that should not occur in the presence of timely and effective health care or other public health practices, programs and policy interventions. It can be divided into two causes:

- Avoidable mortality from ***preventable*** causes: Premature deaths that could potentially have been prevented through primary prevention efforts (e.g. screening, vaccination, healthy lifestyles, air quality, etc.)

- Avoidable mortality from ***treatable*** causes: Premature deaths that could potentially have been avoided through secondary or tertiary prevention (e.g. treatment and interventions that can reduce the fatality of the health condition).

Top causes of avoidable deaths in Zone 1:

1. Lung Cancer
2. Heart Disease
3. Suicide
4. Colorectal Cancer
5. Transport Accidents

SPECIFICS ABOUT ZONE 1

Age distribution of the population

Total population = 203,837

*0- 19 years old = **21%***

*20-39 years old = **26%***

*40-64 years old = **38%***

*65 + years old = **16%***

Median age = 42.7

Language spoken at home:

*French = **35%***

*English = **60%***

Immigrant population = 4.1%

Aboriginal population = 3.1%

(source: 2011 Census, Statistics Canada)

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Population Health Snapshot 2014-2015

Zone 2: Fundy Shore / Saint John Area

		Zone 2 Male	Zone 2 Female	Zone 2 Average	NB Average	Rank (Zone 2 vs. other zones)	Trend compared to last zone 2 snapshot
POPULATION HEALTH OUTCOMES							
See their health as being very good or excellent	(%, 2013)	56.6	60.9	**58.8**	54.0	● **1/7**	▼
See their mental health as being very good or excellent	(%, 2013)	63.4	70.7	**67.3**	66.7	● **4/7**	▼
Pain or soreness that prevents activities (physical or emotional)	(%, 2013)	15.3	19.0	**17.3**	16.3	● **2/7**	▼
Life satisfaction, satisfied or very satisfied	(%, 2013)	93.0	93.4	**93.2**	92.0	● **2/7**	▼
Expected years of life	(age, 2007-2009)	76.8	82.1	79.5	80.2	● 5/7	▼
Infant with less than average birth weight	(%, 2010-2012)	4.7	5.6	**5.1**	5.6	● **2/7**	▲
Infant deaths	(rate per 1,000 live birth, 2010-2012)	3.7	2.3	**3.0**	3.4	**1/4**	▲
Premature deaths from heart and stroke	(years of life lost, rate per 10,000, 2008-2012)	159.4	63.7	**111.0**	93.6	♦ **6/7**	▲
Premature deaths from cancer	(years of life lost, rate per 10,000, 2008-2012)	211.8	162.9	**187.1**	171.1	● **4/7**	▼
Premature deaths from breathing diseases	(years of life lost, rate per 10,000, 2008-2012)	32.9	28.6	**30.7**	22.3	♦ **6/7**	▼
Premature deaths from injuries	(years of life lost, rate per 10,00, 2008-2012)	89.6	32.0	**60.5**	70.9	● **1/7**	▲
Premature deaths due to suicides/self-inflicted injuries	(years of life lost, rate per 10,000, 2008-2012)	61.4	16.8	**38.9**	41.8	● **2/7**	▼
HEALTH DETERMINANTS							
Health Services - accounts for 10% of the health determinants							
Has a regular medical doctor	(%, 2013)	90.3	93.2	**91.8**	92.0	♦ **6/7**	▼
Medical doctor visit within the last year	(%, 2013)	75.3	87.6	**81.8**	79.6	● **2/7**	▲
Dental professional visit within the last year	(%, 2013)	--	--	**66.1**	63.6	● **1/7**	▲
Avoidable hospitalization	(aged-standardized rate per 100,000, 2012-2013)	418	353	**384**	425	● **2/7**	▲
Adults 65 years and up who have received the flu shot in the last year	(%, 2013)	59.8	67.9	**64.3**	65.2	● **4/7**	▼
Females (18 to 69 years old) who had a pap test within the last 3 years	(%, 2013)	--	71.3	**71.3**	73.5	● **5/7**	▲
Females (50 to 69 years old) who had a mammogram in the last 2 years	(%, 2013)	--	65.2	**65.2**	75.5	♦ **7/7**	▲
Overall hospital rating	(%, 2013)	75.6	73.9	74.8	75.4	♦ 6/7	▼
Satisfaction/experience rating for healthcare	(%, 2011)	61.7	58.3	59.9	61.5	● 5*/7	--
Health Behaviours – account for 40% of the health determinants							
Physical activity during free-time, moderately active or active	(%, 2013)	55.8	53.3	**54.5**	49.6	● **1/7**	▲
Eat 5 or more fruits or vegetables a day	(%, 2013)	27.5	43.9	**36.3**	35.9	● **4/7**	▲
Adults with unhealthy weight (obese)	(%, 2013)	21.8[E]	28.7	**25.3**	25.9	● **4/7**	▲
5 or more drinks at one time, at least once a month in the past year (heavy drinking)	(%, 2013)	38.5	15.8[E]	**26.7**	25.1	♦ **7/7**	▼
Seeing your stress as being a lot	(%, 2013)	22.6[E]	18.6	**20.5**	20.1	● **4/7**	▲
Current smoker, daily or occasional	(%, 2013)	24.5[E]	17.1	**20.7**	21.8	● **2/7**	▲
Number of sexually transmitted infections (genital Chlamydia)	(crude rate per 10,000 population, 2013)	11.2	26.6	**19.1**	23.4	● **5/7**	▼
Teens who gave birth	(rate per 1,000 females, 2012)	--	23.5	**23.5**	20.2	♦ **7/7**	▲
Always wears a bicycle helmet while on a bike	(%, 2013)	61.6	63.6	**62.3**	53.2	● **1/7**	▲
Social and Economic Factors – account for 40% of the health determinants							
No high school diploma (25-64 years old)	(%, 2011)	13.5	11.9	12.7	16.8	● 2/7	--
Unemployment (15+ years)	(%, 2013)	--	--	**9.6**	10.4	● **3/7**	--
Divorced	(%, 2011)	5.1	6.7	5.9	5.2	♦ 7/7	▲
Single parent family (of total number of census families in private households)	(%, 2011)	3.4	14.3	17.7	16.1	● 4/7	▼
Low income	(%, 2011)	14.9	18.9	17.0	17.2	● 4/7	--
Violent crime	(rate per 100,000 population, 2013)	--	--	**--**	1,232	--	--
Property crime	(rate per 100,000 population, 2013)	--	--	**--**	2,837	--	--
Total impaired driving under the influence (drugs or alcohol)	(rate per 100,000 population, 2013)	--	--	**--**	247	--	--
Sense of belonging to your community, somewhat strong or very strong	(%, 2013)	77.0	77.1	**77.1**	71.3	● **2/7**	▲
Physical Environment – accounts for 10% of the health determinants							
Coming in contact with second-hand smoke at home	(%, 2013)	--	--	**4.7[E]**	5.3	**2/4**	▲
Coming in contact with second-hand smoke in the past month in vehicles &/or in public place	(%, 2013)	17.7[E]	12.0[E]	**14.6**	14.5	● **5/7**	▲
Dwellings rated as having excellent, very good or good indoor air quality	(%, 2011)	--	--	--	90.3	--	--
Occupied dwellings requiring major repairs (NEW)	(%, 2011)	--	--	**9.6**	9.8	● **3/7**	--

Rating by best (1) to worst (7). Includes all health zones (7). [E] = Use data with caution, sample size too small, * =another zone has the same ranking, -- = data unavailable, **Bold = Updated indicator**

Zone rank in New Brunswick
- ● **Doing well (ranked 1, 2)**
- ● **Caution (ranked 3, 4, 5)**
- ♦ **Lagging (ranked 6, 7)**

Trend comparison with the last zone 2 Population Health Snapshot
- ▲ **Zone indicator value has improved**
- ▼ **Zone indicator value has gotten worse**
- = **Zone indicator value has stayed the same**
- -- **Trending is not available**

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Zone 2: Fundy Shore / Saint John Area

Population Health Snapshot 2014-2015

Top 10 most frequent hospital admissions for Zone 2 (2013-2014)

Hospital admissions	# of cases	Rate per 10,000
1- Newborn	747	42.7
2- Chronic obstructive lung disease (COPD)	634	36.3
3- Vaginal birth with anaesthetic and non-major obstetric/gynecologic intervention	412	23.6
4- Heart failure without cardiac catheter	403	23.1
5- Viral/Unspecified Pneumonia	391	22.4
6- Newborn/neonate 2500+ grams, other minor problem	363	20.8
7- Vaginal birth without anaesthetic	346	19.8
8- Knee replacement	343	19.6
9- Vaginal birth with anaesthetic	301	17.2
10- End of life (palliative care)	288	16.5

Top 10 most common chronic health conditions for Zone 2 (2011)

Chronic health conditions	Prevalence (%)
1 - High blood pressure	25.6
2 - Arthritis	21.2
3 - Chronic pain	15.6
4 - GERD (acid reflux disease)	15.1
5 - Depression	11.8
6 - Asthma	10.6
7 - Diabetes	9.3
8 - Heart disease	8.4
9 - Cancer	7.8
10 - Emphysema or COPD	3.2

What is avoidable mortality?

Avoidable mortality refers to untimely deaths that should not occur in the presence of timely and effective health care or other public health practices, programs and policy interventions. It can be divided into two causes:

- Avoidable mortality from ***preventable*** causes: Premature deaths that could potentially have been prevented through primary prevention efforts (e.g. screening, vaccination, healthy lifestyles, air quality, etc.)

- Avoidable mortality from ***treatable*** causes: Premature deaths that could potentially have been avoided through secondary or tertiary prevention (e.g. treatment and interventions that can reduce the fatality of the health condition).

Top causes of avoidable deaths in Zone 2:

1. Lung Cancer
2. Heart Disease
3. Chronic Obstructive Pulmonary Disease
4. * Suicide
4. * Cerebrovascular Diseases

SPECIFICS ABOUT ZONE 2

Age distribution of the population

Total population = 175,059

*0- 19 years old = **23%***

*20-39 years old = **23%***

*40-64 years old = **38%***

*65 + years old = **16%***

Median age = 42.8

Language spoken at home:

*French = **1%***

*English= **95%***

Immigrant population** = **4.7%

Aboriginal population** = **1.8%

(source: 2011 Census, Statistics Canada)

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Population Health Snapshot 2014-2015

Zone 3: Fredericton / River Valley Area

		Zone 3 Male	Zone 3 Female	Zone 3 Average	NB Average	Rank (Zone 3 vs. other zones)	Trend compared to last zone 3 snapshot
POPULATION HEALTH OUTCOMES							
See their health as being very good or excellent	(%, 2013)	60.8	50.2	**55.3**	54.0	● 2/7	▼
See their mental health as being very good or excellent	(%, 2013)	69.4	65.7	**67.5**	66.7	● 3/7	▼
Pain or soreness that prevents activities (physical or emotional)	(%, 2013)	10.1[E]	24.3	**17.5**	16.3	● 4/7	▼
Life satisfaction, satisfied or very satisfied	(%, 2013)	95.7	88.0	**91.7**	92.0	● 5/7	▼
Expected years of life	(age, 2007-2009)	77.2	82.0	79.6	80.2	● 4/7	▲
Infant with less than average birth weight	(%, 2010-2012)	4.96	5.66	**5.31**	5.57	● 4/7	▼
Infant deaths	(rate per 1,000 live birth, 2010-2012)	5.11	2.92	**4.01**	3.38	1/4	▼
Premature deaths from heart and stroke	(years of life lost, rate per 10,000, 2008-2012)	136.9	64.2	**100.6**	93.6	● 5/7	▼
Premature deaths from cancer	(years of life lost, rate per 10,000, 2008-2012)	150.5	145.2	**147.8**	171.1	● 1/7	▲
Premature deaths from breathing diseases	(years of life lost, rate per 10,000, 2008-2012)	33.6	16.2	**24.9**	22.3	● 5/7	▲
Premature deaths from injuries	(years of life lost, rate per 10,000, 2008-2012)	102.5	37.2	**69.9**	70.9	● 2/7	▲
Premature deaths due to suicides/self-inflicted injuries	(years of life lost, rate per 10,000, 2008-2012)	62.9	20.8	**41.9**	41.8	● 5/7	▲
HEALTH DETERMINANTS							
Health Services - accounts for 10% of the health determinants							
Has a regular medical doctor	(%, 2013)	82.7	89.8	**86.4**	92.0	♦ 7/7	▼
Medical doctor visit within the last year	(%, 2013)	75.5	80.1	**77.9**	79.6	♦ 6/7	▲
Dental professional visit within the last year	(%, 2013)	--	--	**64.9**	63.6	● 2/7	▲
Avoidable hospitalization	(aged-standardized rate per 100,000, 2012-2013)	432	389	**410**	425	● 3/7	▲
Adults 65 years and up who have received the flu shot in the last year	(%, 2013)	73.1	69.6	**71.1**	65.2	● 2/7	▼
Females (18 to 69 years old) who had a pap test within the last 3 years	(%, 2013)	--	70.4	**70.4**	73.5	♦ 7/7	▼
Females (50 to 69 years old) who had a mammogram in the last 2 years	(%, 2013)	--	72.6	**72.6**	75.5	● 5/7	▼
Overall hospital rating	(%, 2013)	74.2	69.5	71.6	75.4	♦ 7/7	▼
Satisfaction/experience rating for healthcare	(%, 2011)	61.7	58.3	59.9	61.5	● 5*/7	--
Health Behaviours – account for 40% of the health determinants							
Physical activity during free-time, moderately active or active	(%, 2013)	50.0	41.9	**45.7**	49.6	♦ 6/7	▼
Eat 5 or more fruits or vegetables a day	(%, 2013)	28.2	36.4	**32.5**	35.9	♦ 6/7	▲
Adults with unhealthy weight (obese)	(%, 2013)	24.9[E]	30.6	**27.8**	25.9	♦ 6/7	▼
5 or more drinks at one time, at least once a month in the past year (heavy drinking)	(%, 2013)	38.4	11.4[E]	**24.3**	25.1	● 3/7	▼
Seeing your stress as being a lot	(%, 2013)	14.9[E]	22.3	**18.8**	20.1	● 3/7	▲
Current smoker, daily or occasional	(%, 2013)	26.9[E]	18.7[E]	**22.6**	21.8	● 3/7	▼
Number of sexually transmitted infections (genital Chlamydia)	(crude rate per 10,000 population, 2013)	24.0	37.9	**31.0**	23.4	♦ 7/7	▼
Teens who gave birth	(rate per 1,000 females, 2012)	--	18.0	**18.0**	20.2	● 4/7	▲
Always wears a bicycle helmet while on a bike	(%, 2013)	49.7	73.3	**60.3**	53.2	● 2/7	▼
Social and Economic Factors – account for 40% of the health determinants							
No high school diploma (25-64 years old)	(%, 2011)	14.0	11.1	12.5	16.8	● 1/7	--
Unemployment (15+ years)	(%, 2013)	--	--	**8.2**	10.4	● 1/7	▲
Divorced	(%, 2011)	4.4	5.9	5.2	5.2	● 4/7	▲
Single parent family (of total number of census families in private households)	(%, 2011)	3.1	11.6	14.5	16.1	● 2/7	▼
Low income	(%, 2011)	15.1	17.6	16.4	17.2	● 2/7	--
Violent crime	(rate per 100,000 population, 2013)	--	--	--	1,232	--	--
Property crime	(rate per 100,000 population, 2013)	--	--	--	2,837	--	--
Total impaired driving under the influence (drugs or alcohol)	(rate per 100,000 population, 2013)	--	--	--	247	--	--
Sense of belonging to your community, somewhat strong or very strong	(%, 2013)	70.4	65.5	**67.8**	71.3	♦ 6/7	▼
Physical Environment – accounts for 10% of the health determinants							
Coming in contact with second-hand smoke at home	(%, 2013)	--	4.9[E]	**3.8[E]**	5.3	1/4	▲
Coming in contact with second-hand smoke in the past month in vehicles &/or in public place	(%, 2013)	10.0[E]	13.4[E]	**11.9[E]**	14.5	● 2/7	▲
Dwellings rated as having excellent, very good or good indoor air quality	(%, 2011)	--	--	--	90.3	--	--
Occupied dwellings requiring major repairs (NEW)	(%, 2011)	--	--	**10.7**	9.8	● 4/7	--

Rating by best (1) to worst (7). Includes all health zones (7). [E] = Use data with caution, sample size too small, * =another zone has the same ranking, -- = data unavailable, **Bold = Updated indicator**

Zone rank in New Brunswick
- ● Doing well (ranked 1, 2)
- ● Caution (ranked 3, 4, 5)
- ♦ Lagging (ranked 6, 7)

Trend comparison with the last zone 3 Population Health Snapshot
- ▲ Zone indicator value has improved
- ▼ Zone indicator value has gotten worse
- = Zone indicator value has stayed the same
- -- Trending is not available

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Zone 3:
Fredericton / River Valley Area

Population Health Snapshot 2014-2015

Top 10 most frequent hospital admissions for Zone 3 (2013-2014)

Hospital admissions	# of cases	Rate per 10,000
1- Newborn	829	47.1
2- Chronic Obstructive Lung Disease (COPD)	629	35.8
3- Vaginal birth without anaesthetic	451	25.6
4- Heart attack (myocardial infarction)	424	24.1
5- Newborn/neonate 2500+ grams, other minor problem	389	22.1
6- Vaginal birth with anaesthetic and non-major obstetric/gynecologic intervention	330	18.8
7- Knee replacement	315	17.9
8- Abnormal heartbeat (arrythmia)	312	17.7
9- End of life (palliative care)	312	17.7
10- Angina / chest pain	309	17.6

Top 10 most common chronic health conditions for Zone 3 (2011)

Chronic health conditions	Prevalence (%)
1 - High blood pressure	24.4
2 - Arthritis	18.4
3 - GERD (acid reflux disease)	17.0
4 - Chronic pain	15.7
5 - Depression	12.9
6 - Asthma	11.2
7 - Diabetes	9.3
8 - Heart disease	7.9
9 - Cancer	6.6
10 - Emphysema or COPD	2.6

What is avoidable mortality?

Avoidable mortality refers to untimely deaths that should not occur in the presence of timely and effective health care or other public health practices, programs and policy interventions. It can be divided into two causes:

- Avoidable mortality from ***preventable*** causes: Premature deaths that could potentially have been prevented through primary prevention efforts (e.g. screening, vaccination, healthy lifestyles, air quality, etc.)

- Avoidable mortality from ***treatable*** causes: Premature deaths that could potentially have been avoided through secondary or tertiary prevention (e.g. treatment and interventions that can reduce the fatality of the health condition).

Top causes of avoidable deaths in Zone 3:

1. Heart Disease
2. Lung Cancer
3. Suicide
4. Chronic Obstructive Pulmonary Disease
5. Transport Accidents

SPECIFICS ABOUT ZONE 3

Age distribution of the population

Total population = 173,876

*0- 19 years old = **23%***

*20-39 years old = **26%***

*40-64 years old = **36%***

*65 + years old = **15%***

Median age = 41.1

Language spoken at home:

*French = **3%***

*English = **93%***

Immigrant population** = **5.3%

Aboriginal population** = **3.8%

(source: 2011 Census, Statistics Canada)

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Population Health Snapshot 2014-2015

Zone 4: Madawaska / North-West Area

		Zone 4 Male	Zone 4 Female	Zone 4 Average	NB Average	Rank (Zone 4 vs. other zones)	Trend compared to last zone 4 snapshot
POPULATION HEALTH OUTCOMES							
See their health as being very good or excellent	(%, 2013)	41.5	50.0	**46.1**	54.0	♦ **7/7**	▼
See their mental health as being very good or excellent	(%, 2013)	62.8	49.5	**55.7**	66.7	♦ **7/7**	▼
Pain or soreness that prevents activities (physical or emotional)	(%, 2013)	24.6[E]	18.6[E]	**21.4**[E]	16.3	♦ **6/7**	▼
Life satisfaction, satisfied or very satisfied	(%, 2013)	87.8	82.1	**84.8**	92.0	♦ **7/7**	▼
Expected years of life	(age, 2007-2009)	76.8	81.6	79.3	80.2	♦ 6/7	▲
Infant with less than average birth weight	(%, 2010-2012)	5.82	6.84	**6.32**	5.57	♦ **7/7**	▼
Infant deaths	(rate per 1,000 live birth, 2010-2012)	--	--	**--**	3.38	--	--
Premature deaths from heart and stroke	(years of life lost, rate per 10,000, 2008-2012)	130.4	32.9	**81.5**	93.6	● **3/7**	▲
Premature deaths from cancer	(years of life lost, rate per 10,000, 2008-2012)	200.3	196.9	**198.6**	171.1	♦ **6/7**	▲
Premature deaths from breathing diseases	(years of life lost, rate per 10,000, 2008-2012)	20.7	15.9	**18.3**	22.3	● **3/7**	▲
Premature deaths from injuries	(years of life lost, rate per 10,000, 2008-2012)	116.9	33.8	75.2	70.9	● **5/7**	▲
Premature deaths due to suicides/self-inflicted injuries	(years of life lost, rate per 10,000, 2008-2012)	85.5	23.3	**54.3**	41.8	♦ **6/7**	▲
HEALTH DETERMINANTS							
Health Services - accounts for 10% of the health determinants							
Has a regular medical doctor	(%, 2013)	92.8	95.6	**94.3**	92.0	● **3*/7**	▼
Medical doctor visit within the last year	(%, 2013)	70.5	86.0	**78.8**	79.6	● **5/7**	▼
Dental professional visit within the last year	(%, 2013)	--	--	**54.6**	63.6	♦ **7/7**	▼
Avoidable hospitalization	(aged-standardized rate per 100,000, 2012-2013)	530	444	**485**	425	● **5/7**	▲
Adults 65 years and up who have received the flu shot in the last year	(%, 2013)	51.4[E]	51.3[E]	**51.4**[E]	65.2	♦ **7/7**	▼
Females (18 to 69 years old) who had a pap test within the last 3 years	(%, 2013)	--	72.3	**72.3**	73.5	● **4/7**	▲
Females (50 to 69 years old) who had a mammogram in the last 2 years	(%, 2013)	--	75.8	**75.8**	75.5	● **4/7**	▼
Overall hospital rating	(%, 2013)	81.5	84.9	83.3	75.4	● 1/7	▲
Satisfaction/experience rating for healthcare	(%, 2011)	65.1	67.0	66.1	61.5	● 1/7	--
Health Behaviours – account for 40% of the health determinants							
Physical activity during free-time, moderately active or active	(%, 2013)	59.0	40.5	**49.0**	49.6	● **4/7**	▲
Eat 5 or more fruits or vegetables a day	(%, 2013)	33.5	34.6[E]	**34.1**	35.9	● **5/7**	▼
Adults with unhealthy weight (obese)	(%, 2013)	30.0[E]	23.4[E]	**26.5**	25.9	● **5/7**	▲
5 or more drinks at one time, at least once a month in the past year (heavy drinking)	(%, 2013)	36.9[E]	17.1[E]	**26.1**	25.1	♦ **6/7**	▼
Seeing your stress as being a lot	(%, 2013)	19.2[E]	35.9[E]	**27.9**	20.1	♦ **7/7**	▼
Current smoker, daily or occasional	(%, 2013)	23.0[E]	26.5[E]	**24.9**	21.8	● **5/7**	▲
Number of sexually transmitted infections (genital Chlamydia)	(crude rate per 10,000 population, 2013)	7.1	16.0	**11.6**	23.4	● **2/7**	▲
Teens who gave birth	(rate per 1,000 females, 2012)	--	16.6	**16.6**	20.2	● **3/7**	▼
Always wears a bicycle helmet while on a bike	(%, 2013)	35.5[E]	--	**34.6**[E]	53.2	♦ **6/7**	▼
Social and Economic Factors – account for 40% of the health determinants							
No high school diploma (25-64 years old)	(%, 2011)	23.7	22.2	23.0	16.8	● 5/7	--
Unemployment (15+ years)	(%, 2013)	--	--	**12.0**	10.4	● **4/7**	▼
Divorced	(%, 2011)	4.2	4.3	4.3	5.2	● 2/7	▲
Single parent family (of total number of census families in private households)	(%, 2011)	3.3	10.7	14.0	16.1	● 1/7	▼
Low income	(%, 2011)	18.1	22.3	20.2	17.2	● 5/7	--
Violent crime	(rate per 100,000 population, 2013)	--	--	**--**	1,232	--	--
Property crime	(rate per 100,000 population, 2013)	--	--	**--**	2,837	--	--
Total impaired driving under the influence (drugs or alcohol)	(rate per 100,000 population, 2013)	--	--	**--**	247	--	--
Sense of belonging to your community, somewhat strong or very strong	(%, 2013)	70.4	71.5	**71.0**	71.3	● **4/7**	▼
Physical Environment – accounts for 10% of the health determinants							
Coming in contact with second-hand smoke at home	(%, 2013)	--	--	--	5.3	♦ --	--
Coming in contact with second-hand smoke in the past month in vehicles &/or in public place	(%, 2013)	--	--	**9.3**[E]	14.5	♦ **1/7**	▲
Dwellings rated as having excellent, very good or good indoor air quality	(%, 2011)	--	--	--	90.3	--	--
Occupied dwellings requiring major repairs (NEW)	(%, 2011)	**--**	**--**	**8.9**	9.8	● **2/7**	**--**

Rating by best (1) to worst (7). Includes all health zones (7). [E] = Use data with caution, sample size too small, * =another zone has the same ranking, -- = data unavailable, **Bold = Updated indicator**

Trend comparison with the last zone 4 Population Health Snapshot

- ▲ Zone indicator value has improved
- ▼ Zone indicator value has gotten worse
- = Zone indicator value has stayed the same
- -- Trending is not available

Zone rank in New Brunswick

- ● Doing well (ranked 1, 2)
- ● Caution (ranked 3, 4, 5)
- ♦ Lagging (ranked 6, 7)

Zone 4:
Madawaska / North-West Area
Population Health Snapshot 2014-2015

Top 10 most frequent hospital admissions for Zone 4 (2013-2014)

Hospital admissions	# of cases	Rate per 10,000
1- Chronic obstructive lung disease (COPD)	311	64.2
2- Newborn	199	41.1
3- Abnormal heartbeat (arrythmia)	170	35.1
4- Stress reaction/adjusment disorder	165	34.1
5- Depressive episode without electroconvulsive therapy (ECT)	136	28.1
6- Heart attack (myocardial infarction)	129	26.6
7- Vaginal birth with anaesthetic	125	25.8
8- Inflammation of small intestines (Enteritis)	124	25.6
9- Recovering from illness or disease	118	24.4
10- End of life (palliative care)	118	24.4

Top 10 most common chronic health conditions in New Brunswick (2011)

Chronic health conditions	Prevalence (%)
1 - High Blood Pressure	25.6
2 - Chronic Pain	16.7
3 - Arthritis	15.8
4 - GERD (Acid Reflux Disease)	15.4
5 - Depression	11.5
6 - Heart Disease	11.1
7 - Diabetes	9.0
8 - Asthma	7.8
9 - Cancer	5.6
10 - Emphysema or COPD	3.9

SPECIFICS ABOUT ZONE 4

Age distribution of the population

Total population = 48,998

*0- 19 years old = **20%***

*20-39 years old = **22%***

*40-64 years old = **42%***

*65 + years old = **17%***

Median age = 46.6

Language spoken at home:

*French = **88.4%***

*English= **7.7%***

Immigrant population** = **3.5%

Aboriginal population** = **1.7%

(source: 2011 Census, Statistics Canada)

What is avoidable mortality?

Avoidable mortality refers to untimely deaths that should not occur in the presence of timely and effective health care or other public health practices, programs and policy interventions. It can be divided into two causes:

- Avoidable mortality from ***preventable*** causes: Premature deaths that could potentially have been prevented through primary prevention efforts (e.g. screening, vaccination, healthy lifestyles, air quality, etc.)

- Avoidable mortality from ***treatable*** causes: Premature deaths that could potentially have been avoided through secondary or tertiary prevention (e.g. treatment and interventions that can reduce the fatality of the health condition).

Top causes of avoidable deaths in Zone 4:

1. Lung Cancer
2. Heart Disease
3. Suicide
4. Colorectal Cancer
5. Transport Accidents

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Population Health Snapshot 2014-2015

Zone 5: Restigouche Area

		Zone 5 Male	Zone 5 Female	Zone 5 Average	NB Average	Rank (Zone 5 vs. other zones)	Trend compared to last zone 5 snapshot
POPULATION HEALTH OUTCOMES							
See their health as being very good or excellent	(%, 2013)	59.4	45.3	**52.7**	54.0	● **3/7**	▲
See their mental health as being very good or excellent	(%, 2013)	62.3	64.2	**63.2**	66.7	♦ **6/7**	▲
Pain or soreness that prevents activities (physical or emotional)	(%, 2013)	16.3[E]	30.6	**23.1**	16.3	♦ **7/7**	▼
Life satisfaction, satisfied or very satisfied	(%, 2013)	87.3	90.7	**89.0**	92.0	♦ **6/7**	▼
Expected years of life	(age, 2007-2009)	74.7	82.2	78.6	80.2	♦ 7/7	▼
Infant with less than average birth weight	(%, 2010-2012)	4.2	5.1	**4.6**	5.6	● **1/7**	▲
Infant deaths	(rate per 1,000 live birth, 2010-2012)	--	--	**--**	3.4	**--**	--
Premature deaths from heart and stroke	(years of life lost, rate per 10,000, 2008-2012)	194.5	88.3	**140.8**	93.6	♦ **7/7**	▼
Premature deaths from cancer	(years of life lost, rate per 10,000, 2008-2012)	242.5	157.4	**199.5**	171.1	♦ **7/7**	▼
Premature deaths from breathing diseases	(years of life lost, rate per 10,000, 2008-2012)	44.9	18.4	**31.5**	22.3	♦ **7/7**	▼
Premature deaths from injuries	(years of life lost, rate per 10,000, 2008-2012)	168.7	35.8	**101.5**	70.9	♦ **7/7**	▼
Premature deaths due to suicides/self-inflicted injuries	(years of life lost, rate per 10,000, 2008-2012)	95.2	47.9	**71.3**	41.8	♦ **7/7**	▼
HEALTH DETERMINANTS							
Health Services - accounts for 10% of the health determinants							
Has a regular medical doctor	(%, 2012)	95.5	98.2	**96.8**	92.0	● **1/7**	▲
Medical doctor visit within the last year	(%, 2013)	80.3	83.2	**81.7**	79.6	● **3/7**	▼
Dental professional visit within the last year	(%, 2013)	--	--	**62.7**	63.6	● **4/7**	▲
Avoidable hospitalization	(aged-standardized rate per 100,000, 2012-2013)	663	653	**660**	425	♦ **7/7**	▼
Adults 65 years and up who have received the flu shot in the last year	(%, 2013)	59.2[E]	63.7	**61.7**	65.2	● **5/7**	▲
Females (18 to 69 years old) who had a pap test within the last 3 years	(%, 2013)	--	70.7	**70.7**	73.5	♦ **6/7**	▲
Females (50 to 69 years old) who had a mammogram in the last 2 years	(%, 2013)	--	71.4	**71.4**	75.5	♦ **6/7**	▼
Overall hospital rating	(%, 2013)	77.8	72.6	75.3	75.4	● 4/7	▲
Satisfaction/experience rating for healthcare	(%, 2011)	64.1	56.0	59.8	61.5	♦ 7/7	--
Health Behaviours – account for 40% of the health determinants							
Physical activity during free-time, moderately active or active	(%, 2013)	60.5	41.9	**51.5**	49.6	● **2/7**	▲
Eat 5 or more fruits or vegetables a day	(%, 2013)	34.8[E]	40.9[E]	**37.8**	35.9	● **2/7**	▲
Adults with unhealthy weight (obese)	(%, 2013)	20.8[E]	24.5[E]	**22.7[E]**	25.9	● **1/7**	▲
5 or more drinks at one time, at least once a month in the past year (heavy drinking)	(%, 2013)	23.9[E]	--	**21.2[E]**	25.1	● **2/7**	▲
Seeing your stress as being a lot	(%, 2013)	24.3[E]	22.5[E]	**23.4[E]**	20.1	♦ **6/7**	▲
Current smoker, daily or occasional	(%, 2013)	30.5[E]	28.4[E]	**29.5**	21.8	♦ **7/7**	▼
Number of sexually transmitted infections (genital Chlamydia)	(crude rate per 10,000 population, 2013)	7.8	13.4	**10.7**	23.4	● **1/7**	▲
Teens who gave birth	(rate per 1,000 females, 2012)	--	15.4	**15.4**	20.2	● **2/7**	▲
Always wears a bicycle helmet while on a bike	(%, 2013)	43.0	--	**37.9[E]**	53.2	● **4*/7**	▲
Social and Economic Factors – account for 40% of the health determinants							
No high school diploma (25-64 years old)	(%, 2011)	26.7	23.9	25.3	16.8	♦ 6/7	--
Unemployment (15+ years)	(%, 2013)	--	--	**12.6**	10.4	● **5/7**	▲
Divorced	(%, 2011)	5.1	5.6	5.3	5.2	♦ 6/7	▲
Single parent family (of total number of census families in private households)	(%, 2011)	3.7	14.5	18.2	16.1	● 5/7	▲
Low income	(%, 2011)	22.9	27.6	25.3	17.2	♦ 7/7	--
Violent crime	(rate per 100,000 population, 2013)	--	--	**--**	1,232	**--**	--
Property crime	(rate per 100,000 population, 2013)	--	--	**--**	2,837	**--**	--
Total impaired driving under the influence (drugs or alcohol)	(rate per 100,000 population, 2013)	--	--	**--**	247	**--**	--
Sense of belonging to your community, somewhat strong or very strong	(%, 2013)	72.1	75.3	**73.6**	71.3	● **3/7**	▲
Physical Environment – accounts for 10% of the health determinants							
Coming in contact with second-hand smoke at home	(%, 2013)	--	--	--	5.3	**--**	--
Coming in contact with second-hand smoke in the past month in vehicles &/or in public place	(%, 2013)	19.9[E]	--	**12.4[E]**	14.5	● **3/7**	▼
Dwellings rated as having excellent, very good or good indoor air quality	(%, 2011)	--	--	--	90.3	--	--
Occupied dwellings requiring major repairs (NEW)	(%, 2011)	--	--	**11.0**	9.8	● **5/7**	--

Rating by best (1) to worst (7). Includes all health zones (7). [E] = Use data with caution, sample size too small, * = another zone has the same ranking, -- = data unavailable, **Bold = Updated indicator**

Trend comparison with the last zone 5 Population Health Snapshot
- ▲ Zone indicator value has improved
- ▼ Zone indicator value has gotten worse
- = Zone indicator value has stayed the same
- -- Trending is not available

Zone rank in New Brunswick
- ● Doing well (ranked 1, 2)
- ● Caution (ranked 3, 4, 5)
- ♦ Lagging (ranked 6, 7)

Zone 5: Restigouche Area

Population Health Snapshot 2014-2015

Top 10 most frequent hospital admissions for Zone 5 (2013-2014)

Hospital admissions	# of cases	Rate per 10,000
1- Chronic Obstructive Lung Disease (COPD)	211	80.4
2- Heart attack (myocardial infarction)	155	59.1
3- Abnormal heartbeat (arrythmia)	100	38.1
4- General symptom/sign	96	36.6
5- Heart failure without cardiac catheter	93	35.4
6- Recovering from illness or disease	91	34.7
7- Depressive episode without electroconvulsive therapy (ECT)	89	33.9
8- End of life (palliative care)	88	33.5
9- Inflammation of small intestines (enteritis)	87	33.1
10- Newborn	77	29.3

Top 10 most common chronic health conditions for Zone 5 (2011)

Chronic health conditions	Prevalence (%)
1 - High Blood Pressure	32.0
2 - Arthritis	20.9
3 - GERD (Acid Reflux Disease)	18.6
4 - Chronic Pain	17.0
5 - Depression	14.0
6 - Diabetes	10.3
7 - Asthma	9.6
8 - Heart Disease	8.7
9 - Cancer	7.5
10 - Mood Disorder other than Depression	4.0

SPECIFICS ABOUT ZONE 5

Age distribution of the population

Total population = 27,897

*0- 19 years old = **18%***

*20-39 years old = **18%***

*40-64 years old = **43%***

*65 + years old = **21%***

Median age = 49.3

Language spoken at home:

*French = **51.1%***

*English = **43.8%***

Immigrant population** = **1.4%

Aboriginal population** = **4.7%

(source: 2011 Census, Statistics Canada)

What is avoidable mortality?

Avoidable mortality refers to untimely deaths that should not occur in the presence of timely and effective health care or other public health practices, programs and policy interventions. It can be divided into two causes:

- Avoidable mortality from ***preventable*** causes: Premature deaths that could potentially have been prevented through primary prevention efforts (e.g. screening, vaccination, healthy lifestyles, air quality, etc.)

- Avoidable mortality from ***treatable*** causes: Premature deaths that could potentially have been avoided through secondary or tertiary prevention (e.g. treatment and interventions that can reduce the fatality of the health condition).

Top causes of avoidable deaths in Zone 5:

1. Lung Cancer
2. Heart Disease
3. Suicide
4. Cerebrovascular Diseases
5. Chronic Obstructive Pulmonary Disease

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Population Health Snapshot 2014-2015

Zone 6: Bathurst / Acadian Peninsula Area

		Zone 6 Male	Zone 6 Female	Zone 6 Average	NB Average	Rank (Zone 6 vs. other zones)	Trend compared to last zone 6 snapshot
POPULATION HEALTH OUTCOMES							
See their health as being very good or excellent	(%, 2013)	54.8	48.2	**51.7**	54.0	🟡 **5/7**	▲
See their mental health as being very good or excellent	(%, 2013)	64.1	65.7	**64.9**	66.7	🟡 **5/7**	▼
Pain or soreness that prevents activities (physical or emotional)	(%, 2013)	--	11.1[E]	**10.3[E]**	16.3	🟢 **1/7**	▲
Life satisfaction, satisfied or very satisfied	(%, 2013)	92.8	90.6	**91.8**	92.0	🟡 **4/7**	▼
Expected years of life	(age, 2007-2009)	78.9	83.8	81.3	80.2	🟢 2/7	▼
Infant with less than average birth weight	(%, 2010-2012)	4.4	6.0	**5.2**	5.6	🟡 **3/7**	▲
Infant deaths	(rate per 1,000 live birth, 2010-2012)	--	--	**--**	3.4	**--**	--
Premature deaths from heart and stroke	(years of life lost, rate per 10,000, 2008-2012)	136.7	45.2	**90.9**	93.6	🟡 **4/7**	▼
Premature deaths from cancer	(years of life lost, rate per 10,000, 2008-2012)	195.2	156.1	**175.6**	171.1	🟡 **3/7**	▲
Premature deaths from breathing diseases	(years of life lost, rate per 10,000, 2008-2012)	16.6	13.8	**15.2**	22.3	🟢 **1/7**	▲
Premature deaths from injuries	(years of life lost, rate per 10,000, 2008-2012)	117.9	51.2	**84.5**	70.9	♦ **6/7**	▼
Premature deaths due to suicides/self-inflicted injuries	(years of life lost, rate per 10,000, 2008-2012)	64.2	16.7	**40.4**	41.8	🟡 **4/7**	▼
HEALTH DETERMINANTS							
Health Services - accounts for 10% of the health determinants							
Has a regular medical doctor	(%, 2013)	91.7	96.3	**93.9**	92.0	🟡 **5/7**	▼
Medical doctor visit within the last year	(%, 2013)	72.5	83.0	**77.5**	79.6	♦ **7/7**	▼
Dental professional visit within the last year	(%, 2013)	--	--	**60.9**	63.6	🟡 **5/7**	▲
Avoidable hospitalization	(aged-standardized rate per 100,000, 2012-2013)	473	437	**454**	425	🟡 **4/7**	▲
Adults 65 years and up who have received the flu shot in the last year	(%, 2013)	64.0	42.4[E]	**52.8**	65.2	♦ **6/7**	▼
Females (18 to 69 years old) who had a pap test within the last 3 years	(%, 2013)	--	81.2	**81.2**	73.5	🟢 **1/7**	▲
Females (50 to 69 years old) who had a mammogram in the last 2 years	(%, 2013)	--	86.3	**86.3**	75.5	🟢 **2/7**	▲
Overall hospital rating	(%, 2013)	79.2	78.5	78.8	75.4	🟢 2/7	▲
Satisfaction/experience rating for healthcare	(%, 2011)	65.2	63.1	64.1	61.5	🟡 3/7	--
Health Behaviours – account for 40% of the health determinants							
Physical activity during free-time, moderately active or active	(%, 2013)	53.7	38.6	**46.5**	49.6	🟡 **5/7**	▼
Eat 5 or more fruits or vegetables a day	(%, 2013)	40.4	45.9	**43.1**	35.9	🟢 **1/7**	▼
Adults with unhealthy weight (obese)	(%, 2013)	25.4[E]	24.1	**24.8**	25.9	🟢 **2/7**	▼
5 or more drinks at one time, at least once a month in the past year (heavy drinking)	(%, 2013)	35.9[E]	12.2[E]	**24.8[E]**	25.1	🟡 **4/7**	▼
Seeing your stress as being a lot	(%, 2013)	--	13.7[E]	**15.0[E]**	20.1	🟢 **1/7**	▼
Current smoker, daily or occasional	(%, 2013)	27.7[E]	19.8[E]	**24.0[E]**	21.8	🟡 **4/7**	▼
Number of sexually transmitted infections (genital Chlamydia)	(crude rate per 10,000 population, 2013)	10.0	26.2	**18.2**	23.4	🟡 **4/7**	▲
Teens who gave birth	(rate per 1,000 females, 2012)	--	13.9	**13.9**	20.2	🟢 **1/7**	▲
Always wears a bicycle helmet while on a bike	(%, 2013)	33.6[E]	43.8[E]	**37.9[E]**	53.2	🟡 **4*/7**	▼
Social and Economic Factors – account for 40% of the health determinants							
No high school diploma (25-64 years old)	(%, 2011)	35.7	29.7	28.9	16.8	♦ 7/7	--
Unemployment (15+ years)	(%, 2013)	--	--	**17.1**	10.4	♦ **6/7**	▼
Divorced	(%, 2011)	4.2	4.4	4.3	5.2	🟢 1/7	▲
Single parent family (of total number of census families in private households)	(%, 2011)	4.2	14.4	18.6	16.1	♦ 7/7	▲
Low income	(%, 2011)	19.3	23.4	21.4	17.2	♦ 6/7	--
Violent crime	(rate per 100,000 population, 2013)	--	--	**--**	1,232	**--**	--
Property crime	(rate per 100,000 population, 2013)	--	--	**--**	2,837	**--**	--
Total impaired driving under the influence (drugs or alcohol)	(rate per 100,000 population, 2013)	--	--	**--**	247	**--**	--
Sense of belonging to your community, somewhat strong or very strong	(%, 2013)	66.0	75.0	**70.3**	71.3	🟡 **5/7**	▲
Physical Environment – accounts for 10% of the health determinants							
Coming in contact with second-hand smoke at home	(%, 2013)	--	--	**6.2[E]**	5.3	**4/4**	--
Coming in contact with second-hand smoke in the past month in vehicles &/or in public place	(%, 2013)	--	17.2[E]	**13.1[E]**	14.5	🟡 **4/7**	▼
Dwellings rated as having excellent, very good or good indoor air quality	(%, 2011)	--	--	**--**	90.3	--	--
Occupied dwellings requiring major repairs (NEW)	(%, 2011)	--	--	**12.1**	9.8	♦ **7/7**	--

Rating by best (1) to worst (7). Includes all health zones (7). [E] = Use data with caution, sample size too small, * =another zone has the same ranking, *F* or --= data unavailable, **Bold = Updated indicator**

Trend comparison with the last zone 6 Population Health Snapshot
- ▲ Zone indicator value has improved
- ▼ Zone indicator value has gotten worse
- = Zone indicator value has stayed the same
- -- Trending is not available

Zone rank in New Brunswick
- 🟢 Doing well (ranked 1, 2)
- 🟡 Caution (ranked 3, 4, 5)
- ♦ Lagging (ranked 6, 7)

Zone 6:
Bathurst / Acadian Peninsula Area
Population Health Snapshot 2014-2015

Top 10 most frequent hospital admissions for Zone 6 (2013-2014)

Hospital admissions	# of cases	Rate per 10,000
1- Chronic Obstructive Lung Disease (COPD)	348	45.4
2- Awaiting placement	231	30.2
3- Heart attack (myocardial infarction)	222	29.0
4- Newborn	218	28.5
5- Viral/unspecified pneumonia	210	27.4
6- End of life (palliative care)	193	25.2
7- Inflammation of small intestines (Enteritis)	186	24.3
8- Hysterectomy with no cancer	171	22.3
9- Abnormal heartbeat (arrythmia)	163	21.3
10- Heart failure without cardiac catheter	142	18.5

Top 10 most common chronic health conditions for Zone 6 (2011)

Chronic health conditions	Prevalence (%)
1 - High Blood Pressure	28.1
2 - Arthritis	16.3
3 - GERD (Acid Reflux Disease)	15.3
4 - Chronic Pain	13.7
5 - Depression	13.1
6 - Asthma	12.0
7 - Diabetes	9.7
8 - Heart Disease	8.7
9 - Cancer	7.0
10 - Mood Disorder other than Depression	2.6

SPECIFICS ABOUT ZONE 6

Age distribution of the population

Total population = 76,816

*0- 19 years old = **18%***

*20-39 years old = **20%***

*40-64 years old = **43%***

*65 + years old = **19%***

Median age = 47.9

Language spoken at home:

*French = **80.7%***

*English= **16.5%***

Immigrant population** = **0.8%

Aboriginal population** = **2.7%

(source: 2011 Census, Statistics Canada)

What is avoidable mortality?

Avoidable mortality refers to untimely deaths that should not occur in the presence of timely and effective health care or other public health practices, programs and policy interventions. It can be divided into two causes:

- Avoidable mortality from ***preventable*** causes: Premature deaths that could potentially have been prevented through primary prevention efforts (e.g. screening, vaccination, healthy lifestyles, air quality, etc.)

- Avoidable mortality from ***treatable*** causes: Premature deaths that could potentially have been avoided through secondary or tertiary prevention (e.g. treatment and interventions that can reduce the fatality of the health condition).

Top causes of avoidable deaths in Zone 6:

1. Lung Cancer
2. Heart Disease
3. Transport Accidents
4. Breast Cancer
5. Suicide

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Population Health Snapshot 2014-2015

Zone 7 : Miramichi Area

		Zone 7 Male	Zone 7 Female	Zone 7 Average	NB Average	Rank (Zone 7 vs. other zones)	Trend compared to last zone 7 snapshot
POPULATION HEALTH OUTCOMES							
See their health as being very good or excellent	(%, 2013)	52.3	49.5	**50.7**	54.0	♦ **6/7**	▼
See their mental health as being very good or excellent	(%, 2013)	68.4	67.4	**67.9**	66.7	● **2/7**	▲
Pain or soreness that prevents activities (physical or emotional)	(%, 2013)	22.7[E]	19.9[E]	**21.1**	16.3	● **5/7**	▼
Life satisfaction, satisfied or very satisfied	(%, 2013)	89.8	94.7	**92.6**	92.0	● **3/7**	▼
Expected years of life	(age, 2007-2009)	76.9	82.6	79.7	80.2	● 3/7	▼
Infant with less than average birth weight	(%, 2010-2012)	6.2	5.5	**5.83**	5.6	● **5/7**	▲
Infant deaths	(rate per 1,000 live birth, 2010-2012)	--	--	**4.5**	3.4	**4/4**	▲
Premature deaths from heart and stroke	(years of life lost, rate per 10,000, 2008-2012)	116.8	39.1	**78.0**	93.6	● **2/7**	▲
Premature deaths from cancer	(years of life lost, rate per 10,000, 2008-2012)	204.5	189.8	**197.2**	171.1	● **5/7**	▲
Premature deaths from breathing diseases	(years of life lost, rate per 10,000, 2008-2012)	23.1	17.8	**20.5**	22.3	● **4/7**	▲
Premature deaths from injuries	(years of life lost, rate per 10,000, 2008-2012)	109.5	35.6	**72.6**	70.9	● **4/7**	▲
Premature deaths due to suicides/self-inflicted injuries	(years of life lost, rate per 10,000, 2008-2012)	68.6	1.8	**35.3**	41.8	● **1/7**	▼
HEALTH DETERMINANTS							
Health Services - accounts for 10% of the health determinants							
Has a regular medical doctor	(%, 2013)	94.6	94.9	**94.8**	92.0	● **2/7**	▼
Medical doctor visit within the last year	(%, 2013)	79.6	85.9	**83.1**	79.6	● **1/7**	▲
Dental professional visit within the last year	(%, 2013)	--	--	**59.8**	63.6	♦ **6/7**	▲
Avoidable hospitalization	(aged-standardized rate per 100,000, 2012-2013)	611	443	**525**	425	♦ **6/7**	▲
Adults 65 years and up who have received the flu shot in the last year	(%, 2013)	75.3	71.8	**73.4**	65.2	● **1/7**	▲
Females (18 to 69 years old) who had a pap test within the last 3 years	(%, 2013)	--	73.8	**73.8**	73.5	● **3/7**	▲
Females (50 to 69 years old) who had a mammogram in the last 2 years	(%, 2013)	--	93.6	**93.6**	75.5	● **1/7**	▲
Overall hospital rating	(%, 2013)	77.4	77.8	77.6	75.4	● 3/7	▲
Satisfaction/experience rating for healthcare	(%, 2011)	64.3	64.9	64.6	61.5	● 2/7	--
Health Behaviours – account for 40% of the health determinants							
Physical activity during free-time, moderately active or active	(%, 2013)	45.1	42.8	**43.8**	49.6	♦ **7/7**	▼
Eat 5 or more fruits or vegetables a day	(%, 2013)	16.9[E]	42.3	**31.5**	35.9	♦ **7/7**	▼
Adults with unhealthy weight (obese)	(%, 2013)	25.9[E]	30.0[E]	**28.2**	25.9	♦ **7/7**	▲
5 or more drinks at one time, at least once a month in the past year (heavy drinking)	(%, 2013)	32.7[E]	10.2[E]	**20.0**[E]	25.1	● **1/7**	▲
Seeing your stress as being a lot	(%, 2013)	--	17.6[E]	**16.3**[E]	20.1	● **2/7**	▼
Current smoker, daily or occasional	(%, 2013)	30.8[E]	23.6[E]	**26.8**	21.8	♦ **6/7**	▼
Number of sexually transmitted infections (genital Chlamydia)	(crude rate per 10,000 population, 2013)	5.6	19.6	**12.7**	23.4	● **3/7**	▲
Teens who gave birth	(rate per 1,000 females, 2012)	--	19.8	**19.8**	20.2	● **5/7**	▲
Always wears a bicycle helmet while on a bike	(%, 2013)	--	--	**26.0**[E]	53.2	♦ **7/7**	▼
Social and Economic Factors – account for 40% of the health determinants							
No high school diploma (25-64 years old)	(%, 2011)	24.6	18.8	21.5	16.8	● 4/7	--
Unemployment (15+ years)	(%, 2013)	--	--	**18.2**	10.4	♦ **7/7**	▲
Divorced	(%, 2011)	4.1	4.7	4.4	5.2	● 3/7	▲
Single parent family (of total number of census families in private households)	(%, 2011)	3.8	14.6	18.3	16.1	♦ 6/7	▼
Low income	(%, 2011)	14.4	18.8	16.7	17.2	● 3/7	--
Violent crime	(rate per 100,000 population, 2013)	--	--	--	1,232	--	--
Property crime	(rate per 100,000 population, 2013)	--	--	--	2,837	--	--
Total impaired driving under the influence (drugs or alcohol)	(rate per 100,000 population, 2013)	--	--	--	247	--	--
Sense of belonging to your community, somewhat strong or very strong	(%, 2013)	88.6	85.6	**86.9**	71.3	● **1/7**	▲
Physical Environment – accounts for 10% of the health determinants							
Coming in contact with second-hand smoke at home	(%, 2013)	--	--	--	5.3	--	--
Coming in contact with second-hand smoke in the past month in vehicles &/or in public place	(%, 2013)	--	12.7[E]	**15.3**[E]	14.5	♦ **6/7**	▼
Dwellings rated as having excellent, very good or good indoor air quality	(%, 2011)	--	--	--	90.3	--	--
Occupied dwellings requiring major repairs (NEW)	(%, 2011)	--	--	**11.4**	9.8	♦ **6/7**	--

Rating by best (1) to worst (7). Includes all health zones (7). [E] = Use data with caution, sample size too small, * =another zone has the same ranking, -- = data unavailable, **Bold = Updated indicator**

Trend comparison with the last zone 7 Population Health Snapshot
- ▲ Zone indicator value has improved
- ▼ Zone indicator value has gotten worse
- = Zone indicator value has stayed the same
- -- Trending is not available

Zone rank in New Brunswick
- ● Doing well (ranked 1, 2)
- ● Caution (ranked 3, 4, 5)
- ♦ Lagging (ranked 6, 7)

Zone 7:
Miramichi Area
Population Health Snapshot 2014-2015

Top 10 most frequent hospital admissions for Zone 7 (2013-2014)

Hospital admissions	# of cases	Rate per 10,000
1- Chronic Obstructive Lung Disease (COPD)	238	53.8
2- Heart attack (myocardial infarction)	179	40.5
3- Newborn	178	40.3
4- inflammation of small intestines (enteritis)	127	28.7
5- Recovering from illness or disease	124	28.1
6- Viral/unspecified pneumonia	119	26.9
7- End of life (palliative care)	114	25.8
8- Abnormal heartbeat (arrythmia)	112	25.3
9- Normal newborn multiple/caesarean delivery	103	23.3
10- Heart failure without cardiac catheter	98	22.2

Top 10 most common chronic health conditions for Zone 7 (2011)

Chronic health conditions	Prevalence (%)
1 - High Blood Pressure	27.8
2 - GERD (Acid Reflux Disease)	17.6
3 - Arthritis	16.1
4 - Chronic Pain	13.8
5 - Depression	12.1
6 - Asthma	9.6
7 - Diabetes	9.5
8 - Heart Disease	8.4
9 - Cancer	6.7
10 - Mood Disorder other than Depression	2.7

SPECIFICS ABOUT ZONE 7

Age distribution of the population

Total population = 44,688

*0- 19 years old = **20%***

*20-39 years old = **21%***

*40-64 years old = **40%***

*65 + years old = **18%***

Median age = 46.0

Language spoken at home:

*French = **23.6%***

*English = **72.4%***

Immigrant population** = **1.5%

Aboriginal population** = **6.2%

(source: 2011 Census, Statistics Canada)

What is avoidable mortality?

Avoidable mortality refers to untimely deaths that should not occur in the presence of timely and effective health care or other public health practices, programs and policy interventions. It can be divided into two causes:

- Avoidable mortality from ***preventable*** causes: Premature deaths that could potentially have been prevented through primary prevention efforts (e.g. screening, vaccination, healthy lifestyles, air quality, etc.)

- Avoidable mortality from ***treatable*** causes: Premature deaths that could potentially have been avoided through secondary or tertiary prevention (e.g. treatment and interventions that can reduce the fatality of the health condition).

Top causes of avoidable deaths in Zone 7:

1. Lung Cancer
2. Heart Disease
3. Transport Accidents
4. Diabetes
5. Breast Cancer

New Brunswick Health Council | Conseil de la santé du Nouveau-Brunswick
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Summary
- Population Health Snapshot per zone, New Brunswick and Canada
2014-2015

● Doing well (ranked 1 or 2 out of 7)
♦ Lagging (ranked 6 or 7 out of 7)

Indicator	Desired direction	Zone 1: Moncton/ South-East Area	Zone 2: Fundy Shore / Saint John Area	Zone 3: Fredericton / River Valley Area	Zone 4: Madawaska / North-West Area	Zone 5: Restigouche Area	Zone 6: Bathurst / Acadian Peninsula Area	Zone 7: Miramichi area	New Brunswick	Canada
Population Health Status										
See their health as being very good or excellent (%, 2013)	▲Better	52.4	● 58.8	● 55.3	♦ 46.1	52.7	51.7	♦ 50.7	54.0	59.4
See their mental health as being very good or excellent (%, 2013)	▲ Better	● 69.2	67.3	67.5	♦ 55.7	♦ 63.2	64.9	● 67.9	64.7	71.7
Pain or soreness that prevents activities (physical or emotional) (%, 2013)	▼ Better	● 13.9	● 17.3	17.5	♦ 21.4[E]	23.1	● 10.3[E]	21.1	16.3	14.7
Life satisfaction, satisfied or very satisfied (%, 2013)	▲ Better	● 93.5	● 93.2	91.7	♦ 84.8	♦ 89.0	91.8	92.6	92.0	91.7
Expected years of life (age, 2007-09)	▲ Better	● 81.4	79.5	79.6	♦ 79.3	♦ 78.6	● 81.3	79.7	80.2	81.1
Infant with less than average birth weight (%, 2010-2012)	▼ Better	♦ 6.16	● 5.13	5.31	♦ 6.32	● 4.63	5.21	5.83	5.57	--
Infant deaths (rate per 1,000 live birth, 2010-2012)	▼ Better	3.81	3.02	4.01				4.49	3.38	--
Premature deaths from heart and stroke (years of life lost, 2008-2012)	▼ Better	● 73.8	♦ 111.0	100.6	81.5	♦ 140.8	90.9	● 78.0	93.6	--
Premature deaths from cancer (years of life lost, 2008-2012)	▼ Better	● 159.7	187.1	● 147.8	♦ 198.6	♦ 199.5	175.6	197.2	171.1	--
Premature deaths from breathing diseases (years of life lost, 2008-2012)	▼ Better	● 15.6	♦ 30.7	24.9	18.3	♦ 31.5	● 15.2	20.5	22.3	--
Premature deaths from injuries (years of life lost, 2008-2012)	▼ Better	70.3	● 60.5	● 69.9	75.2	♦ 101.5	♦ 84.5	72.6	70.9	--
Premature deaths due to suicides/self-inflicted injuries (years of life lost, 2008-2012)	▼ Better	39.3	● 38.9	41.9	♦ 54.3	♦ 71.3	40.4	● 35.3	41.8	--
Health Determinants										
Health Services – accounts for 10 % of the health determinants										
Has a regular medical doctor (%, 2013)	▲ Better	94.3	♦ 91.8	♦ 86.4	94.3	● 96.8	93.9	● 94.8	92.0	84.5
Medical doctor visit within the last 12 months (%, 2013)	▲ Better	79.1	● 81.8	♦ 77.9	78.8	81.7	♦ 77.5	● 83.1	79.6	80.8
Dental professional visit within the last year (%, 2013)	▲ Better	64.2	● 66.1	● 64.9	♦ 54.6	62.7	60.9	♦ 59.8	63.6	66.5
Avoidable hospitalization (aged-standardized rate per 100,000, 2012-2013)	▼ Better	● 354	● 384	410	485	♦ 660	454	♦ 525	425	289
Adults 65 years and up who have received the flu shot in the last year (%, 2013)	▲ Better	69.7	64.3	● 71.1	♦ 51.4[E]	61.7	♦ 52.8	● 73.4	65.2	64.1
Females (18 to 69 years old) who had a pap test within the last 3 years (%, 2013)	▲ Better	● 75.8	71.3	♦ 70.4	72.3	♦ 70.7	● 81.2	73.8	73.5	--
Females (50 to 69 years old) who had a mammogram in the last 2 years (%, 2013)	▲ Better	78.9	♦ 65.2	72.6	75.8	♦ 71.4	● 86.3	● 93.6	75.5	--
Overall Hospital rating (%, 2013)	▲ Better	75.1	♦ 74.8	♦ 71.6	● 83.3	75.3	● 78.8	77.6	75.4	--
Overall health care services rating (%, 2011)	▲ Better	61.6	59.9	59.9	● 66.1	♦ 59.8	64.1	● 64.6	61.5	--

Summary
- Population Health Snapshot per zone, New Brunswick and Canada
2014-2015

● Doing well (ranked 1 or 2 out of 7)
♦ Lagging (ranked 6 or 7 out of 7)

Indicator	Desired direction	Zone 1: Moncton/ South-East Area	Zone 2: Fundy Shore / Saint John Area	Zone 3: Fredericton / River Valley Area	Zone 4: Madawaska / North-West Area	Zone 5: Restigouche Area	Zone 6: Bathurst / Acadian Peninsula Area	Zone 7: Miramichi area	New Brunswick	Canada
Health Behaviours – account for 40% of the health determinants										
Physical activity during free-time, moderately active or active (%, 2013)	▲ Better	51.0	● 54.5	♦ 45.7	49.0	● 51.5	46.5	♦ 43.8	49.6	55.2
Eat 5 or more fruits or vegetables a day (%, 2013)	▲ Better	36.7	36.3	♦ 32.5	34.1	● 37.8	● 43.1	♦ 31.5	35.9	40.8
Adults with unhealthy weight (obese) (%, 2013)	▼ Better	● 25.1	25.3	♦ 27.8	26.4	♦ 22.7[E]	● 24.8	♦ 28.2	25.9	18.8
5 or more drinks at one time, at least once a month in the past year (heavy drinking) (%, 2013)	▼ Better	26.0	♦ 26.7	24.3	♦ 26.1	● 21.2[E]	24.8[E]	● 20.0[E]	25.1	18.9
Seeing your stress as being a lot (%, 2013)	▼ Better	21.3	20.5	18.8	♦ 27.9	♦ 23.4[E]	● 15.0[E]	● 16.3[E]	20.1	23.0
Current smoker, daily or occasional (%, 2013)	▼ Better	18.4	● 20.7	22.6	24.9	♦ 29.5	24.0[E]	♦ 26.8	21.8	19.3
Number of sexually transmitted illnesses (genital Chlamydia) (rate per 10,000, 2013)	▼ Better	♦ 29.2	19.1	♦ 31.0	● 11.6	● 10.7	18.2	12.7	23.4	--
Teens who gave birth (rate per 1,000 females, 2012)	▼ Better	♦ 21.2	♦ 23.5	18.0	16.6	● 15.4	● 13.9	19.8	20.2	--
Always wears a bicycle helmet while on a bike (%, 2013)	▲ Better	58.2	● 62.3	● 60.3	♦ 34.6[E]	37.9[E]	37.9	♦ 26.0[E]	53.2	41.5
Social and Economic Factors – account for 40% of the health determinants										
No high school diploma (25 -64 years) (%, 2011)	▼ Better	15.3	● 12.7	● 12.5	23.0	♦ 25.3	♦ 28.9	21.5	16.8	12.7
Unemployment (%, 2013)	▼ Better	● 8.7	9.6	● 8.2	12.0	12.6	♦ 17.1	♦ 18.2	10.4	7.1
Divorced (%, 2011)	▼ Better	5.2	♦ 5.9	5.2	● 4.3	♦ 5.3	● 4.3	4.4	5.2	6.0
Single parent family (%, 2011)	▼ Better	14.9	17.7	● 14.5	● 14.0	18.2	♦ 18.6	♦ 18.3	16.1	16.3
Low income (%, 2011)	▼ Better	● 14.7	17.0	● 16.4	20.2	♦ 25.3	♦ 21.4	16.7	17.2	14.9
Violent crime (rate per 100,000 population, 2013)	▼ Better	--	--	--	--	--	--	--	1,232	1,092
Property crime (rate per 100,000 population, 2013)	▼ Better	--	--	--	--	--	--	--	2,837	3,146
Charged for driving under the influence (drugs or alcohol) (rate per 100,000 population, 2013)	▼ Better	--	--	--	--	--	--	--	247	223
Sense of belonging to your community, somewhat strong or very strong (%, 2013)	▲ Better	♦ 66.3	● 77.1	♦ 67.8	71.0	73.6	70.3	● 86.9	71.3	65.9
Physical Environment – accounts for 10% of the health determinants										
Coming in contact with second-hand smoke at home (%, 2013)	▼ Better	5.9[E]	4.7[E]	3.8[E]	♦	--	6.2	--	5.3	4.5
Coming in contact with second-hand smoke in the past month, in vehicles and/or in public place (%, 2013)	▼ Better	♦ 18.0	14.6	● 11.9[E]	♦ 9.3[E]	12.4[E]	13.1[E]	♦ 15.3[E]	14.5	16.0
Dwellings rated as having excellent, very good or good indoor air quality (%, 2011)	▲ Better	--	--	--	--	--	--	--	90.3	90.6
Occupied dwellings requiring major repairs [(NEW)] (%, 2011)	▼ Better	● 7.9	9.6	10.7	● 8.9	11.0	♦ 12.1	♦ 11.4	9.8	7.4

Focus:

Causes of avoidable deaths for New Brunswick and Zones to focus our efforts on population health

1 - Premature mortality as a health outcome

Longer life expectancy and fulfillment of a good quality of life are two characteristics of a healthier population. Measuring the rates of premature mortality (death before age 75) in a population and the causes of premature mortality provide insights about how healthy the population is, and whether it faces challenges that can shorten an individual's length of life.

Different health conditions or causes contribute to prematurely dying, the major five groups that the New Brunswick Health Council (NBHC) reported annually on in the New Brunswick Population Health Snapshots report are:

- Cancer;
- Heart and stroke (or cardiovascular diseases);
- Breathing diseases (or respiratory diseases);
- Injuries; and
- Suicide.

As a result of premature mortality, populations lose **individuals** earlier, and the younger an individual dies because of a premature cause of death, the more **years of life** the population overall loses with respect to opportunities for individuals to enjoy productive healthy long lives.

In order to capture premature mortality accurately, it is measured in two ways:

- Death rates: the number of individuals who die prematurely out of the overall population; and
- Potential Years of Life Lost (PYLL): The total number of potential years lost due to death before age 75 (a reflection of how young people die in a certain population). Therefore, the **more** people below 75 years of age, and/or the **younger** people in a population die, the more the years of life that population loses, and the opposite is true.

It is worth noting that deaths among seniors 75 years and older are not counted in premature mortality.

As a population enjoys healthier lifestyles and better treatment, its exposure to causes of premature death is reduced, and accordingly both premature mortality death rates and the potential years of life lost decline indicating improved health outcomes.

2 - Understanding the details of avoidable mortality

Premature mortality might appear as an outcome that is difficult to mitigate. However, more than 70%[1] of premature mortality is potentially **avoidable** through prevention or treatment.

"Avoidable mortality refers to untimely deaths that should not occur in the presence of timely and effective health care or other public health practices, programs and policy interventions. It is based on the understanding that, in some instances, death can be avoided either by preventing disease onset (also known as incidence reduction) or by averting or delaying death after a condition has developed (also known as case-fatality reduction). In this way, avoidable mortality is limited to causes of death where mechanisms of mortality reduction are known, making the measure more "actionable" than an overall premature mortality indicator"[2]

In order to help populations target and reduce premature mortality, the concept of "potentially avoidable mortality" was developed and was further elaborated into:

- Avoidable mortality from preventable causes: premature deaths that could potentially have been prevented through primary prevention efforts (e.g. screening, vaccination, healthy lifestyles, air quality, etc.)[3];and

- Avoidable mortality from treatable causes: premature deaths that could potentially have been avoided through secondary or tertiary prevention (e.g. treatment and interventions that can reduce the fatality of the health condition)[4].

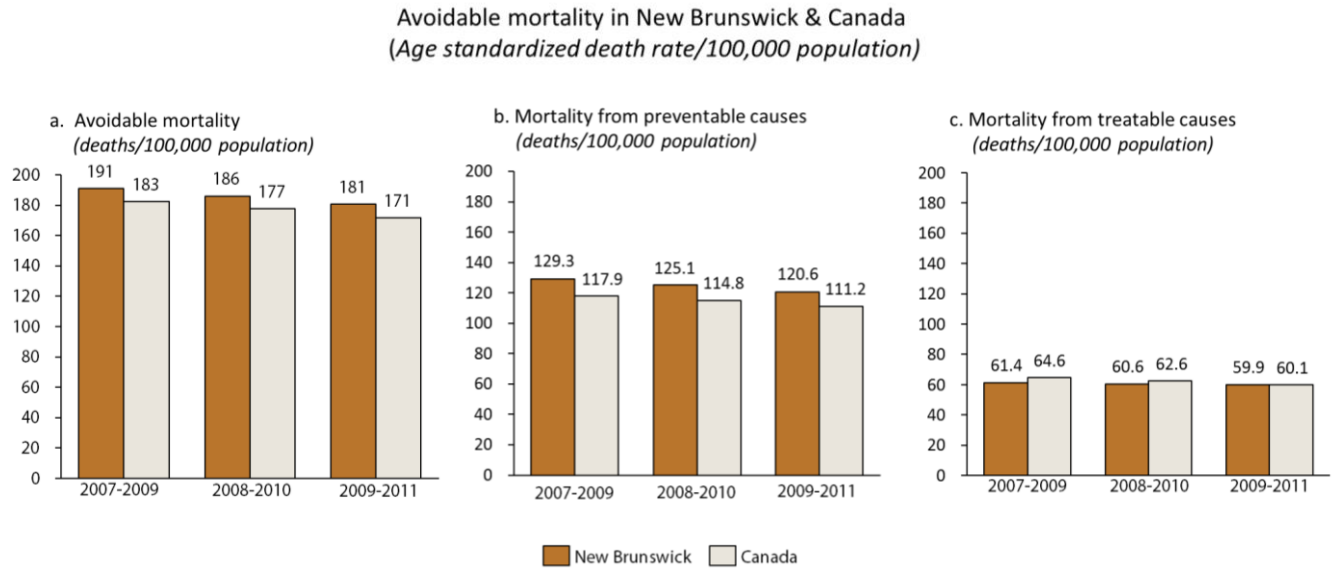
Avoidable mortality in New Brunswick has shown higher rates in comparison to the Canadian average.

[1] Statistics Canada CANSIM table 102-4312, In-house calculation
[2] Canadian Institute for Health Information, Health Indicators 2012 (Ottawa, Ont.: CIHI, 2012)
[3] ibid
[4] ibid

Monitoring the rates of avoidable mortality, in both its preventable and treatable forms, enables a population to identify whether its prevention policies and programs or its healthcare services are being effective. In the "focus" section of the *Population Health Snapshots Report 2013-2014,* the NBHC introduced the avoidable mortality concept and analyzed the patterns of preventable and treatable mortality by health zones within the province, highlighting areas of concern and areas of possible lessons learned.

Avoidable mortality in New Brunswick has shown higher rates in comparison to the Canadian average, and that has been mainly driven by the mortality from preventable causes. (Figures 1, a, b. c)

Figure 1. Avoidable mortality in New Brunswick & Canada (Age standardized death rate/100,000 population). a. Total Avoidable mortality; b. Mortality from preventable causes; c. Mortality from treatable causes [5]



Developing targeted policies, programs and services can benefit from a detailed analysis of the underlying causes of avoidable mortality; causes that are more detailed than the five high level groups of major causes of death listed above (cancer, heart and stroke, breathing diseases, injuries and suicide). Understanding whether lung or colon cancer are the most common types of cancer leading to avoidable death, or whether falls or transport accidents are the major contributors to avoidable deaths from injuries, can enable policy makers to target the root causes of death, and accordingly reduce avoidable mortality more effectively.

[5] Statistics Canada, CANSIM table 102-4311 Premature and potentially avoidable mortality. Vital Statistics, Death database

In the absence of detailed analysis of the causes of avoidable mortality at the national level, The NBHC took the initiative to analyze the local Vital Statistics database 2007-2011, by applying the classification of International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10) adopted by Statistics Canada and the Canadian Institute of Health Information (CIHI) for Avoidable causes of death. Accordingly, five year averages were calculated for avoidable mortality death rates and PYLLs for the causes of avoidable mortality for New Brunswick as well as for each health zone. Causes of avoidable mortality were then ranked based on two perspectives:

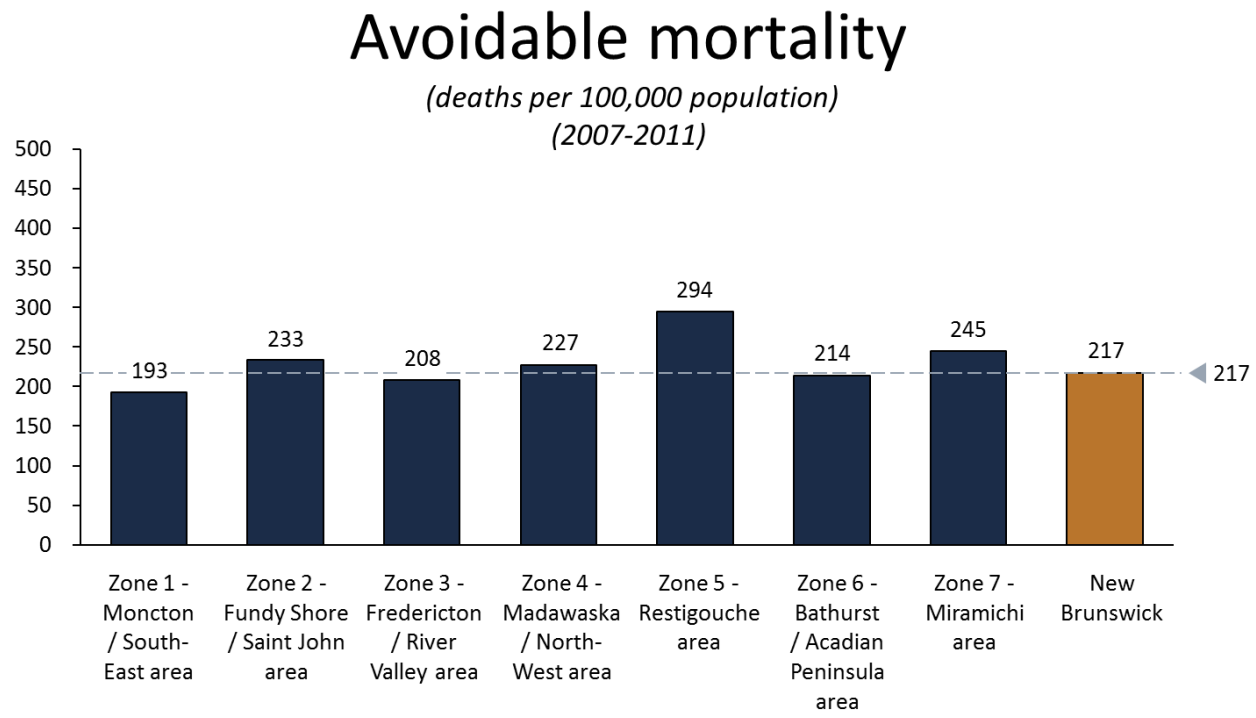
- The top 10 causes of premature deaths per population; and
- The top 10 causes of premature potential years of life lost per population.

a. Top 10 causes of avoidable deaths (losing people)

Between 2007 and 2011, for every 460 New Brunswickers, 1 person was lost per year due to avoidable causes of death (avoidable mortality rate at 217.2 deaths/100,000 population). The range of the avoidable mortality rate within the province was between 193 in Zone 1 (Moncton /South-East Area) and 294 in Zone 5 (Restigouche Area).

Between 2007 and 2011, for every 460 New Brunswickers, 1 person was lost per year due to avoidable causes of death.

Figure 2. Avoidable mortality (deaths per 100,000 population) (2007-2011)[6]



Source: Service New Brunswick, Vital Statistics Database, In-house calculation

The 10 leading causes that accounted for more than 70% of avoidable deaths per population annually in New Brunswick were (in order):

1- Lung cancer: includes cancer of the trachea, bronchus and lung (42.2 deaths/100,000 population);

2- Ischemic heart disease: includes chest pain, heart attack (Acute myocardial infarction) and its following complications. (36.4 deaths/100,000 population);

3- Suicide and self-inflicted injuries (12.3 deaths/100,000 population);

4- COPD (11.2 deaths/100,000 population);

5- Transport accidents (10.7 deaths/100,000 population);

6- Colorectal cancer (10.2 deaths/100,000 population);*

[6] Service New Brunswick, Vital Statistics Database, In-house calculation
*= same rank

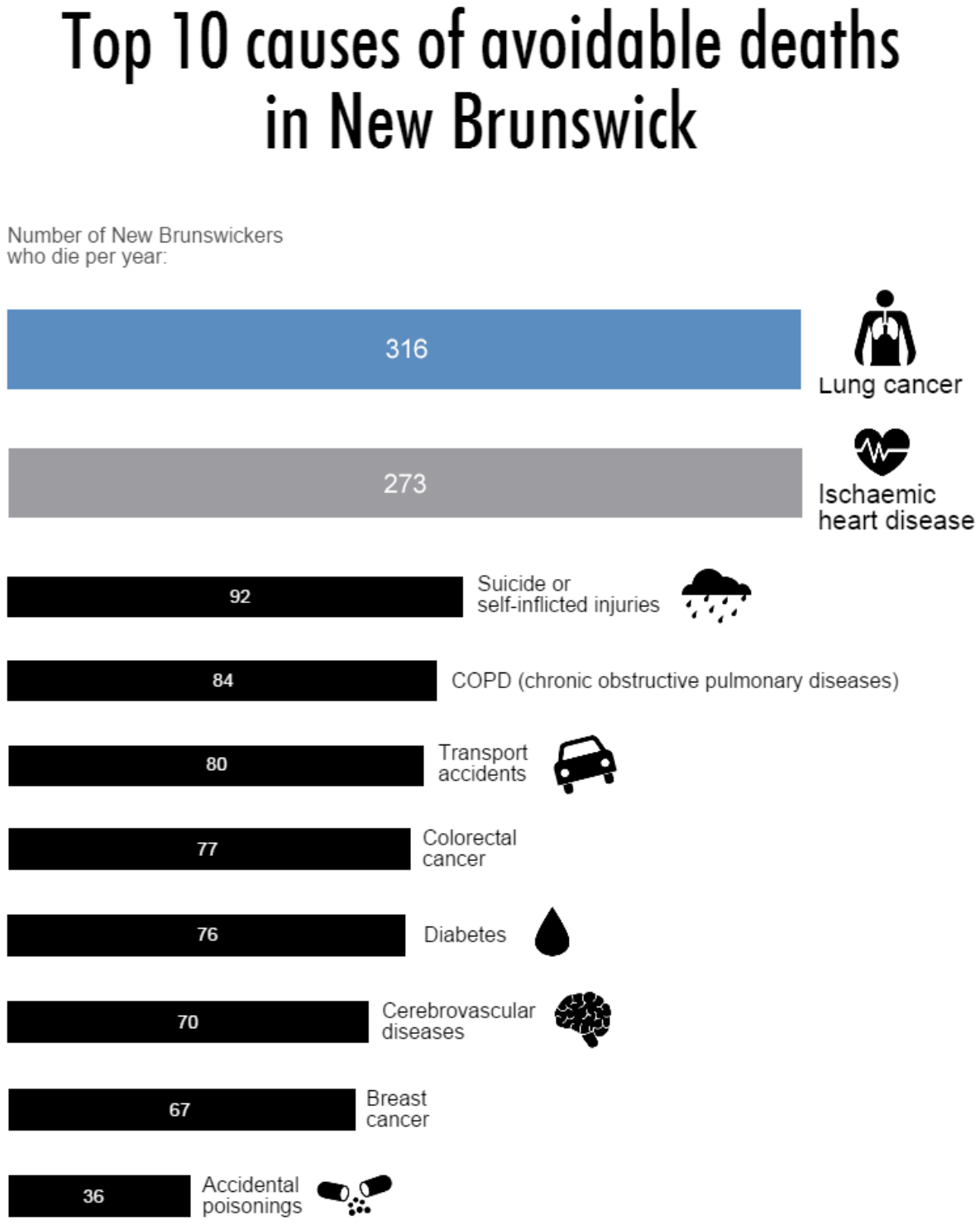
6- Diabetes (10.2 deaths/100,000 population);*

8- Cerebrovascular diseases: includes stroke and bleeding in brain (9.3 deaths/100,000 population);

9- Breast cancer (8.9 deaths/100,000 population);and

10- Accidental poisonings: includes accidental poisoning by and exposure to drugs, medications and biological substances, alcohol, other gases and vapours, pesticides, other and unspecified chemicals and noxious substances (4.7 deaths/100,000 population).

Figure 3. Top 10 causes of avoidable deaths in New Brunswick



The rank of the New Brunswick top 10 causes of deaths varied by health zones (Tables 1). Lung cancer and heart disease were the top two causes of death across all zones. Suicide and self-inflicted injury ranked 3rd in New Brunswick as well as in four out of the seven zones; Zones 1 Moncton/South-East Area), 3 (Fredericton /River Valley Area), 4 (Madawaska/North-West Area) and 5 (Restigouche Area); yet other causes ranked 3rd like COPD in Zone 2 (Fundy Shore/Saint John Area), transport accidents in Zone 6 (Bathurst/Acadian Peninsula Area) and Zone 7 (Miramichi Area).

Table 1. Top causes of avoidable deaths (per 100,000 population) - Ranking per health zone[7]

Top causes of avoidable deaths in N.B. and per zone

Data from 2007-2011, per 100,000 population, N.B. Vital Statistics

Lung cancer
Heart disease
Suicide
Transport accidents
COPD

Top causes of avoidable deaths (per 100,000 population)
Ranking per health zone

New Brunswick		Zone 1 - Moncton/South-East		Zone 2 - Fundy Shore/ Saint John		Zone 3 - Fredericton/River Valley	
1 Lung cancer	42.2	1 Lung cancer	37.0	1 Lung cancer	46.0	1 Heart disease	37.8
2 Heart disease	36.4	2 Heart disease	30.9	2 Heart disease	43.5	2 Lung cancer	37.2
3 Suicide	12.3	3 Suicide	11.6	3 COPD	14.3	3 Suicide	12.6
4 COPD	11.2	4 Colorectal cancer	10.7	4* Suicide	11.0	4 COPD	11.9
5 Transport accidents	10.7	5 Transport accidents	9.8	4* Cerebrovasc. diseases	11.0	5 Transport accidents	10.8
6* Colorectal cancer	10.2	6 Diabetes	9.0	6 Diabetes	10.7	6 Diabetes	10.2
6* Diabetes	10.2	7 COPD	8.1	7 Colorectal cancer	9.6	7 Cerebrovasc. diseases	8.9
8 Cerebrovasc. diseases	9.3	8 Breast cancer	7.8	8 Transport accidents	8.2	8* Colorectal cancer	8.8
9 Breast cancer	8.9	9 Cerebrovasc. diseases	7.5	9 Breast cancer	8.1	8* Breast cancer	8.8
10 Accidental poisonings	4.7	10 Accidental poisonings	5.8	10 Accidental poisonings	4.9	10 Other	

Zone 4 - Madawaska/North-West		Zone 5 - Restigouche		Zone 6 - Bathurst/ Acadian Peninsula		Zone 7 - Miramichi	
1 Lung cancer	51.2	1 Lung cancer	63.9	1 Lung cancer	41.8	1 Lung cancer	46.8
2 Heart disease	27.0	2 Heart disease	45.3	2 Heart disease	35.5	2 Heart disease	34.4
3 Suicide	19.0	3 Suicide	19.3	3 Transport accidents	14.8	3 Transport accidents	15.0
4 Colorectal cancer	14.5	4 Cerebrovasc. diseases	15.6	4 Breast cancer	12.8	4 Diabetes	13.2
5 Transport accidents	13.3	5 COPD	12.6	5* Suicide	11.0	5 Breast cancer	11.9
6 Diabetes	12.5	6* Colorectal cancer	10.4	5* Colorectal cancer	11.0	6 COPD	11.0
7 COPD	12.1	6* Diabetes	10.4	7 COPD	9.7	7* Suicide	10.2
8 Cerebrovasc. diseases	8.5	6* Accidental poisonings	10.4	8 Cerebrovasc. diseases	8.7	7* Colorectal cancer	10.2
9 Breast cancer	7.7	9 Transport accidents	9.7	9 Diabetes	8.4	7* Cerebrovasc. diseases	10.2
10 Other		10 Breast cancer	8.9	10 Other		10 Other	

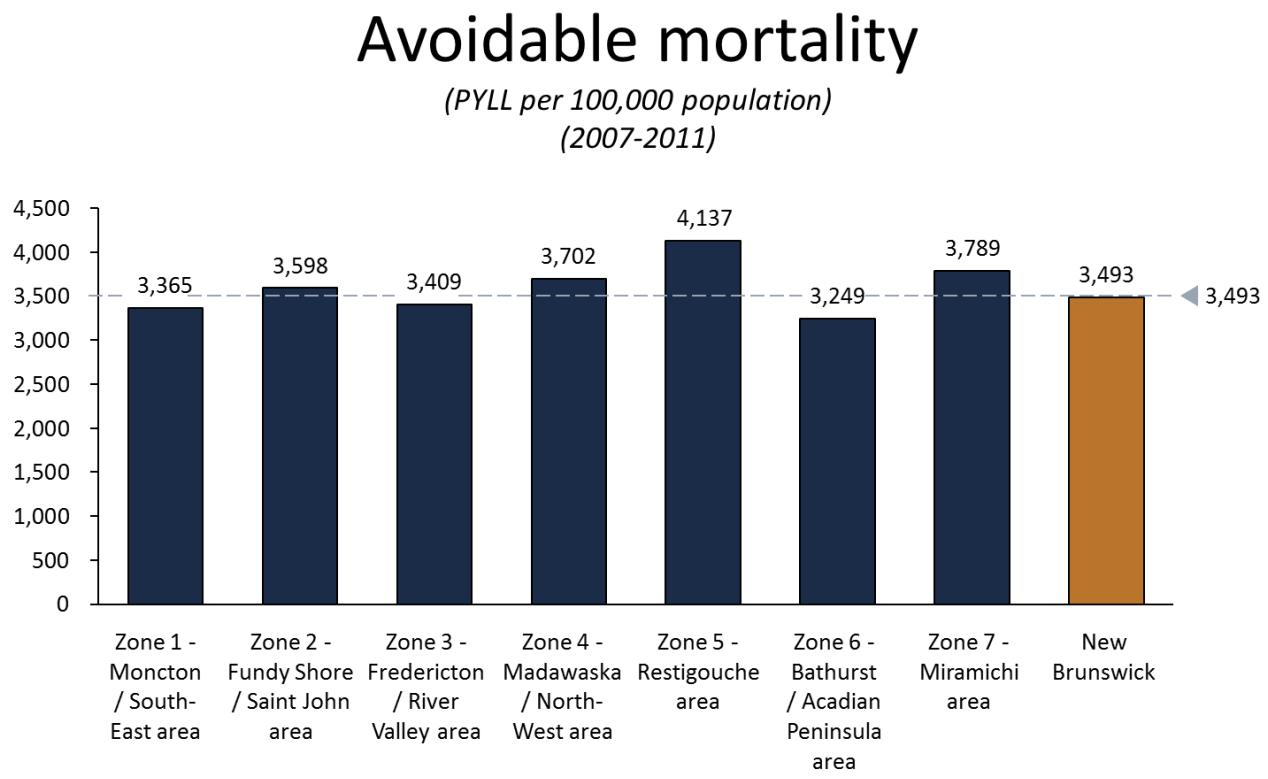
[7] "Others" are causes of avoidable death that were not part of the top 10 provincial causes. These were:
Zone 3: alcohol related diseases, Zone 4: chronic liver disease (excluding alcohol-related) , Zone 6: renal failure Zone 7: alcohol related diseases

b. Top 10 causes of avoidable years of life lost (losing more younger people)

Between 2007 and 2011, New Brunswickers lost 217.2 individuals /100,000 per year due to avoidable causes of death, and those who died lost 16 years of life on average (mortality rate of 3,493 PYLLs/100,000 population). In other words, an average avoidable death between 2007 and 2011 occurred around age 59 due to causes that could have been avoided through prevention or treatment.

An average avoidable death between 2007 and 2011 occurred around age 59 due to causes that could have been avoided through prevention or treatment.

Figure 4. Avoidable mortality (PYLL per 100,000 population) (2007-2011)[8]



Source: Service New Brunswick, Vital Statistics Database, In-house calculation

[8] Service New Brunswick, Vital Statistics Database, In-house calculation

The ten leading causes of avoidable death that accounted for about 69% of potential years of life lost per population in New Brunswick were (in order):

1- Ischemic heart disease: includes chest pain, heart attack (acute myocardial infarction) and its following complications. (loss of potential 13 years of life/death on average);

2- Lung cancer: includes cancer of the trachea, bronchus and lung (loss of potential 11 years of life/death on average);

3- Transport accidents (loss of potential 37 years of life/death on average);

4- Suicide and self-inflicted injuries (loss of potential 30 years of life/death on average);

5- Accidental poisonings: includes accidental poisoning by and exposure to drugs, medications and biological substances, alcohol, other gases and vapours, pesticides, other and unspecified chemicals and noxious substances (Loss of potential 30 years of life/death on average);

6- Breast cancer (loss of potential 15 years of life/death on average);

7- Colorectal cancer (loss of potential 12 years of life/death on average);

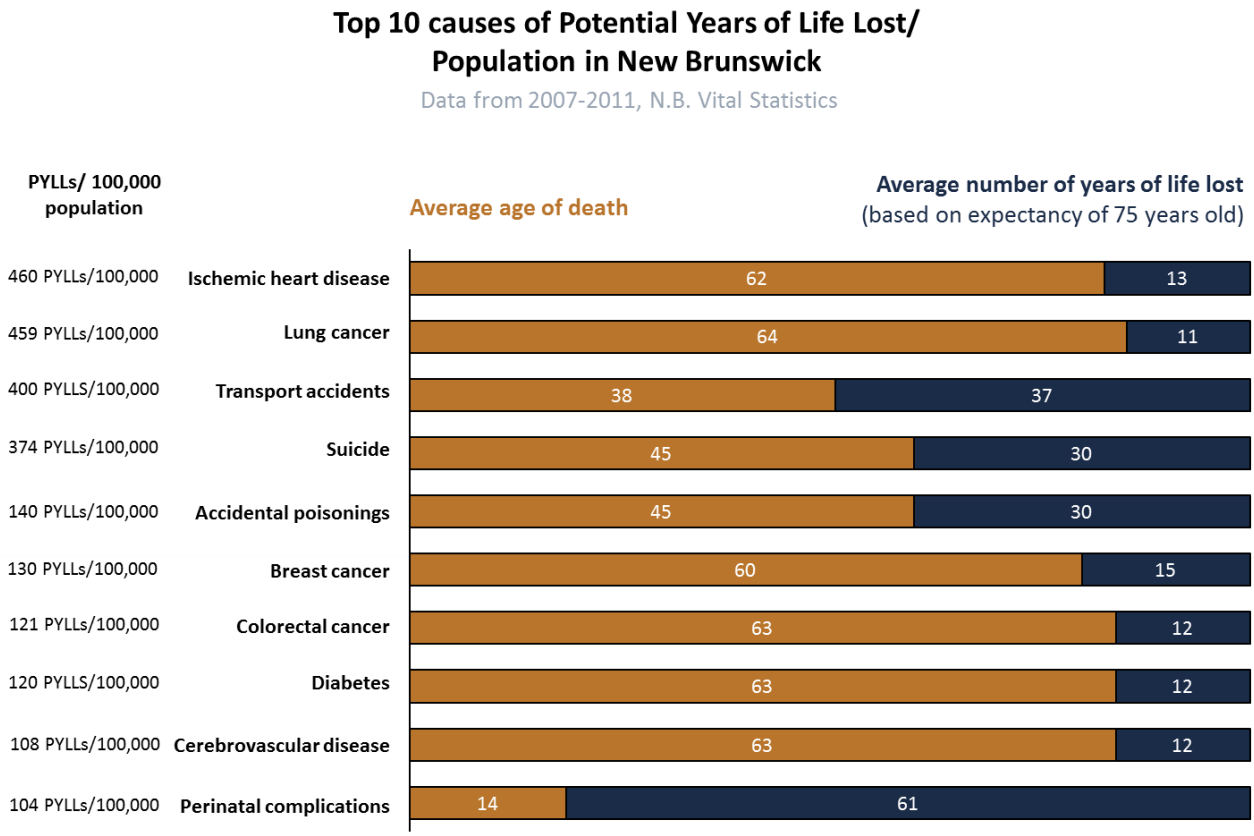
8- Diabetes (loss of potential 12 years of life/death on average);

9- Cerebrovascular diseases: includes stroke and bleeding in brain (loss of potential 12 years of life/death on average);and

10- Complications of perinatal period (both mother and child) (loss of potential 61 years of life/death on average)[9].

[9] Complications of perinatal care represent a mix of deaths of delivering mothers and new born babies. At least 71% of the deaths due to complications of perinatal period registered in New Brunswick happened between birth and age 3. Only 10% of the reported deaths occurred at age 21 and above (mothers).

Figure 5. Top 10 causes of Potential Years of Life Lost/Population in New Brunswick (2007-2011)



Source: Service New Brunswick, Vital Statistics Database, In-house calculation

The list of the top 10 causes of PYLL was mostly the same as the top 10 causes for death with difference in ranking. Four conditions/causes are common between the top five causes in both lists: ischemic heart disease, lung cancer, transport accidents and suicide. Accidental poisoning, that ranked 10th in the top 10 causes of deaths is in the top five for causes of lost years of life.

Ischemic heart disease and lung cancer switched ranks (yet with very close rates of PYLL/population), and that is explained by the fact that deaths due to ischemic heart disease tend to occur at relatively younger age than lung cancer.

The rank of the New Brunswick top 10 causes of avoidable loss of years of life varied by health zones (Table 2). Heart disease and/or lung cancer were in the top two causes of PYLL across all zones. However, other causes ranked within the top two like transport accidents in zones 1 (Moncton/South-East Area), 4 (Madawaska/North West-Area), 6 (Bathurst/Acadian Peninsula Area), or 7 (Miramichi Area); and suicide in Zone 3 (Fredericton/River Valley Area).

Table 2. Top causes of avoidable years of life lost (per 100,000 population) - Ranking per health zone[10]

Top causes of Potential Years of Life Lost (PYLLs) in N.B. and per zone

Data from 2007-2011, per 100,000 population, N.B. Vital Statistics

Lung cancer
Heart disease
Suicide
Transport accidents
Accidental poisonings

Top causes of avoidable years of life lost (per 100,000 population) Ranking per health zone

New Brunswick		Zone 1 - Moncton/South-East Area		Zone 2 - Fundy Shore/ Saint John Area		Zone 3 - Fredericton/River Valley Area	
1 Heart disease	460	1 Transport accidents	424	1 Heart disease	521	1 Heart disease	489
2 Lung cancer	459	2 Lung cancer	406	2 Lung cancer	487	2 Suicide	413
3 Transport accidents	400	3 Heart disease	402	3 Suicide	325	3 Lung cancer	409
4 Suicide	374	4 Suicide	373	4 Transport accidents	289	4 Transport accidents	377
5 Accidental poisonings	140	5 Accidental poisonings	187	5 Cerebrovasc. diseases	144	5 Diabetes	128
6 Breast cancer	130	6 Perinatal complications	129	6 Accidental poisonings	137	6 Perinatal complications	124
7 Colorectal cancer	121	7 Breast cancer	124	7 Perinatal complications	130	7 Breast cancer	122
8 Diabetes	120	8 Diabetes	122	8 Colorectal cancer	122	8 Accidental poisonings	112
9 Cerebrovasc. diseases	108	9 Other		9 Breast cancer	121	9 Cerebrovasc. diseases	108
10 Perinatal complications	104	10 Colorectal cancer	111	10 Other		10 Colorectal cancer	100

Zone 4 - Madawaska/North-West Area		Zone 5 – Restigouche Area		Zone 6 - Bathurst/ Acadian Peninsula Area		Zone 7 – Miramichi Area	
1 Lung cancer	616	1 Lung cancer	647	1 Transport accidents	520	1 Lung cancer	502
2 Transport accidents	551	2 Heart disease	530	2 Heart disease	463	2 Transport accidents	479
3 Suicide	547	3 Suicide	476	3 Lung cancer	450	3 Heart disease	403
4 Heart disease	396	4 Transport accidents	317	4 Suicide	287	4 Suicide	314
5 Colorectal cancer	181	5 Accidental poisonings	288	5 Breast cancer	187	5 Diabetes	170
6 Diabetes	143	6 Colorectal cancer	140	6 Colorectal cancer	128	6 Breast cancer	165
7 Breast cancer	100	7 Cerebrovasc. diseases	137	7 Other		7 Accidental poisonings	161
8 Cerebrovasc. diseases	98	8 Other		8 Diabetes	89	8 Other	
9 Other		9 Other		9 Cerebrovasc. diseases	87	9 Colorectal cancer	153
10 Other		10 Other		10 Other		10 Cerebrovasc. diseases	126

For some zones, other causes of PYLL loss were in the top 10. Examples include: congenital malformations in Zones 1 (Moncton/South-East Area), 6 (Bathurst/Acadian Peninsula Area), and 7 (Miramichi Area); COPD in Zones 2 (Fundy Shore/Saint John Area) and Zone 4 (Madawaska/ North-West Area), pneumonia and falls in Zone 5 (Restigouche Area), other external causes of accidental injury in Zones 4 (Madawaska/ North-West Area) and 5 (Restigouche Area), and alcohol related diseases in Zone 6 (Bathurst/Acadian Peninsula Area).

[10] "Others" are causes of avoidable death that were not part of the top 10 provincial causes. These were:
Zone 1: congenital malformations, deformations and chromosomal anomalies;
Zone 2: COPD;
Zone 4: other external causes of accidental injury and COPD;
Zone 5: pneumonia, falls and other external causes of accidental injury;
Zone 6: congenital malformations, deformations and chromosomal anomalies and alcohol-related diseases, excluding external causes; and
Zone 7: congenital malformations, deformations and chromosomal anomalies.

3 - Discussion: What does that mean?

a. For New Brunswick

Avoidable causes of death represent a select set of health conditions that if not properly prevented or treated contribute to the population's loss of individuals and years of productivity and quality healthy life.

An overview of the list of conditions that top the list as causes of avoidable death in New Brunswick demonstrates mainly:

- Chronic health conditions (heart and stroke disease, diabetes, breathing diseases, and three types of cancer);
- Non chronic conditions (transport accidents, accidental poisoning); and
- Mental health-related conditions (suicide or self-inflicted injuries).

Prevention is a key component in reducing mortality for the majority of these conditions, except for breast and colorectal cancers which are mainly treatable (Table 3).

Table 3. Distribution of top causes of death in New Brunswick by preventable and treatable causes.

	Preventable	**Treatable**
Cancers		
Lung cancer	X	
Breast cancer		X
Colorectal cancer		X
Other chronic conditions		
Heart disease (Ischemic heart disease)	50%	50%
Stroke (cerebrovascular disease)	50%	50%
Diabetes	50%	50%
Breathing diseases (COPD)	X	
Injuries		
Transport accidents	X	
Accidental poisoning	X	
Suicide and self-inflicted injuries	X	

Identifying these conditions reconfirms the priorities identified by the NBHC in 2011 as areas of focus for health promotion and prevention (The third recommendation to the Minister of Health, 2011) as a need for focus:

1- High blood pressure: highly associated with heart and stroke diseases;

2- Obesity: highly linked to diabetes as well as heart and stroke and some types of cancer;

3- Mental health: linked to suicides when inappropriately or effectively managed;and

4- Injuries: caused by many types of accidents, transport accidents seem to be one of the leading types in the province.

The only two conditions that were not part of the NBHC prevention priorities and are worthy of consideration are lung cancer and COPD.

Lung cancer ranked high in the top 10 causes of mortality (number one killer, and number two source of potential years of life lost). According to literature[11], risk factors for lung cancer include preventable exposures: smoking (New Brunswickers have one of the highest smoking rates in the country), second hand smoke, radon (some New Brunswick regions, namely Zones 4 (Madawaska/North-West Area), 5 (Restigouche area), 6 (Bathurst/ Acadian Peninsula area) and 7 (Miramichi area)[12], seem to be at high risk of exposure to radon), and asbestos.

In addition, COPD is a chronic breathing disease that ranked four among the top 10 killers in New Brunswick (number of deaths per population). COPD includes chronic bronchitis and emphysema. Many people with COPD have both conditions. Similar to lung cancer, smoking is believed to be the major cause of COPD, in addition to other preventable causes like second-hand smoke and air pollution (dust or chemicals).

Taking into consideration the significance of lung cancer and COPD as leading causes of avoidable deaths in New Brunswick, "smoking" represents a potential fifth priority for promotion and prevention to be added to the NBHC above mentioned priorities.

[11] Canadian Cancer Society. Risk factors for lung cancer. Retrieved from: http://www.cancer.ca/en/cancer-information/cancer-type/lung/risks/?region=on

[12] Health Canada (March 2012) Cross-Canada Survey of Radon Concentrations in Homes – Final Report. Retrieved from: http://www.hc-sc.gc.ca/ewh-semt/alt_formats/pdf/radiation/radon/survey-sondage-eng.pdf

b. For health zones

Comparing zone specific rates to the provincial average highlights areas of concern for each health zone. When a specific cause of avoidable death in a zone leads to a mortality rate (deaths/100,000 population) and potential years of life loss rate (PYLLs/100,000) that are both above the provincial average, it highlights an area of possible concern. Accordingly, that zone needs to deal with those causes of death as priorities that require attention.

The top causes of both avoidable mortality exceeding the provincial average by zone for both deaths and PYLL highlight the following by zone:

Table 4. Priority defined based on both PYLL and death rates exceeding NB average

	Health zones						
	Zone 1 Moncton / South-East area	**Zone 2** Fundy Shore / Saint John area	**Zone 3** Fredericton / River Valley area	**Zone 4** Madawaska / North-West area	**Zone 5** Restigouche area	**Zone 6** Bathurst / Acadian Peninsula area	**Zone 7** Miramichi area
Priority defined based on both PYLL and death rates exceeding NB average							
Lung cancer		X		X	X		X
Heart disease (Ischemic heart disease)		X			X		
Suicide and self-inflicted injuries			X	X	X		
Transport accidents				X		X	X
Colorectal cancer				X	X	X	
Diabetes			X	X			X
Stroke (Cerebrovascular diseases)		X			X		X
Breast cancer						X	X
Accidental poisonings	X				X		X
% population aged 60-74 years old (2011) (NB 16.4)[13]	15.8%	15.5%	15.2%	17.5%	20%	19.4%	18.2%
Life expectancy at birth (2007-2009)[14] (NB 80.2)	81.4	79.5	79.6	79.3	78.6	81.3	79.7

[13] Statistics Canada, Census 2011, New Brunswick Census Profile. Retrieved from: www.statcan.gc.ca

[14] Statistics Canada, Canadian Vital Statistics, Birth and Death databases and population estimates, CANSIM table 102-4307. Retrieved from: www.statcan.gc.ca

This analysis demonstrates that different causes of avoidable deaths have different implications on the different zones.

Accidental poisoning seems to be the major area of concern in Zone 1 (Moncton/South-East Area); lung cancer, cerebrovascular disease in Zone 2 (Fundy Shore/Saint John Area); suicide and diabetes in Zone 3 (Fredericton/ River Valley Area); transport accidents, breast and colorectal cancers show up as a potential priority in Zone 6 (Bathurst/ Acadian Peninsula Area).

Zones 4 (Madawaska / North-West area), 5 (Restigouche Area) and 7 (Miramichi Area) seem to be losing people and years of life at a rate higher than the provincial average for many of the top causes of avoidable mortality. Most of these causes have a prevention component. A possible contributor to that observation is the relatively older population (age groups 60 to 74) in the north (zones 4, 5, 6, and 7). However, Zone 6 (Bathurst/ Acadian Peninsula Area) was an exception to that hypothesis with only three causes highlighted, two of which (colorectal and breast cancer) are treatable. Accordingly, the explanation of the observation made above, and the possible contribution of the aging population merits further investigation and validation.

Addressing these areas as priorities (especially conditions that can be avoided through prevention), and channeling efforts in each health zone towards effective health promotion and prevention policies, can reduce the burden of those health conditions. As priorities seem to vary by health zones, that highlights a need for a customized planning that match local/regional needs and realities.

Population needs based planning is a new planning approach that has never been fully pursued, despite being required by law since 2002 *(Regional Health Authorities Ac*t). By law, regional health authorities are required to determine the health needs of the population they serve, and to determine the priorities in the provision of health services.

Health system stakeholders (*Department of Health and Regional Health Authorities*) are invited to plan their programs and services based on the needs of the population accounting for the existing variability in the nature of medical conditions that are more prevalent and as they contribute to more avoidable mortality.

This will reduce the number of people suffering from chronic health conditions, and consequently will save lives of New Brunswickers being lost to those conditions. In addition to the health benefits, reducing the incidence or prevalence of those health conditions has economic benefits, as it reduces the demand for advanced more expensive health services and contributes to the containment of health system spending. In the long term, it translates into a healthy aging and a more productive prosperous population

In other words, effective and properly planned health promotion and prevention can add years to New Brunswickers' lives, as well as add lives to their years through better quality of life.

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New Brunswick Health Council | Conseil de la santé du Nouveau-Brunswick

Engage. Evaluate. Inform. Recommend.
Engager. Évaluer. Informer. Recommander.