INJURY PREVENTION CENTRE

Injury Data Overview: Barrhead

October 2024

injurypreventioncentre.ca

UNIVERSITY OF ALBERTA

Injury Data Overview: Barrhead

Introduction:
The development of this report is based on the fundamental principle that injury prevention requires knowledge of the frequency and nature of injury incidents. By disseminating injury data, the Injury Prevention Centre's objective is to support local communities, organizations and groups in the development of coordinated, evidence-based programs and strategies to reduce and prevent injuries to residents of Alberta communities.

This report examines the **leading mechanisms of injuries** of residents in local geographic area of Barrhead (LGA Z5.1.C.06) with comparison to the North Zone and the province (Alberta).

This report examines the five leading causes of injury that have identified evidence-based strategies that can be implemented to prevent or reduce the risk of those injuries. Some mechanisms of injury which may be significant in number, do not provide enough information or include such a wide variety of scenarios that it would be difficult to identify preventative actions. For example, the mechanism of "struck by / against an object / person" would include injuries such as the result of walking into a door, being struck by an object falling off a shelf, or colliding with a person on a crowded street. Other injury mechanisms that describe a wide variety of scenarios include:

- Other / Unspecified
- Cutting / Piercing
- Overexertion / Strenuous movements
- Natural / Environmental factors
- Other Classifiable Injuries

To assist in the overall understanding of the injury issue in Barrhead, the remaining causes of injury are reported but are not discussed in detail.

For the top five leading causes of injury examined, this report provides detail on:

- The overall number and percent of emergency department visits and hospital admissions by age group.
- Mechanism of injury rate comparison of local area, health zone and provincial age-standardized emergency department and hospital admissions rates.
- Mechanism of injury deaths for North Zone.

Injury data reporting is one service provided by the Injury Prevention Centre. After reviewing this report, you may have questions or want to explore what actions could be taken to reduce the rates of injury in Alberta. The Injury Prevention Centre can help you to identify strategies, activities and programs that address the injury issues of concern in your community. The IPC can provide:

- Evidence-based resources on a variety of injury topics.
- Injury prevention networking and information sharing.
- Programs that address seniors' falls, poisoning, child and youth concussions and head injuries.
- Education opportunities on injury prevention and associated topics.
- Expertise in community engagement, resource development, program planning, implementation and evaluation.

If there is something we can do to assist your injury prevention efforts, please contact us - ipc@ualberta.ca or 780-492-6019.

Top 5 Mechanisms of Injury Emergency Department Visits, Barrhead, 2013-2022

Mechanism of Injury/Age Group (years)	All Injuries	% of All Injuries	< 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90+
All injuries excluding adverse events	24,575		147	1,470	1,569	2,273	2,533	1,879	1,581	1,406	1,487	1,240	1,184	1,379	1,306	1,278	981	834	656	575	447	353
Top 5 Mechanisms of Injury with Evidence-based Prevention Strategies																						
Falls	6,506	26	69	541	529	524	380	236	245	234	253	217	232	349	364	371	388	342	323	342	295	272
Sports-related	1,394	6	< 5	20	133	464	341	103	67	51	67	39	35	24	16	15	6	8	<5	<5	< 5	<5
Motor Vehicle	920	4	< 5	14	22	35	139	117	83	60	62	59	63	50	55	54	42	28	14	11	7	<5
Off-road Vehicles	443	2	<5	8	19	46	59	79	54	28	34	26	22	23	13	7	5	13	<5	<5	<5	<5
Poisoning (unintentional / undetermined)	423	2	5	32	9	19	46	51	48	33	29	36	19	23	24	17	9	11	6	<5	<5	< 5

Cells with values less than 5 were reported <5. Actual cell value included in the totals.

Falls were the leading mechanism of injury, and accounted for 26% of injury emergency department visits for residents of Barrhead.

- Sports-related injuries accounted for 6% of injury emergency department visits.
- Motor vehicle injuries accounted for 4% of injury emergency department visits.
- Off-road vehicle injuries accounted for 2% of injury emergency department visits.
- Poisoning (unintentional / undetermined) injuries accounted for 2%% of injury visits.

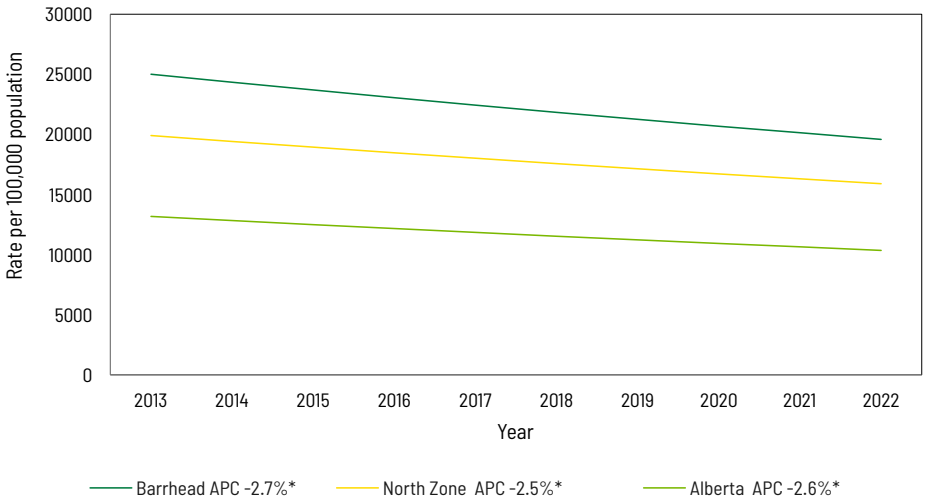
Other Mechanisms of Injury, Barrhead, 2013-2022

Mechanism of Injury	# ED Visits All Ages	% of All Injuries
Other / Unspecified	3,831	16
Cutting / Piercing	2,636	11
Struck by / Against an Object / Person	2,476	10
Natural / Environmental Factors	1,850	8
Overexertion / Strenuous Movements	1,332	5
Suffocation / Choking / Foreign Body	1,099	4
Fire / Flames	377	2
Machinery	344	1
Violence / Injury Purposely Inflicted	275	1
Late Effects	98	0
Suicide / Self-Harm	93	0
Other Classifiable Injuries	60	0
Water Transport	30	0
Operations of War / Legal	22	0
Drowning	11	0
Firearms	10	0
Drowning	8	0
Railway	<5	0
Air / Space Transport	<5	0

Comparison of Overall Injury Emergency Department Visit Rates (age-standardized) for Barrhead, North Zone, and Alberta, 2013-2022

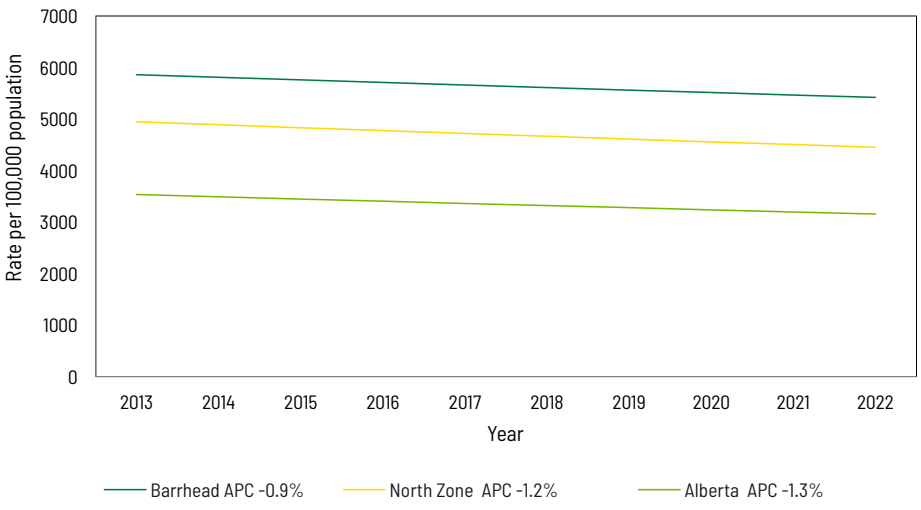
Over the 10-year period from 2013 to 2022, each year there was an average of 2,458 emergency department visits of Barrhead residents due to an injury. This equates to 7 injury visits each day.

When we compare the overall injury age-standarized rates of Barrhead with the North Zone and Alberta, the Barrhead overall injury rate was higher than both the North Zone and the Alberta rates.



Over the 10- year period, Barrhead experienced a statistically significant decrease in the overall injury rate of 2.7% each year. The North Zone experienced a statistically significant 2.5% decrease each year, and Alberta experienced a statistically significant 2.6% decrease each year.

Comparison of Fall-related Injury Emergency Department Visit Rates (age-standardized) for Barrhead, North Zone, and Alberta, 2013-2022



Over the 10-year period from 2013 to 2022, each year there was an average of 651 visits of Barrhead residents due to a fall. This equates to 2 fall injury visits each day.

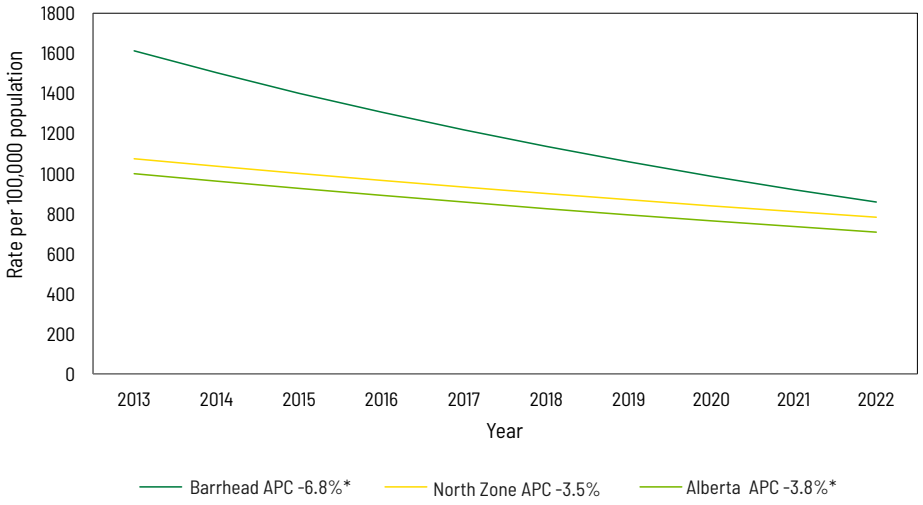
When we compare the fall age-standarized rates of Barrhead with North Zone and Alberta, the Barrhead rate was higher than both the North Zone rate and the Alberta rate.

Over the 10-year period, Barrhead experienced a slight decrease in the fall emergency department visit rate of 0.9% each year. The North Zone experienced a 1.2% decrease each year, and Alberta experienced a 1.3% decrease each year.

Comparison of Sports-related Injury Emergency Department Visit Rates (age-standardized) for Barrhead, North Zone and Alberta, 2013-2022

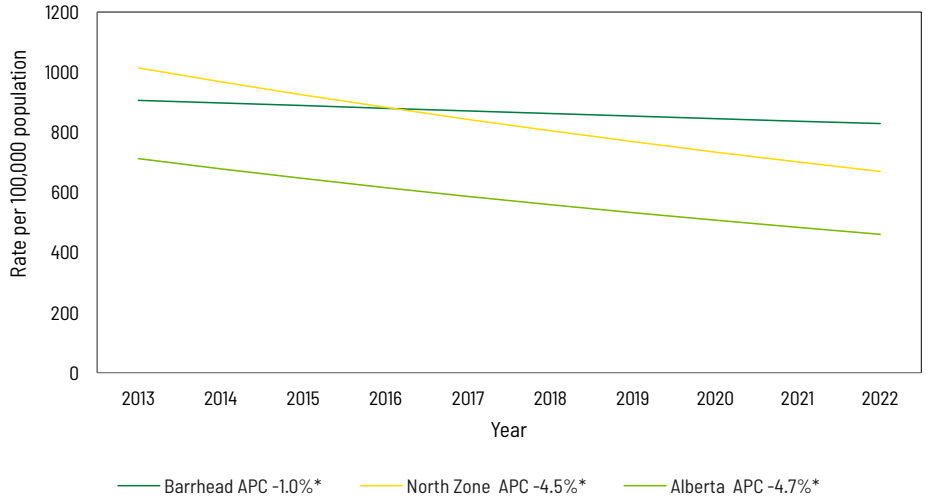
Over the 10-year period from 2013 to 2022, there was an average of 139 emergency department visits of Barrhead residents due to a sports-related injury each year.

When we compare the sports-related injury age-standarized rates of Barrhead with the North Zone and Alberta, the Barrhead rate was higher than both the North Zone, and Alberta rates.



Over the 10-year period, Barrhead experienced a statistically significant decrease in the sports-related injury visit rate of 6.8% each year. The North Zone experienced a decrease each year of 3.5%, and Alberta experienced a statistically significant decrease each year of 3.8%.

Comparison of Motor Vehicle Injury Emergency Department Visit Rates (age-standardized) for Barrhead, North Zone and Alberta, 2013-2022



Over the 10-year period from 2013 to 2022, each year there was an average of 92 emergency department visits of Barrhead residents due to a motor vehicle injury.

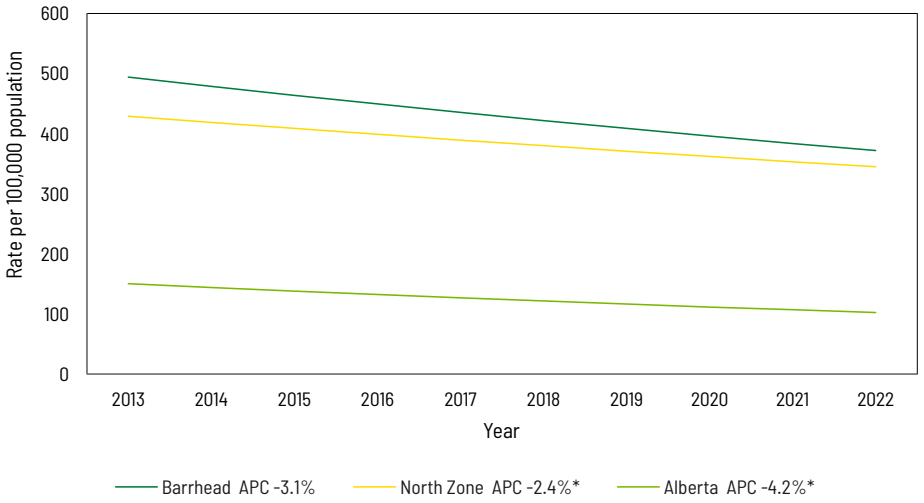
When we compare the motor vehicle injury age-standarized rates of Barrhead with the North Zone, and Alberta, the Barrhead rate was initially higher than the Alberta rate but lower than the North Zone rate. Over the 10 years both the North Zone and Alberta rates declined more significantly than the Barrhead motor vehicle visit rate, resulting in the Barrhead rate being higher than both the North Zone and Alberta rates.

Over the 10-year period, Barrhead experienced a statistically significant decrease in the motor vehicle injury rate of 1.0% each year. The North Zone experienced a statistically significant decrease of 4.5% each year, and Alberta experienced a statistically significant decrease of 4.7% each year.

Comparison of Off-Road Vehicle Emergency Department Visit Rates (age-standardized) for Barrhead County, North Zone, and Alberta, 2013-2022

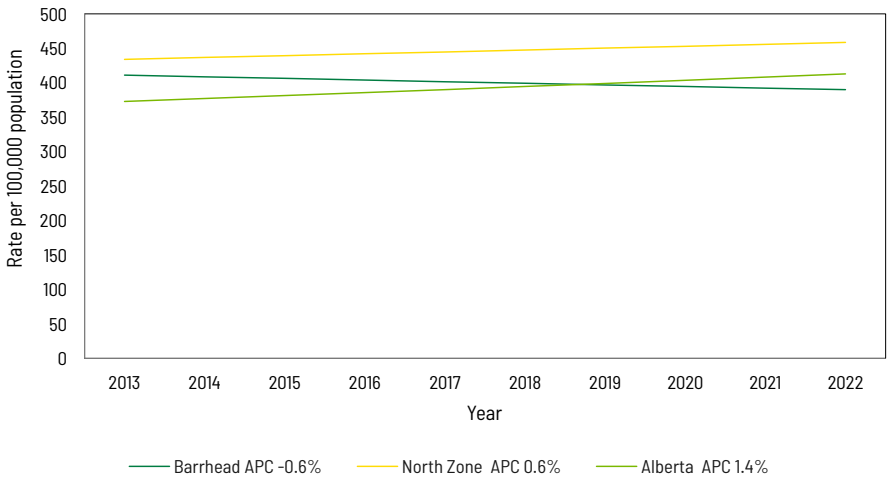
Over the 10-year period from 2013 to 2022, there was an average of 44 emergency department visits of Barrhead residents due to off-road vehicle injuries each year.

When we compare the off-road vehicle injury age-standarized rate of Barrhead with the North Zone, and Alberta, the Barrhead rate was higher than both the North Zone and Alberta rates.



Barrhead had a statistically significant decrease in the off-road vehicle injury rate of 3.1% each year. The North Zone experienced a statistically significant decrease each year of 2.4%, and Alberta experienced a statistically significant decrease of 4.2% each year.

Comparison of Poisonings (unintentional / undetermined) Emergency Department Visit Rates (age-standardized) for Barrhead, North Zone, and Alberta, 2013-2022



Over the 10-year period from 2013 to 2022, there was an average of 42 emergency department visits of Barrhead residents due to poisoning each year.

When we compare the poisoning injury age-standarized rates of Barrhead with the North Zone, and Alberta, initially the Barrhead rate was higher than the Alberta rate but lower than the North Zone rate. Over the 10-year period, the Barrhead rate was lower than both the North Zone and Alberta rates.

Over the 10-year period, Barrhead County experienced a slight decrease of 0.6% each year. The North Zone experienced a slight increase of 0.6% each year, and Alberta experienced a increase of 1.4% each year.

Top 5 Mechanisms of Injury Hospital Admissions, Barrhead, 2013-2022

Mechanism of Injury/Age Group (years)	All Injuries	% of All Injuries	< 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	50-84	85-89	90+
All injuries excluding adverse events	1,478		<5	16	24	32	41	40	49	28	38	50	46	68	77	81	128	124	123	177	151	182
Top 5 Mechanisms of Injury with Evidence-based Prevention Strategies																						
Falls	860	58	<5	7	9	6	6	6	4	11	12	13	7	28	36	42	78	88	93	142	116	155
Motor Vehicle	104	7	< 5	< 5	< 5	< 5	13	7	12	< 5	< 5	8	5	10	6	8	13	5	<5	<5	<5	< 5
Off-road Vehicles	49	3	< 5	<5	< 5	6	5	5	9	< 5	6	< 5	< 5	< 5	5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Poisoning (unintentional / undetermined)	42	3	<	<5	< 5	< 5	< 5	5	8	< 5	< 5	< 5	< 5	< 5	< 5	<5	9	9	< 5	< 5	< 5	< 5
Suicide / Self-harm	37	3	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5

Cells with values less than 5 were reported <5. Actual cell value included in the totals.

Falls were the leading cause of injury hospital admissions of Barrhead residents accounting for 58% of all injury admissions.

- Motor vehicle injuries accounted for 7% of injury hospital admissions.
- Off-road vehicle injuries accounted for 3% of injury hospital admissions.
- Poisonings (unintentional / undetermined) accounted for 3% of injury hospital admissions.
- Suicide / self-harm injuries accounted for 3% of injury admissions.

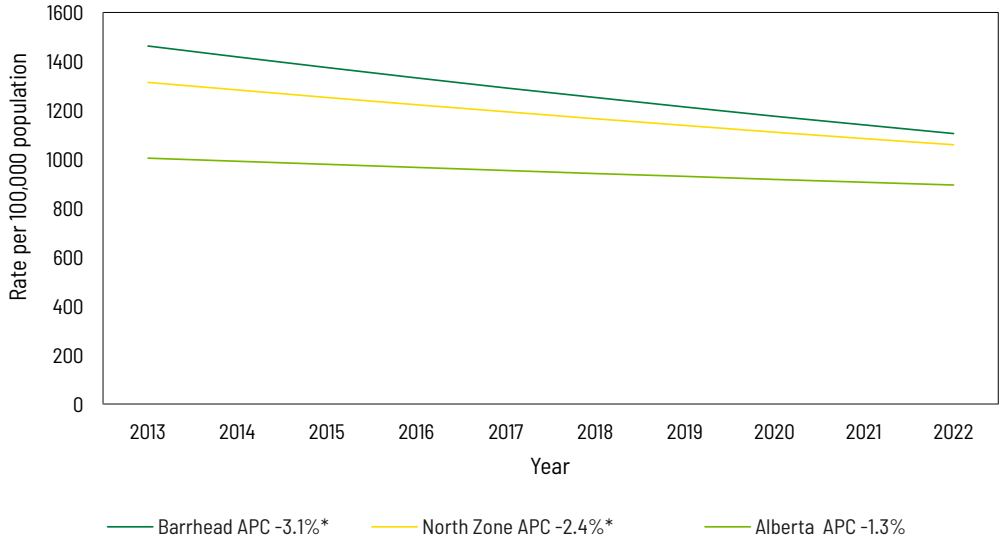
Other Mechanisms of Injury, Barrhead, 2013-2022

Mechanism of Injury	# Admission All Ages	% of All Injuries
Other / Unspecified	134	9
Suffocation / Choking / Foreign Body	91	6
Sports-related	22	1
Natural / Environmental Factors	21	1
Overexertion / Strenuous Movements	20	1
Cutting / Piercing	19	1
Late Effects	18	1
Machinery	17	1
Struck by / against an Object / Person	14	1
Violence / Injury Purposely Inflicted	13	1
Fire / Flames	8	1
Water Transport	<5	0
Vehicle (not elsewhere classified)	<5	0
Drowning	<5	0
Other Classifiable Injuries	<5	0
Railway	<5	0
Air / Space Transport	<5	0
Operations of War / Legal	<5	0
Firearms	<5	0

Comparison of Overall Injury Hospital Admission Rates (age-standardized) for Barrhead, North Zone, and Alberta, 2013-2022

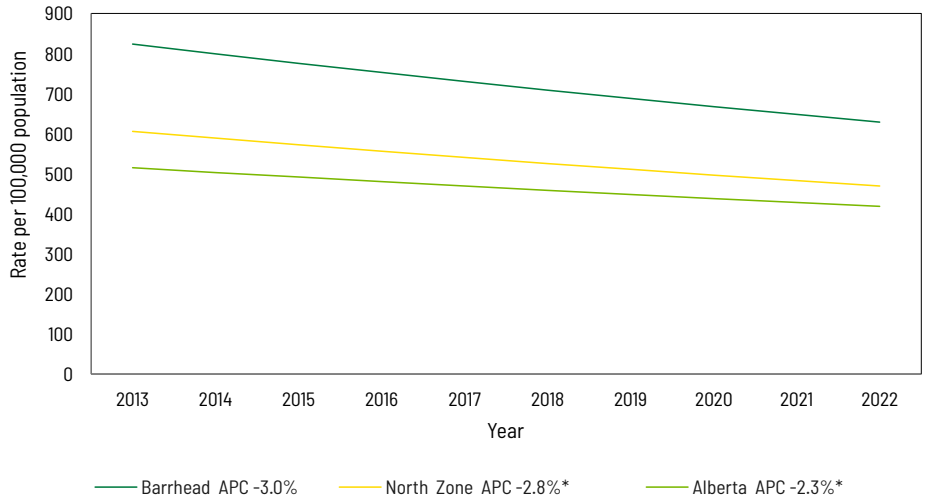
Over the 10-year period from 2013 to 2022, each year there was an average of 148 admissions of Barrhead residents due an injury.

When we compare the overall injury age-standarized hospital admission rate of Barrhead with the North Zone, and Alberta, the Barrhead rate was higher than both the North Zone and Alberta rates.



Barrhead experienced a statistically significant decrease in the injury rate of 3.1% each year. The North Zone experienced a statistically significant decrease of 2.4% each year, and Alberta experienced a 1.3% decrease each year.

Comparison of Fall Hospital Admission Rates (age-standardized) for Barrhead, North Zone, and Alberta, 2013-2022



Over the 10-year period from 2013 to 2022, each year there was an average of 86 hospital admissions of Barrhead residents due to a fall.

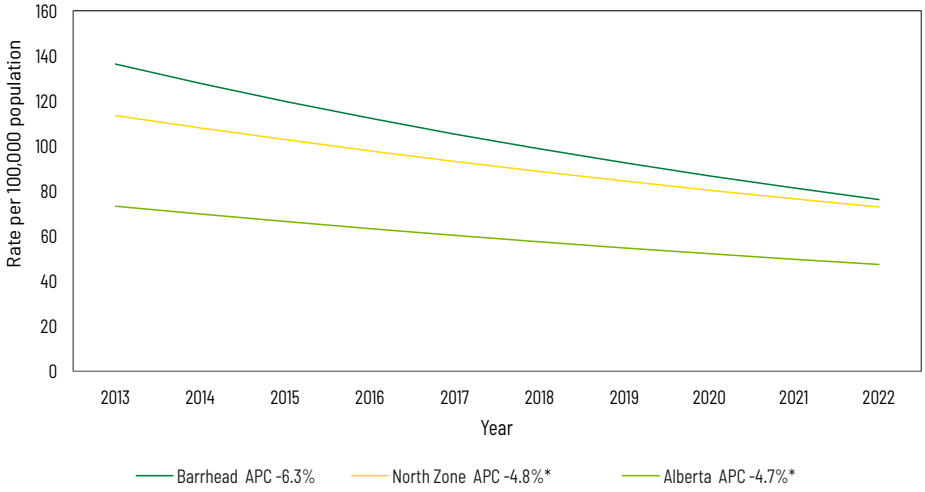
When we compare the fall injury age-standarized hospital admission rates of Barrhead with the North Zone, and Alberta, the Barrhead rate was higher than both the North Zone and Alberta rates.

Over the 10-year period, Barrhead experienced a decrease in fall admission rates of 3.0% each year. The North Zone experienced a statistically significant decrease of 2.8% each year, and Alberta experienced a statistically significant decrease of 2.3% each year.

Comparison of Motor Vehicle Injury Hospital Admission Rates (age-standardized) for Barrhead, North Zone, and Alberta, 2013-2022

Over the 10-year period from 2013 to 2022, there was an average of 10 hospital admissions of Barrhead residents due to a motor vehicle injury each year.

When we compare the motor vehicle injury age-standarized rates of Barrhead, North Zone, and Alberta, the Barrhead rate was higher than both the North Zone and Alberta rates.

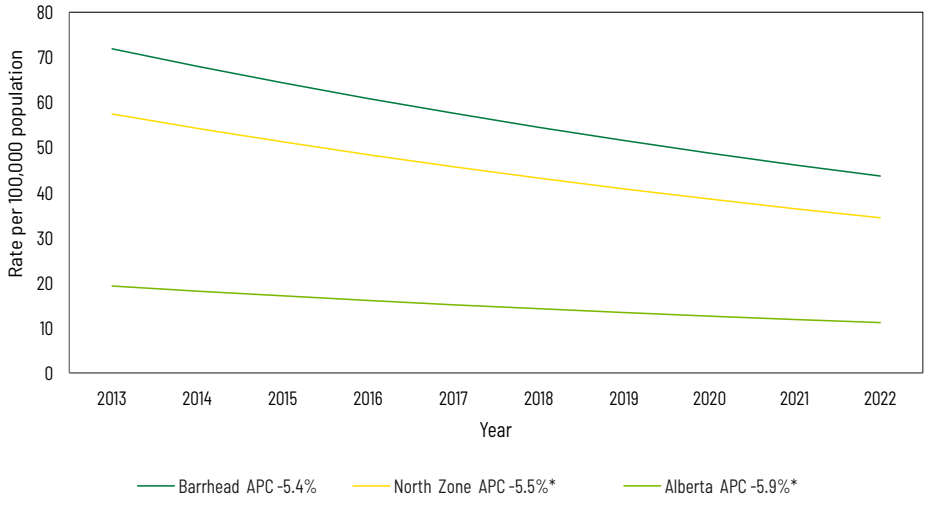


Barrhead experienced a decrease in the motor vehicle injury admission rate of 6.3% each year. The North Zone experienced a statistically significant decrease of 4.8% each year, and Alberta also experienced a statistically significant decrease of 4.7% each year.

Comparison of Off-Road Vehicle Injury Hospital Admission Rates (age-standardized) for Barrhead, North Zone, Alberta, 2013-2022

Over the 10-year period from 2013 to 2022, an average of 5 Barrhead residents were admitted to hospital due to an off-road vehicle injury each year.

When we compare the off-road vehicle injury age-standarized rates of Barrhead, North Zone, and Alberta, the Barrhead rate was higher than both the North Zone and Alberta rates.

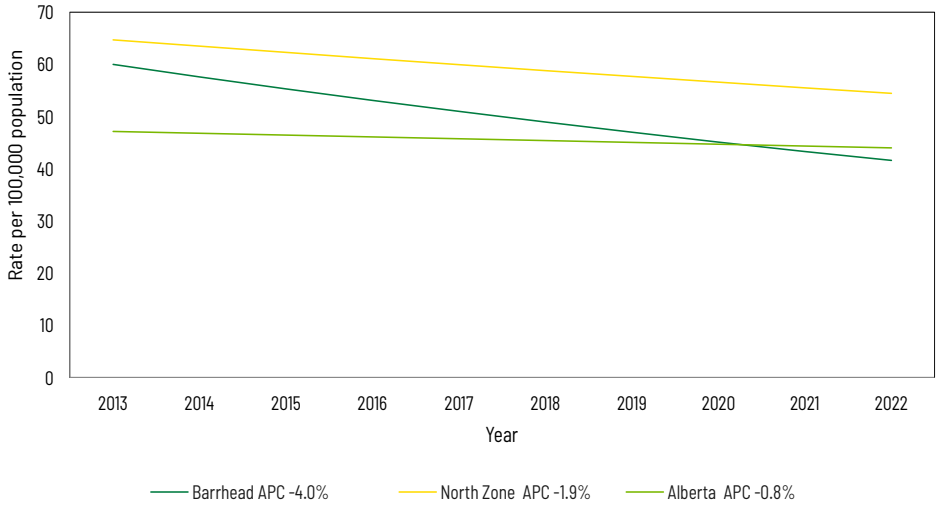


Barrhead experienced a decrease in off-road vehicle injury admission rate of 5.4% each year. The North Zone experienced a statistically significant decrease of 5.5% each year, and Alberta experienced a statistically significant decrease 5.9% each year.

Comparison of Poisoning (unintentional / undetermined) Hospital Admission Rates (age-standardized) for Barrhead, North Zone and Alberta, 2013-2022

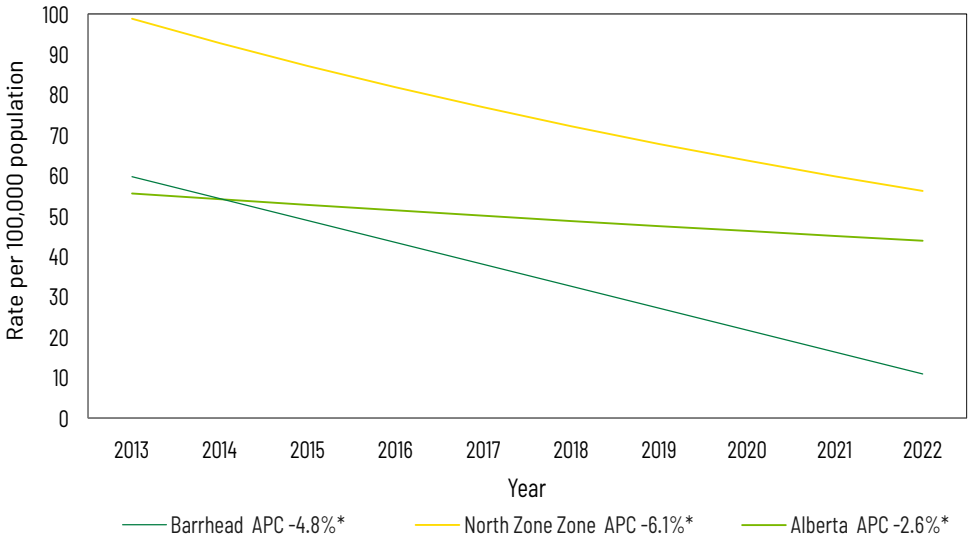
Over the 10-year period from 2013 to 2022, an average 4 Barrhead residents were admitted to hospital due to a poisoning (unintentional / undetermined) each year.

When we compare the poisoning injury age-standarized rates of Barrhead, North Zone, and Alberta, the Barrhead rate was initially higher than the Alberta rate and lower than the North Zone rate. Over the 10 years, the Barrhead rate was lower than both the North Zone and Alberta rates.



Barrhead experienced a poisoning injury hospital admission rate decrease of 4.0% each year. The North Zone experienced a decrease of 1.9% each year, and Alberta experienced a decrease of 0.8% each year.

Comparison of Suicide / Self-harm Hospital Admission Rates (age-standardized) for Barrhead, North Zone and Alberta, 2013-2022



Over the 10-year period from 2013 to 2022, there was an average of 4 hospital admissions of Barrhead residents due to suicide / self-harm injuries each year.

When we compare the suicide / self-harm injuries admission age-standarized rates of Barrhead, North Zone, and Alberta, the Barrhead rate was initially higher than the Alberta rate and lower than the North Zone rate. Over the 10-year period, the Barrhead rate was lower than both the North Zone and the Alberta rates.

Barrhead experienced a statistically significant decrease in the suicide / self-harm admission rates of 4.8% each year. The North Zone experienced a statistically significant decrease of 6.1% each year, and Alberta experienced a statistically significant decrease of 2.6% each year.

Top 5 Mechanisms of Deaths, North Zone*, 2013-2022

*Due to the small number of injury deaths of Barrhead residents, only **North Zone** death numbers will be presented.

Mechanism of Injury/Age Group (years)	All Injuries	% of All Injuries	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
All injuries excluding adverse events	3,519		276	334	342	369	337	378	325	347	377	434
Top 5 Mechanisms of Injury with Evidence-based Prevention Strategies												
Poisoning (unintentional / undetermined)	929	26	61	73	73	94	75	88	86	88	121	170
Suicide / Self-Harm	895	25	66	80	96	92	83	96	104	88	95	95
Motor vehicle	596	17	59	71	69	73	66	63	45	46	55	49
Falls	282	8	20	27	24	28	29	32	20	31	30	41
Violence / Injury Purposely Inflicted	153	4	13	14	17	27	18	23	9	15	11	6

The leading cause of injury death for residents of the North Zone was poisonings (unintentional / undetermined) accounting for 26% of injury deaths.

- Suicide / self-harm deaths accounted for 25% of injury deaths.
- Motor vehicle injury deaths accounted for 17% of injury deaths.
- Falls accounted for 8% of injury deaths.
- Violence / injury purposely inflicted accounted for 4% of injury deaths.

Other Mechanisms of Injury, North Zone, 2013-2022

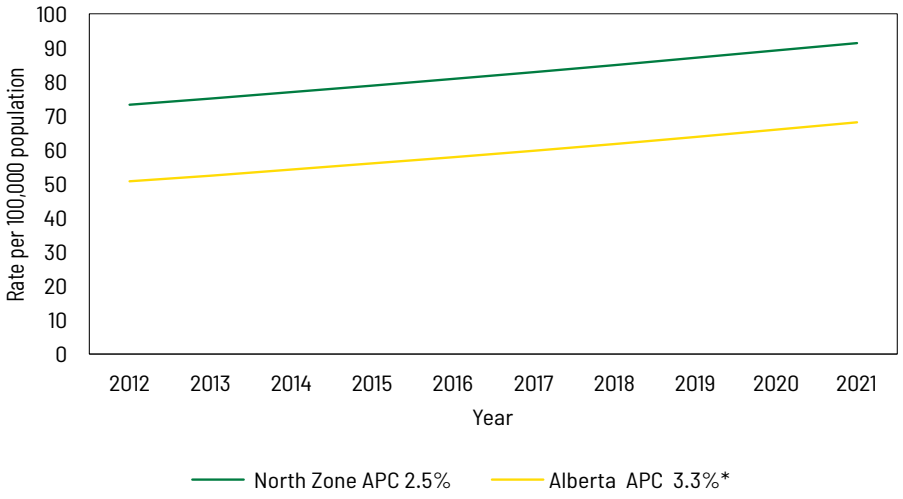
Mechanism of Injury	# Deaths All Ages	% of All Injuries
Other / Unspecified	141	4
All-Terrain / Off-Road Vehicles	77	2
Drowning	73	2
Suffocation / Choking / Foreign Body	68	2
Natural / Environmental Factors	67	2
Fire / Flames	44	1
Late Effects	39	1
Struck by / Against an Object / Person	35	1
Machinery	21	1
Air / Space Transport	13	0
Other Classifiable	12	0
Sports-Related	7	0
Vehicle (not elsewhere classified)	6	0
Operations of War / Legal	5	0
Railway	<5	0
Firearms	<5	0
Water Transport	<5	0
Overexertion / Strenuous Movements	<5	0
Cutting / Piercing	0	0

Comparison of Overall Injury Death Rates (age-standardized) for North Zone and Alberta, 2012-2021

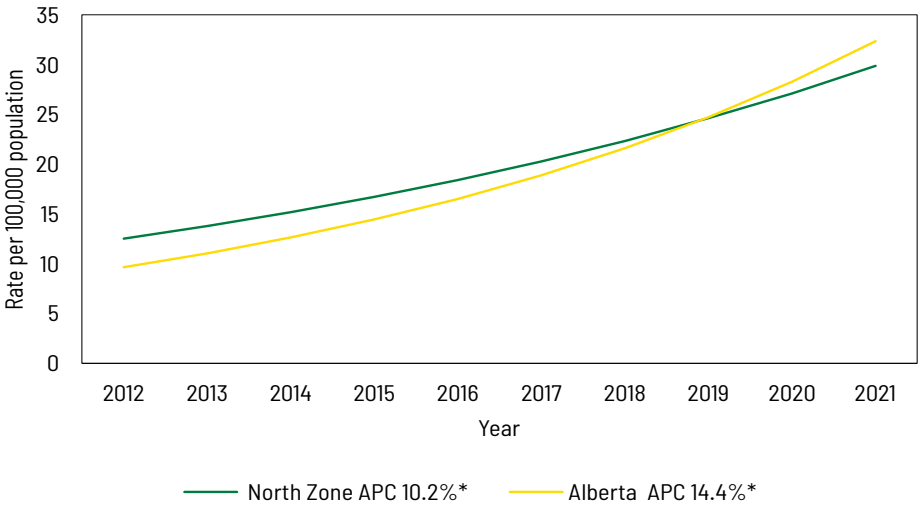
Over the 10-year period from 2012 to 2021, an average of 352 North Zone area residents died due to an injury each year.

When we compare the overall injury age-standarized death rates of North Zone and Alberta, the North Zone had an overall injury death rate higher than the Alberta rate.

The North Zone experienced an increase in the overall injury death rate of 2.5% each year. Alberta experienced a statistically significant increase in the overall injury death rate of 3.3% each year.



Comparison of Poisoning (unintentional and undetermined) Death Rates (age-standardized) for North Zone and Alberta, 2012-2021

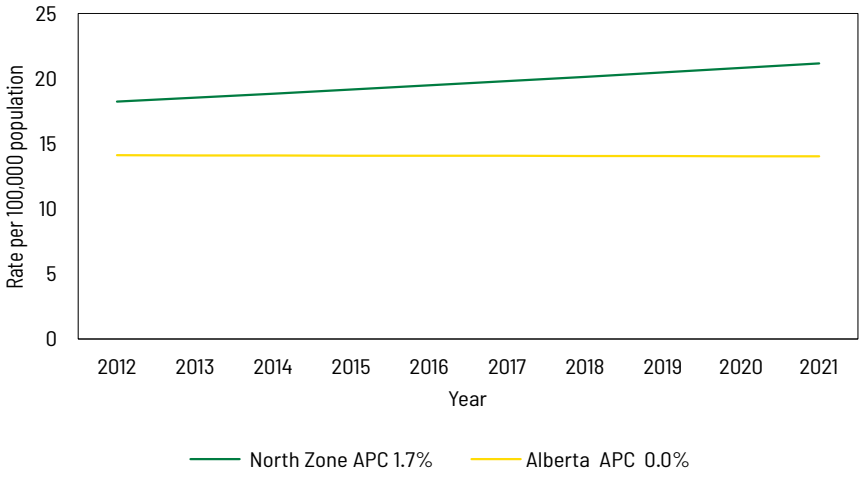


Over the 10-year period from 2012 to 2021, an average of 93 North Zone area residents died due to unintentional / undetermined poisonings each year. This accounted for 26% of injury deaths.

When we compare the poisoning injury age-standarized death rates of North Zone and Alberta, initially the North Zone had a higher poisoning rate however, as of 2019, the North Zone rate was lower than the Alberta rate.

The North Zone experienced a statistically significant increase in the poisoning death rate of 10.2% each year. Alberta also experienced a statistically significant increase in poisoning death rate of 14.4% each year.

Comparison of Suicide / Self-Harm Death Rates (age-standardized) for North Zone and Alberta, 2012-2021



Over the 10-year period from 2012 to 2021, there was an average of 90 North Zone residents who died due suicide / self-harm injuries each year.

When we compare the suicide age-standarized death rate of North Zone and Alberta, the North Zone had a suicide / self-harm injury death rate was higher than the Alberta rate.

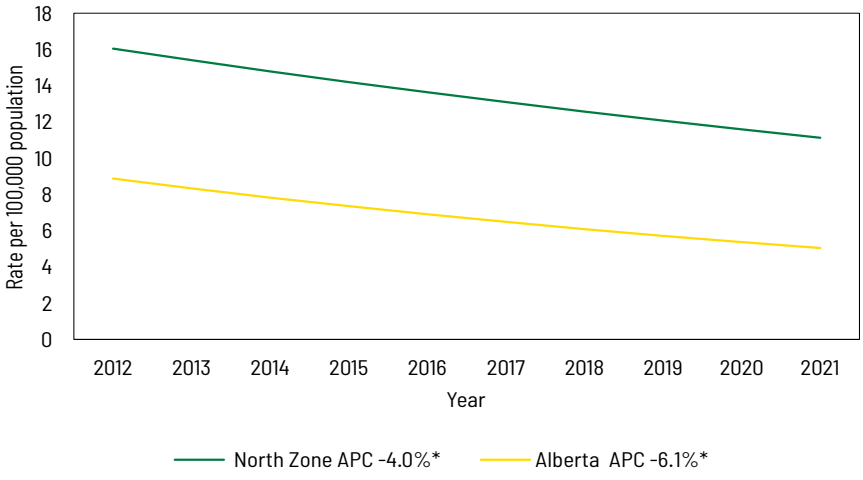
Over the 10 years, the North Zone experienced a slight increase in the suicide / self-harm death rate of 1.7% each year. There was no change in the Alberta suicide /self-harm death rate.

Comparison of Motor Vehicle Death Rates (age-standardized) for North Zone and Alberta, 2012-2021

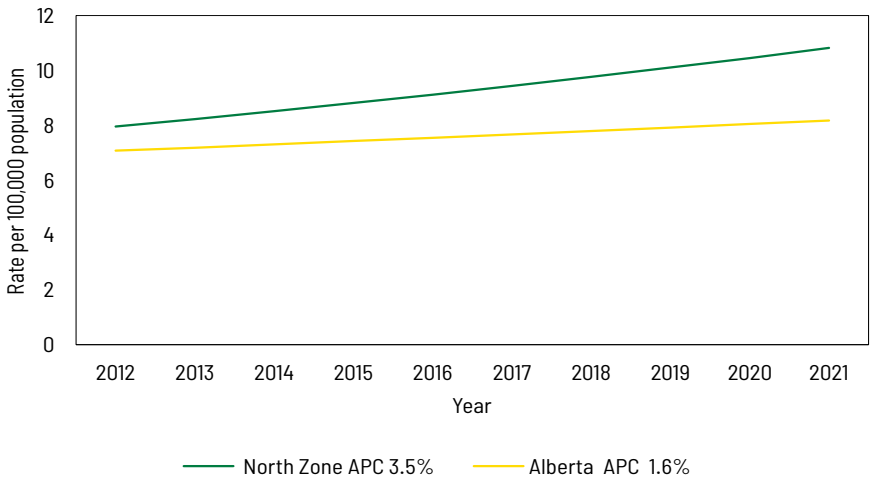
Over the 10-year period from 2012 to 2021, an average of 60 North Zone residents died as a result of a motor vehicle incident each year. This accounts for 17% of all injury deaths.

When we compare the motor vehicle injury age-standarized death rates of the North Zone and Alberta, the North Zone rate was higher than the Alberta rate.

The North Zone experienced a statistically significant decrease in the motor vehicle death rate of 4.0% each year. Alberta experienced a statistically significant death rate decrease of 6.1% each year.



Comparison of Fall Death Rates (age-standardized) for North Zone and Alberta, 2012-2021



Over the 10-year period from 2012 to 2021, an average of 28 North Zone residents died as a result of a fall. Falls accounted for 8% of injury deaths.

When we compare the fall age-standarized death rates of North Zone and Alberta, the North Zone had a fall death rate higher than the Alberta rate.

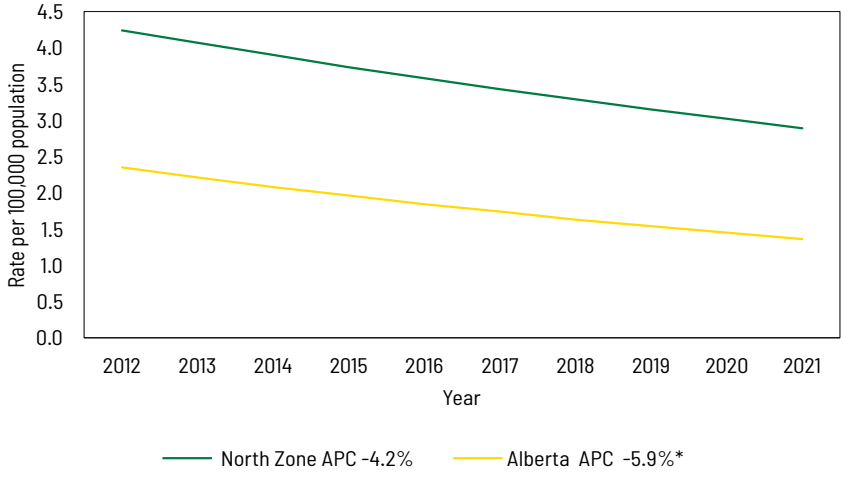
Both the North Zone and Alberta experienced an annual rate increase over the 10 year period. The North Zone had a 3.5% increase and Alberta had a 1.6% increase each year.

Comparison of Violence / Injury Purposely Inflicted Death Rates (age-standardized) for North Zone and Alberta, 2012-2021

Over the 10-year period from 2012 to 2021 an average of 15 North Zone residents died due to injuries from violence / injury purposely inflicted each year.

When we compare the violence / injury purposely inflicted age-standarized death rates of North Zone and Alberta, the North Zone had a violence / injury purposely inflicted death rate higher than the Alberta rate.

The North Zone experienced a 4.2% average annual decrease in the violence / injury purposely inflicted death rate and Alberta experienced a statistically significant rate decrease of 5.9% each year.



Supplemental Data

Numerator: Geographic Assignment: The Alberta Hospital Morbidity file was linked with the Alberta Health Care Insurance Plan (AHCIP) Population Registration Data file to identify visits belonging to Alberta residents (at the time of visit or following fiscal year end). Only those of Alberta residents are included. The local geographic area was assigned based on postal code of the patient at the time of the health care encounter. For this report, those residents with the local geographic area of Z5.1.C.06 were included.

Denominator:
Inclusion: The population data is sourced from the mid-year adjusted AHCIP Population Registry Files (See the methodological notes for the adjusted population estimates in the Alberta Health, Interactive Health Database Application for more detail). These population counts serve as estimates of person-years for a given calendar year.

Geographic Assignment:
The postal code on the adjusted mid-year population registry file is used to determine the geographic location of the individual as of June 30 each year. The geography of residence is obtained by linking with the postal code using the postal code translation file.

Age and Sex Assignment: The date of birth and sex on the mid-year population registry file is used to calculate the age and sex of the individual as of June 30 each year.

The population exclude; members of the Armed Forces, RCMP, inmates in Federal Penitentiaries, or those who have opted out of the Alberta Health Care Insurance Plan. Observations with a missing value for sex or age are excluded; transfers between facilities are included as multiple visits. Adjusted population estimates (See the methodological notes for the adjusted population estimates in the IHDA for more detail) are used for the denominators of the rates. The newly recalculated incidence rates will differ slightly from all previously reported figures released on the IHDA prior to July, 2014. Emergency department visits by Alberta residents in the Lloydminster hospital (Saskatchewan side of border) are not included.

Age-Standardized Rates:
Overall Description The Age-Standardized Rates of Hospital Separations due to Injury is a measure of the frequency (rate) at which injury related hospital separations occur if that population (Alberta) had the same age distribution as the standard population (Canada 2011). This measure captures multiple separations per person.

Regression analysis of injury data was performed using the Joinpoint Regression Program which was developed by the Statistical Research and Applications Branch of the National Cancer Institute of the U.S. National Institutes of Health. Joinpoint uses statistical analysis to fit the most appropriate trend line model based on the time series data (i.e. age-standardized injury rates), For more information please go to the link at: http://surveillance.cancer.gov/joinpoint

Changes in the trend line are expressed by the average annual per cent change (APC). The sum of the average percentage change between time period will give the overall change.

Confidence Intervals:
Confidence intervals are provided for most rates to aid interpretation. Using confident intervals acknowledges that the observed rate is an estimate of an underlying true rate that cannot be directly observed. The width of the confidence interval illustrates the degree of variability associated with the rate. The true rate will fall between the upper and lower confidence intervals 19 out of 20 times (95 per cent confidence).

Not Corrected:
Rates were not corrected / adjusted for participation, weather conditions, or COVID-19 effects.

Supplemental Data

Mechanism / Cause of Injury	Inclusion / Exclusion
Cutting / Piercing	Includes: powered lawn mower, power tools, household appliances, knives, swords, hand tools and implements, hypodermic needle, broken glass, dart / arrow, edge of stiff paper, nail, splinter, tin can lid.
Drowning / Submersion	Includes: water transport accidents, drowning / submersion while: waterskiing, diving, fishing (except with boat), ice-skating, playing in water, surfboarding, swimming, wading in water.
Fall	Excludes: falls related to sports Includes: fall on or from stairs / steps, ladders / scaffolding, from or out of building / structure, into hole or other opening in surface, fall from one level to another, fall on same level from slipping / tripping / stumbling, fall on same level from collision / pushing / shoving by or with person (not sports).
Fire / Scald / Burn	Includes: fire, flames, hot objects / substances. Explosion caused by fire, smoke, smoke, and fumes from fire in private dwelling, building or structure, ignition of clothing, ignition of highly flammable materials. Burns caused by: hot substance or object, caustic or corrosive material and steam.
Firearm	Includes: handgun, pistol, revolver, shotgun (automatic), hunting rifle, military firearm / machine gun, air gun, flare pistol.
Machinery	Includes: agriculture machinery, mining / earth-drilling machines, chain hoists, crane, derrick, elevator, forklift, winch, metal working machine, woodworking / forming machines, gas turbine / steam / internal combustion engine, transmission machinery, bulldozer, roadscraper, manufacturing machines.
Motor Vehicle - Traffic	Definition: includes any motor vehicle occurring on a public highway. A motor vehicle 'accident' is assumed to have occurred on the highway unless another place is specified, except in the case of off-road motor vehicles which are classified as nontraffic 'accidents' unless the contrary is stated. Includes: driver, passenger, motor cyclist, bicyclist, pedestrian, or other unspecified.
Bicyclist - Non-Traffic	Excludes: bicyclist unspecified person. Includes bicycle 'accidents' with railway, snowmobile, other off-road vehicle, animal, pedestrian, stationary object while boarding and alighting.
Pedestrian - Non-Traffic	Includes: pedestrian 'accidents' with railway, snowmobile, other off-road vehicle, animal pedestrian, stationary object

Data Sources & Methods

Data for this report was obtained from Alberta Health. Emergency Department Visits are from the National Ambulatory Care Reporting System (NACRS) with a visit date between January 1, 2013 to December 31, 2022. Hospital admissions are from the Discharge Abstract Database (DAD) with a discharge date from January 1, 2013 to December 31, 2022. The deaths are from Vital Statistics, Alberta with a death date from January 1, 2012 to December 31, 2021.

The mechanism of injury was determined by the first external cause of injury (V01-Y09) classified according to International Classification of Disease (ICD-10 CA) excluding adverse events and medical / surgical complications.

The data are based on emergency department visits rather than individual patients, therefore multiple visits of the same patient for the same injury would be counted as separate cases.

Non-residents of Alberta, those identified as not having an Alberta postal code at the time of the visit were removed.

Direct age-standardization method was used as it accounts for differences in the age structures of the populations being compared (study populations), by weighting their respective age-specific rates to the age distribution of a standard population. The Canadian population of 2022 was used as the standard population. Regression analysis of injury data was performed using the Joinpoint Regression Program which was developed by the Statistical Research and Applications Branch of the National Cancer Institute of the U.S. National Institutes of Health. Joinpoint uses statistical analysis to fit the most appropriate trend line model based on the time series data (i.e. age-stnadardized injury rates), For more information please go to the link at:
http://surveillance.cancer.gov/joinpoint

Changes in the trend line are expressed by the average annual per cent change (APC). The sum of the average percentage change between time period will give the overall change.

Percentages and rates were not adjusted for the number of registered participants, frequency of play, duration of play, seasonal weather conditions or influences of COVID-19.

Supplemental Data

Mechanism / Cause of Injury	Inclusion / Exclusion
Natural / Environmental	Includes: excessive cold / heat, thirst, exposure, neglect, bites/ / stings, dog bites, forces of nature, air pressure change, travel and motion, other and unspecified environmental and accidental causes.
Overexertion	Includes: overexertion from lifting, pulling, pushing, strenuous movements in recreational activities and other activities.
Unintentional Poisoning	Includes: accidental overdose of drug, wrong drug given or taken in error, and drug taken inadvertently. Excludes: administration with suicidal or homicidal intent or intent to harm, correct drug properly administered in the therapeutic or prophylactic dosage as the cause of an adverse effect.
Struck by Object / Persons	Includes: struck by falling object, person / object (excluding sports), caught in or between objects. Excludes: sports-related.
Suffocation / Foreign Body in Natural Opening	Includes: inhalation and ingestion of food / object causing obstruction of respiratory tract / suffocation, accidental mechanical suffocation, and foreign body in natural opening.
Other Specified Classifiable	Includes: fracture unspecified, cause unspecified, explosion of pressure vessel, 'accident' caused by explosive material, 'accident' caused by electric current, exposure to radiation.
Late Effects of Injury	Definition: a residual condition (sequelae) of a disease that is no longer present. Includes: late effects of motor vehicle 'accident' other transportation 'accident', 'accidental' poisoning, 'accidental' fall, 'accident' caused by fire, 'accident' due to natural and environmental factors, other 'accident' unspecified 'accident'.
Sports Related	Includes: fall on same level from collision, pushing or shoving by or with other person in sports (tackle), and striking against or struck accidentally by object or person in sports.
Other Injuries, Undetermined Intent	Includes: injuries undetermined whether accidental (unintentional), suicide (attempted), or assault of substances including: poisoning by solid or liquid, gas, hanging, strangulation, or suffocation, submersion / drowning, injury by firearm, cutting / piercing, fire / burn / scald, electrocution.
Attempted Suicide / Self-Inflicted	Includes: attempted suicide / self-inflicted poisonings by solids or liquids, hanging, firearms, cutting / piercing instruments, carbon monoxide, other.

Number of Injury Emergency Visits by Age Group, Barrhead, 2013 - 2022

Mechanism of Injury/Age Group (years)	All Ages	% of All Injuries	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90+
All Injuries	24,575		147	1,470	1,569	2,273	2,533	1,879	1,581	1,406	1,487	1,240	1,184	1,379	1,306	1,278	981	834	656	572	447	353
Top 5 Mechanism of Injury with Actionable Injury Prevention Strategies																						
Falls	6506	26	69	541	529	524	380	236	245	234	253	217	232	349	364	371	388	342	323	342	295	272
Sports-related	1394	6	<5	20	133	464	341	103	67	51	67	39	35	24	16	15	6	8	<5	<5	<5	<5
Motor Vehicle	920	4	<5	14	22	35	139	117	83	60	62	59	63	50	55	54	42	28	14	11	7	<5
Off-Road Vehicle	443	2	<5	8	19	46	59	79	54	28	34	26	22	23	13	7	5	13	<5	<5	<5	<5
Unintentional / Undetermined poisonings	423	2	5	32	9	19	46	51	48	33	29	36	19	23	24	17	9	11	6	<5	<5	<5
Mechanism of Injury with Little or No Evidence-based Prevention Strategies																						
Other / unspecified	3,831	16	28	206	243	339	368	255	238	230	250	203	193	214	226	220	152	147	126	88	62	43
Cutting / piercing	2,636	11	5	87	119	134	289	271	223	191	229	185	154	190	142	151	94	74	45	32	18	<5
Struck by/against an object/person	2,476	10	10	180	200	274	319	241	167	175	127	130	122	137	127	89	51	47	32	26	15	7
Natural/environmental factors	1,850	8	7	150	115	119	121	144	114	107	126	96	105	118	108	142	116	76	41	26	14	5
Overexertion/strenuous movements	1332	5	<5	33	33	135	199	103	97	97	121	98	70	99	70	64	40	28	17	14	7	7
Suffocation/choking/foreign body	1,099	4	15	109	49	27	65	98	96	68	87	67	72	67	79	61	38	31	29	17	14	10
Fire/Flames	377	2	6	50	19	16	33	33	29	31	29	28	19	16	22	19	10	7	7	<5	<5	<5
Machinery	344	1	<5	13	9	17	30	28	30	33	19	23	19	24	23	36	14	11	7	<5	<5	<5
Violence/Purposely Inflicted	275	1	<5	5	4	13	39	44	41	36	16	15	23	10	13	9	<5	<5	<5	<5	<5	<5
Late effects	98	0	<5	<5	<5	<5	<5	5	11	<5	10	8	11	8	<5	11	5	<5	<5	<5	<5	<5
Suicide/self-harm	93	0	<5	<5	<5	7	21	11	13	11	7	<5	5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Other classifiable	60	0	<5	<5	<5	<5	9	11	7	<5	10	<5	<5	6	<5	<5	<5	<5	<5	<5	<5	<5
Water transport	30	0	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vehicle-not elsewhere classified	22	0	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Operations of war/legal	11	0	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Drowning	10	0	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Firearms	8	0	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Railway	0	0	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Air/space transport	0	0	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Cells with values less than 5 were reported <5. Actual cell value included in the totals.

Number of Injury Hospital Admissions by Age Group, Barrhead, 2013 - 2022

Mechanism of Injury/Age Group (years)	All Ages	% of All Injuries	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90+
All Injuries excluding adverse events	1,478		<5	16	24	32	41	40	49	28	38	50	46	68	77	81	128	124	123	177	151	182
Top 5 Mechanism of Injury with Actionable Injury Prevention Strategies																						
Falls	860	58	<5	7	9	6	6	6	<5	11	12	13	7	28	36	42	78	88	93	142	116	155
Motor Vehicle	104	7	<5	<5	<5	<5	13	7	12	<5	<5	8	5	10	6	8	13	5	<5	<5	<5	<5
All-Terrain / Off-Road Vehicles	49	<5	<5	<5	<5	6	5	5	9	<5	6	<5	<5	<5	5	<5	<5	<5	<5	<5	<5	<5
Poisoning (unintentional / undetermined)	42	<5	<5	<5	<5	<5	<5	5	8	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Suicide / Self-Harm	37	<5	<5	<5	<5	<5	6	7	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Mechanism of Injury with Little or No Evidence-based Prevention Strategies																						
Other / Unspecified	134	9	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	8	<5	<5	8	12	11	11	20	16	15
Suffocation / Choking / Foreign Body	91	6	<5	7	<5	<5	<5	<5	<5	<5	<5	6	<5	9	7	<5	<5	10	10	11	9	6
Sports-related	22	<5	<5	<5	<5	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Natural / Environmental factors	21	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Overexertion / Strenuous Movements	20	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Cutting / Piercing	19	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Late Effects	18	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Machinery	17	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Struck By / Against an Object / Person	14	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Violence / Purposely Inflicted	13	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Fire / Flames	8	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Water Transport	3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vehicle-Not Elsewhere Classified	3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Drowning	3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Other Classifiable	3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Railway	0	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Air / Space Transport	0	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Operations of War / Legal	0	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Firearms	0	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Cells with values less than 5 were reported <5. Actual cell value included in the totals.

Number of Injury Deaths by Year, North Zone, 2012 - 2021

Mechanism of Injury/ Death Year	All Ages	% of All Injuries	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
All Injuries excluding adverse events	3519		276	334	342	369	337	378	325	347	377	434
Top 5 Mechanism of Injury with Actionable Injury Prevention Strategies												
Poisoning (Unintentional / Undetermined)	929	26	61	73	73	94	75	88	86	88	121	170
Suicide / Self-Harm	895	25	66	80	96	92	83	96	104	88	95	95
Motor Vehicle	596	17	59	71	69	73	66	63	45	46	55	49
Falls	282	8	20	27	24	28	29	32	20	31	30	41
Violence/ Injury Purposely Inflicted	153	4	13	14	17	27	18	23	9	15	11	6
Mechanism of Injury with Little or No Evidence-based Prevention Strategies												
Other / Unspecified	141	4	16	13	14	11	11	14	12	20	18	12
All-Terrain / Off-Road Vehicles	77	2	8	9	8	9	9	5	6	<5	8	11
Drowning	73	2	6	10	11	<5	5	12	9	7	<5	6
Suffocation / Choking / Foreign Body	68	2	<5	<5	6	5	11	8	7	10	6	7
Natural / Environmental Factors	67	2	<5	<5	6	5	5	<5	11	12	12	8
Fire / Flames	44	1	<5	<5	5	<5	<5	6	<5	11	<5	7
Late Effects	39	1	<5	<5	<5	<5	<5	7	<5	<5	5	<5
Struck By / Against an Object / Person	35	1	<5	7	<5	<5	<5	5	<5	<5	<5	<5
Machinery	21	1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Air / Space Transport	13	0	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Other Classifiable	12	0	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Sports-related	7	0	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vehicle-Not Elsewhere Classified	6	0	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Operations of War / Legal	5	0	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Railway	3	0	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Firearms	2	0	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Water Transport	1	0	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Overexertion / Strenuous Movements	1	0	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Cutting / Piercing	0	0	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Cells with values less than 5 were reported <5. Actual cell value included in the totals.

If you would like additional information about injuries, please visit **http://injurypreventioncentre.ca** or contact us via phone at **780.492.6019** or email **ipc@ualberta.ca**

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Funding and Support
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REV: 09-2024