

# ATLANTIC CANADA

## CHILD & YOUTH UNINTENTIONAL INJURY HOSPITALIZATIONS: 10 Years in Review [2004-2013]

Revised: March, 2018



*Special thanks to*



*for their financial contribution to support this project.*

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Child Safety Link is a Maritime-wide injury prevention program at the IWK Health Centre in Halifax, Nova Scotia, whose mission is to reduce the incidence and severity of unintentional injuries to children and youth. It began serving Nova Scotians in 1997, and in 2002 expanded its focus to include the provinces of New Brunswick and Prince Edward Island. Current priority areas include child passenger safety, home safety including poisoning prevention, safe and active play, etc. Information for caregivers and for those who work with young families is available at [www.childsafetylink.ca](http://www.childsafetylink.ca).

The Atlantic Collaborative on Injury Prevention (ACIP) is a partnership of injury prevention practitioners from both government and non-government organizations. ACIP provides leadership to prevent injuries and their impact on individuals and communities in Atlantic Canada. Priority areas include policy and advocacy; research and surveillance; sustainability and growth; and networking, partnerships and knowledge exchange. More information is available at [www.acip.ca](http://www.acip.ca).

## EXECUTIVE SUMMARY

Although hospitalization rates have decreased from 2004 to 2013, the hospitalization rates for unintentional injuries in Atlantic Canada are still significantly higher than the national rates. Falls remain the leading cause of injury hospitalization for each age group in this report. Other leading causes of hospitalizations are sports related injuries and playground fall injuries.

Injury related hospitalization rates may vary by province and are outlined by cause as well as by provincial and national comparisons in tables at the end of this report.

When comparing the unintentional hospitalization rates (excluding transfers to institutions, deaths, adverse events, and complications) the children of Atlantic Canada had a rate significantly higher than the Canadian rate. The rate in Atlantic Canada was 340.9 hospitalizations/100,000 population and the Canadian rate was 260.4 hospitalizations/100,000 population.

Of the Atlantic provinces, New Brunswick had the highest rate with 382.3 hospitalizations/100,000 population. Newfoundland and Labrador had the lowest rate with 320.2 hospitalizations/100,000 population.

Injuries impact individuals and families, the health care system, and productivity, creating additional burden to the four Atlantic Provinces. People are also not affected equally by injury. Research indicates that individuals of low socioeconomic status (SES), members of some ethnic groups, the children of unemployed parents, and people who live in areas characterized by poverty are more likely to experience both fatal and non-fatal injuries.<sup>1</sup> Future injury prevention strategies for unintentional childhood injury must also strive to address these social determinants.<sup>2</sup>

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<sup>1</sup> Laflamme, L., Sethi, D., Burrows, S., Hasselberg, M., Racioppi, F., Apfel, F. (2009). Addressing the socioeconomic safety divide: A policy briefing. World Health Organization Europe.

<sup>2</sup> Atlantic Collaborative on Injury Prevention. (2011). The Social Determinants of Injury.

# ABOUT THIS REPORT

This report builds on the previous report from 2005 entitled *Child & Youth Unintentional Injury Atlantic Canada: 10 years in review*. Data was commissioned from the Canadian Institute for Health Information hospitalization trends (2004-2013) for childhood injury over a 10-year period, the most recent years for which data were available both at the National and Provincial levels. The purpose of this report is to determine the pattern of injuries to children and youth in Atlantic Canada and where possible, whether these injury patterns follow national trends.

The data in this report mainly focuses on hospitalizations of children from birth to age 14 (inclusive) and is

about unintentional injuries only. Injuries considered intentional i.e. those resulting from acts of violence or attempts of suicide are not within the scope of this report. A detailed description of the methodology used in this report is on page 24.

Hospital admission rates are age-standardized and calculations are based on population. Rates are not adjusted for duration of play and/or participation. This report does not reflect any changes in medical practice, advances in medical technologies or medical service availability in each of the provinces that may affect injury rates.



Atlantic Canada is comprised of four provinces in the eastern part of the country. West to east, New Brunswick, Prince Edward Island, Nova Scotia, and Newfoundland and Labrador have a combined land mass of 540,371 square kilometers and a total population of 2,333,300.

# THE BURDEN OF INJURY: HOSPITALIZATIONS

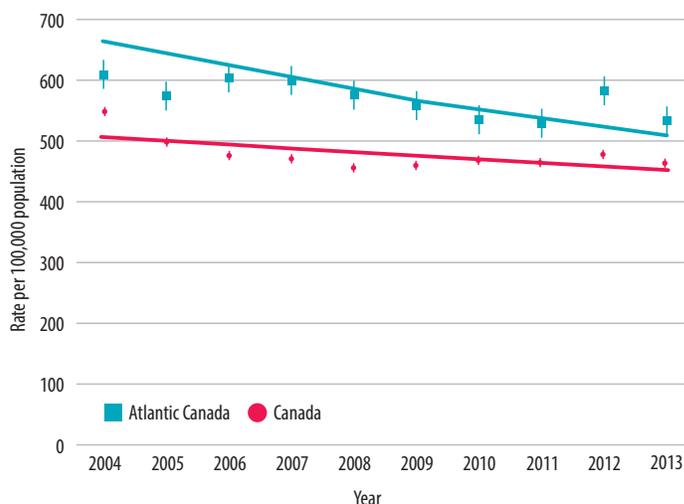
## HOSPITALIZATIONS (2004-2013)

- In 2004, there were 2,381 hospitalizations for unintentional injuries of children age 14 and under who live in Atlantic Canada. Ten years later, in 2013, there were 1,848 hospitalizations. This is a 22% decline in the number of unintentional injury hospitalizations between 2004 and 2013.
- On average there were 2,069 unintentional injury hospitalizations each year.
- The rate of unintentional injury-related hospitalizations decreased an average of 2.8% each year.

**When comparing the overall injury hospitalization rate of children in Atlantic Canada with the overall rate of Canadian provinces, the Atlantic rate was significantly higher with a rate of 571.5 hospitalizations per 100,000 population (95% CL 563.7 to 579.3) and the Canadian rate was 478.9 hospitalizations per 100,000 population (95% CL 480.9 to 476.8).**

**NB:** Includes transfers to institutions, deaths, adverse events, and complications. See Executive Summary for exclusionary rate.

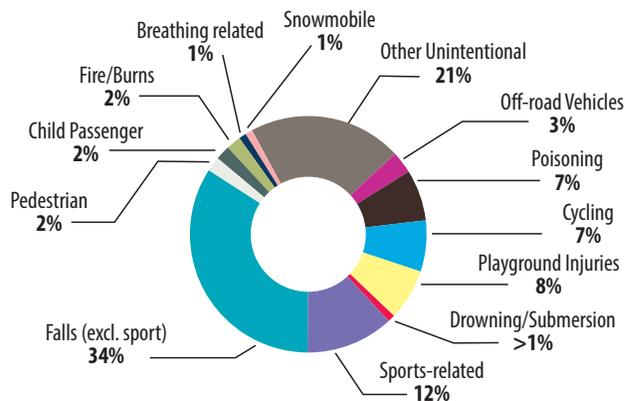
Rate of unintentional injury hospitalizations among children who live in Atlantic Canada, 2004-2013, age-standardized



## HOSPITALIZATIONS BY CAUSE

The data presented from this point forward includes hospitalizations of Atlantic children age 0-14 years, excludes: self-harm, assaults, undetermined intent, adverse events, medical/surgical complications, transfers to another facility, in-hospital deaths, and re-admissions.

**The leading cause of injury hospitalizations is falls, which accounted for 34% of the admissions. Sports-related injuries accounted for 12% and playground injuries accounted for 8% of unintentional injury hospitalizations.**



**Note:** "Other causes" refers to types of childhood unintentional injury hospitalizations that have not been covered in this report, firearms, injuries from riding animals, being struck by an object thrown or falling (non-sports-related), being unintentionally hit/kicked by another person, foreign body, bitten by an animal, exposure to other and unspecified factors, or machinery. The data is gathered in such a way that it often captures whether a child was struck by and/or struck against something, rather than the activity that the child was involved in at the time of injury.

# THE BURDEN OF INJURY: HOSPITALIZATIONS

## HOSPITALIZATIONS BY BODY REGION

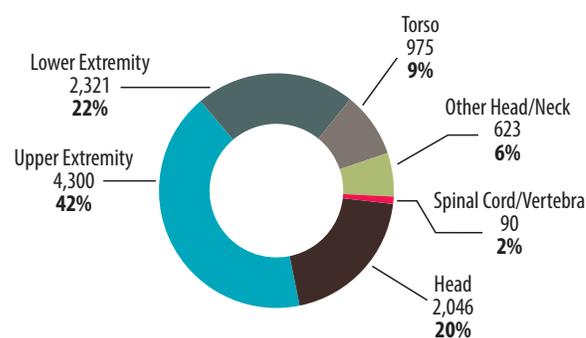
### Unintentional injury hospitalizations by body region among children who live in Atlantic Canada, age 0-14 yrs, 2004-2013

Source: Canadian Institute for Health Information

The body region most frequently injured requiring hospitalization was upper extremity (shoulders, arms, and hands). The second most common injury body region was the lower extremities (leg and foot). Significant injuries to the upper and lower extremities most commonly involved fractures. Injuries to head/brain most commonly were concussions.

**Note:** there were 1,976 additional admissions in which the most responsible diagnosis was not an injury code or the injury code was unclassified or multiple sites.

\*See page 26 for inclusions.



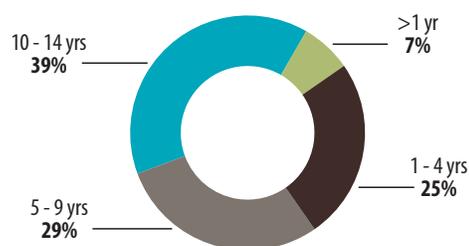
## HOSPITALIZATIONS BY AGE GROUPS

### Proportion of unintentional injury hospitalizations among children who live in Atlantic Canada by age group, 2004-2013

Source: Canadian Institute for Health Information

Youth between 10 and 14 years of age had the largest proportion of injury hospitalizations with 39%. This was followed by children 5 to 9 years of age with 29%, children between 1 and 4 years with 25% and infants less than 1 year of age with 7%.

**Note:** there were 1,976 admissions in which the most responsible diagnosis was not an injury code or the injury code was unclassified or multiple sites.



### Rates of unintentional injury hospitalizations among children who live in Atlantic Canada by age group, 2004-2013

Source: Canadian Institute for Health Information

Over the 10 year period, youth between 10 and 14 years of age experienced a statistically significant decrease in the average hospitalization rate of 5.0% annually. Children between 5 and 9 years of age experienced a statistically significant average decrease of 4.0% annually, and children between 1 and 4 years of age had a statistically significant average decrease of 1.6% annually. Whereas, infants less than 1 year of age experienced a statistically significant average increase of 3.0% annually.



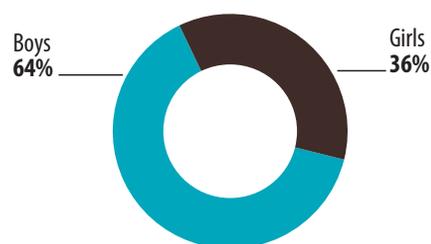
# THE BURDEN OF INJURY: HOSPITALIZATIONS

## HOSPITALIZATIONS BY GENDER

**Proportion of unintentional injury hospitalizations among children who live in Atlantic Canada aged 0-14 years by gender, 2004-2013**

Source: Canadian Institute for Health Information

Approximately two-thirds of the children hospitalized due to injuries were boys.

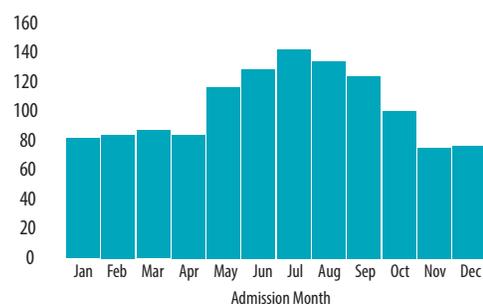


## HOSPITALIZATIONS BY MONTH

**Unintentional injury hospitalizations among children who live in Atlantic Canada aged 0-14 years by month, 2004-2013**

Source: Canadian Institute for Health Information

As expected, children were injured more frequently during the warmer months, possibly due to increased outdoor activities and play.



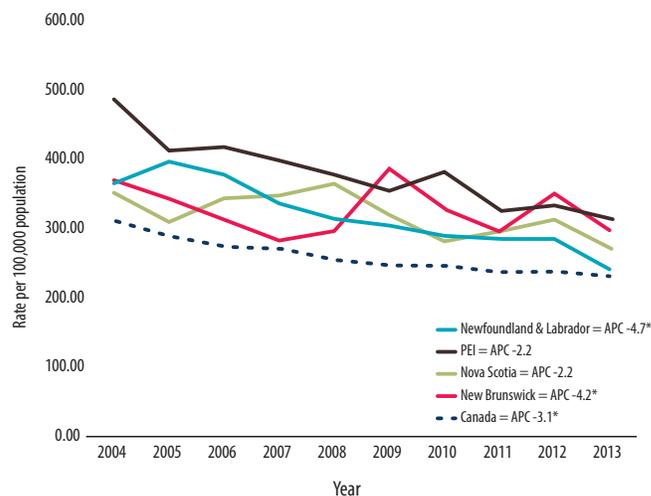
## HOSPITALIZATIONS BY REGION

**Trends in injury hospitalization rates among children who live in Atlantic Canada aged 0-14 years, 2004-2013 age-standardized**

Source: Canadian Institute for Health Information

Over the 10-year period each Atlantic province experienced a decrease in the overall injury hospital admission rate.

Newfoundland and Labrador experienced a statistically significant decrease in the hospitalization rate of an average of 4.7% annually. New Brunswick experienced a statistically significant decrease on average of 4.2% annually. Prince Edward Island and Nova Scotia both experienced an average annual decrease of 2.2% each.



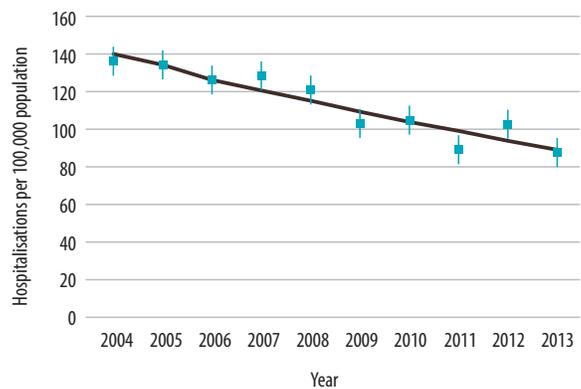
\*APC: Annual Percentage Change

# FALL INJURIES

## Trends in fall-related hospitalization rates among children who live in Atlantic Canada aged 0-14 years, 2004-2013 age-standardized

Source: Canadian Institute for Health Information

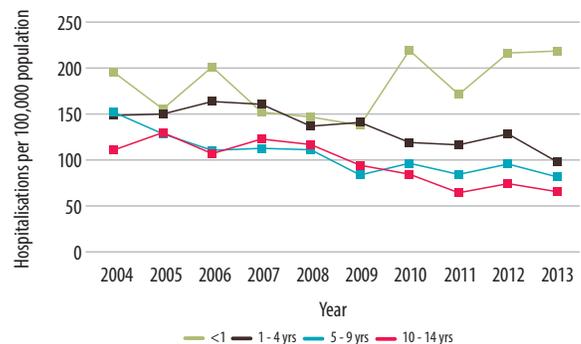
Falls were the leading cause of injury hospitalizations of Atlantic Canadian children and youth. Over the 10-year period from 2004 to 2013 the overall rate of hospitalizations due to fall-related injuries significantly decreased an average of 4.9% annually. During this same time period the average number of admissions was 416 each year.



## Trends in fall-related hospitalization rates among children who live in Atlantic Canada aged 0-14 years by age, 2004-2013 age-standardized

Source: Canadian Institute for Health Information

Infants less than 1 year of age experienced an increase in fall-related hospitalization rate of 2.3% annually. Children between 1 and 4 years of age had a statistically significant average decrease of 4.2% annually. Children between 5 and 9 years of age had a statistically significant average annual decrease of 5.7% and youth between 10 and 14 years experienced the largest statistically significant decrease with an average of 6.7% annually.



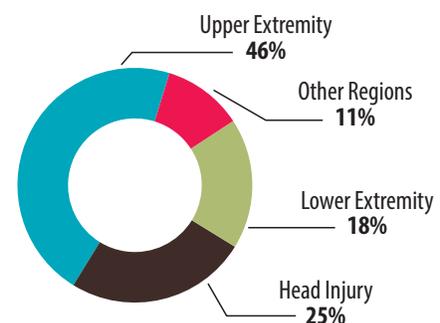
## Fall-related injury hospitalizations by body region among children who live in Atlantic Canada aged 0-14 yrs, 2004-2013

Source: Canadian Institute for Health Information

The most common body region injured due to a fall was the upper extremity with 46% followed by head injuries with 25% and lower extremity injuries with 18%. Other body regions accounted for the remaining 11%.

Of the upper extremity injuries, 98% were fractures. Of head injuries, 32% had a diagnosis of a concussion, another 18% had a fracture of skull or facial bone and another 11% had an internal brain injury. Of the lower extremity injuries, fractures accounted for 93%.

Of the detailed cause of the falls, falls from furniture accounted for 17% (700 hospitalizations) of all falls. Another 10% involved stairs/steps (401 admissions).



# SPORT INJURIES

## Trends in sports-related hospitalization rates among children who live in Atlantic Canada aged 0-14 years, 2004-2013 age-standardized

Source: Canadian Institute for Health Information

Sports-related injuries<sup>†</sup> were the second leading cause of injury hospitalizations of Atlantic Canadian children and youth. Over the 10-year period from 2004 to 2013 the overall rate of hospitalizations due to sports-related injuries experienced a statistically significant average decrease of 4.9% annually. During this same time period the average number of hospitalizations was 143 each year.

**Note:** sports-related injury rates are not correct for the number of participants, frequency or duration of play.

<sup>†</sup>Please see page 27 for a list of sport injury includes.

## Trends in sports-related hospitalization rates among children who live in Atlantic Canada aged 0-14 years by age, 2004-2013 age-standardized

Source: Canadian Institute for Health Information

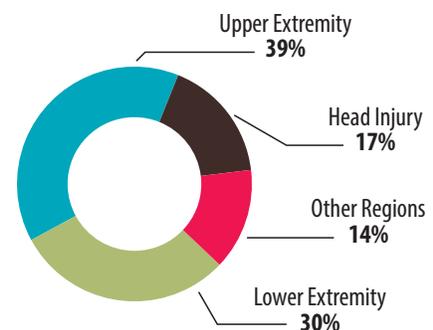
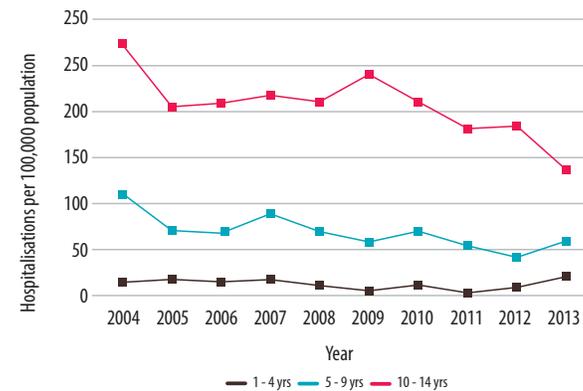
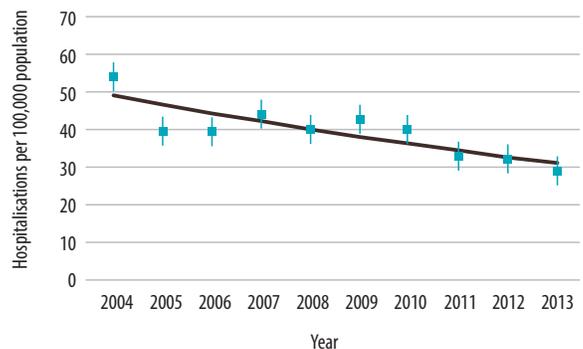
Children between 5 and 9 years of age overall had a statistically significant average annual decrease of 6.6%. Youth between 10 and 14 years had a statistically significant decrease of 4.2% on average annually. Children between 1 and 4 years of age had an average decrease of 1.9% annually. Infants less than 1 year of age were not reported due to small numbers.

## Sports-related injury hospitalizations by body region among children who live in Atlantic Canada aged 0-14 yrs, 2004-2013

Source: Canadian Institute for Health Information

The most common body region injured was the upper extremity with 39% followed by lower extremity with 30% and head injuries with 17%. Other body regions accounted for the remaining 14%.

Of the upper extremity injuries, 99% were fractures. Of the lower extremity injuries, 95% were a fracture. Of the head injuries, 55% were diagnosed with a concussion, another 13% with an internal brain injury and 9% with a fracture of the skull or facial bone.

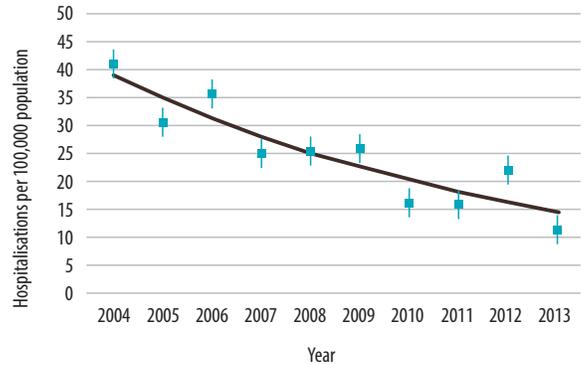


# BICYCLE INJURIES

## Trends in bicycle-related hospitalization rates among children who live in Atlantic Canada aged 0-14 years, 2004-2013 age-standardized

Source: Canadian Institute for Health Information

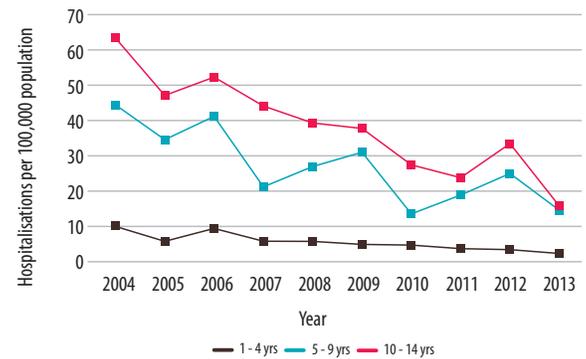
Over the 10-year period from 2004 to 2013 the overall rate of hospitalizations due to bicycle-related injuries (traffic and non-traffic example: falling off the bike) experienced a statistically significant decrease of 10.3% annually. During this same time period the average number of hospitalizations was 90 each year.



## Trends in bicycle-related hospitalization rates among children who live in Atlantic Canada aged 0-14 years by age, 2004-2013 age-standardized

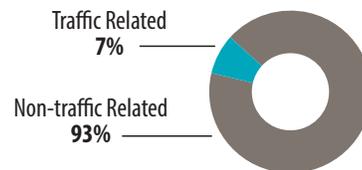
Source: Canadian Institute for Health Information

Overall, each age group experienced a statistically significant decrease in bicycle-related hospitalization rates. Even though children between 1 and 4 years of age had the overall lowest rates, this age group experienced the largest statistically significant average decrease of 12.3% annually. Youth between 10 and 14 years of age experienced a statistically significant average decrease of 10.5% annually. Children between 5 and 9 years experienced a statistically significant average decrease of 9.4% annually.



Of all bicycle-related injury hospitalizations the majority (93%) were as a result of falling off a bicycle, or striking a stationary object. The remaining 7% were as a result of being struck by a motor vehicle.

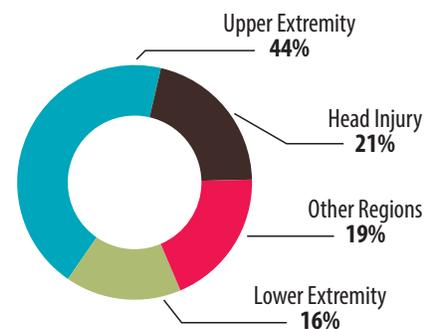
Infants less than 1 year of age were not reported due to small numbers.



## Bicycle-related injury hospitalizations by body region among children who live in Atlantic Canada aged 0-14 yrs, 2004-2013

Source: Canadian Institute for Health Information

The most common body region injured was the upper extremity with 44% followed by head injury with 21%, and lower extremity injuries with 16%. Other body regions accounted for the remaining 19%.



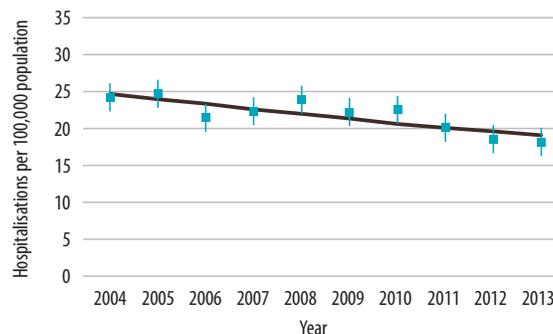
Of the upper extremity injuries, 99% were fractures. Of the head injuries, 46% were diagnosed with a concussion, another 22% with an internal brain injury and 6% with a fracture of the skull or facial bone. Of the lower extremity injuries, 82% were a fracture.

# POISONING INJURIES

## Trends in unintentional poisoning hospitalization rates among children who live in Atlantic Canada aged 0-14 years, 2004-2013 age-standardized

Source: Canadian Institute for Health Information

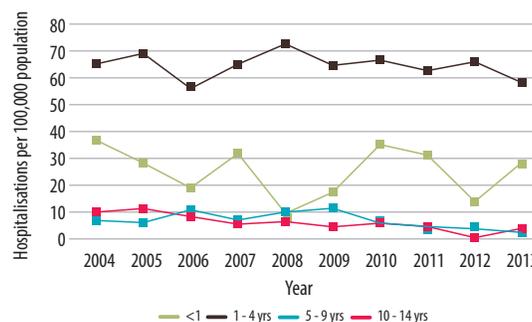
Over the 10-year period from 2004 to 2013 the overall rate of hospitalizations due to unintentional poisoning injuries experienced a statistically significant average decrease of 2.9% annually. During this same time period the average number of hospitalizations was 80 each year.



## Trends in unintentional poisoning hospitalization rates among children who live in Atlantic Canada aged 0-14 years by age, 2004-2013 age-standardized

Source: Canadian Institute for Health Information

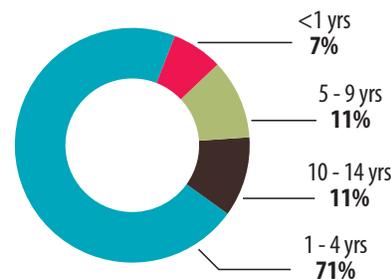
Overall, each age group experienced a decrease in unintentional poisoning hospitalization rates. Youth between 10 and 14 years of age experienced a statistically significant average decrease of 12.6% annually. Children between 5 and 9 years experienced a statistically significant average decrease of 6.2% annually. Children between 1 and 4 years had a statistically significant average decrease of 4.3% annually and infants less than 1 year of age had an average annual decrease of 2.1%.



## Proportion of unintentional poisoning hospitalizations of children who live in Atlantic Canada aged 0-14 years by age group, 2004-2013

Source: Canadian Institute for Health Information

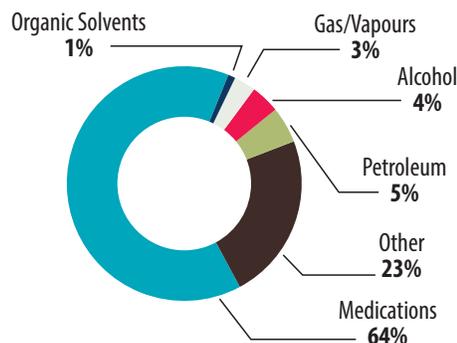
The majority (71%) of the unintentional poisoning hospitalizations were children between the ages of 1 and 4 years.



## Proportion of unintentional poisoning hospitalizations of children who live in Atlantic Canada aged 0-14 years by cause, 2004-2013

Source: Canadian Institute for Health Information

The majority of the unintentional poisonings were as a result of ingestion of a medication. Medications accounted for 64% of all unintentional poisoning-related hospitalizations in children and youth.

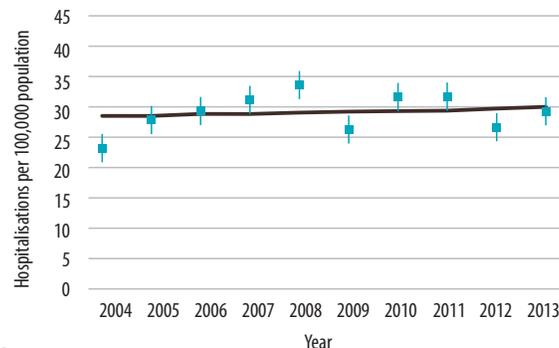


# PLAYGROUND INJURIES

## Trends in playground-related injury hospitalization rates among children who live in Atlantic Canada aged 0-14 years, 2004-2013 age-standardized

Source: Canadian Institute for Health Information

Over the 10-year period from 2004 to 2013 the overall rate of hospitalizations due to playground-related injuries increased an average of 1.1% annually. The hospitalization rate increased even though the number of admissions remained the same. This is due to a decrease in the child and youth population of 12%. During the same time period, the number of hospitalizations was 104 each year.

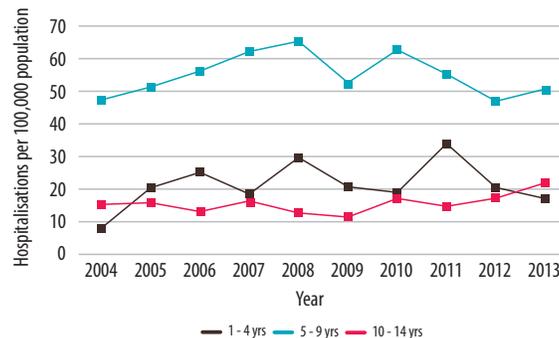


## Trends in playground-related injury hospitalization rates among children who live in Atlantic Canada aged 0-14 years by age, 2004-2013 age-standardized

Source: Canadian Institute for Health Information

Overall, each age group experienced an increase in playground-related injury hospitalization rates. Youth between 10 and 14 years of age experienced the largest average increase of 2.9% annually. Children between 1 and 4 years of age experienced an average increase of 2.6% annually, and children between 5 and 9 years of age experienced an average increase of 0.4% annually.

Infants less than 1 year of age were not reported due to small numbers.

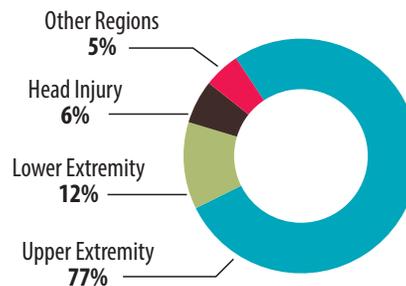


## Playground-related injury hospitalizations by body region among children who live in Atlantic Canada aged 0-14 yrs, 2004-2013

Source: Canadian Institute for Health Information

The most common body region injured was the upper extremity with 77% followed by lower extremity injury with 12% and head injuries with 6%. Other body regions accounted for the remaining 5%.

Of the upper extremity injuries, 99% were fractures. Of the lower extremity injuries, 95% were fractures. Of the head injuries, 53% were diagnosed with a concussion, another 10% with an internal brain injury and 7% with a fracture of the skull or facial bone.

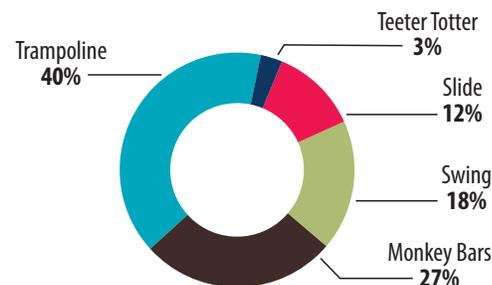


## Proportion of playground-related injury hospitalization rates among children who live in Atlantic Canada aged 0-14 years, 2009-2013

Source: Canadian Institute for Health Information

From 2009 to 2013, where the type of playground equipment was identified, 40% of the injuries were as a result of playing/falling from a trampoline. Another 27% were from falls from monkey bars, 18% falls from a swing, 12% of the injuries involved a slide and 3% of the playground-related injuries involved a teeter totter.

There were 596 hospitalizations (57%) that were either prior to 2009 in which details of the type of playground equipment was not available or the type of equipment was not identified.

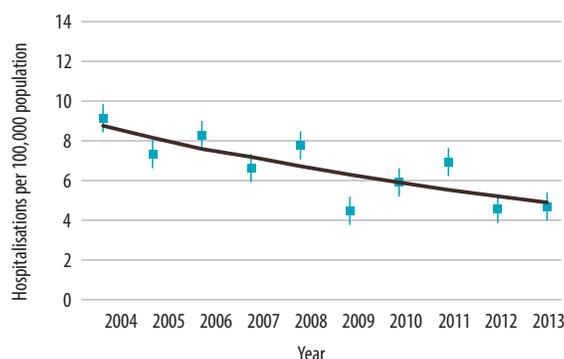


# CHILD-PASSENGER INJURIES

## Trends in child-passenger injury hospitalization rates among children who live in Atlantic Canada aged 0-14 years, 2004-2013 age-standardized

Source: Canadian Institute for Health Information

Over the 10-year period from 2004 to 2013 the overall rate of hospitalizations due to child-passenger injuries experienced a statistically significant average decrease of 6.3% annually. During this same time period the average number of hospitalizations was 24 admissions each year.

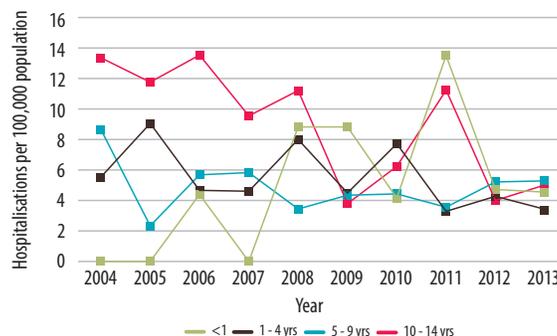


## Trends in child-passenger-related injury hospitalization rates among children who live in Atlantic Canada aged 0-14 years by age, 2004-2013 age-standardized

Source: Canadian Institute for Health Information

Youth between 10 and 14 years of age experienced the largest and statistically significant average decrease of 9.2% annually. Children between 1 and 4 years of age had an average decrease of 5.7% annually. Children between 5 and 9 years of age had an average decrease of 4.3% annually. Infants had a slight average increase of 0.7% annually.

**Note:** The large fluctuations in the rates are due to the small number of hospitalizations.



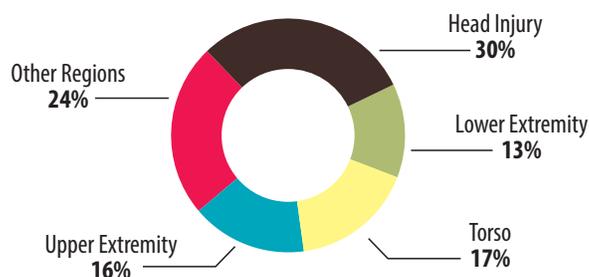
## Child-passenger-related injury hospitalizations by body region among children who live in Atlantic Canada aged 0-14 yrs, 2004-2013

Source: Canadian Institute for Health Information

The most common body region injured was the head with 30% followed by torso injuries with 17%, upper extremity injuries with 16% and lower extremity injuries with 13%. Other body regions accounted for the remaining 24%.

Of the head injuries, 32% were diagnosed with an internal brain injury, another 24% had a concussion, 10% with a fracture of the skull or facial bone. Of the upper extremity injuries the majority (82%) were a fracture. Of the lower extremity injuries 75% were fractures.

Of the torso body region injuries, 33% were injuries to the intra-abdominal organs such as the spleen, gallbladder, pancreas, stomach and intestines.



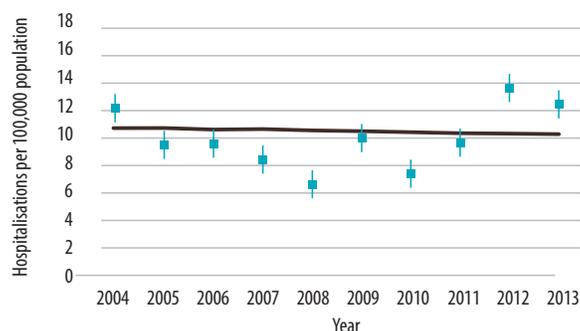
# ALL-TERRAIN VEHICLE INJURIES

## Trends in all-terrain vehicle-related injury hospitalization rates among children who live in Atlantic Canada aged 0-14 years, 2004-2013 age-standardized

Source: Canadian Institute for Health Information

Over the 10-year period from 2004 to 2013 the overall rate of hospitalizations due to all-terrain vehicle-related injuries increased an average of 1.8% annually. During this same time period the average number of hospitalizations was 35 each year.

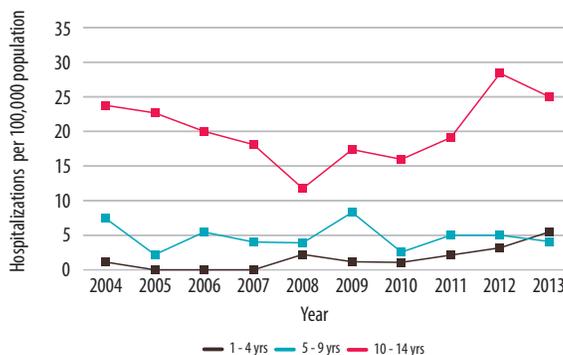
This includes side-by-sides and dirtbikes\*.



## Trends in all-terrain vehicle-related injury hospitalization rates among children who live in Atlantic Canada aged 0-14 years by age, 2004-2013 age-standardized

Source: Canadian Institute for Health Information

Children between 1 and 4 years of age experienced an average increase of 3.4% annually. Infants less than 1 year of age were not reported due to small numbers. Youth between 10 and 14 years of age experienced an average increase of 1.1% annually. Children between 5 and 9 years of age experienced a decrease with an average of 2.5% annually. Children between 1 and 4 years of age experienced an increase in the rate given there were zero hospitalizations between 2005 and 2007.

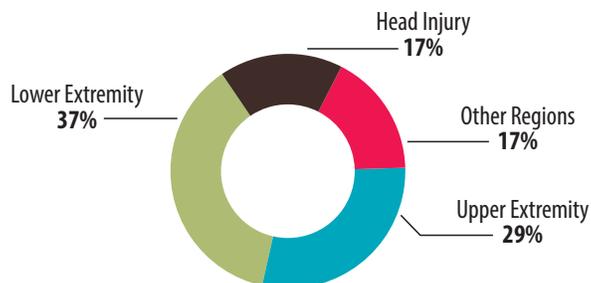


## All-terrain vehicle injury hospitalizations by body region among children who live in Atlantic Canada aged 0-14 yrs, 2004-2013

Source: Canadian Institute for Health Information

The most common body region injured was the lower extremity with 37%. Upper extremity injuries accounted for 29%, head injuries 17% and other regions the remaining 17%.

Of the upper extremity injuries the majority (96%) were a fracture. Of the lower extremity injuries 85% were fractures. Of the head injuries, 37% were diagnosed with an internal brain injury, another 25% had a concussion, 19% with a fracture of the skull or facial bone.



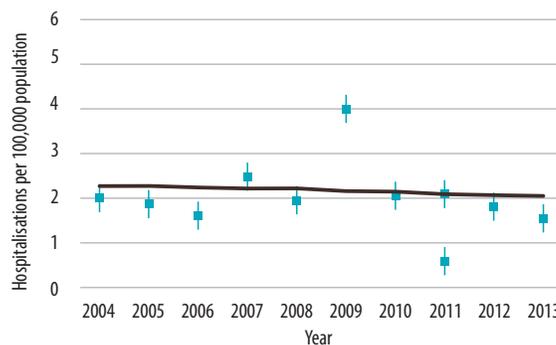
\*All-terrain vehicles (ATVs) are defined as all vehicles that are designed primarily for off-road use excluding snowmobiles

# SNOWMOBILE INJURIES

## Trends in snowmobile-related injury hospitalization rates among children who live in Atlantic Canada aged 0-14 years, 2004-2013 age-standardized

Source: Canadian Institute for Health Information

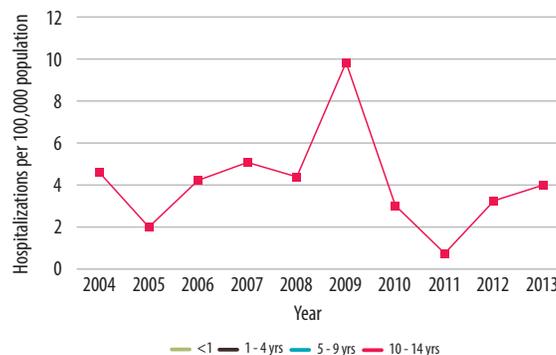
Over the 10-year period from 2004 to 2013 the overall rate of hospitalizations due to snowmobile-related injuries experienced an average decrease in rate of 1.2% annually. During this time period there was an average of 7 admissions each year.



## Trends in snowmobile-related injury hospitalization rates among children who live in Atlantic Canada aged 0-14 years by age, 2004-2013 age-standardized

Source: Canadian Institute for Health Information

The rate of snowmobile-related hospitalizations for youth between 10 and 14 years of age remained unchanged over the 10-year period. The other age groups were not included in the graph to the right due to small numbers.

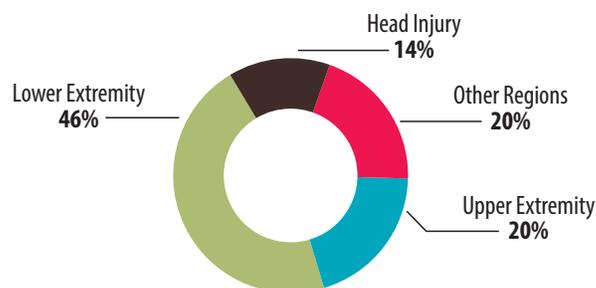


## Snowmobile-related injury hospitalizations by body region among children who live in Atlantic Canada aged 0-14 yrs, 2004-2013

Source: Canadian Institute for Health Information

The most common body region injured was the lower extremity with 46%. Upper extremity injuries accounted for 20%, head injuries 14% and other regions the remaining 20%.

Of the lower extremity injuries, 85% were fractures. Of the upper extremity injuries, 93% were fractures. Of the head injuries, 60% were a concussion.

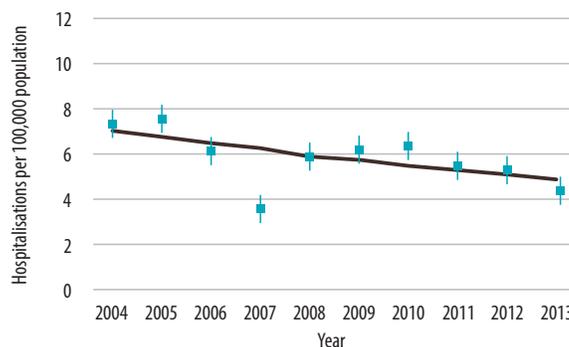


# PEDESTRIAN INJURIES

## Trends in pedestrian-related injury hospitalization rates among children who live in Atlantic Canada aged 0-14 years, 2004-2013 age-standardized

Source: Canadian Institute for Health Information

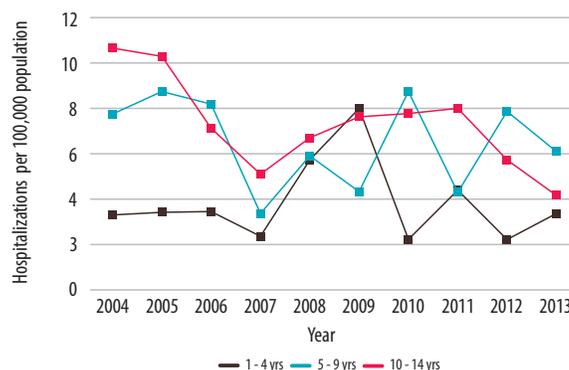
Over the 10-year period from 2004 to 2013 the overall rate of hospitalizations due to pedestrian-related injuries experienced an average decrease of 4.0% annually. During this time period there was an average of 21 admissions each year.



## Trends in pedestrian-related injury hospitalization rates among children who live in Atlantic Canada aged 0-14 years by age, 2004-2013 age-standardized

Source: Canadian Institute for Health Information

Youth between 10 and 14 years of age experienced the largest statistically significant average decrease of 6.2% annually. Children between 5 and 9 years of age experienced an average decrease of 2.3% annually and children between 1 and 4 years of age experienced an average increase of 0.5% annually. Infants less than 1 year of age were not reported due to small numbers.

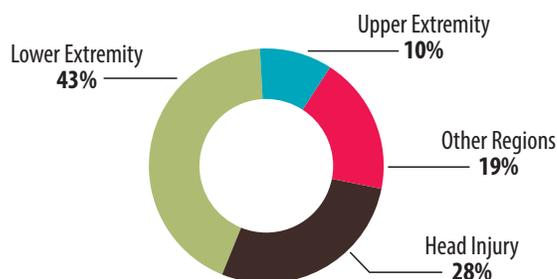


## Pedestrian-related injury hospitalizations by body region among children who live in Atlantic Canada aged 0-14 yrs, 2004-2013

Source: Canadian Institute for Health Information

The most common body region injured was the lower extremity with 43%. Head injuries accounted for 28%, upper extremity injuries accounted for 10%, and other regions the remaining 19%.

Of the lower extremity injuries, 89% were fractures. Of the head injuries, 35% were an internal injury to the brain, 23% were concussions and another 14% were a fracture to the skull or facial bones. Of the lower extremity injuries, 89% were fractures.

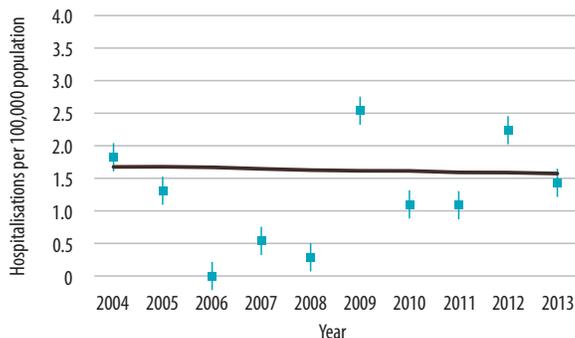


# DROWNING INJURIES

## Trends in near drowning hospitalization rates among children who live in Atlantic Canada aged 0-14 years, 2004-2013 age-standardized

Source: Canadian Institute for Health Information

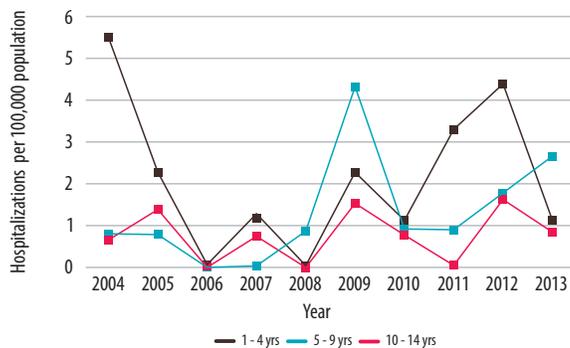
Over the 10-year period from 2004 to 2013 the overall rate of hospitalizations due to near drowning decreased an average of 0.6% annually. During this time period there was on average 5 near drowning hospitalizations each year.



## Trends in near drowning hospitalization rates among children who live in Atlantic Canada aged 0-14 years by age, 2004-2013 age-standardized

Source: Canadian Institute for Health Information

Children between 5 and 9 years of age experienced an average increase of 7.0% annually and youth between 10 and 14 years of age had an average increase of 2.8% annually. Whereas, children between 1 and 4 years of age had an average decrease of 3.6% annually. Infants less than 1 year of age were not reported due to small numbers.

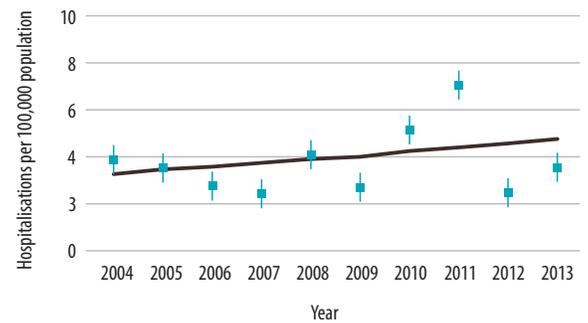


# BREATHING-RELATED INJURIES

## Trends in breathing-related injury hospitalization rates among children who live in Atlantic Canada aged 0-14 years, 2004-2013 age-standardized

Source: Canadian Institute for Health Information

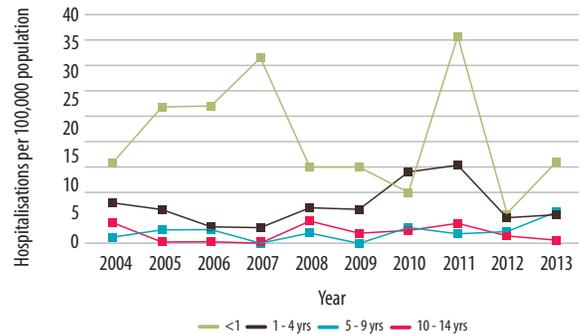
Threats to breathing include: suffocations, strangulation, choking and entrapment. Over the 10-year period from 2004 to 2013 the rate of hospitalizations due to threats to breathing-related injuries experienced an average increase of 4.0% annually. During this time period there was an average of 14 hospitalizations related to threats to breathing.



## Trends in threats to breathing-related injury hospitalization rates among children who live in Atlantic Canada aged 0-14 years by age, 2004-2013 age-standardized

Source: Canadian Institute for Health Information

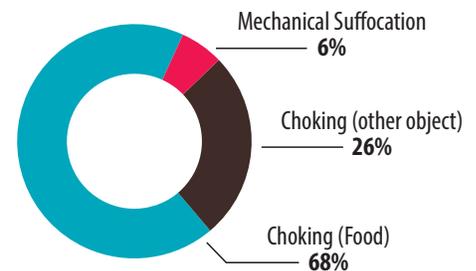
Children between 5 and 9 years of age experienced an average increase of 10.0% annually even though they have two years in which there were zero hospitalizations. Children between 1 and 4 years of age experienced an average increase of 6.6% annually. Youth between 10 and 14 years of age had an average decrease of 5.2% annually. Infants less than one year of age had hospitalization rates three times that of the next age group. Infants experienced an average decrease in the hospitalization rate of 1.7% annually.



## Proportion of threats to breathing injury hospitalization rates among children who live in Atlantic Canada aged 0-14 years, 2004-2013

Source: Canadian Institute for Health Information

The majority (68%) of the threats to breathing were a result of food.

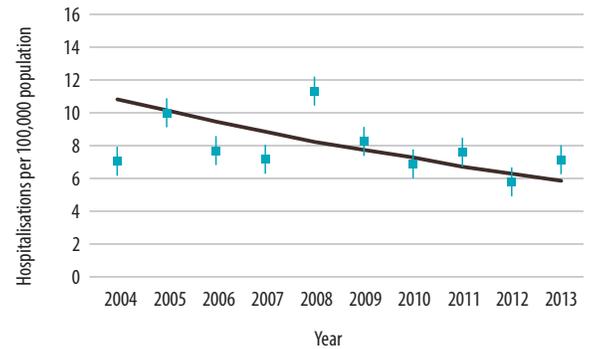


# BURN INJURIES

## Trends in burn-related injury hospitalization rates among children who live in Atlantic Canada aged 0-14 years, 2004-2013 Age-standardized

Source: Canadian Institute for Health Information

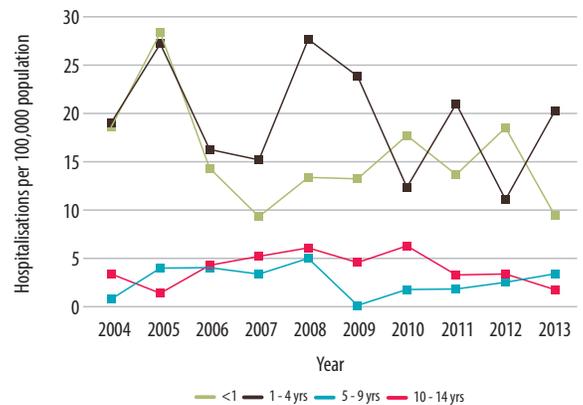
Burn-related hospitalizations include; contact with fire/flames, steam, and hot liquids (scalds) including tap water. Over the 10-year period from 2004 to 2013 the rate of hospitalizations due to burns experienced a statistically significant average decrease of 6.3% annually. During this time period there was on average 29 burn-related hospitalizations.



## Trends in burn-related injury hospitalization rates among children who live in Atlantic Canada aged 0-14 years by age, 2004-2013 Age-standardized

Source: Canadian Institute for Health Information

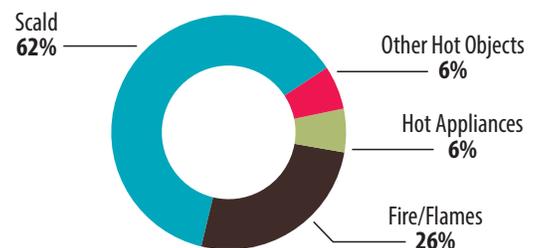
Infants less than one year of age experienced a decrease in the hospitalization rate with an average of 5.1% annually. Children between 5 and 9 years of age experienced a decrease of an average of 2.8% annually. Children between 1 and 4 years of age experienced a decrease of an average of 2.6% annually. Youth between 10 and 14 years of age had a decrease in the average rate of 0.1% annually.



## Proportion of burn-related injury hospitalization rates among children who live in Atlantic Canada aged 0-14 years, 2004-2013

Source: Canadian Institute for Health Information

The majority (62%) of the burn-related hospitalizations were as a result of scalds from hot liquids. Another 26% were as a result of a child being burned by fire/flames.



# PROVINCIAL COMPARISONS

HOSPITALIZATIONS, 2004 - 2013

## ALL UNINTENTIONAL HOSPITALIZATIONS (EXCLUSIONS)

This excludes intentional injuries such as, suicide/self-harm and assaults, undetermined intents, adverse events, medical/surgical complications, transfer to another hospital, re-admissions and in-hospital deaths.

| PROVINCE                         | Age-stnd Rate per 100,000 Population | Upper Confidence Level | Lower Confidence Level |
|----------------------------------|--------------------------------------|------------------------|------------------------|
| Newfoundland & Labrador          | 320.2                                | 332.7                  | 307.6                  |
| Prince Edward Island             | 326.3                                | 349.3                  | 303.2                  |
| Nova Scotia                      | 320.9                                | 330.2                  | 311.7                  |
| New Brunswick                    | 382.3                                | 393.5                  | 371.1                  |
| Ontario                          | 209.4                                | 211.3                  | 207.5                  |
| Manitoba*                        | 262.9                                | 269.9                  | 255.9                  |
| Saskatchewan                     | 486.2                                | 495.9                  | 476.5                  |
| Alberta                          | 318.6                                | 322.9                  | 314.4                  |
| British Columbia                 | 262.1                                | 266.0                  | 258.3                  |
| Territories                      | 258.5                                | 278.0                  | 239.0                  |
| CANADA                           | 260.4                                | 261.9                  | 258.8                  |
| Atlantic Canada                  | 340.9                                | 346.9                  | 334.9                  |
| *Manitoba rates from 2005 - 2013 |                                      |                        |                        |

When comparing the overall unintentional (exclusions) hospitalization rates, the children of Atlantic Canada had a rate significantly higher than the Canadian rate. The rate in Atlantic Canada was 340.9 hospitalizations/100,000 population and the Canadian rate was 260.4 hospitalizations/100,000 population.

Of the Atlantic provinces, New Brunswick had the highest overall rate with 382.3 hospitalizations/100,000 population. Newfoundland and Labrador had the lowest overall rate with 320.2 hospitalizations/100,000 population.

When comparing the Atlantic unintentional (exclusions) rate with the Atlantic overall rate, the Atlantic overall rate is almost twice that of the exclusions rate. This is due to the 46% admission of unintentional exclusions such as suicide/self-harm, assaults, undetermined intents, adverse events, medical/surgical complications, hospital transfers, re-admissions, and in-hospital deaths.

# PROVINCIAL COMPARISONS

HOSPITALIZATIONS, 2004 - 2013

## FALLS

| PROVINCE                | Age-stnd Rate per 100,000 Population | Upper Confidence Level | Lower Confidence Level |
|-------------------------|--------------------------------------|------------------------|------------------------|
| Newfoundland & Labrador | 98.8                                 | 105.8                  | 91.8                   |
| Prince Edward Island    | 103.1                                | 116.0                  | 90.1                   |
| Nova Scotia             | 112.9                                | 118.4                  | 107.4                  |
| New Brunswick           | 130.5                                | 137.1                  | 124.0                  |
| Ontario                 | 67.2                                 | 68.2                   | 66.1                   |
| Manitoba*               | 65.5                                 | 69.0                   | 62.0                   |
| Saskatchewan            | 138.6                                | 143.8                  | 133.4                  |
| Alberta                 | 82.3                                 | 84.5                   | 80.2                   |
| British Columbia        | 75.9                                 | 77.8                   | 73.6                   |
| Territories             | 65.9                                 | 75.7                   | 56.0                   |
| CANADA                  | 77.9                                 | 78.7                   | 77.0                   |
| Atlantic Canada         | 114.9                                | 118.4                  | 111.4                  |

\*Manitoba rates from 2005 - 2013

When comparing the fall-related hospitalization rates, the children of Atlantic Canada had a rate significantly higher than the Canadian rate. The rate in Atlantic Canada was 114.9 hospitalizations/100,000 population and the Canadian rate was 77.9 hospitalizations/100,000 population.

Of the Atlantic provinces, New Brunswick had the highest rate with 130.5 hospitalizations/100,000 population. Newfoundland and Labrador had the lowest rate with 98.8 hospitalizations/100,000 population.

## SPORTS-RELATED

| PROVINCE                | Age-stnd Rate per 100,000 Population | Upper Confidence Level | Lower Confidence Level |
|-------------------------|--------------------------------------|------------------------|------------------------|
| Newfoundland & Labrador | 28.7                                 | 32.5                   | 25.0                   |
| Prince Edward Island    | 45.6                                 | 54.2                   | 36.9                   |
| Nova Scotia             | 42.1                                 | 45.3                   | 38.7                   |
| New Brunswick           | 43.5                                 | 47.9                   | 39.7                   |
| Ontario                 | 24.3                                 | 24.9                   | 23.6                   |
| Manitoba*               | 28.3                                 | 30.6                   | 26.0                   |
| Saskatchewan            | 53.0                                 | 56.2                   | 49.8                   |
| Alberta                 | 36.2                                 | 37.7                   | 34.8                   |
| British Columbia        | 34.7                                 | 36.0                   | 33.3                   |
| Territories             | 23.9                                 | 29.8                   | 17.9                   |
| CANADA                  | 30.4                                 | 31.0                   | 29.9                   |
| Atlantic Canada         | 39.9                                 | 42.0                   | 37.9                   |

\*Manitoba rates from 2005 - 2013

When comparing sports-related hospitalization rates, the children of Atlantic Canada had a rate significantly higher than the Canadian rate. The rate in Atlantic Canada was 39.9 hospitalizations/100,000 population and the Canadian rate was 30.4 hospitalizations/100,000 population.

Of the Atlantic provinces, Prince Edward Island had the highest rate with 45.6 hospitalizations/100,000 population. Newfoundland and Labrador had the lowest rate with 28.7 hospitalizations/100,000 population.

## BICYCLE

| PROVINCE                | Age-stnd Rate per 100,000 Population | Upper Confidence Level | Lower Confidence Level |
|-------------------------|--------------------------------------|------------------------|------------------------|
| Newfoundland & Labrador | 28.7                                 | 32.5                   | 25.0                   |
| Prince Edward Island    | 14.4                                 | 19.3                   | 9.6                    |
| Nova Scotia             | 20.9                                 | 23.2                   | 18.5                   |
| New Brunswick           | 30.4                                 | 33.6                   | 27.2                   |
| Ontario                 | 13.3                                 | 13.8                   | 12.8                   |
| Manitoba*               | 14.1                                 | 15.7                   | 12.5                   |
| Saskatchewan            | 23.9                                 | 26.0                   | 21.7                   |
| Alberta                 | 19.2                                 | 20.2                   | 18.2                   |
| British Columbia        | 21.1                                 | 22.2                   | 20.0                   |
| Territories             | 13.1                                 | 17.5                   | 8.7                    |
| CANADA                  | 16.9                                 | 17.3                   | 16.5                   |
| Atlantic Canada         | 25.2                                 | 26.8                   | 23.6                   |

\*Manitoba rates from 2005 - 2013

When comparing the bicycle-related hospitalization rates, the children of Atlantic Canada had a rate higher than the Canadian rate. The rate in Atlantic Canada was 25.2 hospitalizations/100,000 population and the Canadian rate was 16.9 hospitalizations/100,000 population.

Of the Atlantic provinces, New Brunswick had the highest rate with 30.4 hospitalizations/100,000 population. Prince Edward Island had the lowest rate with 14.4 hospitalizations/100,000 population.

# PROVINCIAL COMPARISONS

## HOSPITALIZATIONS, 2004 - 2013

### POISONING

| PROVINCE                | Age-stnd Rate per 100,000 Population | Upper Confidence Level | Lower Confidence Level |
|-------------------------|--------------------------------------|------------------------|------------------------|
| Newfoundland & Labrador | 24.9                                 | 28.4                   | 21.4                   |
| Prince Edward Island    | 19.9                                 | 25.6                   | 14.2                   |
| Nova Scotia             | 13.0                                 | 14.9                   | 11.1                   |
| New Brunswick           | 30.9                                 | 34.1                   | 27.7                   |
| Ontario                 | 11.6                                 | 12.0                   | 11.1                   |
| Manitoba*               | 16.1                                 | 17.8                   | 14.4                   |
| Saskatchewan            | 39.2                                 | 42.0                   | 36.5                   |
| Alberta                 | 15.8                                 | 16.8                   | 14.9                   |
| British Columbia        | 15.0                                 | 15.9                   | 14.0                   |
| Territories             | 27.0                                 | 33.3                   | 20.7                   |
| CANADA                  | 15.1                                 | 15.5                   | 14.8                   |
| Atlantic Canada         | 21.8                                 | 23.3                   | 20.3                   |

\*Manitoba rates from 2005 - 2013

When comparing the poisoning-related hospitalization rates, the children of Atlantic Canada had a rate higher than the Canadian rate. The rate in Atlantic Canada was 21.8 hospitalizations/100,000 population and the Canadian rate was 15.1 hospitalizations/100,000 population.

Of the Atlantic provinces, New Brunswick had the highest rate with 30.9 hospitalizations/100,000 population. Nova Scotia had the lowest rate with 13.0 hospitalizations/100,000 population.

### PLAYGROUND

| PROVINCE                | Age-stnd Rate per 100,000 Population | Upper Confidence Level | Lower Confidence Level |
|-------------------------|--------------------------------------|------------------------|------------------------|
| Newfoundland & Labrador | 18.9                                 | 22.0                   | 15.9                   |
| Prince Edward Island    | 30.3                                 | 37.3                   | 23.3                   |
| Nova Scotia             | 30.8                                 | 33.6                   | 27.9                   |
| New Brunswick           | 33.3                                 | 36.7                   | 30.0                   |
| Ontario                 | 21.0                                 | 21.6                   | 20.4                   |
| Manitoba*               | 23.3                                 | 25.4                   | 21.3                   |
| Saskatchewan            | 54.3                                 | 57.6                   | 51.1                   |
| Alberta                 | 32.7                                 | 34.0                   | 31.3                   |
| British Columbia        | 34.4                                 | 35.8                   | 33.0                   |
| Territories             | 21.5                                 | 27.2                   | 15.9                   |
| CANADA                  | 27.1                                 | 27.6                   | 20.6                   |
| Atlantic Canada         | 29.0                                 | 30.7                   | 27.2                   |

\*Manitoba rates from 2005 - 2013

When comparing the playground-related hospitalization rates, the children of Atlantic Canada had a rate significantly higher than the Canadian rate. The rate in Atlantic Canada was 29.0 hospitalizations/100,000 population and the Canadian rate was 27.1 hospitalizations/100,000 population.

Of the Atlantic provinces, New Brunswick had the highest rate with 33.3 hospitalizations/100,000 population. Newfoundland and Labrador had the lowest rate with 18.9 hospitalizations/100,000 population.

### CHILD PASSENGERS

| PROVINCE                | Age-stnd Rate per 100,000 Population | Upper Confidence Level | Lower Confidence Level |
|-------------------------|--------------------------------------|------------------------|------------------------|
| Newfoundland & Labrador | 6.0                                  | 7.7                    | 4.3                    |
| Prince Edward Island    | 6.3                                  | 9.6                    | 3.1                    |
| Nova Scotia             | 6.6                                  | 8.0                    | 5.3                    |
| New Brunswick           | 7.1                                  | 8.7                    | 5.6                    |
| Ontario                 | 4.1                                  | 4.4                    | 3.8                    |
| Manitoba*               | 7.8                                  | 9.0                    | 6.6                    |
| Saskatchewan            | 14.5                                 | 16.1                   | 12.8                   |
| Alberta                 | 8.3                                  | 9.0                    | 7.6                    |
| British Columbia        | 6.6                                  | 7.2                    | 6.0                    |
| Territories             | 16                                   | 3.2                    | 0.1                    |
| CANADA                  | 6.0                                  | 6.2                    | 5.7                    |
| Atlantic Canada         | 6.6                                  | 7.5                    | 5.8                    |

\*Manitoba rates from 2005 - 2013

When comparing the child passenger-related hospitalization rates, the children of Atlantic Canada had a rate higher than the Canadian rate. The rate in Atlantic Canada was 6.6 hospitalizations/100,000 population and the Canadian rate was 6.0 hospitalizations/100,000 population.

Of the Atlantic provinces, New Brunswick had the highest rate with 7.1 hospitalizations/100,000 population. Newfoundland and Labrador had the lowest rate with 6.0 hospitalizations/100,000 population.

# PROVINCIAL COMPARISONS

HOSPITALIZATIONS, 2004 - 2013

## ALL-TERRAIN VEHICLES

| PROVINCE                | Age-stnd Rate per 100,000 Population | Upper Confidence Level | Lower Confidence Level |
|-------------------------|--------------------------------------|------------------------|------------------------|
| Newfoundland & Labrador | 13.6                                 | 16.2                   | 11.0                   |
| Prince Edward Island    | 8.9                                  | 12.7                   | 5.1                    |
| Nova Scotia             | 7.7                                  | 9.1                    | 6.2                    |
| New Brunswick           | 9.6                                  | 11.3                   | 7.8                    |
| Ontario                 | 3.6                                  | 3.9                    | 3.4                    |
| Manitoba*               | 9.4                                  | 10.7                   | 8.1                    |
| Saskatchewan            | 16.5                                 | 18.3                   | 14.7                   |
| Alberta                 | 14.0                                 | 14.9                   | 13.1                   |
| British Columbia        | 5.4                                  | 5.9                    | 4.8                    |
| Territories             | 10.4                                 | 14.3                   | 6.5                    |
| CANADA                  | 6.8                                  | 7.1                    | 6.6                    |
| Atlantic Canada         | 9.6                                  | 10.6                   | 8.6                    |

\*Manitoba rates from 2005 - 2013

When comparing off-road vehicle-related hospitalization rates, the children of Atlantic Canada had a rate significantly higher than the Canadian rate. The rate in Atlantic Canada was 9.6 hospitalizations/100,000 population and the Canadian rate was 6.8 hospitalizations/100,000 population.

Of the Atlantic provinces, Newfoundland and Labrador had the highest rate with 13.6 hospitalizations/100,000 population. Nova Scotia had the lowest rate with 7.7 hospitalizations/100,000 population.

## PEDESTRIAN

| PROVINCE                | Age-stnd Rate per 100,000 Population | Upper Confidence Level | Lower Confidence Level |
|-------------------------|--------------------------------------|------------------------|------------------------|
| Newfoundland & Labrador | 8.8                                  | 10.9                   | 6.7                    |
| Prince Edward Island    | 5.1                                  | 8.0                    | 2.2                    |
| Nova Scotia             | 6.4                                  | 7.7                    | 5.1                    |
| New Brunswick           | 3.4                                  | 4.4                    | 2.3                    |
| Ontario                 | 3.9                                  | 4.2                    | 3.7                    |
| Manitoba*               | 9.6                                  | 10.9                   | 8.3                    |
| Saskatchewan            | 9.8                                  | 11.1                   | 8.4                    |
| Alberta                 | 5.0                                  | 5.5                    | 4.5                    |
| British Columbia        | 6.1                                  | 6.7                    | 5.5                    |
| Territories             | 5.7                                  | 8.6                    | 2.8                    |
| CANADA                  | 5.2                                  | 5.4                    | 4.9                    |
| Atlantic Canada         | 5.9                                  | 6.7                    | 5.1                    |

\*Manitoba rates from 2005 - 2013

When comparing pedestrian-related hospitalization rates, the children of Atlantic Canada had a rate significantly higher than the Canadian rate. The rate in Atlantic Canada was 5.9 hospitalizations/100,000 population and the Canadian rate was 5.2 hospitalizations/100,000 population.

Of the Atlantic provinces, Newfoundland and Labrador had the highest rate with 8.8 hospitalizations/100,000 population. New Brunswick had the lowest rate with 3.4 hospitalizations/100,000 population.

## DROWNING

| PROVINCE                | Age-stnd Rate per 100,000 Population | Upper Confidence Level | Lower Confidence Level |
|-------------------------|--------------------------------------|------------------------|------------------------|
| Newfoundland & Labrador | 0.6                                  | 1.2                    | 0.1                    |
| Prince Edward Island    | 0.9                                  | 2.0                    | -0.3                   |
| Nova Scotia             | 1.6                                  | 2.3                    | 0.9                    |
| New Brunswick           | 1.3                                  | 1.9                    | 0.6                    |
| Ontario                 | 1.3                                  | 1.5                    | 1.2                    |
| Manitoba*               | 1.9                                  | 2.5                    | 1.3                    |
| Saskatchewan            | 1.3                                  | 1.8                    | 0.8                    |
| Alberta                 | 1.5                                  | 1.8                    | 1.2                    |
| British Columbia        | 1.5                                  | 1.8                    | 1.2                    |
| Territories             | 3.4                                  | 5.7                    | 1.2                    |
| CANADA                  | 1.4                                  | 1.5                    | 1.3                    |
| Atlantic Canada         | 1.2                                  | 1.6                    | 0.9                    |

\*Manitoba rates from 2005 - 2013

When comparing drowning-related hospitalization rates, the children of Atlantic Canada had a rate significantly lower than the Canadian rate. The rate in Atlantic Canada was 1.2 hospitalizations/100,000 population and the Canadian rate was 1.4 hospitalizations/100,000 population.

Of the Atlantic provinces, Nova Scotia had the highest rate with 1.6 hospitalizations/100,000 population. Newfoundland and Labrador had the lowest rate with 0.6 hospitalizations/100,000 population.

# PROVINCIAL COMPARISONS

HOSPITALIZATIONS, 2004 - 2013

## BREATHING-RELATED

| PROVINCE                | Age-stnd Rate per 100,000 Population | Upper Confidence Level | Lower Confidence Level |
|-------------------------|--------------------------------------|------------------------|------------------------|
| Newfoundland & Labrador | 2.4                                  | 3.5                    | 1.3                    |
| Prince Edward Island    | 3.4                                  | 5.7                    | 1.0                    |
| Nova Scotia             | 5.9                                  | 7.1                    | 4.7                    |
| New Brunswick           | 2.3                                  | 3.2                    | 1.4                    |
| Ontario                 | 1.5                                  | 1.7                    | 1.4                    |
| Manitoba*               | 3.1                                  | 3.9                    | 2.4                    |
| Saskatchewan            | 5.2                                  | 6.2                    | 4.2                    |
| Alberta                 | 4.2                                  | 4.7                    | 3.7                    |
| British Columbia        | 3.3                                  | 3.8                    | 2.9                    |
| Territories             | 3.6                                  | 5.8                    | 1.3                    |
| CANADA                  | 2.7                                  | 2.9                    | 2.5                    |
| Atlantic Canada         | 3.8                                  | 4.4                    | 3.2                    |

\*Manitoba rates from 2005 - 2013

When comparing threats to breathing-related hospitalization rates, the children of Atlantic Canada had a rate significantly higher than the Canadian rate. The rate in Atlantic Canada was 3.8 hospitalizations/100,000 population and the Canadian rate was 2.7 hospitalizations/100,000 population.

Of the Atlantic provinces, Nova Scotia had the highest rate with 5.9 hospitalizations/100,000 population. New Brunswick had the lowest rate with 2.3 hospitalizations/100,000 population.

## BURNS

| PROVINCE                | Age-stnd Rate per 100,000 Population | Upper Confidence Level | Lower Confidence Level |
|-------------------------|--------------------------------------|------------------------|------------------------|
| Newfoundland & Labrador | 12.5                                 | 15.0                   | 10.0                   |
| Prince Edward Island    | 8.5                                  | 12.2                   | 4.7                    |
| Nova Scotia             | 6.2                                  | 7.5                    | 4.9                    |
| New Brunswick           | 6.8                                  | 8.3                    | 5.3                    |
| Ontario                 | 5.3                                  | 5.6                    | 5.0                    |
| Manitoba*               | 11.6                                 | 13.0                   | 10.1                   |
| Saskatchewan            | 11.2                                 | 12.7                   | 9.7                    |
| Alberta                 | 6.9                                  | 7.5                    | 6.3                    |
| British Columbia        | 6.0                                  | 6.6                    | 5.4                    |
| Territories             | 6.7                                  | 9.8                    | 3.6                    |
| CANADA                  | 6.5                                  | 6.7                    | 6.2                    |
| Atlantic Canada         | 7.9                                  | 8.8                    | 7.0                    |

\*Manitoba rates from 2005 - 2013

When comparing fire/burn-related hospitalization rates, the children of Atlantic Canada had a rate significantly higher than the Canadian rate. The rate in Atlantic Canada was 7.9 hospitalizations/100,000 population and the Canadian rate was 6.5 hospitalizations/100,000 population.

Of the Atlantic provinces, Newfoundland and Labrador had the highest rate with 12.5 hospitalizations/100,000 population. Nova Scotia had the lowest rate with 6.2 hospitalizations/100,000 population.

## SNOWMOBILES

| PROVINCE                | Age-stnd Rate per 100,000 Population | Upper Confidence Level | Lower Confidence Level |
|-------------------------|--------------------------------------|------------------------|------------------------|
| Newfoundland & Labrador | 7.6                                  | 9.6                    | 5.7                    |
| Prince Edward Island    | 0.9                                  | 2.0                    | -0.3                   |
| Nova Scotia             | 0.3                                  | 0.6                    | 0.0                    |
| New Brunswick           | 0.5                                  | 0.9                    | 0.1                    |
| Ontario                 | 0.6                                  | 0.7                    | 0.5                    |
| Manitoba*               | 3.7                                  | 4.6                    | 2.9                    |
| Saskatchewan            | 3.4                                  | 4.2                    | 2.6                    |
| Alberta                 | 1.0                                  | 1.2                    | 0.7                    |
| British Columbia        | 0.5                                  | 0.7                    | 0.3                    |
| Territories             | 10.9                                 | 14.9                   | 6.9                    |
| CANADA                  | 1.1                                  | 1.2                    | 1.0                    |
| Atlantic Canada         | 2.0                                  | 2.4                    | 1.5                    |

\*Manitoba rates from 2005 - 2013

When comparing snowmobile-related hospitalization rates, the children of Atlantic Canada had a rate significantly higher than the Canadian rate. The rate in Atlantic Canada was 2.0 hospitalizations/100,000 population and the Canadian rate was 1.1 hospitalizations/100,000 population.

Of the Atlantic provinces, Newfoundland and Labrador had the highest rate with 7.6 hospitalizations/100,000 population. More than 3 times the Atlantic Canada rate. Nova Scotia had the lowest rate with 0.3 hospitalizations/100,000 population.

Statistics Canada. Table 051-0001 - Estimates of population, by age group and sex for July 1, Canada, provinces and territories, annual (persons unless otherwise noted). Accessed: August 12, 2015.

# REPORT METHODOLOGY

## REPORT PURPOSE

The purpose of this report is to review trends related to unintentional injury suffered by the children living in Atlantic Canada. In the report, children are defined as being age 14 or under. Unintentional injury is defined as the unforeseen or chance result of hurt or damage from a voluntary act resulting in acute exposure to energy that exceeds human tolerance.

## DATA SOURCES

Data for this analysis were provided from two sources; 10 years of hospitalization data were provided by the Canadian Institute for Health Information (CIHI). All corresponding annual population estimates were accessed from Statistics Canada.

Injury hospitalization data from CIHI were provided from the following databases:

- Discharge Abstract Database (DAD), ICD10, 2004-2013. *All of Canada excluding Quebec and Manitoba (outside Winnipeg).*
- Discharge Abstract Database (DAD), ICD10, 2005-2013. *Manitoba excluding outside Winnipeg.*

Population Estimates were accessed from Statistics Canada:

- CANSIM - Statistics Canada. Table 051-0001 - Estimates of population, by age group and sex for July 1, Canada, provinces and territories, annual (persons unless otherwise noted). (accessed: September 10, 2015).

## EXTERNAL CAUSE CODES: ICD

(International Classification of Disease)

Where injury trends are observed for overall hospitalization (pages 4 to 6), analysis was based on data for all unintentional injuries. Where injury trends were analyzed for external cause, the top causes of injury based on burden was reported. As well, some causes were included due to their importance to Canadian child injury prevention efforts between 2004 and 2013.

Hospitalized injuries are classified according to categories developed by the World Health Organization's (WHO) International Classification of Diseases (ICD) coding system. Use of ICD-10CA (International Classification of Diseases and Related Health Problems, 10 Revision, Canadian Enhancement).

### Data extrapolation

This report does not suggest causation in relation to these injury trends. 2004 to 2013 hospitalization data were analysed as these were the most current years of data available.

## SUMMARY OF EXTRAPOLATED DATA

### I. Injury hospitalization data, 2004-2013

Data were available for calendar years January 2004 to December 2013 based on discharge year and month. Injury hospitalization counts for these available years were plotted using Microsoft Excel™ for each of the various breakdowns (all unintentional injury, age groups, gender, main causes).

Patients who died in hospital, transferred to another acute care facility, readmitted, or had an adverse medical/surgical event were excluded from the dataset.

Records which were missing or had invalid most responsible diagnosis codes or external cause of injury codes (0.9%) were excluded from the dataset.

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# REPORT METHODOLOGY

## UNINTENTIONAL EXTERNAL INJURY CODES

### External cause

Cycling  
Cycling – traffic  
Cycling – other

Pedestrian  
Pedestrian – traffic  
Pedestrian – other)  
Motor Vehicle Occupant

Drowning/submersion  
Bath tub  
Swimming pool

Poisoning  
Medications  
Alcohol  
Petroleum products  
Agricultural/horticultural products  
Other unspecified solids/liquids  
Poisonous gases

Fire/burn  
Scalding  
Fire/flames  
Hot appliances  
Other hot objects

Falls  
Bed or chair  
Playground equipment  
Stairs and steps

Suffocation  
Inhalation of food  
Inhalation of other object  
Accidental mechanical suffocation

ATV/Snowmobile

### ICD-10

V10-V18, V19 (.0-.6,.8,.9)  
V12-V14 (.3-.9), V19(.4-.6)  
V10-V11, V12-V14 (.0-.2), V15-V18, V19(.0-.3,.8,.9)

V1, V2-V4(.0,.1,.9), V5, V6, V9(.0-.3,.9)  
V2-V4(.1,.9), V09.2  
V1, V2-V4(.0), V5, V6, V9(.0,.1,.3,.9)  
V30-V79(.4-.9), V83(.0-.3)

W65-W74  
W65, W66  
W67, W68

X40-X49  
X40-X44  
X45  
X46  
X48  
X49  
X47

X00-X19  
X10-X13  
  
X15, X16

W00-W19  
W06, W07  
W09  
W10

W75-W84  
W79, W78  
W 80  
W75, W76, W77, W81, W83, W84

V86(.00-.68), V87

Source: International Collaborative Effort (ICE) on Injury Statistics. External Cause of Injury Mortality Matrix.

# REPORT METHODOLOGY

## INJURY DIAGNOSIS CODES: BODY REGION OF INJURY

| Body Region             | ICD-10  |
|-------------------------|---|
| Head injury             | S02(0-1,,3,,7-9), S04.0,S06, S07,S09.2,S09.7,S09.9, T90.2, T90(4,,8),T90.5,T90.9  |
| Other head and neck     | S00, S02(2,,4-6),S03(0-5), S04(1-9), S05(0-9), S08(0-9), S09.1, S09.2, S10, S11,S12(8-9), S13(2-3, .5-6),S14(3-6), S15(0,,2-9),S16, S17, S18, S19.7,S19.8, S19.9,T00.0, T01.0, T02.0, T03.0 T04.0, T15-T16, T17(0-4),T18.0,T20, T27.0, T27.4, T28.0,T28.5, T33.1,T34.1, T35.2 T90.0,T90.3,T95.0   |
| Spinal cord             | S14(0-1),S24(0-1), S34(0-1,,3), T09.3, T91.3  |
| Vertebral column injury | S12(0-7), S13(0-1),S13.4, S14.2, S15.1,S22(0-1),S23(0-1),S23.3,S24.2, S32(0-2), S33(0-2), S33(5-7),S34(2-4), T08,T09.4, T91.1   |
| Torso                   | S20, S21,S22(2-9). S23.2, S23(4-5),S24(3,,6),S25, S26.0,S26.8, S26.9, S27(0-9),S28.0, S28.1,S29(0,8), S29.7, S29.9,S30(0-2,,7-9), S31(0,,1-5,,7,,8), S32(3-8), S33(3-4),S34(5,,6,,8), S35(0-5,,7-9), S36, S37, S38(0-3), S39(0,,6-9), T00.1, T01.1, T02.1, T03.1,T04.1,T04.7, T06.5, T09(0-9), T17.5,T17(8-9), T18(-1- .2, .5,8-9), T19,T21,T27(2-3,,6-7) T28(1-3,,6-8), T33.2, T33.3, T34.2,T3.4.3. T35.3, , T91.2, T91.4, T91.5,T95.1 |
| Upper extremity         | S40, S41, S42, S43(0-7), S44, S45, S46, S47, S48, S49(7-9), S50, S51, S52, S53(0-4), S54, S55, S56, S57, S58, S59(7-9), S60, S61, S62, S63(0-7), S64, S65, S66, S67, S68, S69(7-9), T00.2, T01.2, T02(2,,4), T03.2, T04.2, T05(0-02), T10, T11(0-9), T33(4-5), T22-T23, T34(4-5), T35.4, T92(0-9), T95.2  |
| Lower extremity         | S70(0.9), S71(0-8), S72(0-9), S73(0-1), S74, S75, S76(0-7), S77(0-2), S78(0-9), S79(7-9), S80, S81, S82, S83(0-7), S84, S85, S86, S88, S87, S89(7-9), S90, S91, S92(0-1,,3), S93(2,,4-6), S94, S95, S96, S97, S98, S99(7-9), T00.3, T01.3, T02(3,5), T03.3, T04.3, T05(3-5), T12, T13(0-9), T24, T25, T33(6-8), T35.5, T93(0-9), T95.3  |
| Inclassifiable by site  | T00(6,,8-9), T01(6,,8, .9), T02(6-9), T03(4,,8-9), T04(4,,8-9), T05(6-9)  |
| Multiple sites          | T06(1-4,8), T07, T14(0-9), T27(1,,5), T28(4,9), T29(0-7), T30-T32, T33.9, T34.9, T35(0-1,,6,,7), T36-T50, T51-T65,T66-T75, T79(0-9), T91(0,,8,9), T94(0,,1), T95(4,,8-9), T96, T97, T98(0-2)  |
| Adverse events          | T78, T80-T88, T98.3   |

# REPORT METHODOLOGY

## BODY REGION CLASSIFICATION

Body region of injury based on the External Cause of Injury Matrix from the Centre for Disease Control and Prevention.

### Traumatic brain injury

- Fracture of skull, concussion, cerebral edema, diffuse brain injury, local brain injury, crushing injury of the head, unspecified injury of the head, sequelae of injuries to the head.

### Other head and neck

- Superficial injury of the head, open wound of the head, fracture of nose, fracture of jaw, fracture of tooth, dislocation/sprain/strain of joints and ligaments of the head, injury of cranial nerve, injury of eye and orbit, avulsion of part of head, other unspecified injuries of the head, superficial injury of neck, open wound of neck, dislocation/sprain/strain of joints and ligaments of neck, crushing injury of neck, foreign body on eye/ear/mouth, burn/corrosion of head and neck/trachea, superficial frostbite of head/neck, sequelae of superficial head/neck injury.

### Spinal cord

- Injury of nerves and spinal cord at neck level, injury of nerves and spinal cord at thorax level, injury of nerves and lumbar spinal cord at abdomen, lower back and pelvic level.

### Vertebral column injury

- Fracture of neck, traumatic rupture of intervertebral disc, sprain/strain of cervical spine (whiplash), injury of nerve root of cervical spine, fracture of thoracic vertebrae, fracture of sacrum/coccyx, fracture of spine at unspecified level, sequelae of spinal fracture.

### Torso

- Open wound of thorax, fracture of ribs/sternum/thoracic spine, dislocation/sprain/strain of joint and ligament of thorax, injury of blood vessels of thorax, injury of heart, injury of other unspecified intrathoracic organs, crushing injury of thorax and traumatic amputation of part of thorax, other unspecified injuries of thorax, open wound of abdomen/lower back and pelvis, injury of blood vessels at abdomen/lower back and pelvis, injury of spleen/gallbladder/pancreas/stomach/small intestine/colon/rectum/multiple intraabdominal organs, other intraabdominal organs, unspecified intraabdominal organs, injury of urinary and pelvic organs, crushing injury and traumatic amputation of part of abdomen/lower back/pelvis, other and unspecified injuries of abdomen, lower back and pelvis, superficial injuries involving the thorax with abdomen/lower back and pelvis.

### Upper extremity

- Superficial injury, open wound, fracture, dislocation/sprain/strain of joints and ligaments, injury of nerves, injury of blood vessels, injury of muscle or tendon, crushing injury, traumatic amputation, other unspecified injury of:
  - shoulder and upper arm
  - forearm and elbow
  - wrist and hand

### Lower extremity

- Superficial injury, open wound, fracture, dislocation/sprain/strain of joints and ligaments, injury of nerves, injury of blood vessels, injury of muscle or tendon, crushing injury, traumatic amputation, other and unspecified injury of:
  - hip and thigh
  - knee and lower leg
  - ankle and foot

# REPORT METHODOLOGY

## SPORT INJURY MECHANISM INCLUDES

### Falling involving:

- skates
- skis
- sport boards
- inline skates

### Striking against or struck while

- skiing/snowboarding
- tobogganing
- playing
  - hockey
  - football
  - rugby
  - soccer
  - baseball
  - other sport/recreation

### Striking again or struck by

- sports equipment
- ball
- hockey stick
- hockey puck
- other sports equipment

### Striking against or bumped into another person:

- Skiing
- snowboarding
- tobogganing
- hockey
- football
- rugby
- soccer
- baseball
- other sport/recreation

# REPORT METHODOLOGY

## METHODOLOGICAL REFERENCES

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