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HOUSELESSNESS AND INJURIES IN ALBERTA: 2019-2020

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INTRODUCTION

Houselessness is a grave and complex societal issue that requires a multi-disciplinary approach (i.e., social work and public health) when investigating its etiology and developing evidence-based interventions. Houselessness is "the condition of being without a house..."[1] and is an extreme manifestation of poverty experienced by many individuals and families across the world.[2] Houselessness / houseless refers to the same state of being as 'homelessness'. However, the former term is preferable over the latter due to houselessness acknowledging the reality of individuals currently living without a physical space or house.[3] 'Home' can be used plurally by individuals who may define their communities, land, neighborhoods, or social support networks as 'homes'.[3] By labeling individuals who do not have a house or physical location to live as 'homeless', one may unintentionally disregard these connections made by individuals and sever their connections with their current homes.[3] Therefore, this report will use the terms "Houselessness" or "Houseless" throughout and when referencing prior literature on "homelessness".

Risk factors for entering houselessness have been explored by the literature.[4-5] Harmful and traumatic life events experienced during one's life course, mental health issues, unemployment,[4-5] and the unaffordable rent due to economic changes[6] are one of the many reasons why anyone is at risk for entering houselessness. One of the critical issues individuals may face while experiencing houselessness, is the increased risk of sustaining injuries because of one's living conditions (i.e., emergency shelters, living in outside conditions) when experiencing houselessness.[7]

As reported by research, frequently occurring injuries among those experiencing houselessness are sprains/strains, contusions/abrasions, burns, and injuries to the lower extremities.[8] The prevalence of traumatic brain injuries are also noticeably high among those experiencing houselessness.[9-10] A study in Toronto showed that men experiencing houselessness have greater rates of emergency department visits for cold weather-related injuries than men not currently experiencing houselessness,[11] highlighting the unique geographic challenges of experiencing houselessness during harsh winter climates predominant among most Canadian provinces, including Alberta.

Along with the harsh realities of experiencing houselessness in Alberta, there is also evidence to suggest that houselessness has increased among some Albertan jurisdictions since the COVID-19 pandemic. The *Alberta 2018 Point-in-Time Homeless Count* estimated that there were 5,735 individuals experiencing houselessness among seven major Albertan cities in 2018, with the majority of those experiencing houselessness centered in the Edmonton and Calgary regions.[6] However, these estimates were calculated before the pandemic; more recent estimates suggest that the number of Albertans experiencing houselessness has increased compared to what was reported by the seven cities report. For example, experts have suggested that the number of Edmontonians currently experiencing houselessness is closer to 3,000,[12-13] a substantial increase than what was reported by Seven Cities in 2018 (1,971).[6] To our knowledge, more recent numbers for the remaining cities are unknown but could be theorized to have increased due to the aftereffects of the COVID-19 pandemic. Some have suggested that a recession caused by the COVID-19 pandemic may have contributed to increased houselessness across Canada. As such, it could take years (up to 5) before the full impact of the COVID-19 recession on houselessness is fully realized.[14] Despite the methodological limitations of Point-in-Time (PIT) estimates regarding houselessness,[15] these estimates suggest a high likelihood of increased houselessness in Albertan municipalities than in previous years.

While recent data suggests a 'lag effect' regarding the rise in houselessness across the country, there is also time to implement preventative measures to address this increase.[14] Furthermore, most of the previously discussed injuries sustained by those experiencing houselessness can be prevented, highlighting the significant role that public health officials in injury prevention can play in mitigating the harms associated with houselessness. Coupled with the increase in those experiencing houselessness along with a higher risk of injuries, efforts focused on preventing injuries are critical.

The first step towards effective injury control programming for those experiencing houselessness in Alberta is to provide a clear understanding of what injuries are, their causes, and effective prevention strategies. Previous research reporting on the prevalence of injury among Albertans experiencing houselessness was only contained within one geographic location and only within small samples of individuals.[16] Given the current data drought surrounding injury rates among those experiencing houselessness in Alberta, this report will be the first in Alberta to provide baseline information on injury-related emergency department visits for people experiencing houselessness. The intended purpose of this report is to determine areas of greatest need to plan and deliver effective injury prevention programming.

1. Collins Dictionary. (n.d.). Houselessness. In collinsdictionary.com dictionary. Retrieved May 10, 2022, from https://www.collinsdictionary.com/dictionary/english/houselessness.
2. Gaetz, S. (2009). What is homelessness?. Homeless Hub – Educational Resources. Retrieved May 10, 2022, https://homelesshub.ca/resource/what-homelessness.
3. Hunt, K. (2019, June 5). Why Do We Say "Houseless"?. Do Good Multnomah – Blog. Retrieved May 10, 2022, https://dogoodmultnomah.org/blog/why-do-we-say-houseless.
4. Schreiter, S., Speerforck, S., Schomerus, G., & Gutwinski, S. (2021). Homelessness: care for the most vulnerable – a narrative review of risk factors, health needs, stigma, and intervention strategies. Current Opinion in Psychiatry, 34(4); 400–404. https://doi.org/10.1097/yco.0000000000000715.
5. Nilsson, S. F., Nordentoft, M., & Hjorthøj, C. (2019). Individual-Level Predictors for Becoming Homeless and Exiting Homelessness: a Systematic Review and Meta-analysis. Journal of Urban Health, 96(5); 741–750. https://doi.org/10.1007/s11524-019-00377-x.
6. 7 Cities on Housing and Homelessness. 2018 Alberta Point-in-Time Homeless Count- Technical Count. Pit Count. Retrieved May 10, 2022, https://www.7cities.ca/_files/ugd/ff2744_5d899dceff12471c835fddf4e5d119fc.pdf.
7. Glogauer, N. (2021, August 12). Top Ten Health Issues Facing Homeless People. Homeless Hub. Retrieved from: https://www.homelesshub.ca/blog/top-ten-health-issues-facing-homeless-people.
8. Mackelprang, J. L., Graves, J. M., & Rivara, F. P. (2014). Homeless in America: injuries treated in US emergency departments, 2007–2011. International journal of injury control and safety promotion, 21(3); 289-297. https://doi.org/10.1080/17457300.2013.825631.
9. Stubbs, J.L., Thornton, A.E., Sevick, J.M., Silverberg, N.D., Barr, A.M., Honer, W.G., & Panenka, W.J. (2019). Traumatic brain injury in homeless and marginally housed individuals: a systematic review and meta-analysis. Lancet Public Health, 5(1); E19-E32. https://doi.org/10.1016/S2468-2667(19)30188-4.
10. O'Connor, T.A., Panenka, W.J., Livingston, E.M., Stubbs, J.L., Askew, J., Sahota, C.S., Feldman, S.J., Buchanan, T., Xu, L., Hu, X.J., Lang, D.J., Woodward, M.L., Thornton, W.L., Gicas, K.M., Vertinsky, A.T., Heran, M.K., Su, W., MacEwan, G.W., Barr, A.M., Honer, W.G., & Thornton, A.E. (2022). Traumatic brain injury in precariously housed persons: Incidence and risks. EclinicalMedicine, 44(101277). https://doi.org/10.1016/j.eclinm.2022.101277.
11. Zhang, P., Bassil, K., Gower, S., Katic, M., Kiss, A., Gogosis, E., & Hwang, S. W. (2019). Cold-related injuries in a cohort of homeless adults. Journal of Social Distress and the Homeless, 28(1); 85-89. https://doi.org/10.1080/10530789.2018.1523103.
12. Homeward Trust. (2022, April 29). Program Data. Homeward Trust. Retrieved May 10, 2022, https://homewardtrust.ca/what-weve-learned/performance-evaluation/
13. CTV News. Edmonton's homeless population has doubled since the pandemic, city says. CTV News – Edmonton. Retrieved May 10, 2022, https://edmonton.ctvnews.ca/edmonton-s-homeless-population-has-doubled-since-the-pandemic-city-says-1.5850173.
14. Falvo, N. (2020, December). The long-term impact of the COVID-19 Recession on homelessness in Canada: What to expect, what to track, what to do. Nick Falvo Consulting. Retrieved May 10, 2022, https://nickfalvo.ca/wp-content/uploads/2020/11/Falvo-Final-report-for-ESDC-FINAL-28nov2020.pdf.
15. Schneider, M., Brisson, D., & Burnes, D. (2016). Do we really know how many are homeless?: An analysis of the point-in-time homelessness count. Families in Society: The Journal of Contemporary Social Services, 97(4); 321–329. https://doi.org/10.1606%2F1044-3894.2016.97.39.
16. Milaney, K., Kamran, H., & Williams, N. (2020). A Portrait of Late Life Homelessness in Calgary, Alberta. Canadian Journal on Aging / La Revue Canadienne Du Vieillissement, 39(1), 42-51. https://doi.org/10.1017/S0714980819000229.

PRESENTATION OF DATA

The data presented in this report includes injury-related emergency department visits of those reporting houselessness. Exclusions from the report are: adverse events, medical / surgical complications, transfers to another facility.

The primary data in this report are:

- the number of emergency department visits by mechanism
- the number of emergency department visits by detailed mechanism of injury (where available)
- the number of emergency department visits by age / sex
- the number of emergency department visits by body region and nature of injury (where applicable)

Houselessness was identified by documentation within the emergency department visit and the use of ICD10-CA diagnosis code Z59.0 houselessness, in any diagnosis field.

The mechanism of injury is identified by the first listed external cause code using the International Classification of Disease 10 edition, Canadian Adaptation (ICD10-CA) diagnosis code V00-Y36.9.

Due to the lack of population numbers for the houselessness, age specific rates could not be calculated.

Data collection around gender was not self-reported, and individuals were not asked about their preferred pronouns. The data regarding non-binary or transgender individuals was also not collected.

OVERVIEW

There was an average of 5,814 injury-related emergency department visits of people experiencing houselessness.

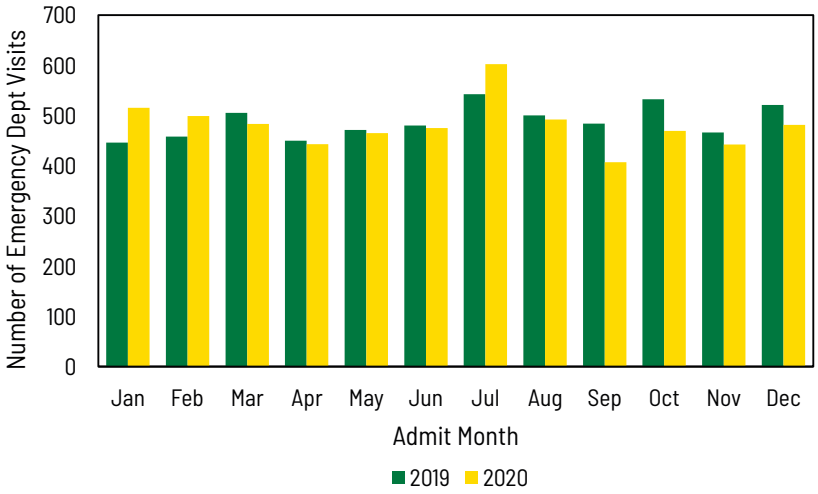
In 2019, there were 5,855 injury-related visits and, in 2020, there were 5,773 injury-related visits of people experiencing houselessness.

The number of injury-related emergency department visits by people experiencing houselessness remained relatively consistent.

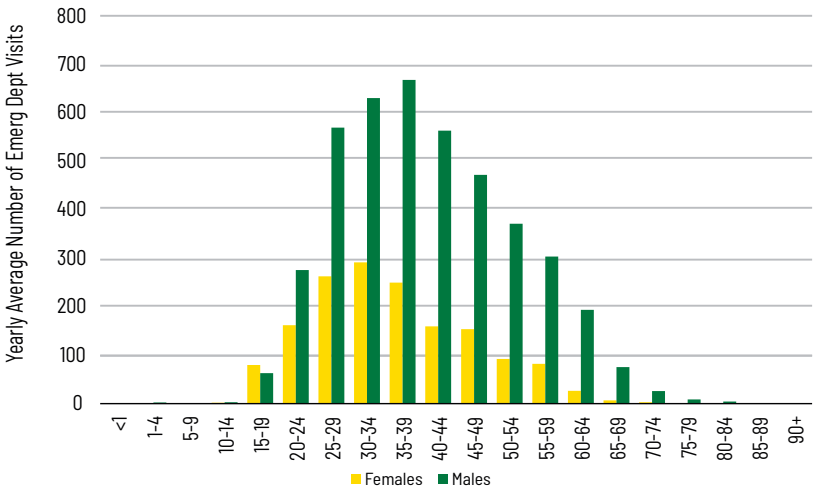
July had the highest number of injury-related visits with 542 visits in 2019, and 602 visits in 2020.

September had the lowest number of visits with 484 injury-related visits in 2019 and 407 injury-related visits in 2020.

Number of Emergency Department Visits by Month, Alberta, 2019-2020



Number of Emergency Department Visits by Age Group and Sex, Alberta, 2019-2020



Seventy-three percent of injury-related emergency department visits from people experiencing houselessness were males, with an average of 4,237 visits each year.

The remaining 27% of injury-related emergency department visits were females, with an average of 1,578 visits each year.

Males between 35 and 39 years of age had the highest number of visits, with an average of 669 each year.

Females between 30 and 34 years of age had the highest number of injury-related emergency department visits, with an average of 292 visits each year.

NOTE: as there is no source that accurately counts the houselessness population, rates can not be calculated.

SELECTION OF CAUSES

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). 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.

This report focuses on the most significant causes of injury-related emergency department visits for those experiencing houselessness. The most significant causes with actionable prevention strategies discussed in this report include: unintentional/undetermined intent of poisonings, violence/injury purposely inflicted, falls and injuries due to environmental conditions.

DEFINITIONS FOR PREVENTABLE LEADING CAUSES

Unintentional / undetermined poisoning include: A poisoning may occur when a substance (drug, medication or biological agent) is taken incorrectly. This includes wrong drug being given/taken, wrong dosage, self-prescribed drug in combination with a prescribed drug, any drug taken in combination with alcohol. According to coding standards, all poisonings are classified as accidental unless there is clear documentation of intentional self-harm or undetermined intent.

Violence includes: injuries inflicted by another with the intent to injure or kill, by any means. Including use of firearms, fight/brawl, sexual assault, cutting / piercing (stabbing), maltreatment / neglect / abandonment, drugs / liquid, being struck with a blunt object, and other/unspecified.

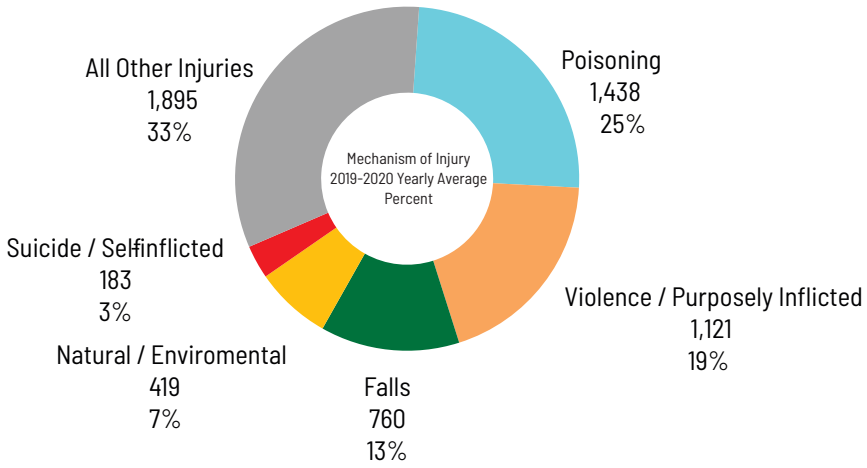
Falls include: ice and snow, slipping / tripping / stumbling, due to collision with, or pushing by another person, while being carried or supported by another person, falls involving wheelchairs and other type of walking devices, from furniture, playground equipment including trampolines, stairs / steps,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

Natural / environmental includes: bites / stings from insects or other nonvenomous arthropods / spiders, contact with venomous plants / animals, contact with hornets / wasps / bees, dog bites, bite by other mammals, lack of food / water, excessive heat due to weather, excessive cold due to weather and other unspecified forces of nature.

Suicide / self-inflicted injuries include: (self-inflicted) poisoning, intentional exposure to gas / vapours, intentional self harm from hanging / strangulation / suffocation, firearms, cutting / piercing, and other (explosive materials, smoke / fire / flames, hot steam / hot objects), intentional self-harm with the use of a blunt object, jumping from a high place, jumping / lying before a moving object, intentional crashing of a motor vehicle, other and unspecified means of self-harm.

Percentage include adverse events, complications

Number and Percent of Emergency Department Visits by Mechanism of Injury, Alberta, 2019-2020



The leading cause of injury-related emergency department visits of individuals experiencing houselessness was unintentional / undetermined poisoning accounting for 25%, with 1,438 visits each year.

The second leading cause of injury-related visits was as a result of violence / injury purposely inflicted which accounted for 19%, with an average of 1,121 visits each year.

Fall-related injuries accounted for 13% of the emergency department visits, with an average of 760 visits each year.

Natural / environmental (exposure to extreme weather, bites / sting from insects, and dog bites) accounted for 7% of the injury-related visits, with an average of 419 each year.

Suicide / self-inflicted harm injuries accounted for 3% of the injury-related emergency department visits, with an average of 183 visits each year.

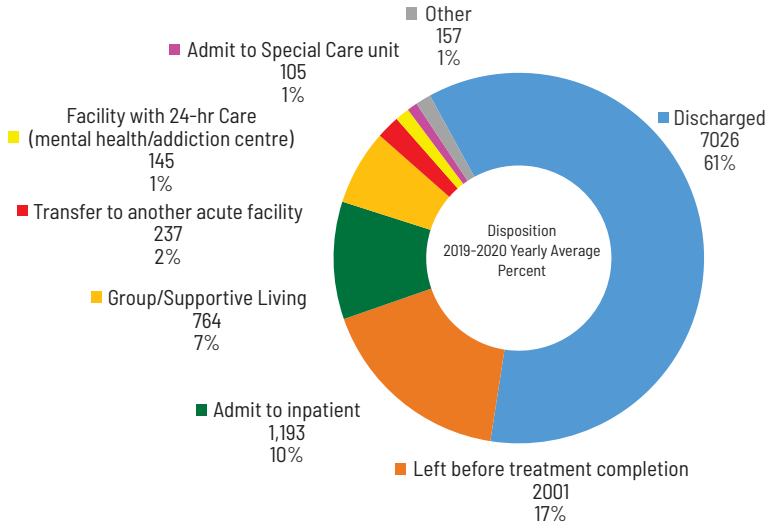
All other injuries accounted for the largest portion of injury-houselessness. Of the 1,895 average yearly visits in the other injuries category,

- 39% were identified as other / unspecified with an average of 743 visits each year.
- 12% were identified as cutting / piercing with an average of 227 visit each year.
- 11% were identified as being struck by / against person / object (not violence-related) with an average of 212 visits each year.

These 3 mechanisms of injury accounted for 69% of the injuries in the other injury category and accounted for 20% of all injury visits.

Percentage include adverse events, complications

Number and Percent of Emergency Department Visits by Disposition, Alberta, 2019-2020



Sixty one percent of people experiencing houselessness who were seen at an emergency department due to an injury were discharged from the department.

Seventeen per cent of the visits left either before being triage, being seen by a physician or having their treatment completed.

Ten per cent were admitted as an inpatient.

Seven per cent were discharged to a group / supportive living facility. These facilities are non-institutional community residential settings that integrate a shared living environment with varying degrees of supportive services (e.g., meal service) and sometimes staff supervision (professional services). These include group homes, retirement residences and seniors' lodges and transitional housing which is a community setting providing food and shelter on a short-term basis, including shelters, hostels and hotels.

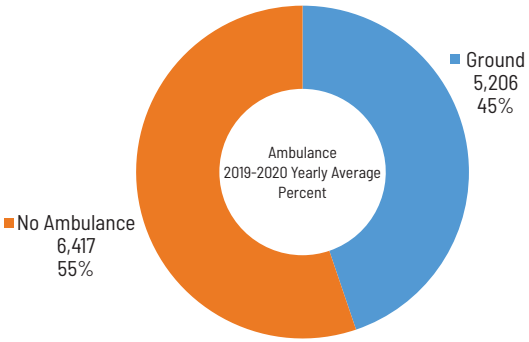
Another 2% of the injury-related emergency department visits from those experiencing houselessness were admitted to another care facility (hospital).

One per cent were transferred to a facility with 24 hour care. This includes: long-term care centres that provide 24-hour nursing care, (e.g., extendicare, personal care homes, nursing homes, health centres, care centres), mental health and addiction centres, residential treatment centres (community-based, not in an acute care facility) that provide 24-hour care, including detox and withdrawal management and hospice / palliative care facilities.

One per cent were admitted to a special care unit.

One per cent other. This includes: transfer to a correctional institute, discharged with supports, transferred to a non-acute care facility, intra-facility transfer to clinic, day surgery, or died in the facility.

Number and Percent of Emergency Department Visits by Ambulance, Alberta, 2019-2020



Fifty five percent of the injury-related emergency department visits (6,417 visits each year) from those experiencing houselessness did not arrive via ambulance.

The remaining 45% of the injury-related emergency department visits from those experiencing houselessness arrived via ambulance (5,206 visits each year).

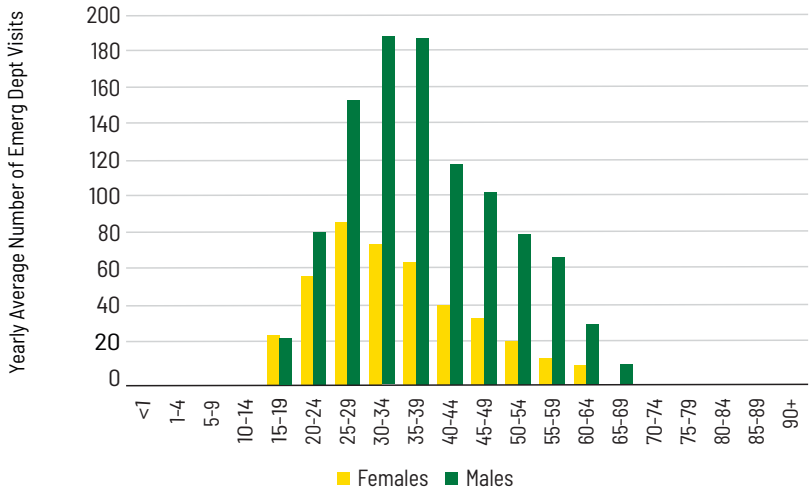
UNINTENTIONAL / UNDETERMINED POISONING

Unintentional / undetermined poisoning is a poisoning that may occur when a substance (drug, medication or biological agent) is taken incorrectly. This includes wrong drug given / taken, wrong dosage, self-prescribed drug take in combination with a prescribed drug, any drug taken in combination with alcohol. According to coding standards, all poisonings are classified as accidental unless there is clear documentation of intentional self-harm or undetermined intent.

Number of Unintentional / undetermined Poisoning-related Emergency Department Visits by Age Group and Sex, Alberta, 2019-2020

Over the period from 2019 through 2020, 25% of the injury-related emergency department visits of people experiencing houselessness was due to an unintentional / undetermined poisoning, accounting for an average of 1,438 visits each year.

Seventy two percent of the unintentional / undetermined poisoning-related visits of those experiencing houselessness were males, with an average of 1,035 visits each year. The remaining 28% were females, with an average of 403 visits each year.



Males, aged 30 to 34 years who experience houselessness had the highest number of visits with an average of 188 visits each year. This was closely followed by males, 35 to 39 years of age with an average of 187 unintentional / undetermined poisoning-related visits each year.

Females, 25 to 29 years old experiencing houselessness had the highest average number of unintentional / undetermined poisoning-related emergency department visits with an average of 83 visits each year.

VIOLENCE / INJURY PURPOSELY INFLICTED

Violence includes: injuries inflicted by another with the intent to injure or kill, by any means. It includes use of firearms, fight / brawl, sexual assault, cutting / piercing (stabbing), maltreatment / neglect/abandonment, drugs / liquid, being struck with a blunt object, drowning / submersion, explosive materials, smoke / fire / flames, steam / hot vapours / hot objects, pushing from a high place, pushed or placing victim before moving object, crashing a motor vehicle, and other / unspecified.

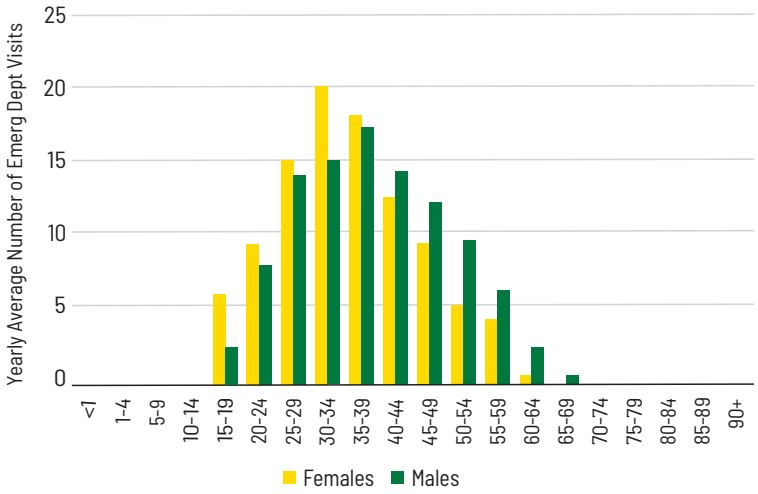
Over the period from 2019 through 2020, there was an average of 1,121 violence-related emergency department visits each year to those experiencing houselessness.

Overall, males experiencing houselessness accounted for 64% of the visits, with an average of 718 visits each year.

Females accounted for the remaining 34% with an average of 403 violence-related visits each year.

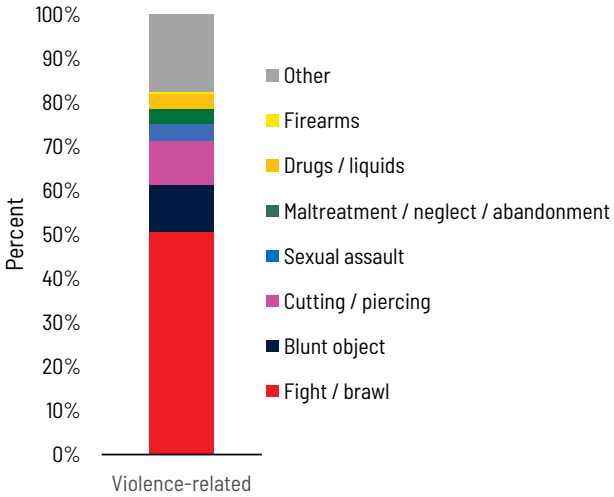
Females from 15 to 39 years of age experiencing houselessness had a higher average number of violence-related visits than houseless men of the same age. From 40 years of age and older, males experiencing houselessness had higher numbers violence-related emergency department visits than females.

Number of Violence-Related Emergency Department Visits by Age Group and Sex, Alberta, 2019-2020



Females 30 to 34 years of age had the highest number of violence-related emergency department visits with an average of 20 visits each year. Males 35 to 39 years of age had the highest number of violence-related emergency department visits with an average of 16 visits each year.

Percent of Violence-related Injuries by Specific Mechanism, Alberta, 2019-2020



Overall, fights / brawls accounted for 51% of the violence-related emergency department visits of those experiencing houselessness, with an average of 226 visits each year.

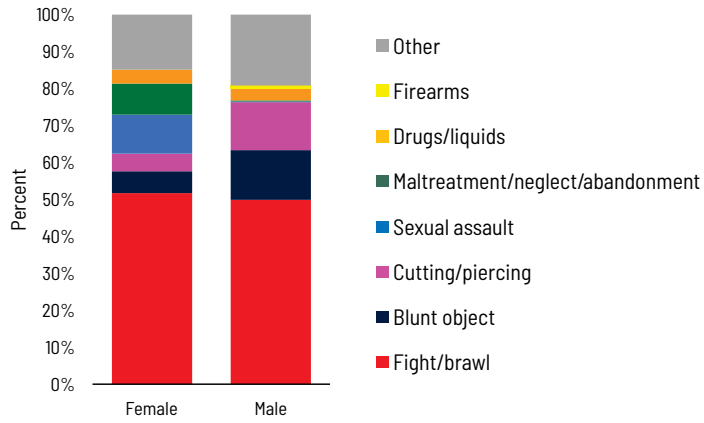
Injuries as a result of being struck with a blunt object accounted for 11% of the violence-related emergency department visits of those experiencing houselessness, with an average of 120 visits each year.

Cutting / piercing (stabbing)-related emergency department visits accounted for another 10%, with an average of 112 visits each year.

Sexual assault, maltreatment / neglect / abandonment, drugs / liquids, and firearm related emergency department visits each accounted for less than 10% of the violence-related emergency department visits.

Other violence-related injuries accounting for 18%, with an average of 198 visits each year.

Percent of Specific Mechanism of Violence-related Injuries by Sex, Alberta, 2019-2020



When we look at the specific violence-related mechanisms by sex:

Fight / brawl-related injuries accounted for 52% of violence-related emergency department visits for females experiencing houselessness, with an average of 208 visits each year. Fights / brawls accounted 50% of the violence-related injuries of males experiencing houselessness, with than an average of 358 visits each year.

Injury-related emergency department visits as a result of being struck by a blunt object accounted for 13% of the violence-related visits by males experiencing houselessness, with an average of 91 visits each year. For females experiencing houselessness, injuries as a result of being struck by an blunt object accounted 6% of violence-related injuries, with an average of 24 visits each year.

Cutting / piercing (stabbing) accounted for 13% of the violence-related injuries to males experiencing houselessness, with an average of 94 emergency department visits each year. Whereas, cutting / piercing (stabbing)-related emergency department visits accounted for 5% of the violence-related injuries to females experiencing houselessness, with an average of 19 visits each year.

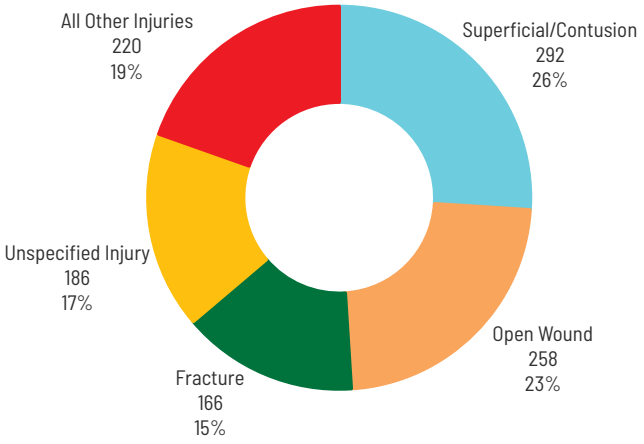
Sexual assault-related emergency department visits accounted for 11% of violence-related emergency department visits for females experiencing houselessness, with 43 visits each year. Whereas males experiencing houselessness accounted for 0% of violence-related emergency department visits.

Maltreatment / neglect / abandonment accounted for 8% of violence-related emergency department visits for females experiencing houselessness, with 34 visits each year and 0% of violence-related emergency department visits for males experiencing houselessness.

Violence-related injuries with the use of drug / liquids accounted for 4% for females experiencing houselessness, with an average of 15 visits each year. For males experiencing houselessness, this accounted for 3%, with an average of 23 visits each year.

Firearm violence-related emergency department visits accounted for 1% of the visits by males experiencing houselessness with an average of 6 firearm-related visits. Whereas for females experiencing houselessness, there were zero firearm-related visits.

Number and Percent Violence-related of Emergency Department Visits by Nature of Injury, Alberta, 2019-2020



Of the annual 760 violence-related emergency department visits of people experiencing houselessness, 26% were diagnosed with a superficial injury or contusion, with an average of 292 visits each year. This would include: scrapes, scratches, bumps and bruises.

Another 23% of the violence-related visits were diagnosed with an open wound with an average of 258 visits each year. This includes cuts.

Another 15% were diagnosed with a fracture after a violence-related incident, with an average of 166 visits each year.

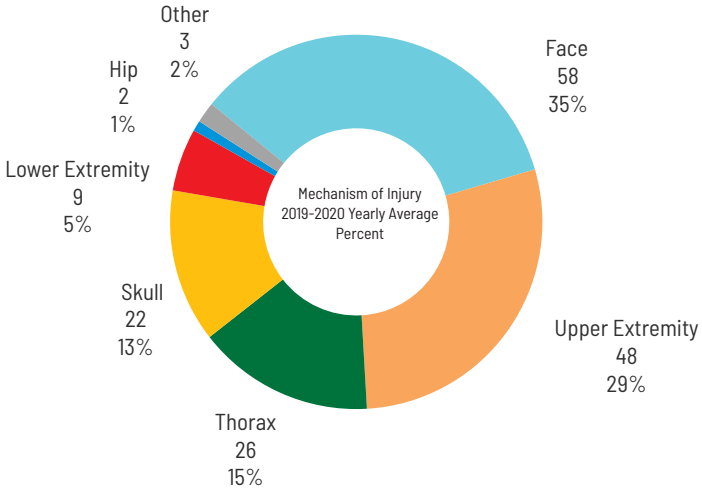
Unspecified injuries accounted for 17% of the violence-related emergency department visits with an average of 186 visits each year. This category is used when there is lack of adequate documentation for a more specific mechanism violence-related injury.

Another 19% of the violence-related injuries were all other injuries with an average of 220 emergency department visits each year. This includes dislocations of joints, amputations, injuries to blood vessels, burns, foreign body, and multiple injuries.

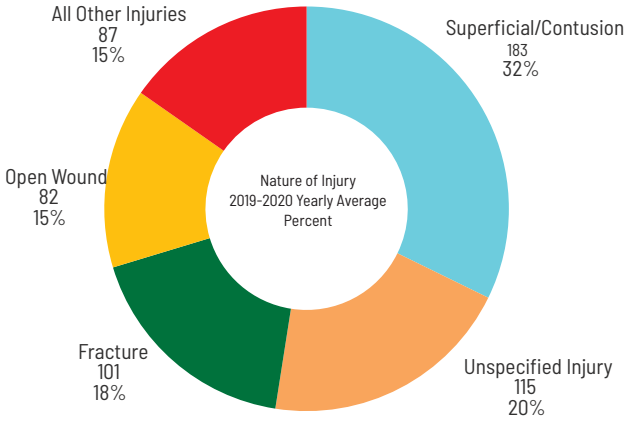
Number and Percent of Violence-related Fractures by Body Region, Alberta, 2019-2020

Of the 166 violence-related emergency department visits each year diagnosed with a fracture:

- 35% involve fracture the face. This includes fractures of the nose, cheek bone, jaw or teeth.
- 29% involved a fracture of the upper extremity. This includes fractures of the shoulder / upper arm, forearm, wrist or hand.
- 15% involved a fracture of the chest / thorax cavity. This includes fracture of the ribs or sternum.
- 13% involved a fracture of the skull. This includes fracture of skull vault, base, orbital floor, or multiple skull / facial bones.
- 5% 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.
- 1% involved a fracture of the hip.
- 2% involved other body regions.



Number and Percent of Fight/brawl-related Emergency Department Visits by Nature of Injury, Alberta, 2019-2020



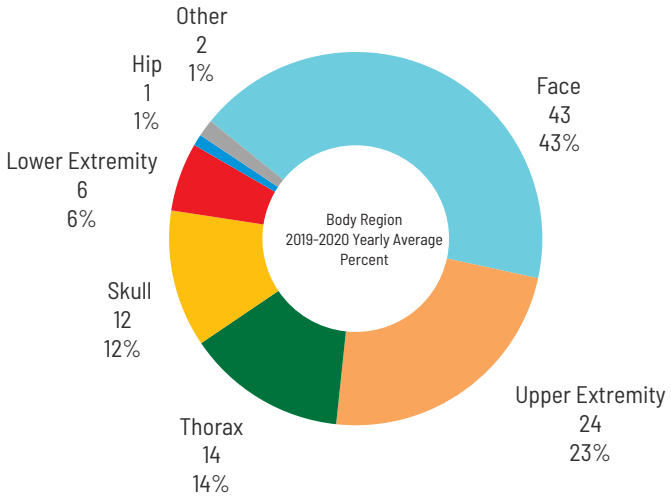
Of the annual 566 fight / brawl-related emergency department visits of people experiencing houselessness:

- 32% were diagnosed with a superficial injury or contusion with an average of 183 visits each year. This would include: scrapes, scratches, bumps and bruises.
- Unspecified injuries accounted for 20% of the fight/brawl-related emergency department visits, with an average of 115 visits each year. This category is used when there is a lack of adequate documentation for a more specific mechanism violence-related injury.
- Another 18% were diagnosed with a fracture after a fight / brawl-related incident, with an average of 101 visits each year.
- Another 15% of the fight / brawl-related visits were diagnosed with an open wound, with an average of 82 visits each year. This includes cuts.
- Another 15% of the fight / brawl-related injuries were all other injuries, with an average of 87 emergency department visits each year. This includes dislocations of joints, amputations, injuries to blood vessels, burns, foreign body, and multiple injuries.

Number and Percent of Fight/brawl-related Fractures by Body Region, Alberta, 2019-2020

Of the 101 fights / brawls-related emergency department visits each year diagnosed with a fracture:

- 43% involve fracture of the face with an average of 43 visits each year. This includes fractures of the nose, cheek bone, jaw or teeth.
- 23% involved a fracture of the upper extremity with an average of 24 visits each year. This includes fractures of the shoulder / upper arm, forearm, wrist or hand.
- 14% involve a fracture of the chest / thorax cavity with an average of 14 visits each year. This includes fracture of the ribs or sternum.
- 12% involve a fracture of the skull with an average of 12 visits each year. This includes fracture of skull vault, base, orbital floor, or multiple skull / facial bones.
- 6% involve the lower extremity with an average of 6 visits each year. 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.
- 1% involve fracture of the hip.
- 2% involve other body regions.



FALLS

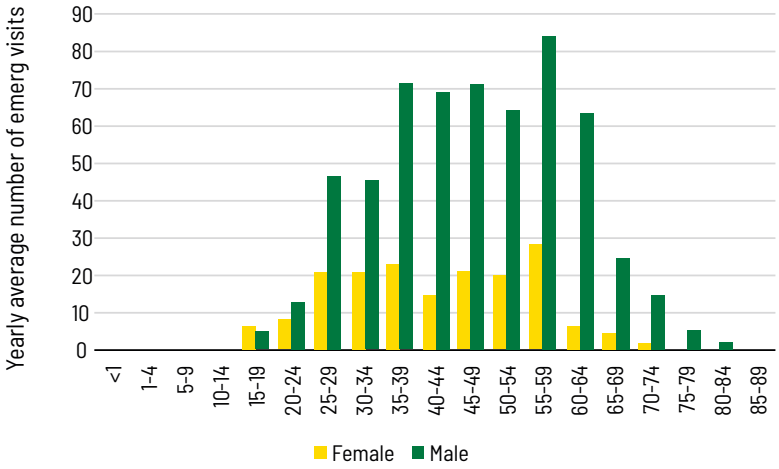
Falls include: falls due to ice and snow, slipping / tripping / stumbling, due to collision with, or pushing by another person, while being carried or supported by another person, falls involving wheelchairs and other type of walking devices, from furniture, playground equipment including trampolines,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

Overall, between 2019 and 2020 there were 760 fall-related emergency department visits of those experiencing houselessness.

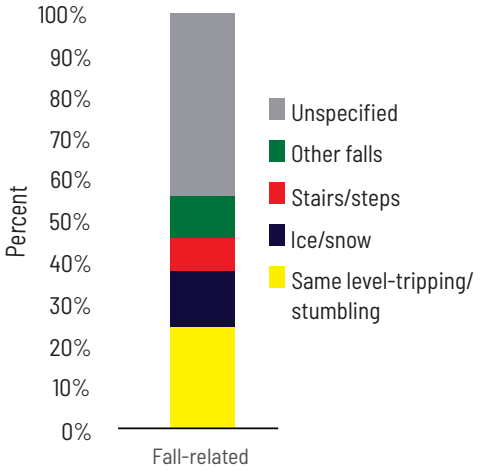
Seventy seven percent of the fall-related emergency department visits of those experiencing houselessness were males, with an average of 585 visits each year. The remaining 23% were females, with an average of 175 visits each year.

Those between 55 to 59 years of age experiencing houselessness had the highest number of fall-related emergency department visits for both females and males with females having an average of 16 fall-related visits each year and males having an average of 14 fall-related visits each year.

Number of Fall-related Emergency Department Visits by Age Group and Sex, Alberta, 2019-2020



Percent of Fall-related Injuries by Specific Mechanism, Alberta, 2019-2020



Falls on the same level due to tripping and stumbling accounted for the largest percent of fall-related emergency department visits of those experiencing houselessness accounting for 25% with an average of 194 visits each year.

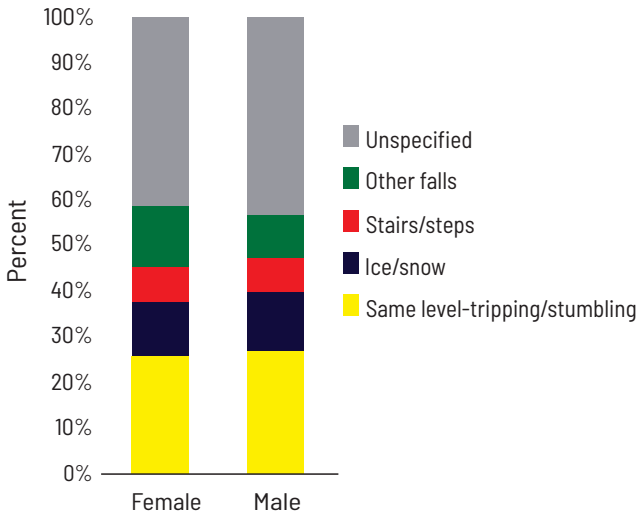
Fall-related injuries involving ice / snow accounted for another 13%, with an average of 100 visits each year.

Fall-related injuries on stairs / steps accounted for 8%, with an average of 61 visits each year.

Fall-related injuries as a result of other causes of falls accounted for 11%, with an average of 82 visits each year. This would includes falls from a ladder / scaffolding, building structure, fall from one level to another, falls from furniture and playground equipment.

The largest category was fall-related injuries due to other unspecified mechanisms which accounted for 43% of the visits, with an average of 325 visits each year. This category includes falls while being carried or supported by another person, falls from wheelchairs and other types of walking devices, fall on same level (in or from bathtub / shower stall / toilet / unspecifed fall on same level). Also includes unspecified fall in which there was a lack of documentation to identify a more specific mechanism.

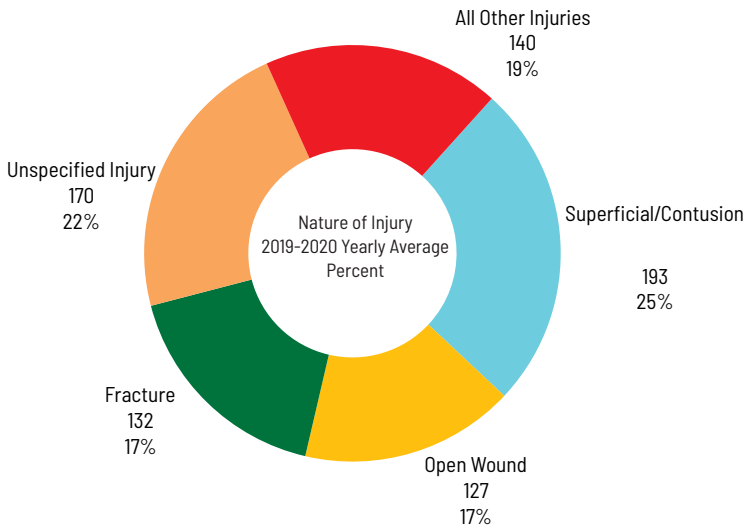
Percent of Specific Mechanism of Fall-related Injuries by Sex, Alberta, 2019-2020



Examining specific fall-related mechanisms by sex:

- Falling from a trip / stumble accounted for 25% of fall-related emergency department visits for females experiencing houselessness with an average of 44 visits each year. Falls from tripping / stumbling accounted 26% of the fall-related injuries of males experiencing houselessness with an average of 150 visits each year.
- Injury emergency department visits as a result of a fall from ice / snow accounted for 13% for both males and females experiencing houselessness. Females had an average of 24 visits each year and males had an average of 76 ice / snow-related fall emergency department visits each year.
- Falling from stairs / steps accounted for 8% of the fall-related injuries to males experiencing houselessness with an average of 49 emergency department visits each year. Whereas for females experiencing houslessness, falling from stair/step accounted for 7% of emergency department visits, with an average of 12 visits each year.
- Fall-related injuries as a result of other mechansims / causes accounted for 10% of emergency department visits for males experiencing houselessness and 13% for females. Males had an average of 59 visits each year and females had an average of 22 visits each year. This would includes falls from a ladder / scaffolding, building structure, fall from one level to another, falls from furniture and playground equipment.
- The largest category was fall-related injuries due other unspecified mechanisms which accounted for 43% of the visits of males experiencing houselessness, with an average of 252 visits each year. For females experiencing houselessness, this category accounted for 42% of fall-related emergency department visits with an average of 74 visits each year. This category includes falls while being carried or supported by another person, falls from wheelchairs and other types of walking devices, fall from on same level (in or from bathtub / shower stall / toilet / unspecifed fall on same level). Also includes unspecified fall in which there was a lack of documentation to identify a more specific mechanism.

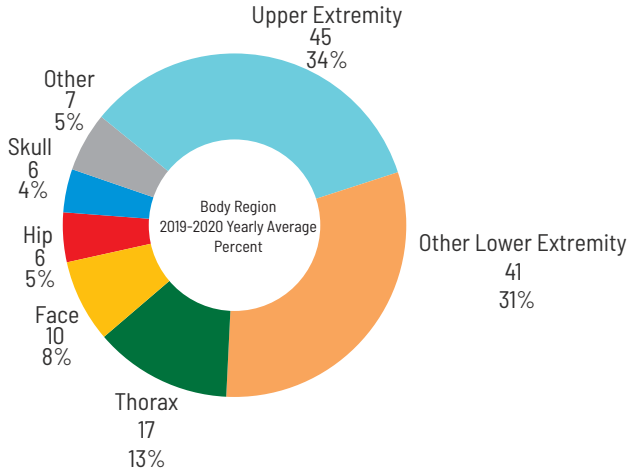
Number and Percent of Fall-related Emergency Department Visits by Nature of Injury, Alberta, 2019-2020



Of the 760 fall-related emergency department visits of people experiencing houselessness

- 25% were diagnosed with a superficial injury or contusion with an average of 193 visits each year. This would include: scrapes, scratches, bumps and bruises.
- 17% of the fall-related visits were diagnosed with an open wound with an average of 127 visits each year. This includes cuts.
- 17% were diagnosed with a fracture after a fall-related incident with an average of 132 visits each year.
- 22% of the fall-related emergency department visits were unspecified injury often described as head injury unspecified.
- 19% of the fall-related emergency department visits were diagnosed with dislocation, multiple injuries, and sprains / strains.

Number and Percent of Fall-related Emergency Department Visits by Nature of Injury, Alberta, 2019-2020



Of the 132 visits each year diagnosed with a fracture:

- 34% involved fractures of the upper extremity with an average of 41 visits each year. This would include: shoulder / upper arm, forearm, wrist and hand.
- 31% involved a fracture of the lower extremity with an average of 41 visits each year. This would include: shaft or lower end of femur (excludes fractured hip), multiple leg fractures, lower leg including ankle or foot.
- 13% involve fracture of the thorax / chest including ribs or sternum with an average of 17 visits each year.
- 8% involve fractures of the face with an average of 10 visits each year. This includes fractures of the nose, cheek bone, jaw or teeth.
- 5% involve fracture of the hip with an average of 6 visits each year.
- 4% involve a fracture of the skull with an average of 6 visits each year. This includes fractures of the vault, base, orbital floor, multiple skull / facial bones.
- 5% involve other body regions with an average of 7 visits each year.

NATURAL / ENVIRONMENTAL

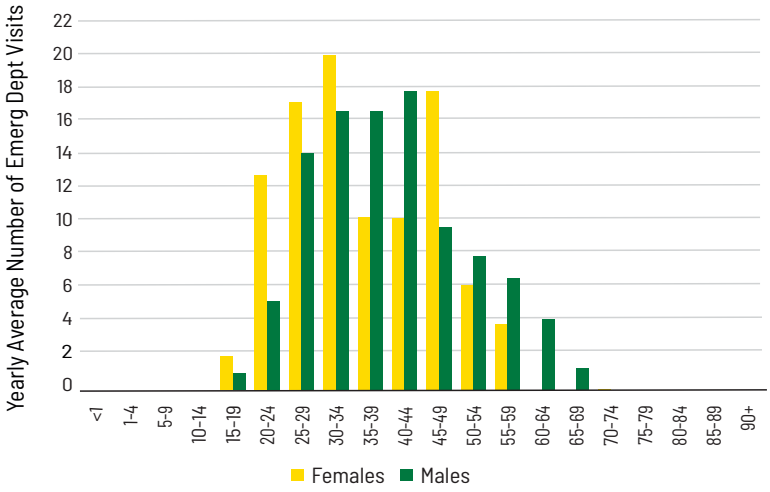
Natural / environmental includes: bites / stings from insects or other non-venomous arthropods / spiders, contact with venomous plants / animals, contact with hornets / wasps/bees, dog bites, bite by other mammals, lack of food / water, excessive heat due to weather, excessive cold due to weather and other unspecified forces of nature.

Over the period from 2019 through 2020, there was an average of 419 natural-related emergency department visits each year to those experiencing houselessness.

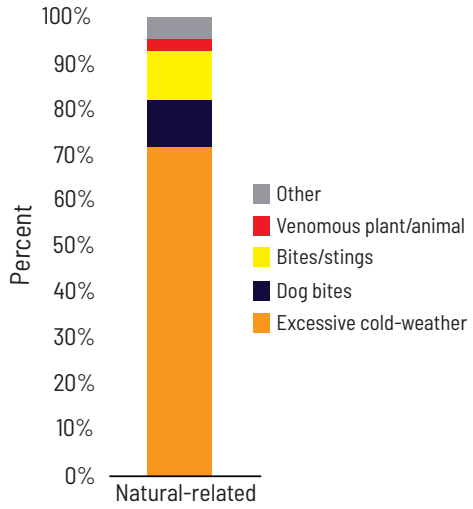
Females 30 to 34 years old experiencing houselessness had the highest number of natural-related emergency department visits, with an average of 20 each year.

Males 40 to 44 years old experiencing houselessness had the highest number of natural-related emergency department visits, with an average of 18 each year.

Number of Natural-related Injury Emergency Department Visits by Age Group and Sex, Alberta, 2019-2020



Percent of Natural-related Injuries by Specific Mechanism, Alberta, 2019-2020



Overall, exposure to cold weather accounted for 73% of the natural-related emergency department visits of those experiencing houselessness, with an average of 307 visits each year.

This was followed by dog bites, accounting for 11% of the natural-related emergency department visits, with an average of 44 visits each year.

Insect and bugs bites or stings accounted for another 9% of natural-related injury visits, with an average of 39 visits each year.

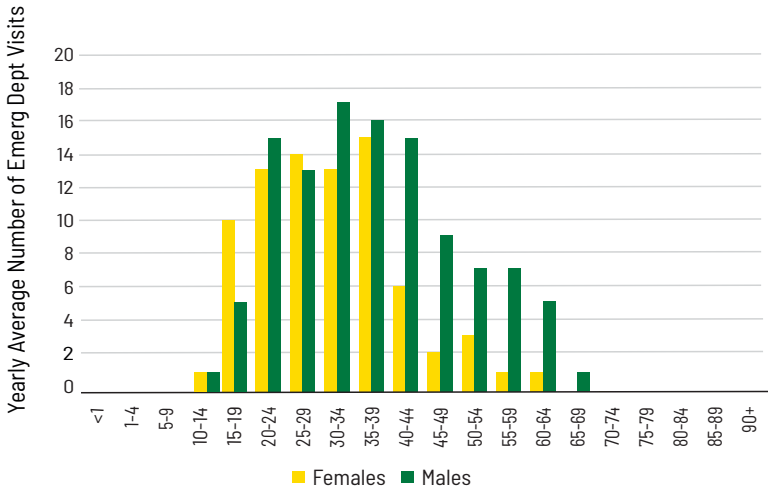
Emergency department visits as a result of contact with a venomous plant / animal accounted for 2% of all natural-related visits, with an average of 10 visits each year.

Other natural-related injury emergency department of visits of people experiencing houselessness accounted for 5% with an average of 20 visits each year. This includes exposure to excessive heat due to weather or man made, exposure to high / low air pressure and changes, victim of lightning, earthquake, tsunami, snow / ice storm, hurricane / tropical storm, tornado or other specified or unspecified storm.

SUICIDE / SELF-INFLICTED

Suicide / self-inflicted injuries include: (self-inflicted) poisoning, intentional exposure to gas / vapours, intentional self harm from hanging / strangulation / suffocation, firearms, cutting / piercing, and other (explosive materials, smoke / fire / flames, hot steam / hot objects, intentional self-harm with the use of a blunt object, jumping from a high place, jumping / lying before a moving object, intentional crashing of a motor vehicle, other and unspecified means of self-harm).

Number of Suicide / self-Inflicted Injury Emergency Department Visits by Age Group and Sex, Alberta, 2019-2020



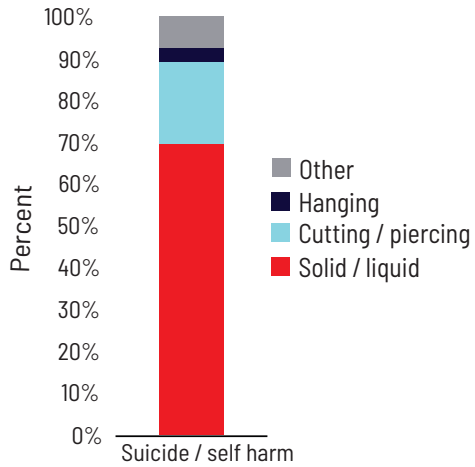
Over the period from 2019 through 2020, on average there was an average of 183 suicide / self-inflicted injury related emergency department visits to those experiencing houselessness.

Suicide / self-inflicted injuries accounted for 3% of all injury-related emergency department visits of those experiencing houselessness.

Females 35 to 39 years old experiencing houselessness had the highest number of suicide / self-inflicted injury related emergency department, with an average of 15 visits each year.

Males 30 to 34 years old experiencing houselessness had the highest number of suicide / self-inflicted injury related emergency department visits, with an average of 17 visits each year.

Percent of Suicide / self-inflicted Injury Emergency Department Visits by Specific Mechanism, Alberta, 2019-2020



The majority of suicide / self-inflicted injury related emergency department visits of those experiencing houselessness was due to intentional poisoning by a solid or liquid accounting for 69%, with an average of 126 visits each year.

Another 20% of the suicide / self-inflicted injuries involved cutting or piercing, with an average of 37 visits each year.

Another 4% of the suicide / self-inflicted injuries were due to hanging, strangulation, or suffocation, accounting for 8 visits each year.

Other methods of self-inflicted injuries accounted for 7%, with an average of 7 visits each year. This includes: explosive materials, smoke / fire / flames, hot steam / hot objects, intentional self-harm with the use of a blunt object, jumping from a high place, jumping / lying before a moving object, intentional crashing of a motor vehicle, other and unspecified means of self-harm.

APPENDIX I

UNINTENTIONAL FALLS												
same level from slipping, tripping and stumbling	W01											
same level due to collision with or pushing by another person	W03											
Stairs,steps	W10											
Ladder, scaffolding	W11	W12										
Building, structure	W13											
One level to another	W14	W15	W16	W17								
Other, unspecified	W04	W05.00	W05.01	W05.02	W05.03	W05.04	W05.08	W05.09	W18	W19		
Ice, snow	W00											
Playground Equipment	W09.01	W09.02	W09.03	W09.04	W09.05	W09.08	W09.09					
Furniture	W06	W07	W08									
OPERATIONS OF WAR/LEGAL INTERVENTION												
War	Y36.0	Y36.1	Y36.2	Y36.3	Y36.4	Y36.5	Y36.6	Y36.7	Y36.8	Y36.9		
Legal	Y35.0	Y35.1	Y35.2	Y35.3	Y35.4	Y35.5	Y35.6	Y35.7				
UNINTENTIONAL POISONING												
Unintent Poisoning	X40	X41	X42	X43	X44	X45	X46	X47	X48	X49		
VIOLENCE AND INJURY PURPOSELY INFLICTED												
Firearms	X93	X94	X95.00	X95.01	X95.08	X95.09						
Fight/Brawl	Y04											
Sexual Assault	Y05											
Cutting/Piercing	X99											
Maltreatment	Y07.0	Y07.1	Y07.2	Y07.3	Y07.8	Y07.9						
Drugs/Liquids	X85	X86	X87	X88	X89	X90						
Other	X91	X92	X96	X97	X98	Y01	Y02	Y03	Y08	Y09		
Neglect/ Abandoment	Y06.0	Y06.1	Y06.2	Y06.8	Y06.9							
Blunt Object	Y00											
OTHER/UNSPECIFIED												
Other/Unspec	W41	W42	W43	W49	X58	X59.0	X59.1	X59.9				
NATURAL AND ENVIRONMENTAL FACTORS												
Bites/Stings	W53	W55	W56	W57	W58	W59						
Venomous Plant/Animal	X20	X21	X22	X23	X24	X25	X26	X27	X28	X29		
Dog Bites	W54											
Lack of Food/Water	X53	X54	X57									
Excessive Heat-weather	X30											
Excessive Cold-weather	X31											
Other CIHI included	W64	W92	W93	W94	W99	X33	X34.0	X34.1	X34.8	X34.9	X35	X36
	X37.00	X37.01	X37.02	X37.08	X37.09	X38	X39	X52				
Other CIHI excluded	X51											

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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