

Falls in Alberta

INJURY PREVENTION CENTRE

May 2024

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Since 1998, the Injury Prevention Centre (IPC) has been a leader in working with communities and partners to address the issue of injuries in Alberta—an issue that costs Alberta **\$7.1 billion** each year.

The IPC has a long and proud history of supporting organizations, communities and individuals to take actions to reduce their injury risk. For decades, often in partnership, we have initiated and implemented province-wide evidence informed initiatives, programs and advocacy efforts. By focusing on preventing injuries we can save lives. We can also keep Albertans out of emergency rooms and hospital beds. By taking action, we ensure that Albertans stay healthy and fit so that they can continue to live their lives to the fullest.

Taking steps to reduce injury does not mean enveloping our children in bubble wrap; eliminating all risk from our lives. Albertans are risk takers – that's what makes Alberta the province it is. Rather, preventing injury means using the evidence we have to take the measures we know will save lives and prevent Albertans from getting hurt. As connectors, providers and leaders we remain committed to our vision of ensuring that "Albertans work and play hard, free from life-limiting injuries."

INTRODUCTION

As the leading cause of injury, falls are a significant public health issue across age groups and settings in Alberta.

This report provides

- number of deaths, hospital admissions and emergency department visits.
- age-standardized trend rates for deaths, hospital admissions and emergency department visits
- calculated annual percent change in rates of fall deaths, hospital admissions and emergency department visits.
- number and percent of fall deaths, hospital admissions and emergency department visits by sex
- age-specific trend rates for deaths, hospital admissions and emergency department visits by sex
- cost of hospital admissions and emergency department visits
- length of stay for hospital admissions by age group
- percent of concussion / head injury by age group
- percent of place of occurrence
- mechanism of fall for deaths, hospital admissions and emergency department visits
- nature of injury and body part injured
- number and rate by year and zone

Injuries are defined as the physical damage a person suffers from mechanical energy (a motor vehicle crash), thermal energy (a burn from a flame), electrical energy (a shock) or chemical energy (poisoning) or from the absence of essentials such as heat (resulting in frost bite or hypothermia) or oxygen (resulting in suffocation).¹ Injury can be further categorized as unintentional (unexpected), such as falling or drowning, or intentional (having an intent to harm oneself or others), such as suicide or violence.

Data Selection

Injury data was obtained from Alberta Health with deaths from January 1, 2002 to December 31, 2021, and hospital admissions and emergency department visits with discharge / visit dates between January 1, 2003 and December 31, 2022 with an ICD-10-CA (International Statistical Classification of Disease and Related Health Problems Tenth Revision, Canada) diagnosis code V00-Y84 in any of the diagnosis fields.

Each record was assigned to an injury category based on the first injury code records. Those records with the first injury code identified as a fall (W00-W19) were included in this report, excluding sports-related falls (W02).

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 2011 was used as the standard population. No adjustments were made on the number or rates of falls based on weather or other conditions.

INTRODUCTION

Falls include:

- ice and snow
- same level- slipping / tripping / stumbling
- due to collision with, or pushing by another person
- while being carried or supported by another person
- involving wheelchairs and other type of walking devices
- from furniture
- from playground equipment including trampolines
- from stairs / steps
- from ladders / scaffolding
- out of / from buildings or structures
- from high place
- from one level to another
- unspecified falls

DENOMINATOR

Inclusion: The population data is sourced from the mid-year adjusted AHCIIP Population Registry Files (See the methodological notes for the adjusted population estimates in the Alberta Health, Interactive Health Database Application for more detail - IHDA). 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.

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:

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 2011 was used as the standard population. No adjustments were made on the number or rates of falls based on weather or other conditions.

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/>.

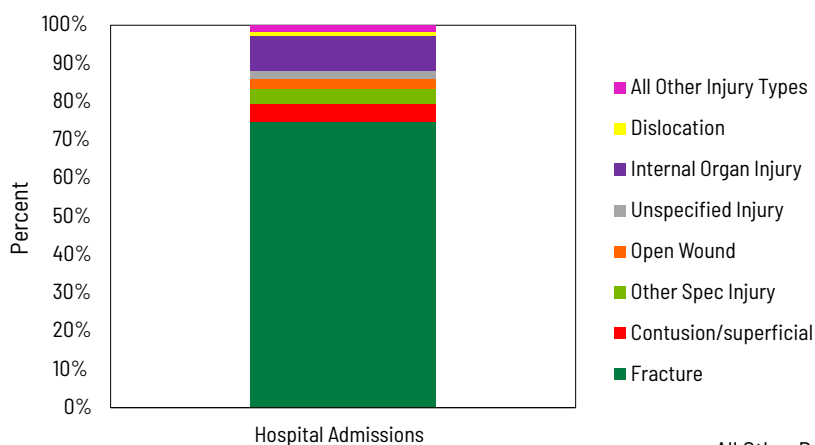
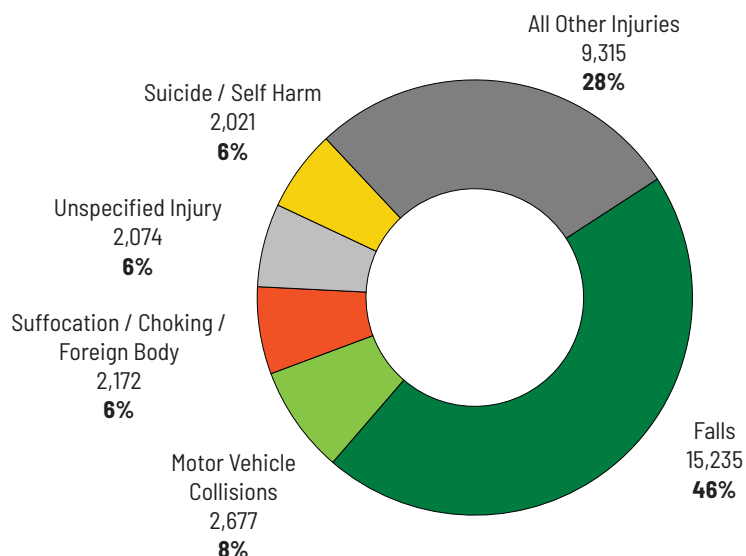
Changes in the trend line are expressed by the average annual per cent change (APC). The sum of the average percentage change between time period will give the overall change.

NEARLY **1** OUT OF EVERY **2**
HOSPITAL ADMISSIONS
IS DUE TO A **FALL**

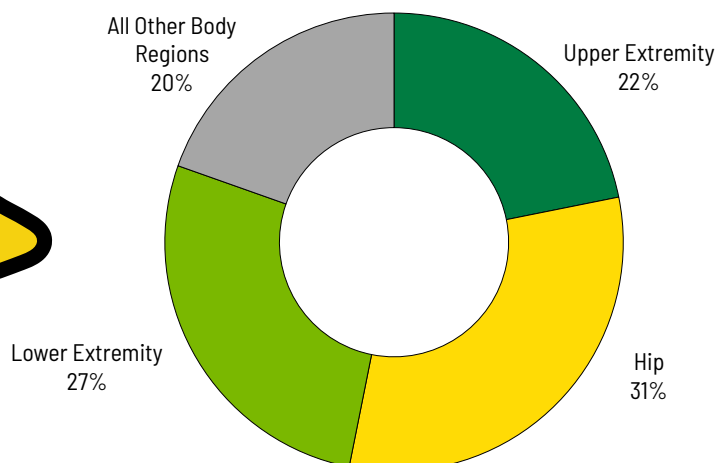
Average of 15,235 each year =

→ 1,270 each month

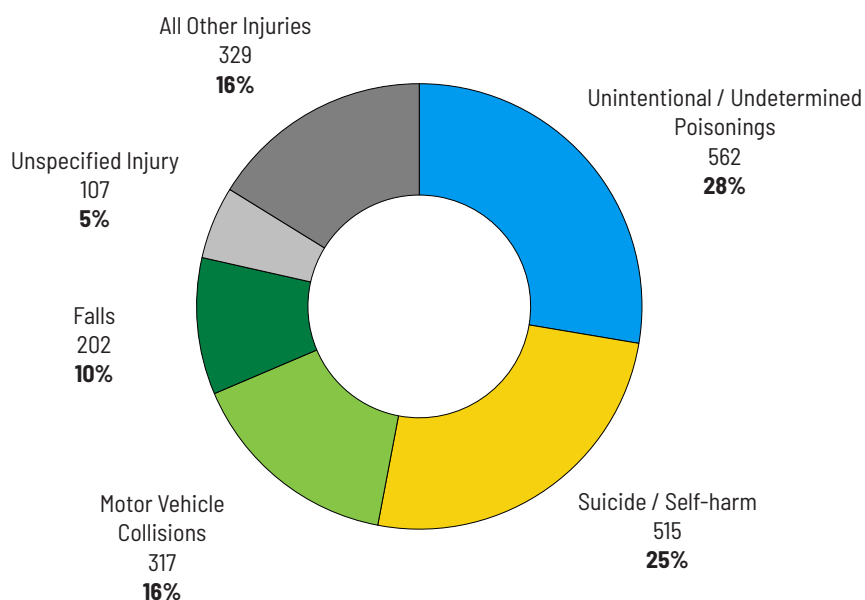
→ 42 each day



75% OF ALL ADMISSIONS INVOLVED A FRACTURE



Number and Percent of Injury-related Deaths by Mechanism of Injury, Alberta, 2002-2021



Over the 20-year period from 2002-2021, there were on average 2,032 injury-related deaths (excluding adverse event and complications of surgical / medical complications) of Albertans each year.

The leading cause of injury-related deaths was unintentional / undetermined poisonings, with an average of 562 deaths each year. This accounts for 28% of the injury deaths.

This was followed by suicide / self-harm-related deaths, accounting for 25% with an average of 515 deaths each year.

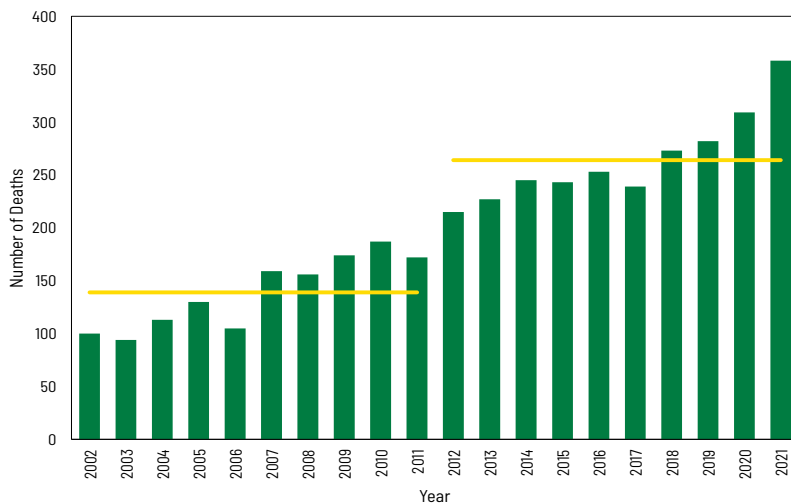
Motor vehicle collisions accounted for 16% of injury deaths with a yearly average of 317 deaths.

Falls accounted for 10% of injury death with an average of 202 deaths each year.

Unspecified injuries, due to lack of documentation, accounted for 5% of injury deaths with an average of 107 deaths each year.

All other injuries-related deaths accounted for 16%, with an average of 329 deaths each year.

Number of Fall-related Deaths, Alberta, 2002-2021



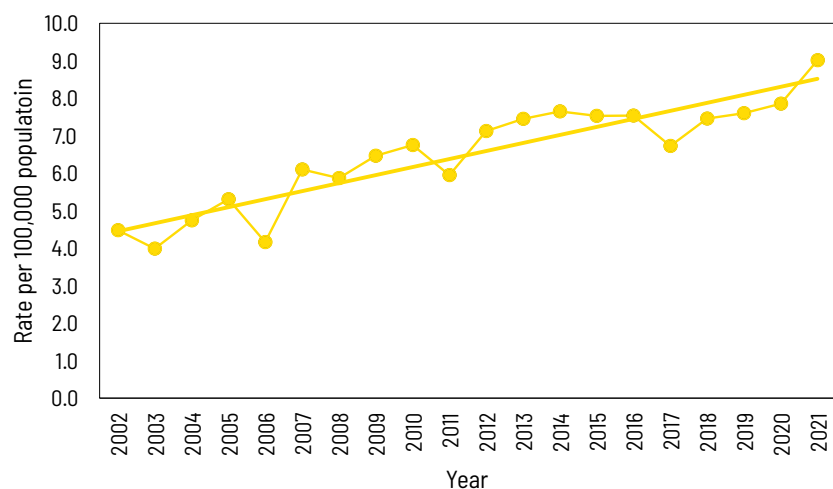
Over the 20-year reporting period, on average, there were 202 fall-related deaths each year.

During the first 10 years (2002-2011), on average, there were 139 fall deaths. During the latter 10 years (2012-2021), the number of deaths increased to an average of 264 fall deaths each year.

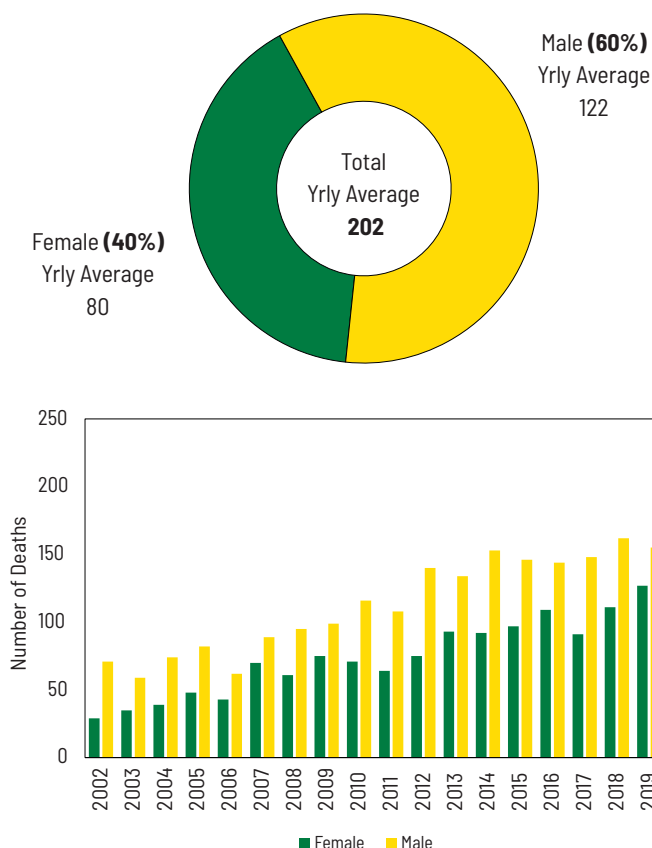
Fall-related Death Rates, Alberta, 2002-2021

Over the 20-year reporting period, there was a statistically significant increase in the average fall death rate of 3.2% each year.

The lowest rate was in 2003 with 4.0 deaths per 100,000 population. The highest rate was in 2021 with a fall death rate of 9.0 per 100,000 population.



Fall-related Death by Sex, Alberta, 2002-2021



Over the 20-year reporting period, on average, there were 202 fall deaths each year.

The majority (60%) of the fall deaths were males, with an average of 122 deaths each year. The remaining 40% were females, with an average of 80 fall deaths each year.

During the first 10 years (2002-2011), there were on average 54 fall deaths each year for females and 86 fall deaths each year for males.

During the last 10 years (2012-2021), there were on average 107 fall deaths each year of females and 158 fall deaths each year for males.

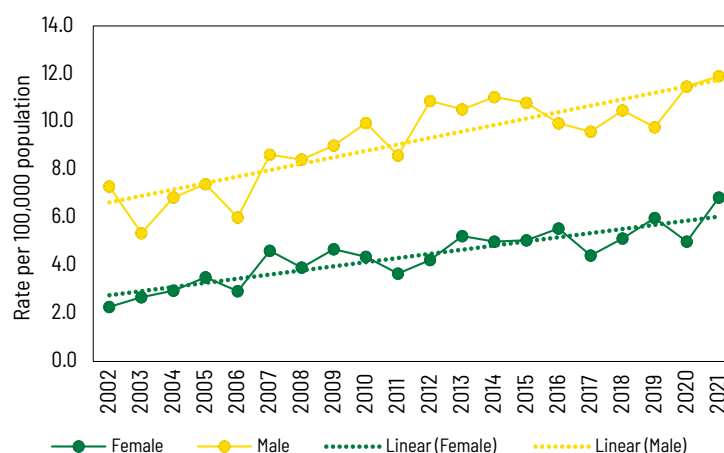
Between the two time periods, the number of females fall deaths increased by 33% and 30% for males.

Fall-related Death Rates by Sex, Alberta, 2002-2021

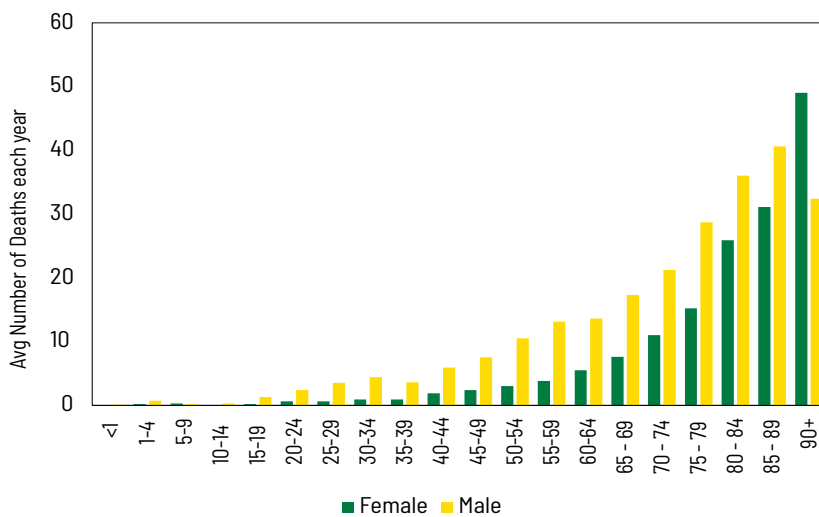
Over the 20-year period, the overall fall death rate experienced a statistically significant increase of 3.2% each year.

There was a statistically significant increase of fall death rate of 3.7% each year for females.

There was a statistically significant increase of fall death rates of 2.8% each year for males.



Number of Fall-related Death by Sex and Age Group, Alberta, 2002-2021



On average, between 2002 and 2021, there were 202 fall-related deaths.

The number of fall-related deaths increased with age for both males and females.

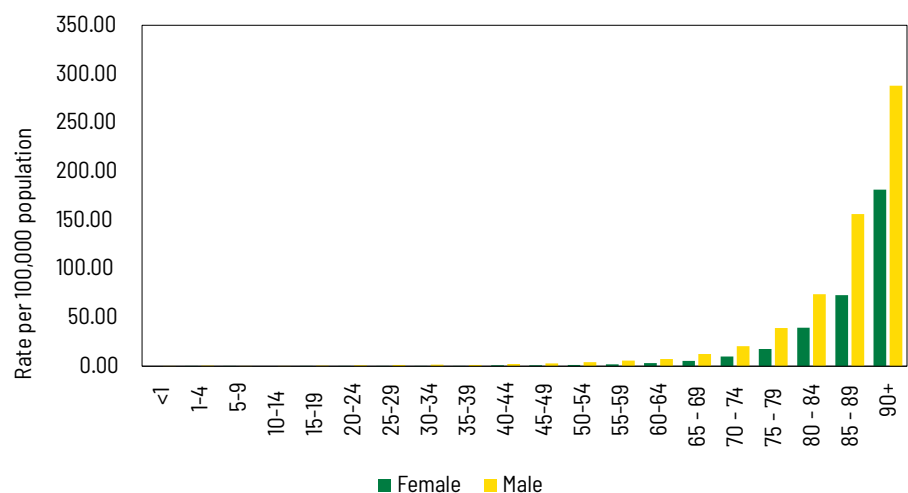
Males consistently had a higher number of fall deaths than females for all age groups, except those 90 years of age and older where females had more fall deaths and than males.

Fall-related Death Rates by Sex and Age Group, Alberta, 2002-2021

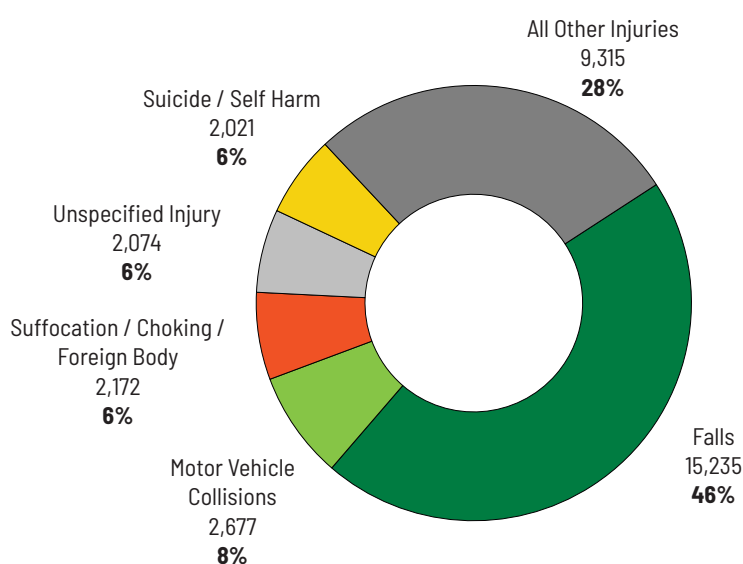
The overall fall-related death rate was 5 deaths per 100,000 population.

Fall-related death rates increased with age for both males and females.

Males consistently had a higher fall death rates than females for all ages.



Number and Percent of Injury-related Hospital Admissions by Mechanism of Injury, Alberta, 2003-2022



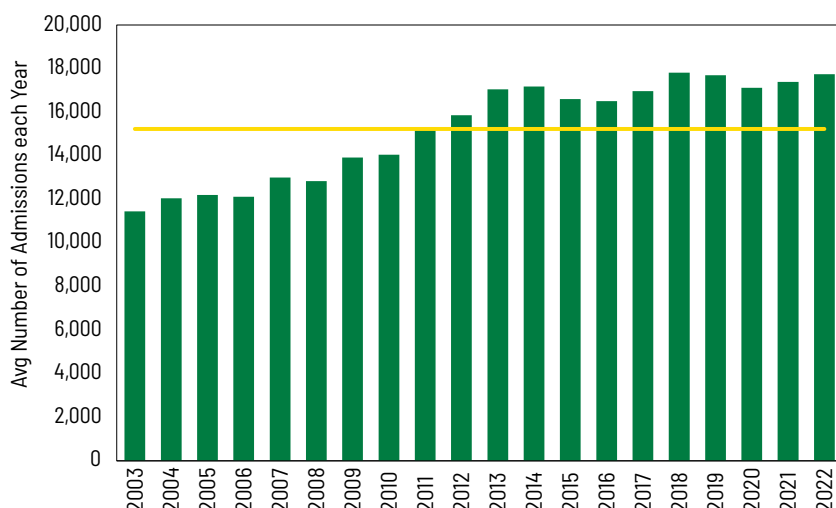
Over the 20-year period from 2003-2022, there was, on average, 33,493 injury-related hospital admissions (excluding adverse event and complications of surgical / medical complications) of Albertans each year.

The leading cause of injury-related hospital admissions was falls, with an average of 15,235 admissions each year. This accounted for 45% of the injury hospital admissions.

This was followed by motor vehicle-related admissions with 2,677 admissions each year, accounting for 8%.

The following mechanisms of injury each accounted for 6%: suffocation / choking / foreign body with an average of 2,172 admissions each year; unspecified injury with an average of 2,074 admissions each year; and suicide / self harm with an average of 2,021 admissions each year.

Number of Fall-related Hospital Admissions, Alberta, 2003-2022



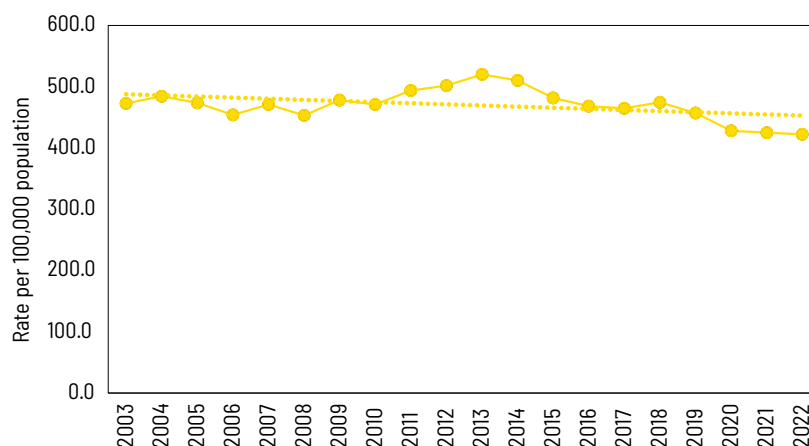
Over the 20-year reporting period, on average, there were 15,235 fall-related hospital admissions each year.

During the first 10 years (2003-2012) there were, on average, 13,266 fall admissions each year. During the latter 10 years (2013-2023), the number of admissions increased to an average of 17,203 each year.

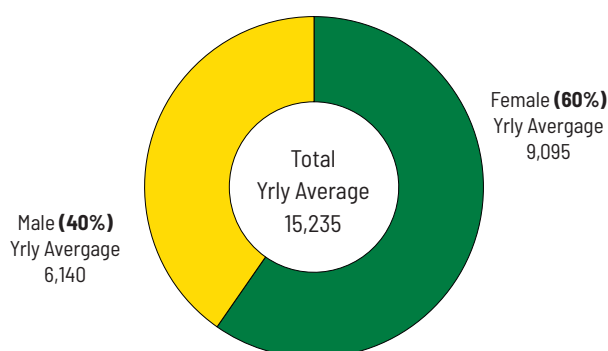
Fall-related Hospital Admission Rates, Alberta, 2003-2022

Over the 20-year reporting period, there was a statistically significant decrease in the average fall hospital admission rate of 0.5% each year.

The lowest rate was in 2022, with 422.2 admissions per 100,000 population. The highest rate was in 2013 with a fall admission rate of 520.2 per 100,000 population.

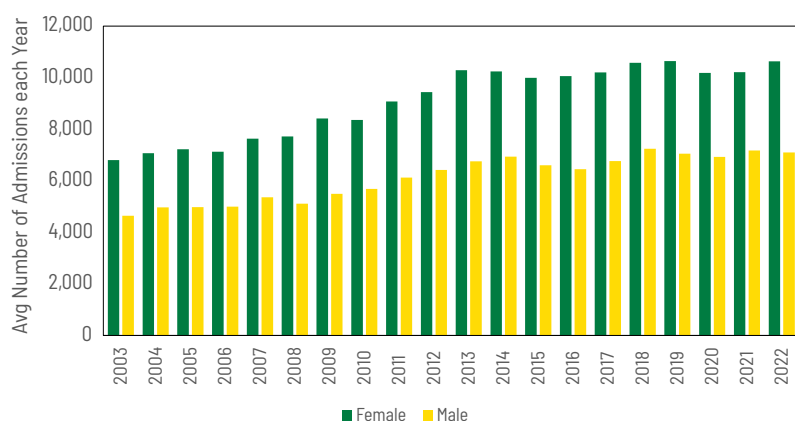


Number and Percent of Fall-related Hospital Admissions by Sex, Alberta, 2003-2022



Over the 20 year reporting period on average there were 15,235 fall-related hospital admissions each year.

The majority, 60% of the admissions were females with an average of 9,095 admissions each year. The remaining 40% were males with an average of 6,140 fall admissions each year. This was opposite of deaths in which 60% of the fall-related deaths were males.



During the first 10 years (2003-2012) there were on average 7,888 fall admissions each year for females and 5,378 fall admissions each year for males.

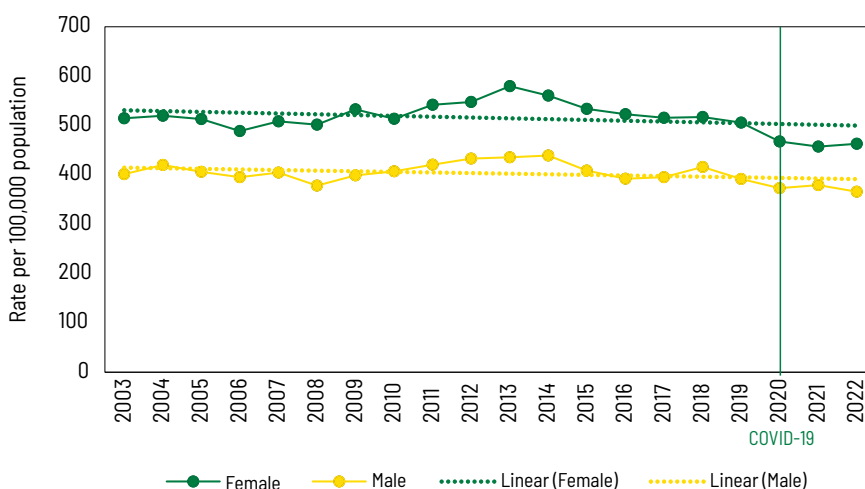
During the last 10 years (2013-2022) there were on average 10,302 fall admissions each year of females and 6,901 fall admissions each year for males.

Females consistently had higher fall-related emergency department visits in each age group.

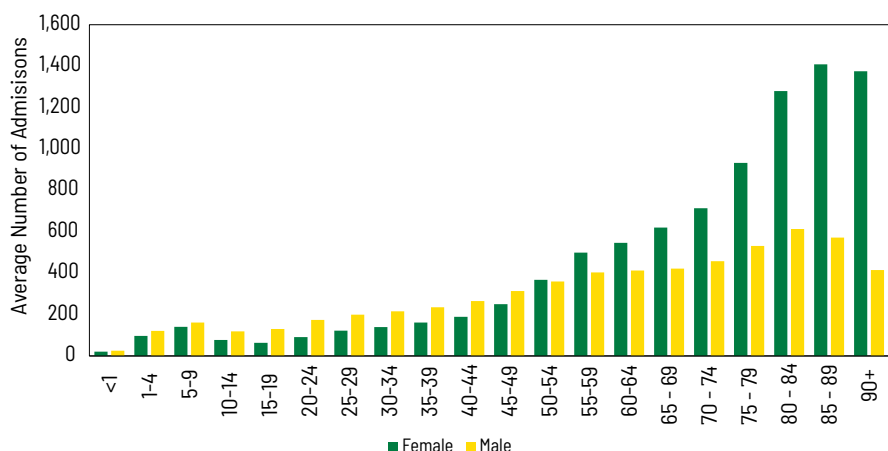
Fall-related Hospital Admission Rates by Sex, Alberta, 2003-2022

Over the 20-year period, the overall fall admission rate experienced a statistically significant decrease of 0.5% each year.

There was a decrease to the fall admission rate of 0.5% each year for both females and males.



Number of Fall-related Hospital Admissions by Sex and Age Group, Alberta, 2003-2022



Over the 20-year period, on average, there were 15,235 fall-related hospital admissions each year.

From 0 to 50 years of age, males had higher number of admissions than females. From 50 years and older, females had higher number of fall hospital admissions in each age group.

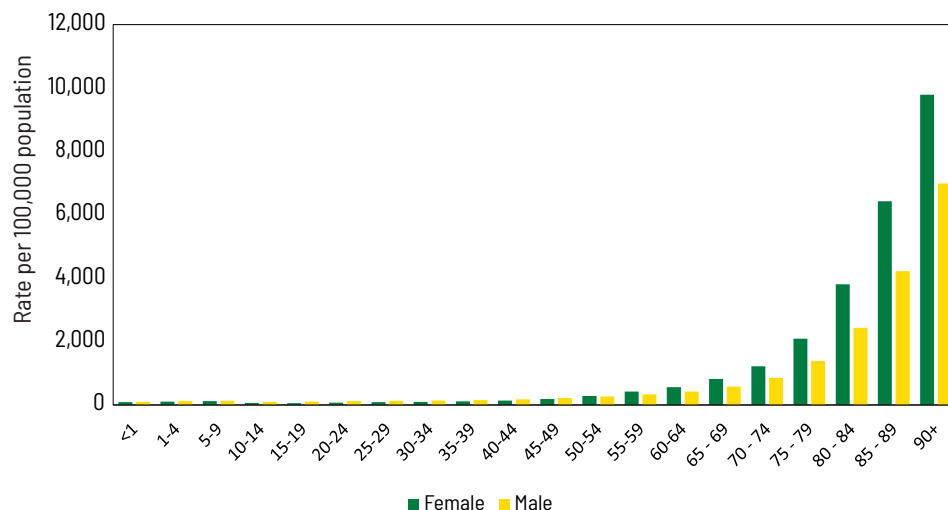
The number of fall admissions increased with age for both and females and males.

Fall-related Hospital Admission Rates by Sex and Age Group, Alberta, 2003-2022

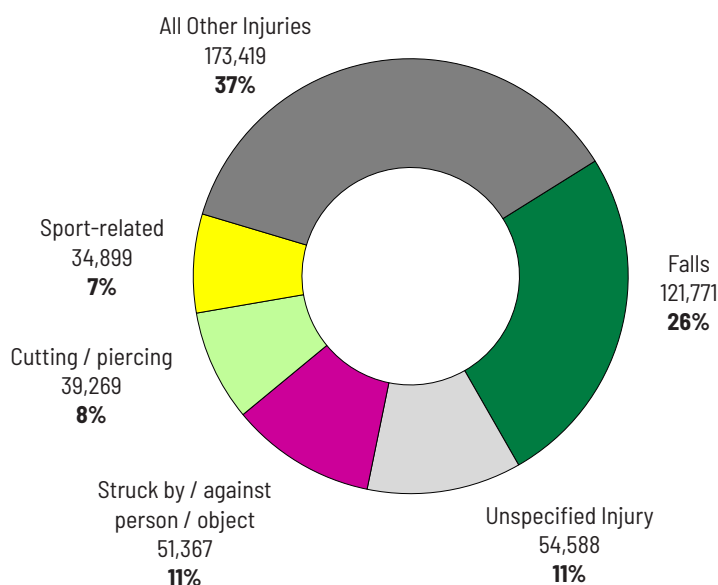
The overall fall hospital admission rate was 471 admissions per 100,000 population.

Fall hospital admission rates increased with age for both males and females.

From 0 to 50 years of age, males had higher fall admission rates than females. From 50 years and older, females had higher fall hospital admission rates in each age group.



Number and Percent of Injury-related Emergency Department Visits by Mechanism of Injury, Alberta, 2003-2022



Over the 20-year period from 2003-2022 there were, on average, 475,312 injury-related emergency department visits (excluding adverse event and complications of surgical / medical complications) from Albertans each year.

The leading cause of injury-related emergency department visits was falls, with an average of 121,771 visits each year. This accounts for 26% of the injury emergency department visits.

This was followed by unspecified injury visits with 54,588 visits each year, accounting for 11%.

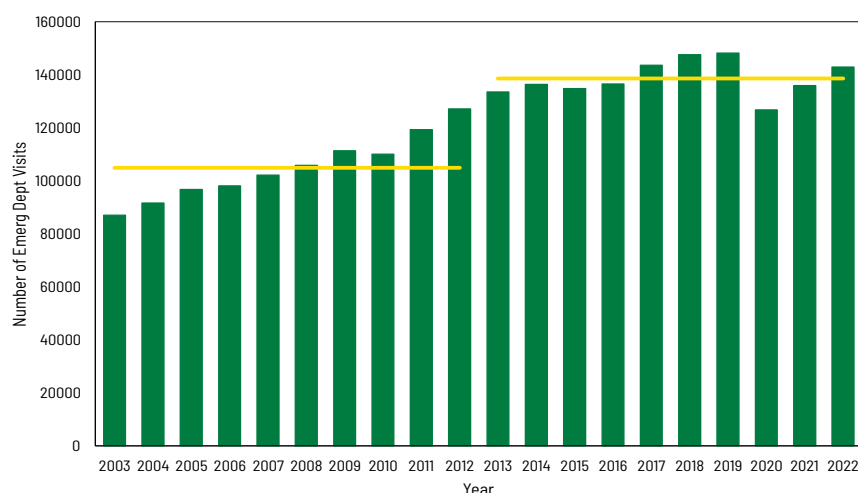
Emergency department visits as a result of being struck by / against a person / object accounted for another 11%, with an average of 51,367 visits each year.

Cutting / piercing visits accounted for 8% of the injury visits, with an average of 39,269 visits each year.

Sports-related injuries accounted for 7% of injury visits, with an average of 34,899 visits.

All other injuries accounted for 36%, with 173,419 visits each year.

Number of Fall-related Emergency Department Visits, Alberta, 2003-2022



Over the 20 year reporting period, on average, there were 121,771 fall-related emergency department visits each year.

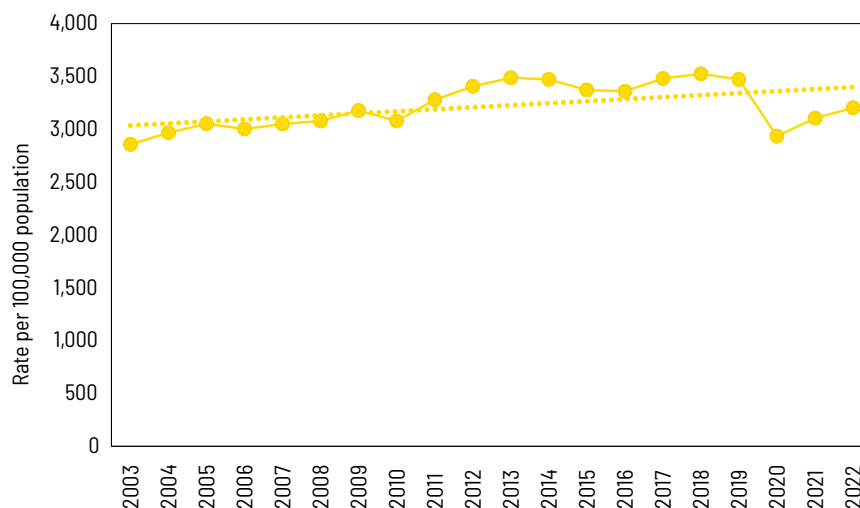
During the first 10 years (2003-2012), on average, there were 104,925 visits. During the latter 10 years (2013-2022), the number of fall emergency department visits increased to an average of 138,617 visits each year.

Due to COVID-19, the number of fall-related emergency department visits in 2020 decreased by 21,430 visits from the previous year. This represents a 14% decrease.

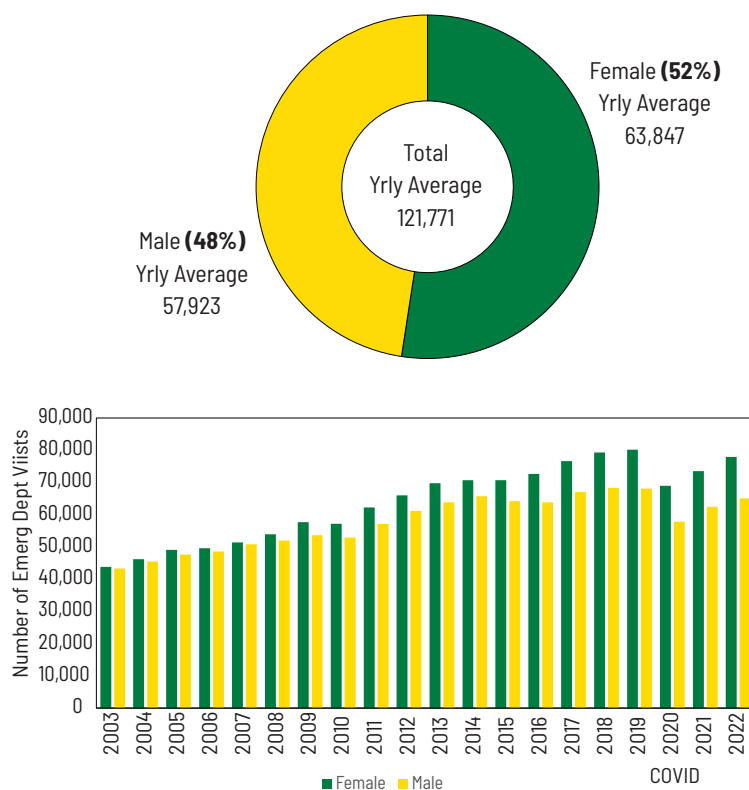
Fall-related Emergency Department Visit Rates, Alberta, 2003-2022

Over the 20-year reporting period, there was a statistically-significant increase of the emergency department visit rate of 0.5% each year.

The fall emergency department visit rates increased from 2003 to 2019. In 2020 due to COVID-19 the emergency department visit rates decreased to 2,934.5 visits per 100,000 population.



Number and Percent of Fall-related Emergency Department Visits by Sex, Alberta, 2003-2022



Over the 20-year reporting period, on average, there were 121,771 fall-related emergency department visits each year.

The majority, 52% of the fall visits were females, with an average of 63,847 visits each year. The remaining 48% were males, with an average of 57,923 fall visits each year.

During the first 10 years (2003-2012) there were on average 53,684 fall visits each year for females and 51,240 fall visits each year for males.

During the last 10 years (2013-2022) there were on average 74,009 fall visits each year of females and 64,605 fall visits each year for males.

Females consistently had higher fall-related emergency department visits in each age group.

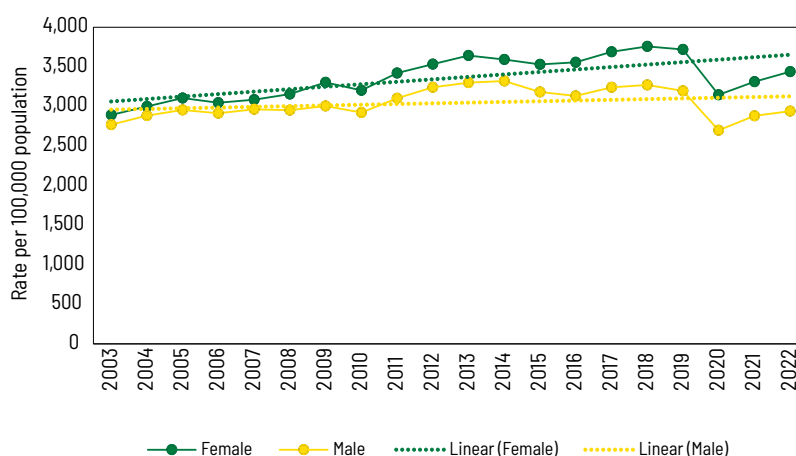
Due to COVID-19, the number of fall-related emergency department visits in 2020 decreased by 11,165 visits (14%) for females and 10,265 visits (15%) for males.

Fall-related Emergency Department Visit Rates by Sex, Alberta, 2003-2022

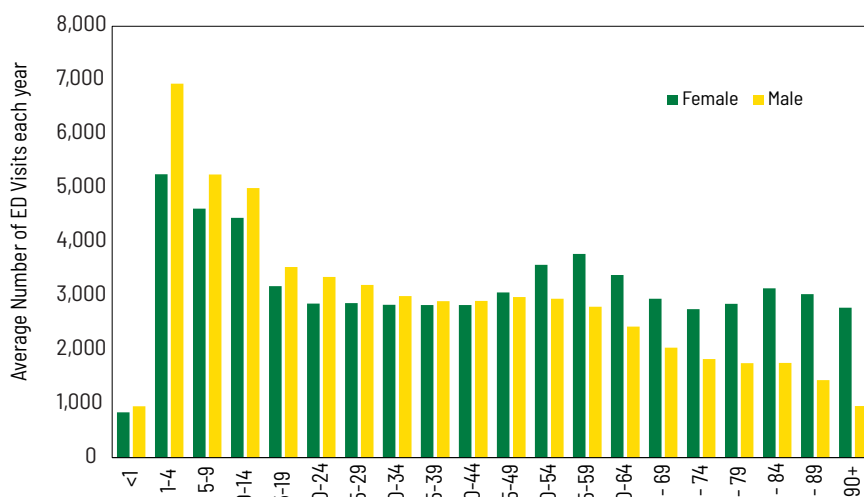
Over the 20-year period, the fall-related emergency department visit rate experienced a statistically significant increase of 0.5% each year.

The fall visit rates for females experienced a statistically significant increase of 0.9% each year.

The fall visit rates for males had a 0.2% increase each year.



Number of Fall-related Emergency Department Visits by Sex and Age Group, Alberta, 2003-2022



Over the 20-year period, on average, there were 121,771 fall-related emergency department visits each year.

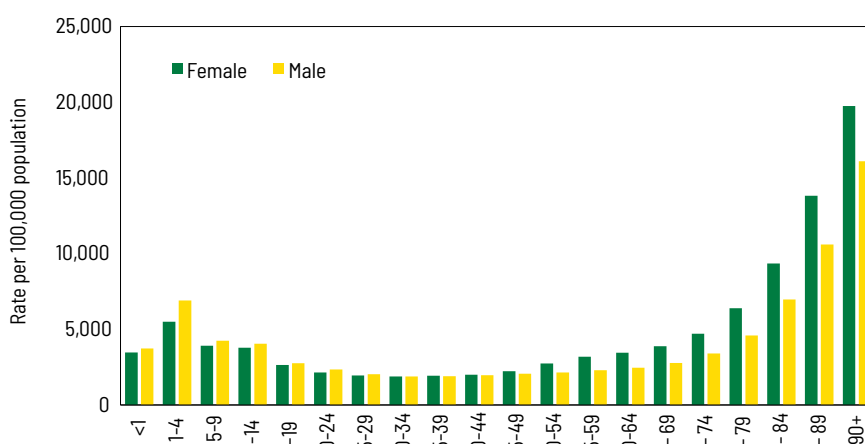
From 0 to 44 years of age, males had higher number of fall visits than females. From 45 years and older, females had higher number of fall emergency department visits in each age group.

Fall-related Emergency Department Visit Rates by Sex and Age Group, Alberta, 2003-2022

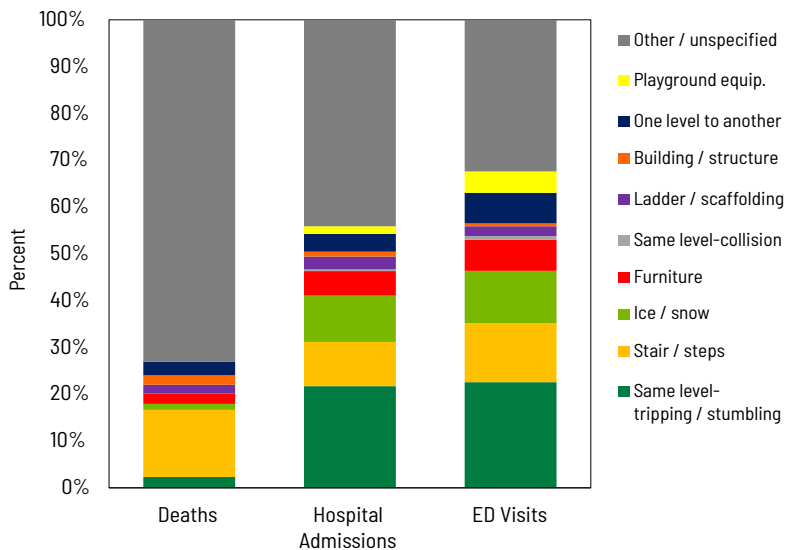
The overall fall-related emergency department visit rate was 3,120 visits per 100,000 population.

From 0 to 34 years of age, males had higher fall visit rates than females. From 35 years and older, females had higher fall emergency department visit rates in each age group.

The fall emergency department visit rates increased with age for both females and males.



Percent of Fall-related Deaths, Hospital Admissions and Emergency Department Visits by Mechanism of Falls, Alberta, 2012/13-2021/22



The mechanism of fall varies with the health service type.

Unspecified fall accounted for 73% of the deaths, 44% of the hospital admissions and 32% of the emergency department visits. This is often due to a lack of documentation to enable a more specific mechanism of fall.

Stairs / steps accounted for 14% of the fall-related deaths. Same level-tripping / stumbling accounted for 22% of the hospital admissions and 23% of the emergency department visits.

Falls involving stair/steps accounted for 9% of the hospital admissions and 13% of the emergency department visits.

Percent of Fall-related Deaths by Mechanism of fall and Age Group, Alberta, 2012-2021

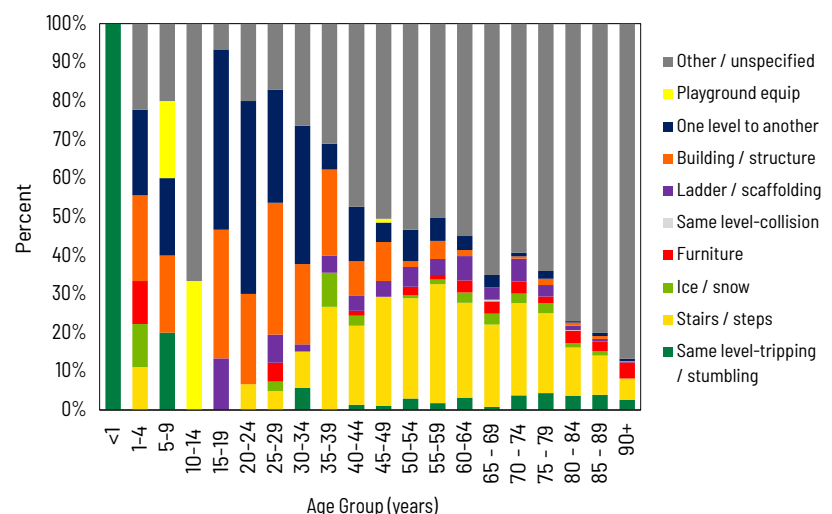
Sixty-nine percent of the fall-related deaths were as identified other / unspecified. This is due to a lack of specification in documentation regarding the mechanism of a fall.

Fall mechanisms vary with age.

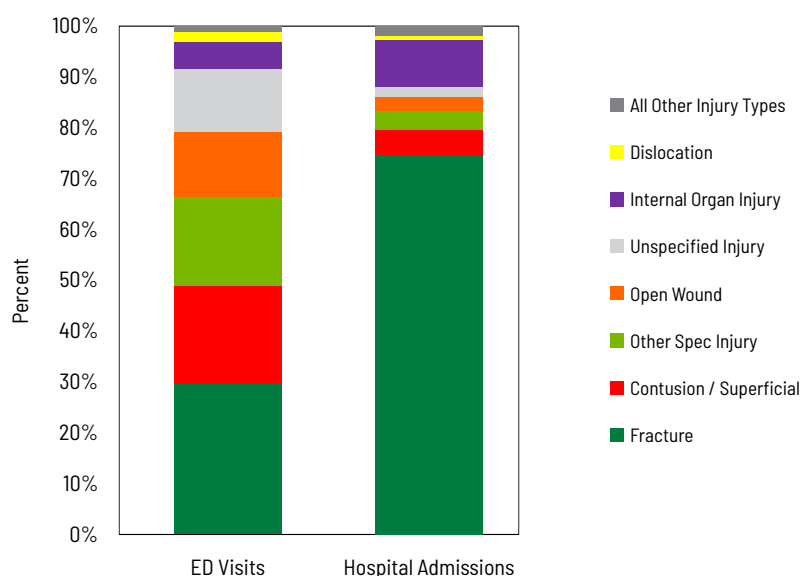
The leading mechanism of a fall-related death involved stairs / steps with 15%.

Another 3% for each of the fall mechanism:

- falls on the same level-tripping/stumbling,
- falls from furniture,
- falls from building/structure,
- falls from one level to another



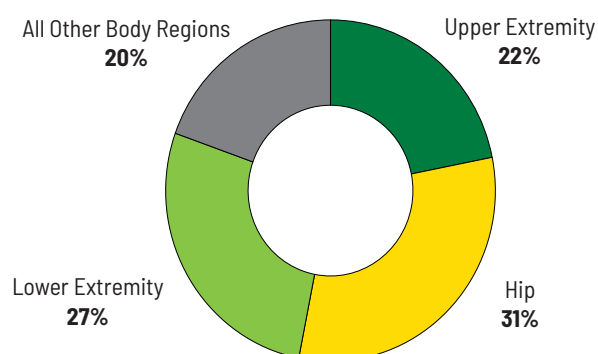
Percent of Nature of Fall-related Hospital Admissions and Emergency Department Visits, Alberta, 2013-2022



When comparing nature of injury of emergency department visits and hospital admissions, fractures were the leading diagnosis for both hospital admissions and emergency department visits. Fractures accounted for 75% of fall-related hospital admissions and 30% of the fall emergency department visits.

Contusions (bruises) and other superficial injuries accounted 19% of emergency fall visits and 5% of hospital admissions.

Percent of Fall-related Fractures Hospital Admissions, Alberta, 2013-2022

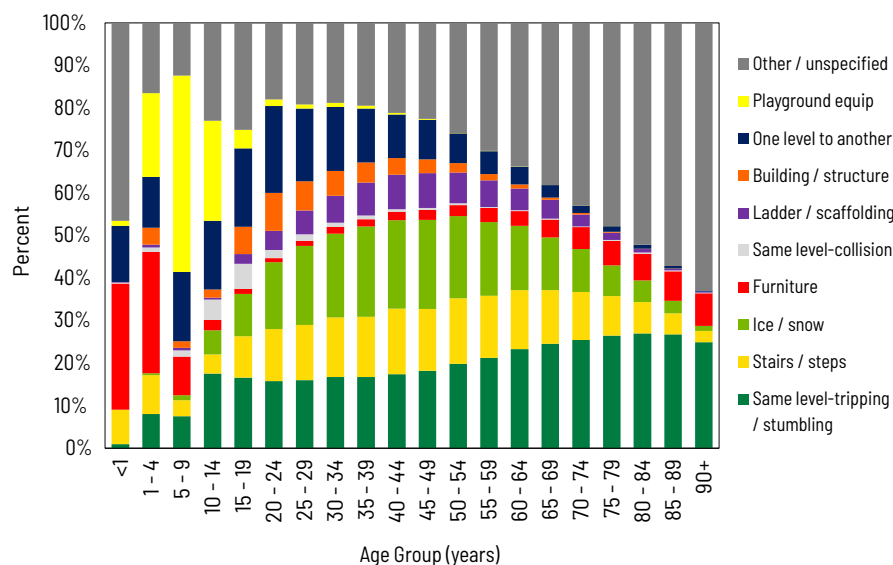


Of those admitted with the primary diagnosis of a fracture as a result of a fall, 22% of the admissions were a fracture of the upper extremity (includes, fingers / thumb, hand, wrist, forearm, elbow, upper arm and shoulder)

Another 31% involved a fracture of the hip.

Another 27% involved the lower extremity. This includes a fracture of the shaft or lower end of femur (excludes fractured hip), multiple leg fractures, or fractures of lower leg including ankle and foot.

Percent of Fall-related Hospital Admissions by Fall Mechanism and Age, Alberta, 2013-2022



Forty-one percent of the fall-related hospital admissions were identified as other / unspecified. This is due to a lack of specification in documentation regarding the fall.

Another 23% of the fall admissions involved falling on the same level as a result of tripping / stumbling

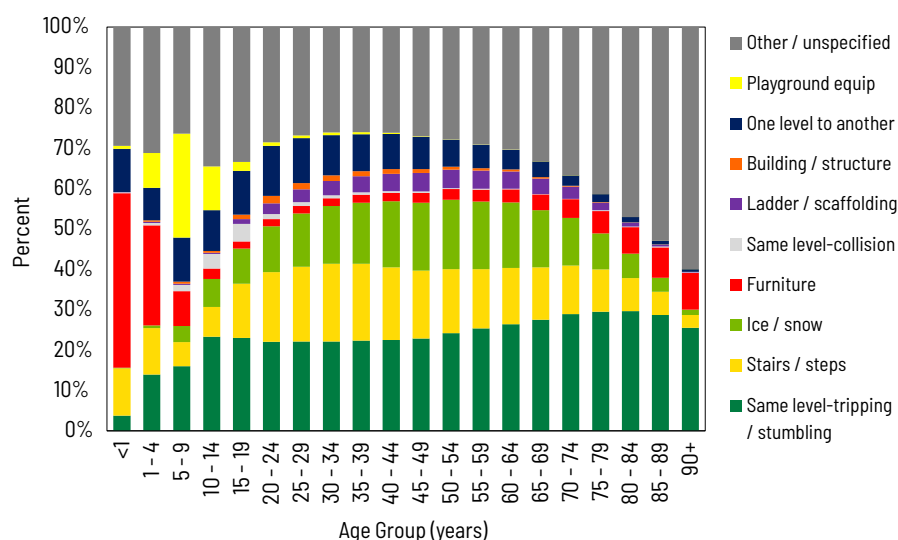
Another 10% for falls from furniture and 10% from fall on ice / snow.

Percent of Fall-related Emergency Department Visits by Fall Mechanism and Age, Alberta, 2013-2022

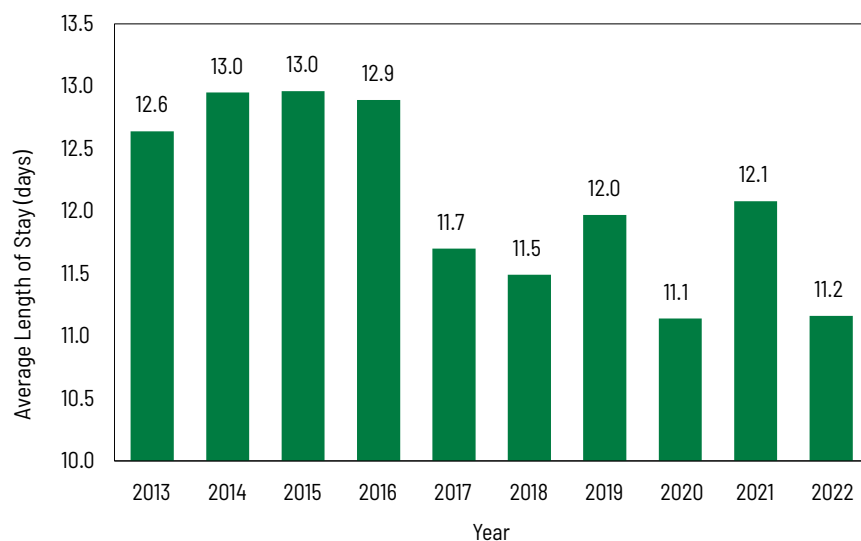
Thirty-three percent of the fall-related emergency department visits were identified as other/unspecified. This is due to a lack of specification in documentation regarding the fall.

The leading mechanism of fall emergency department visits involve falling on the same levels as a result of tripping / stumbling with 23%.

Another 13% from falls on stair / steps and 10% from falls on ice / snow.

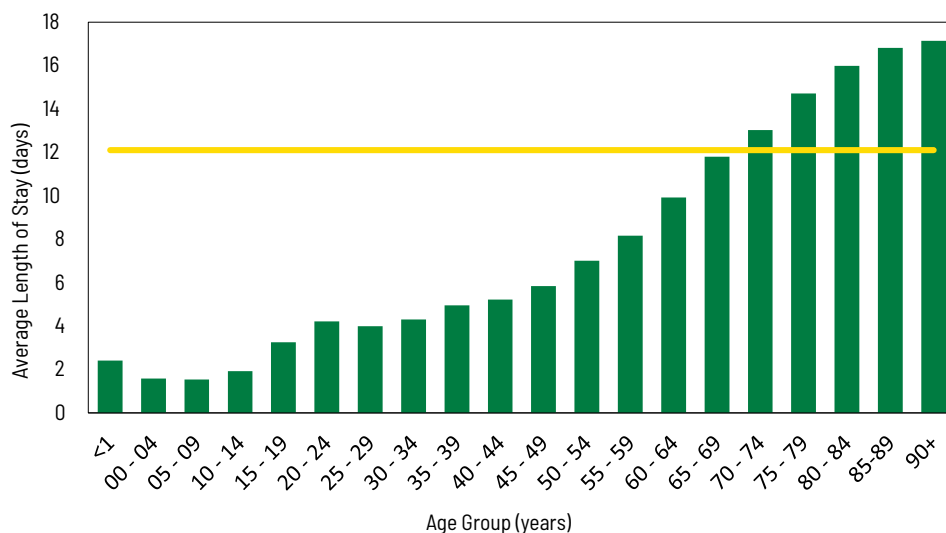


Fall-related Average Emergency Department Visit Costs by Age Group, Alberta, 2013-2022



Over the latter 10 years, the average length of stay in hospital due to a fall fluctuated between 11.1 days and 13.0 days.

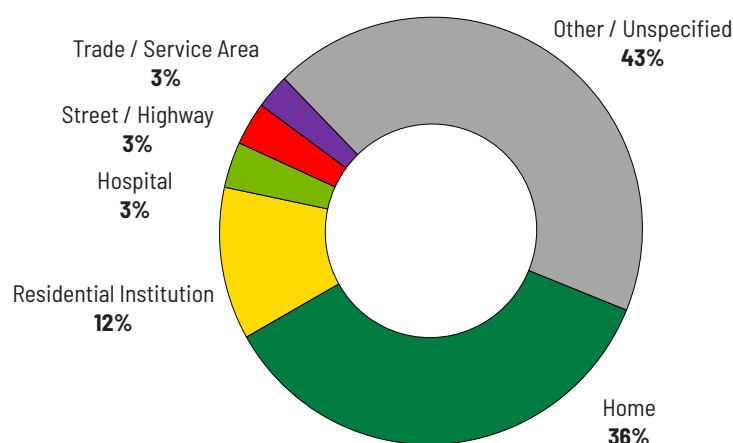
Fall-related Hospital Admission Average Length of Stay (days) by Age Group, Alberta, 2013-2022



The average length of stay in hospital due to a fall is 12.8 days.

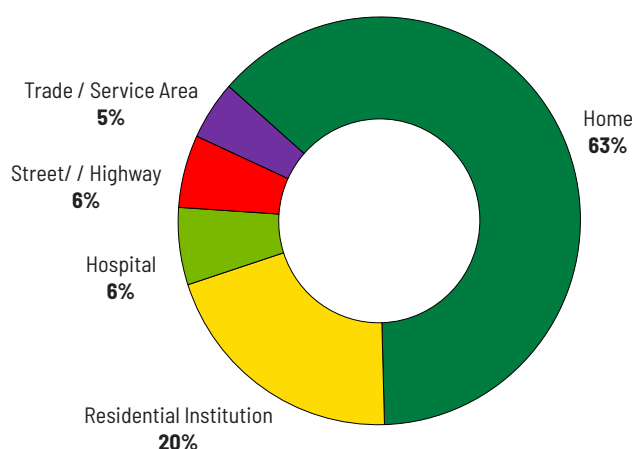
The length of stay increases with age.

Fall-related Emergency Department Visits by Place of Occurrence, Alberta, 2013-2022



For 45% of the emergency department visits, there was inadequate documentation to identify a more specific cause of fall.

Fall-related Emergency Department Visits by Place of Occurrence excluding Other / Unspecified, Alberta, 2013-2022

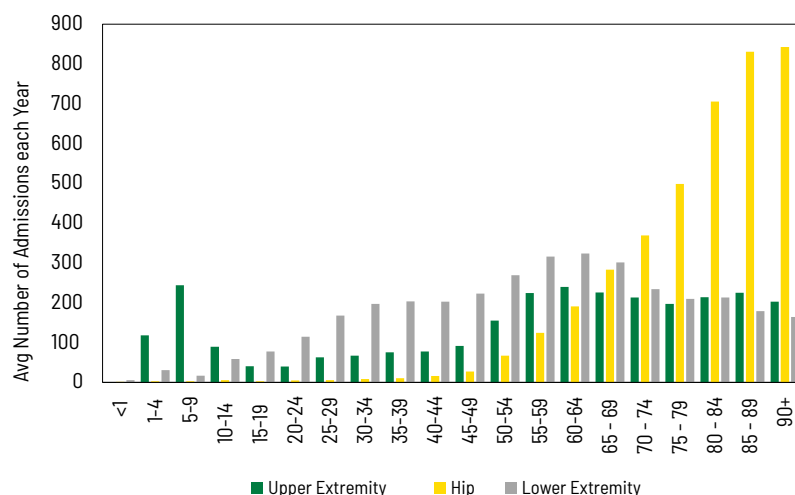


For 45% of the emergency department visits, there was inadequate documentation to identify a more specific cause of fall.

Of the fall-related emergency department visits in which a location was identified, the majority (63%) of falls were in the home; another 20% were in a residential institution. This would include: nursing home, seniors' home, prison, hospice.

Another 6% the of the falls each occurred in a hospital or on a street or highway. Another 5% of the fall emergency department visits occurred in a trade or service area. This would include: airport, bank, café / restaurant, casino, gas station, grocery store, hotel, office building, shop / shopping mall, store, supermarket, warehouse.

Number of Fall-related Fractures by Body Region, Alberta, 2013-2022



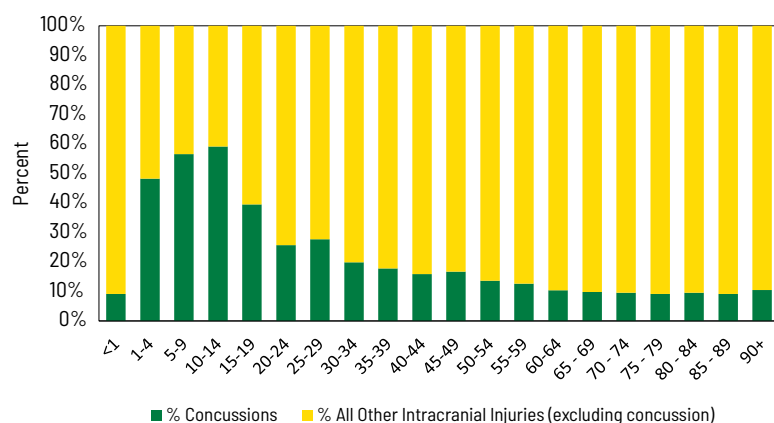
The body region of the fracture differed with age.

Of the top 3 fractures by body region, fractures of the upper extremity was most often diagnosed in children 5 to 9 years of age and older adults.

The average number of fractures of the lower extremity (not hip) was highest among those 50 to 69 years of age.

The average number of patients admitted with a hip fracture was most often seen in seniors. The percent of hip fractures increased with age.

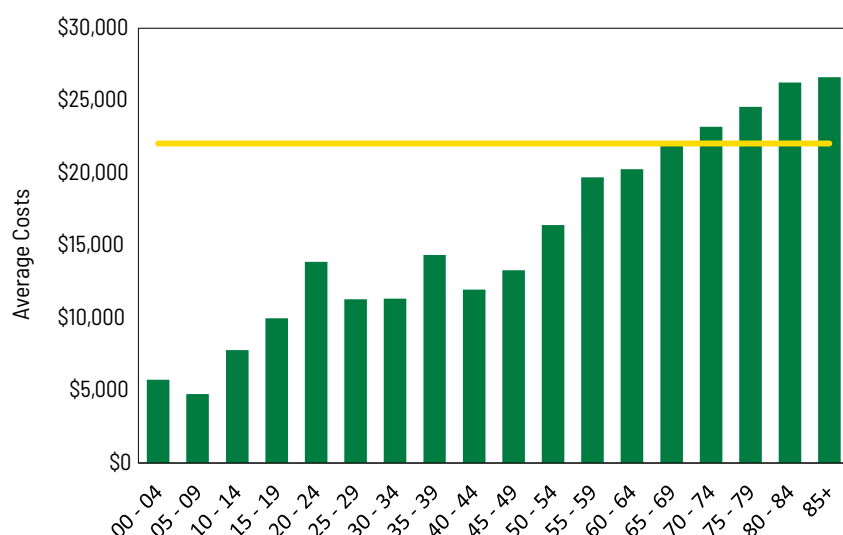
Percent of Fall-related Brain Injuries by Age Group, Alberta, 2013-2022



Of the fall-related patients identified with an injury to their brain (excludes bruises, cuts, open wounds to the head), the majority of the children and youth were more often diagnosed with a concussion.

Older patients were often diagnosed with a brain injury more significant than a concussion such as diffuse brain injury, traumatic epidural / subdural or subarachnoid hemorrhage and other intracranial injuries with or without an intracranial wound.

Average Cost of Fall-related Hospital Admissions by Age Group, Alberta, 2021/22



The average cost of falls for all ages was \$22,045 for each admission.

The average fall-related hospital admission cost increases with age.

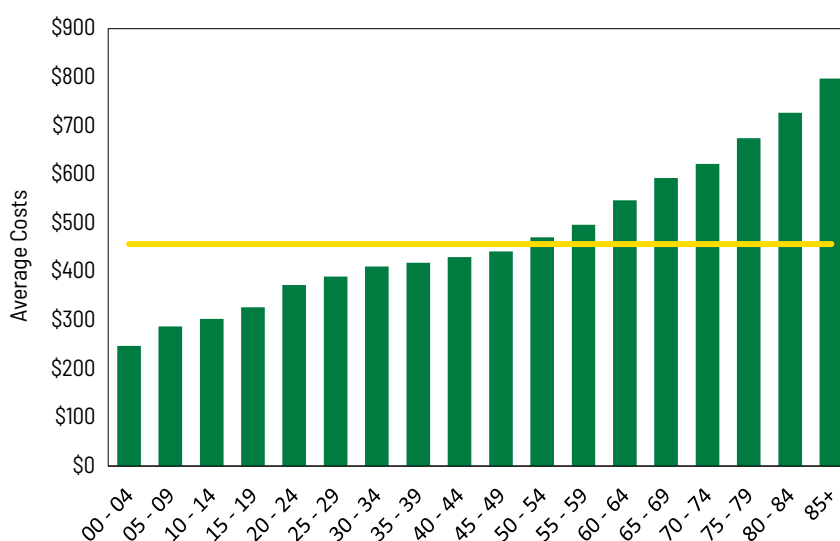
Those 85 years of age and older had the highest average fall-related hospital admissions with a cost of \$26,610 for each admission.

Average Cost of Fall-related Emergency Department Visit by Age Group, Alberta, 2021/22

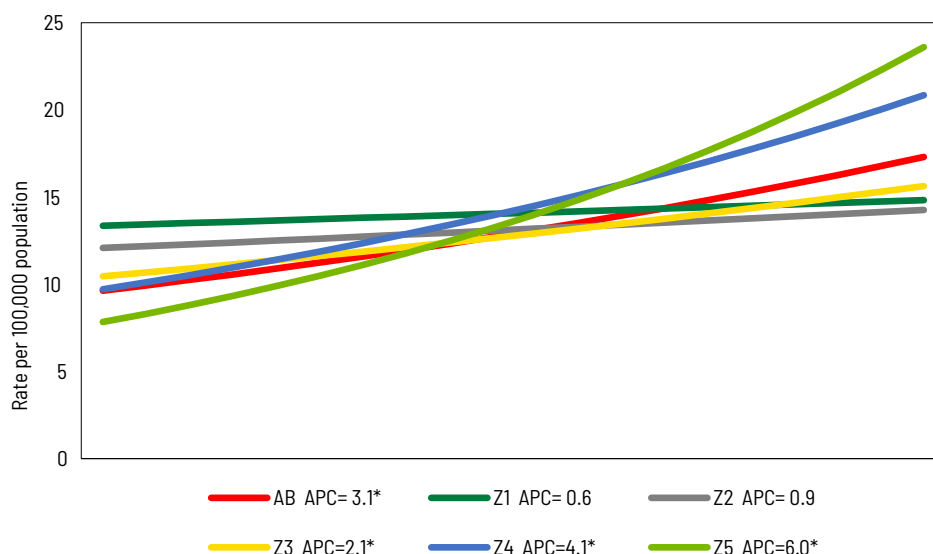
The average cost of falls for all ages was \$457 for each emergency department visit.

The average fall-related emergency department visit costs increase with age.

Those 85 years of age and older had the highest average fall-related emergency department visits with a cost of \$797 for each visit.

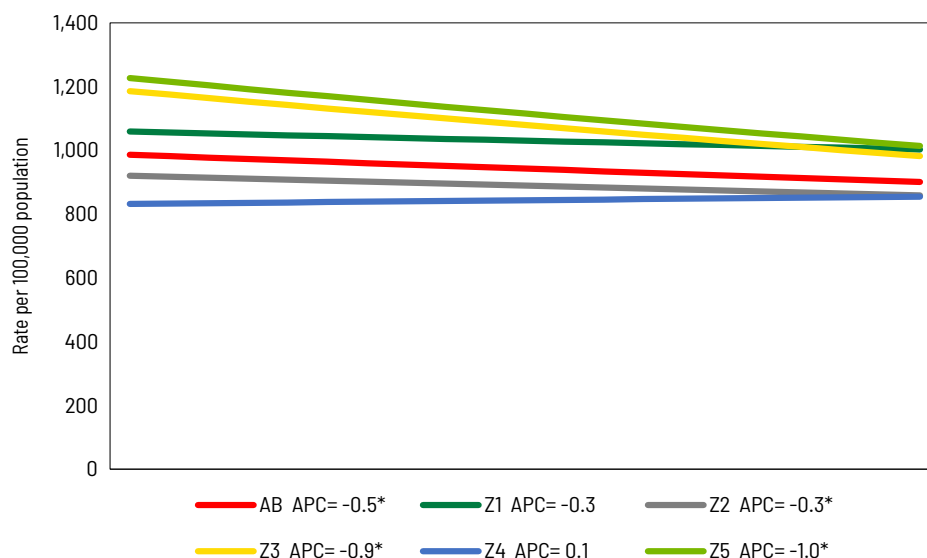


Fall-related Death Numbers and Rates by Zone, 2002-2021



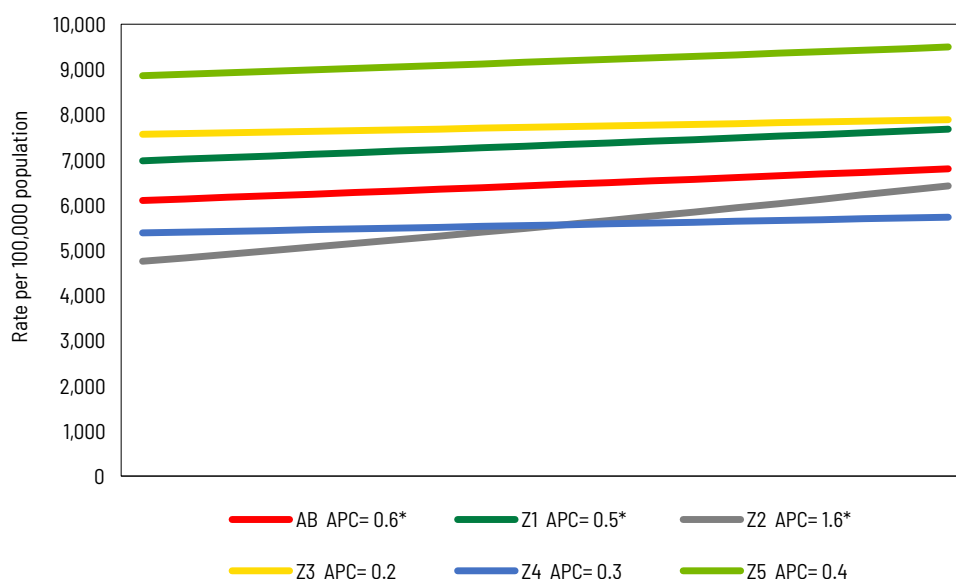
Year	# Deaths						Age-Standardized Death Rate per 100,000 population					
	AB	Z1	Z2	Z3	Z4	Z5	AB	Z1	Z2	Z3	Z4	Z5
2002	200	20	44	48	70	18	9.0	8.9	5.9	14.4	10.2	7.2
2003	188	20	62	20	64	22	8.0	8.7	7.8	5.6	8.5	8.5
2004	226	20	46	24	110	26	9.5	8.3	5.9	7.0	14.9	8.2
2005	260	40	74	40	82	24	10.6	16.7	9.1	10.8	10.7	9.4
2006	210	14	74	22	88	12	8.3	5.6	8.6	5.7	11.2	5.3
2007	318	26	120	46	102	24	12.2	9.6	13.8	11.7	12.5	10.5
2008	312	36	114	42	96	24	11.8	14.0	12.6	10.6	11.5	8.8
2009	348	36	132	60	100	20	12.9	13.4	15.1	14.5	11.5	8.1
2010	374	52	150	56	82	34	13.5	19.2	16.6	13.8	9.0	11.9
2011	344	46	134	34	98	32	11.9	16.5	13.8	8.1	10.4	11.5
2012	430	48	138	58	146	40	14.3	17.3	13.2	13.7	15.0	14.1
2013	454	30	158	60	152	54	14.9	10.5	15.4	14.1	15.1	17.6
2014	490	42	142	62	196	48	15.3	15.1	13.1	13.5	18.8	15.2
2015	486	30	168	66	166	56	15.1	9.6	15.1	14.8	15.7	19.4
2016	506	44	158	46	200	58	15.1	14.9	13.2	9.9	18.2	20.1
2017	478	38	164	56	156	64	13.5	12.6	13.2	11.3	12.9	22.5
2018	546	36	200	68	202	40	14.9	10.7	15.3	13.7	16.9	12.2
2019	564	50	156	64	232	62	15.2	15.6	11.6	12.6	19.0	19.4
2020	618	48	148	100	260	60	15.7	13.6	10.5	18.9	20.0	17.7
2021	716	50	208	78	298	82	18.1	14.4	14.2	15.1	22.7	24.6
Yearly Avg	403	36	130	53	145	40						

Fall-related Hospital Admission Numbers and Rates by Zone, 2002-2022



Year	# Hospital Admissions						Age-Standardized Hospital Admission Rate per 100,000					
	AB	Z1	Z2	Z3	Z4	Z5	AB	Z1	Z2	Z3	Z4	Z5
2003	22894	2452	7376	3986	5788	3030	945.3	1060.5	930.2	1105.0	749.3	1196.7
2004	24088	2398	7420	4360	6378	3214	968.8	1008.2	910.6	1187.1	806.7	1204.3
2005	24394	2556	7424	4584	6300	3252	947.2	1057.4	875.0	1214.7	765.1	1188.2
2006	24242	2446	7718	4176	6636	2874	907.9	984.8	859.6	1077.7	779.4	1053.1
2007	25994	2674	8160	4488	7288	2946	941.6	1052.1	880.7	1136.5	817.3	1042.8
2008	25674	2510	8436	4074	7184	3092	906.3	962.5	887.7	1010.0	789.2	1056.7
2009	27832	2700	8828	4506	8090	3422	956.3	1013.8	890.9	1100.1	861.1	1160.4
2010	28086	2906	9028	4420	7978	3432	941.7	1068.5	883.9	1064.1	828.1	1139.3
2011	30406	2812	9444	4826	9232	3654	987.2	1021.4	890.9	1140.1	925.2	1163.8
2012	31708	2996	9758	4970	9572	3890	1003.5	1066.9	894.9	1149.4	935.5	1229.1
2013	34086	3064	10828	5258	10558	3894	1040.4	1065.7	952.5	1189.9	993.1	1183.9
2014	34352	3284	11018	5180	10164	4236	1020.7	1122.5	938.5	1150.4	930.0	1266.1
2015	33204	3046	10752	4954	10296	3782	963.5	1024.6	888.0	1086.1	914.4	1120.2
2016	33010	3300	10906	4754	9966	3696	936.3	1092.1	875.8	1019.0	865.0	1077.3
2017	33934	3216	11856	4820	9884	3738	929.5	1051.2	904.1	1012.4	829.3	1070.6
2018	35622	3330	12786	4894	10588	3704	948.9	1068.0	938.5	1015.2	861.0	1044.7
2019	35392	3380	12590	5140	10378	3680	914.4	1056.8	892.8	1032.8	817.1	1009.3
2020	34224	3100	12150	4880	10272	3710	855.9	949.9	823.3	959.5	784.7	995.0
2021	34770	3088	12266	4894	10688	3712	849.7	915.0	809.0	935.5	798.2	995.1
2022	35478	3068	12800	4898	11056	3486	844.4	905.0	813.3	932.2	799.2	933.9
Yearly Avg	30470	2916	10077	4703	8915	3522						

Fall-related Emergency Department Visit Numbers and Rates by Zone, 2002-2022



year	# Emergency Department Visits						Age-Standardized Rate per 100,000 population					
	AB	Z1	Z2	Z3	Z4	Z5	AB	Z1	Z2	Z3	Z4	Z5
2003	174064	18312	42468	28700	49318	31980	5716.4	7108.4	4065.4	7097.5	5249.3	8472.5
2004	183238	17756	46388	30138	51434	34154	5937.7	6801.3	4336.4	7388.0	5413.3	9022.9
2005	193488	18722	53598	31724	52316	34028	6108.5	7061.7	4830.0	7612.3	5363.9	8824.1
2006	196168	19024	57500	31636	52462	32040	6006.1	7033.2	4951.1	7414.2	5226.7	8189.5
2007	204316	18752	58858	33732	54298	34600	6099.8	6814.2	4924.4	7743.6	5254.9	8630.6
2008	211656	19638	63686	34582	54318	35610	6156.6	6974.3	5171.9	7814.9	5130.9	8713.1
2009	222608	20508	69282	34808	57916	36886	6353.2	7182.0	5481.5	7807.0	5340.0	8938.3
2010	220070	21240	68056	33974	55832	37846	6160.8	7336.6	5260.1	7560.1	5044.7	8959.5
2011	238630	21626	74254	35932	62364	40394	6561.0	7415.0	5595.3	7961.2	5519.5	9426.2
2012	254262	22350	80294	36880	66574	43530	6814.3	7582.8	5868.6	8048.0	5718.5	9984.4
2013	267082	22460	88086	37570	71464	42888	6975.7	7535.9	6242.5	8090.0	5958.1	9627.8
2014	272696	23588	90396	38620	71224	44088	6943.6	7828.7	6214.4	8221.9	5747.9	9747.7
2015	269660	22036	88104	37438	74408	44090	6742.7	7239.5	5930.9	7910.3	5865.0	9642.2
2016	272998	23348	91616	37006	75216	42804	6721.5	7581.3	6042.2	7758.4	5797.1	9396.6
2017	287272	23542	97080	39054	79260	45292	6960.8	7596.3	6279.3	8140.7	5979.8	9919.8
2018	295160	24938	1E+05	38266	83650	44154	7052.5	7963.3	6462.9	7954.0	6203.2	9663.3
2019	296340	24140	1E+05	39762	82370	45130	6945.3	7625.9	6368.0	8182.8	5959.7	9821.4
2020	253480	22018	89766	34404	68236	37626	5868.9	6883.9	5461.3	7055.4	4867.2	8220.1
2021	271858	22748	95292	35862	76644	40022	6214.1	7038.1	5698.6	7298.6	5382.3	8764.4
2022	285786	25436	99918	37412	80006	41508	6404.8	7861.8	5798.7	7579.1	5492.0	9036.3
Yearly Avg	243542	21609	77971	35375	65966	39434						

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



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