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An evaluation of psychoactive substances bringing youth to the emergency department: Focus on alcohol

CPAC – Alcohol Policy Webinar Series

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ED consultations in Sherbrooke (2018)

- All alcohol-related visits for 12 to 24 years of age;
- Period ranging from January 1st 2012 to January 1st 2017;
- All alcohol-related consultations were analyzed, including:
 - acute alcohol intoxication,
 - alcohol-related injury,
 - alcohol-related violence,
 - alcohol-related deliberate self-harm;
- Alcohol use was verified and confirmed by the patient, a third party or a positive BAC.
- Preventive measures;
 - ✓ Health services initiatives
 - ✓ Information and Education
 - ✓ Community Actions
- Legislative changes
 - ✓ Amendment to Quebec Bill 170
 - ✓ Amendment to the Food and Drug Regulations to restrict the amount of alcohol in single-serve highly sweetened alcoholic beverages



Project Scope



- Assess what psychoactive substances are bringing young people to EDs with the aim of documenting both the magnitude of the problem and the severity of these cases across Canadian communities.
- Describing alcohol-, cannabis- or opioid-related ED consultations among adolescents and young adults, including clinical presentation, clinical and biological characteristics upon admission, substance use context, co-exposure to other substances and patient management.
- Determining priorities about alcohol, cannabis and opioid prevention programs within the local community.

Methodology

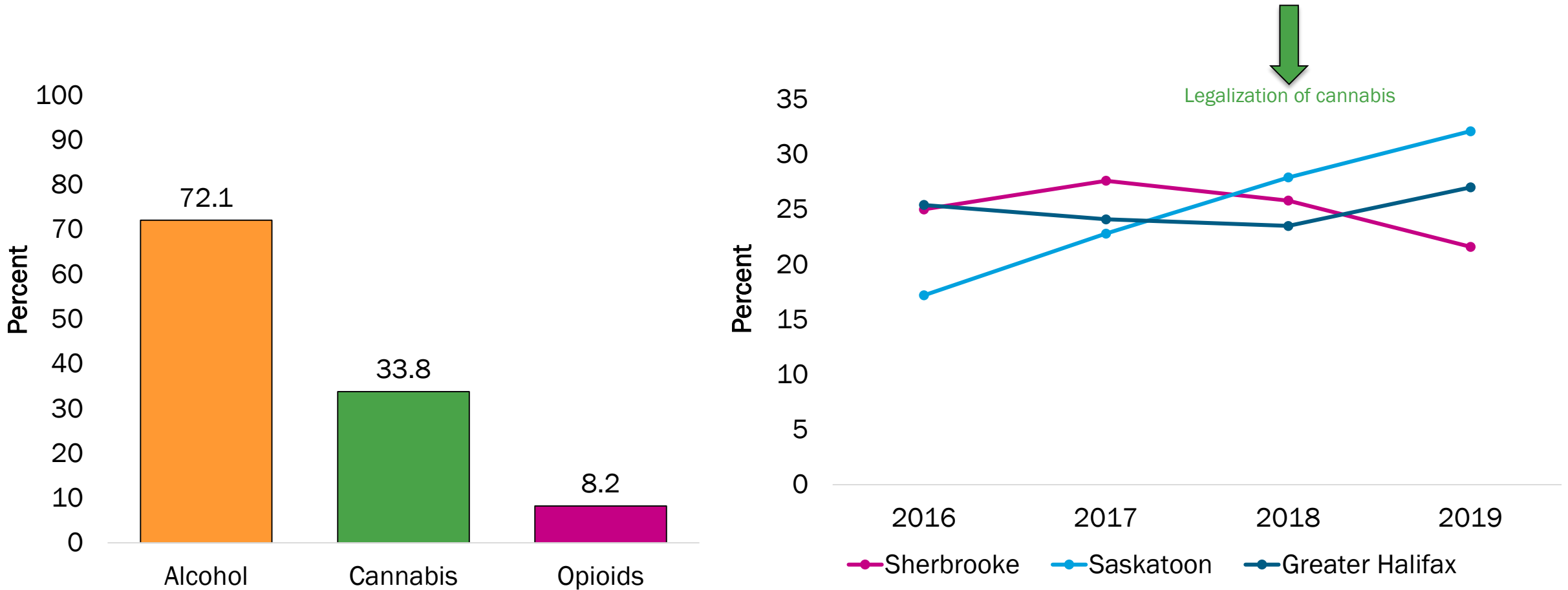


- Collaborated with a group of clinicians from:
 - Saskatoon (Royal University Hospital Emergency Room)
 - Sherbrooke (CHUS – Fleurimont; CHUS - Hôtel-Dieu)
 - Halifax (Queen Elizabeth II Health Sciences Centre; Cobequid Community Health Centre; Dartmouth General Hospital; IWK Health Centre), who:
- Accessed and compiled retrospective data of all ED visits involving alcohol, cannabis or opioids by adolescents (12- 17 years of age) and young adults (18–24 years of age) between January 1, 2016, and December 31, 2019.
- Filled out a case report form for each case which included:
 - Demographic,
 - Contextual,
 - Medical and clinical information

Case Definition

- Criteria for inclusion:
 - **Alcohol-related visits:**
 - ICD-10 codes for acute and chronic causes 100% attributable to alcohol, whether it was the “chief complaint” or comorbidity.
 - ICD-10 codes for assault, falls, MVC and total alcohol-related injury visits **AND** a history of drinking in the 24 hours before the visit **OR** BAC >0.
 - **Cannabis-related visits:**
 - ICD-10 codes for poisoning attributable to cannabis or for mental or behavioural disorders due to the use of cannabinoids, whether it was “chief complaint” or comorbidity **OR** urine toxicology screen positive for THC.
 - **Opioid-related visits:**
 - ICD-10 codes for poisoning attributable to narcotics or for mental and behavioural disorders due to opioids, whether it was the “chief complaint” or comorbidity **OR** urine toxicology screen positive for opioids.

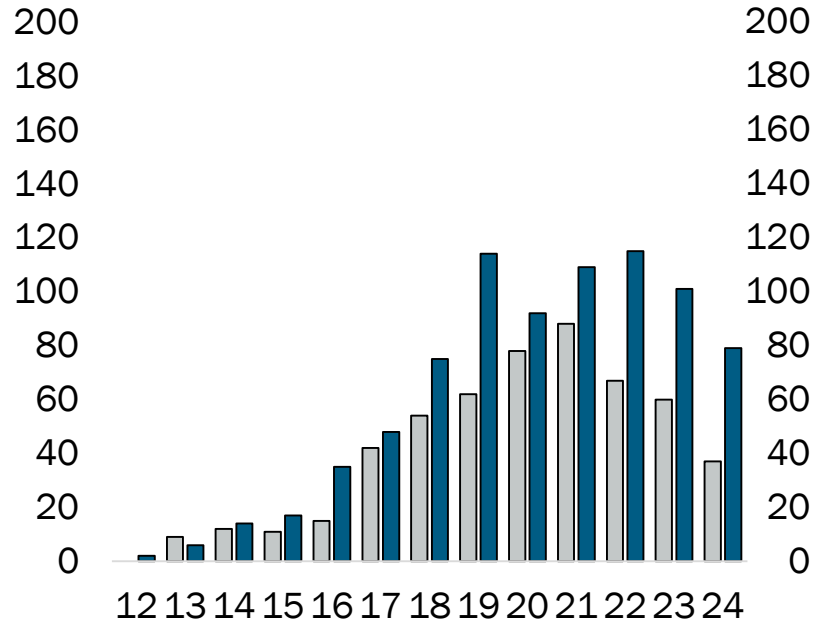
Results: All in-scope ED consultations



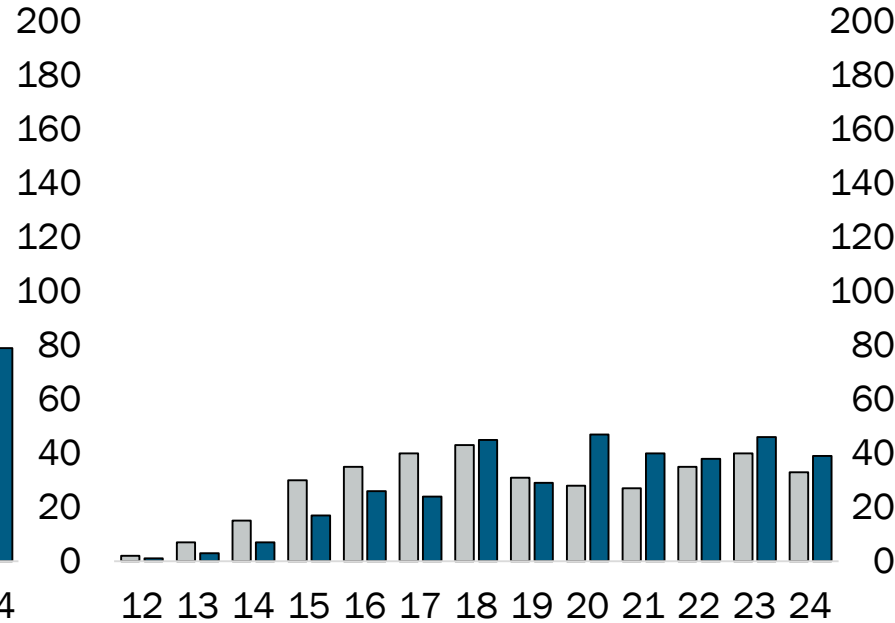
$n = 4635$; In-scope substances may have been used alone or in combination with others.

Results: Age distribution by sex

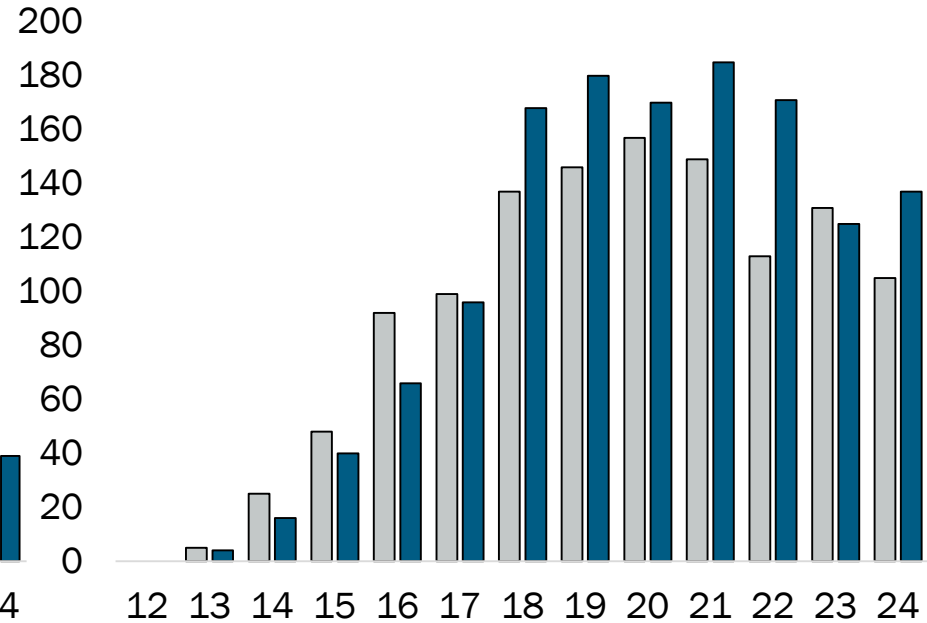
Sherbrooke
(2 EDs)



Saskatoon
(1 ED)



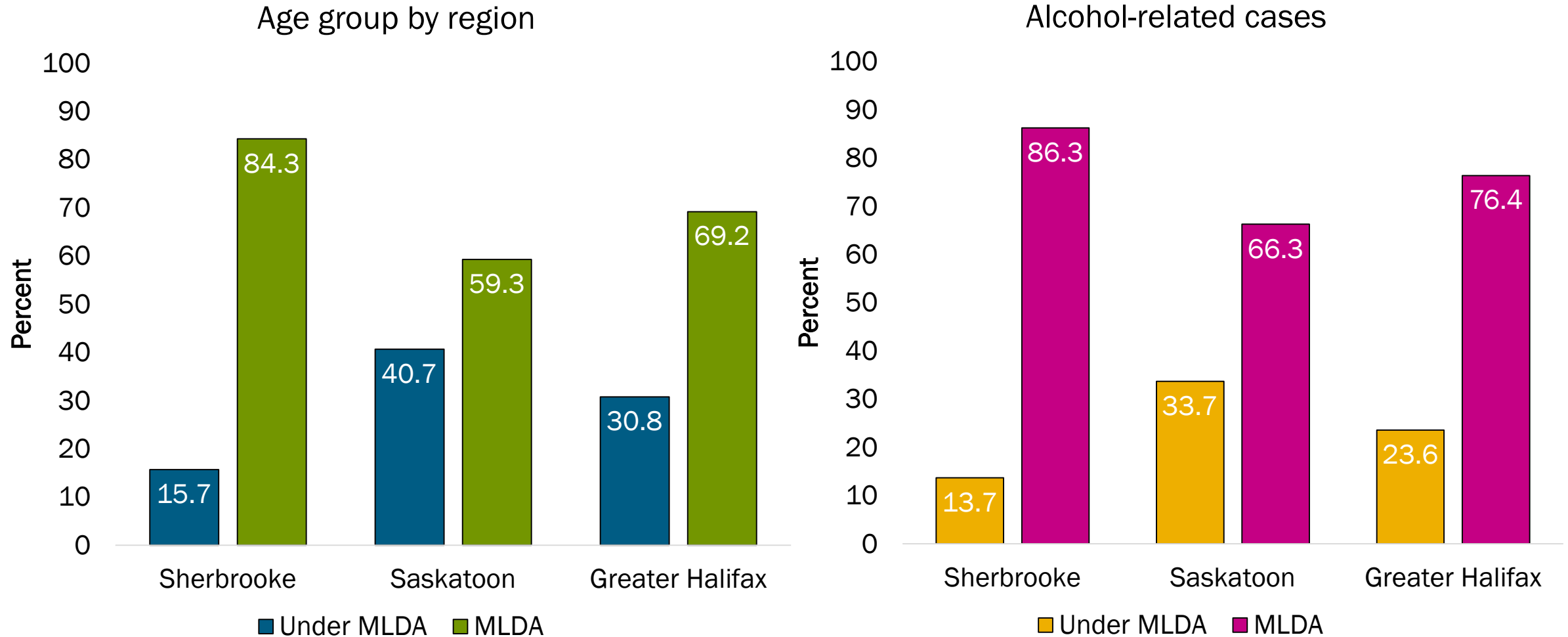
Greater Halifax
(4 EDs)



□ Female ■ Male

Median age for males: 20; Median age for females: 21

Results: Age groups and sex

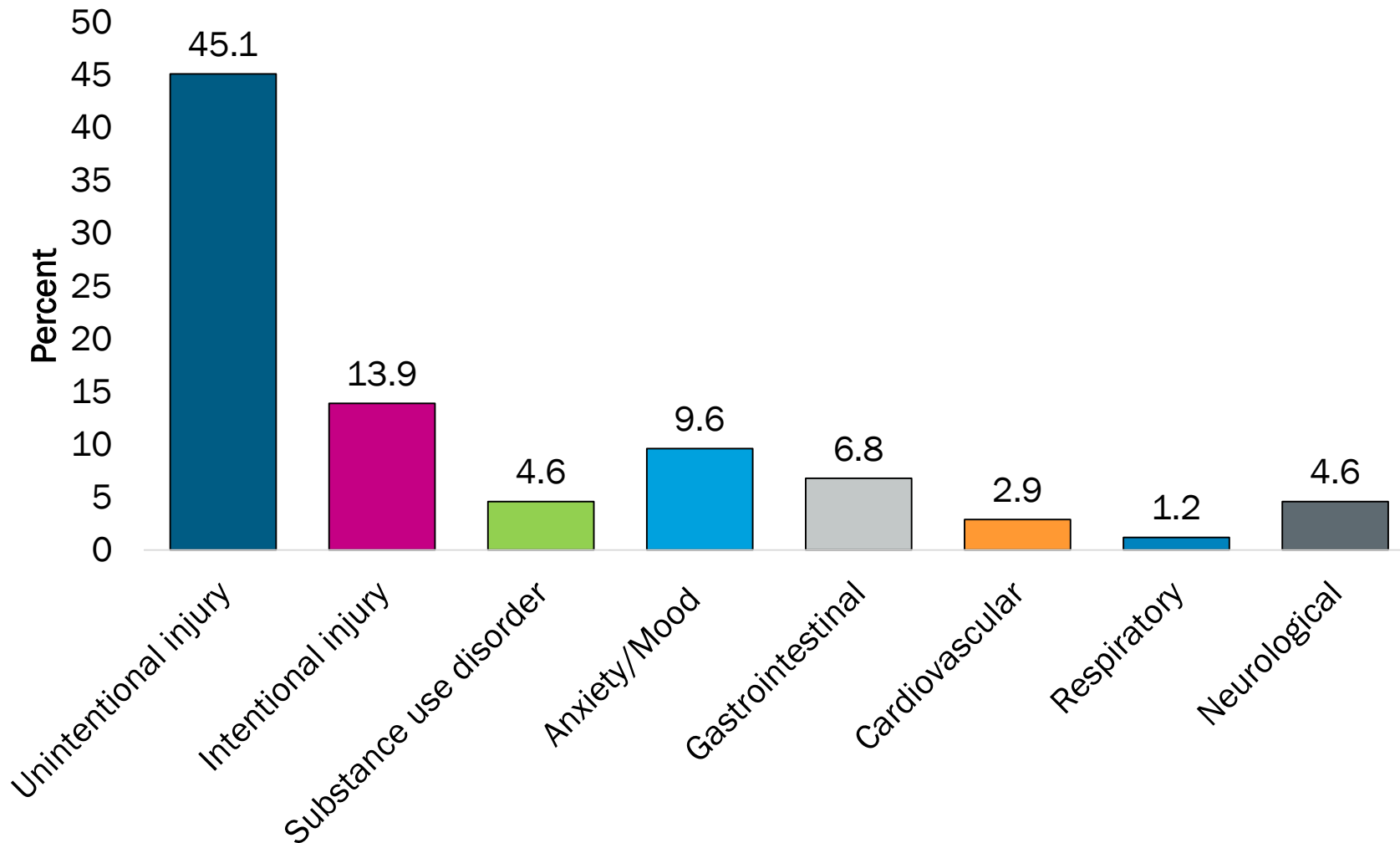


Results: Week of presentation

- Peak periods of ED consultations varied between regions and between those under MLDA and those of MLDA.
 - Adolescents in Sherbrooke presented in late June (often when prom is held), whereas young adults presented most often in late March/early April (end of winter term), or during October (mid-term season).
 - Adolescent visits in Saskatoon were highly variable, but the most common week for visits among young adults was in mid-July.
 - Adolescents in the Greater Halifax area tended to visit the ED in late September, whereas young adults tended to visit in late October.



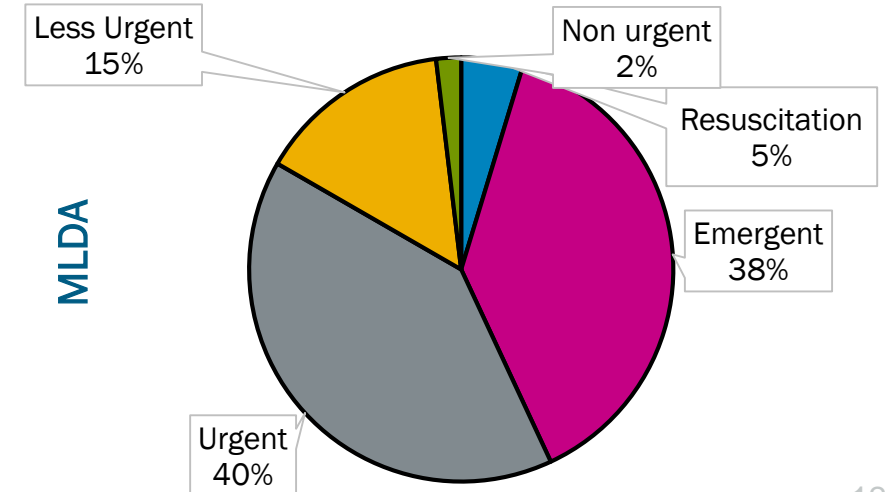
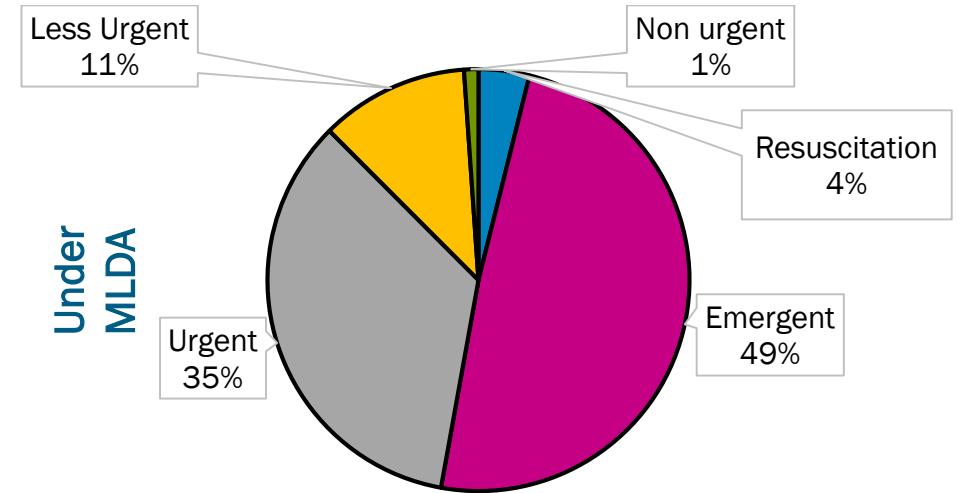
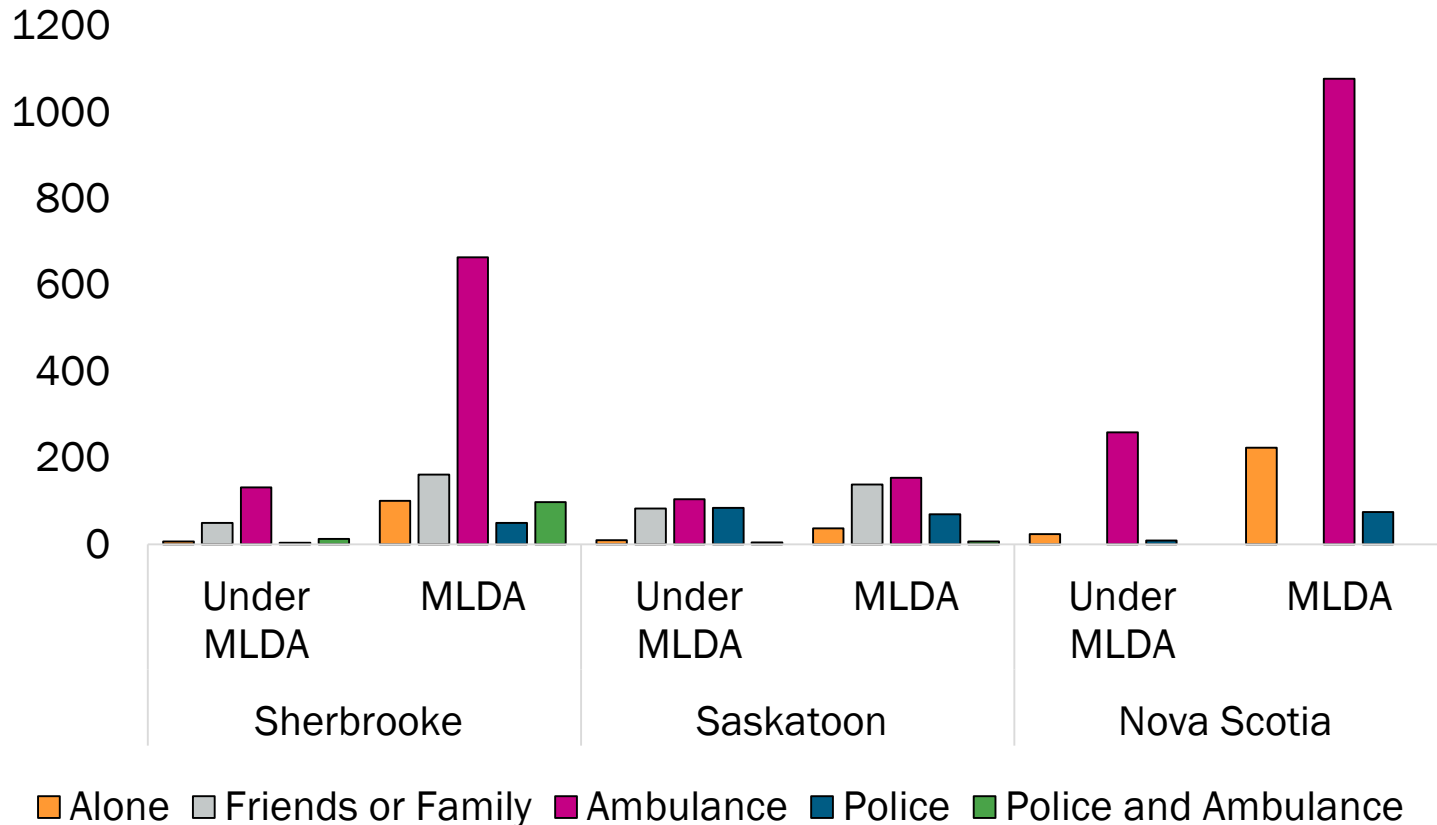
Reason(s) for hospital visit



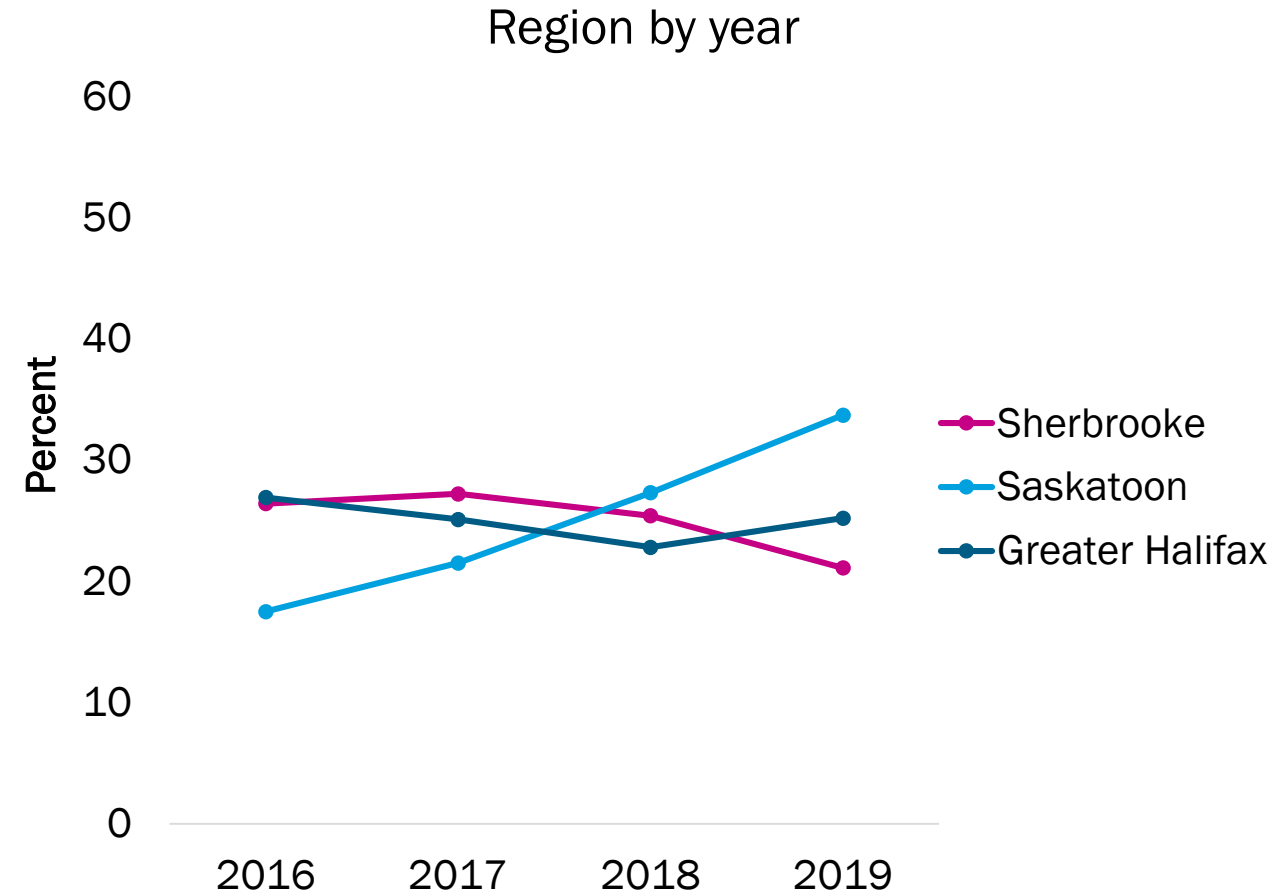
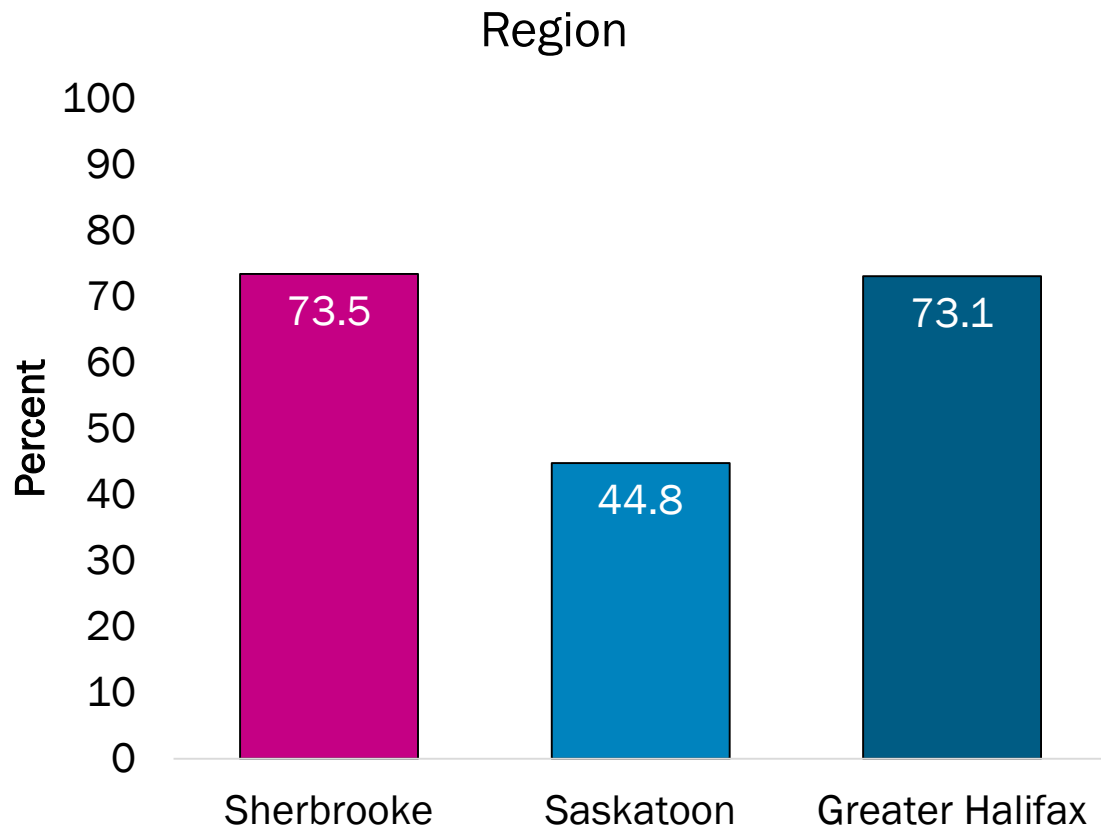
- Unintentional injuries include falls, motor-vehicle related incidents and violence/assault.
- Intentional injuries include self harm behaviours of any nature, suicide ideation, and suicide attempts.

Results: Mode of transportation and Triage Score

Mode of presentation, by age group and region



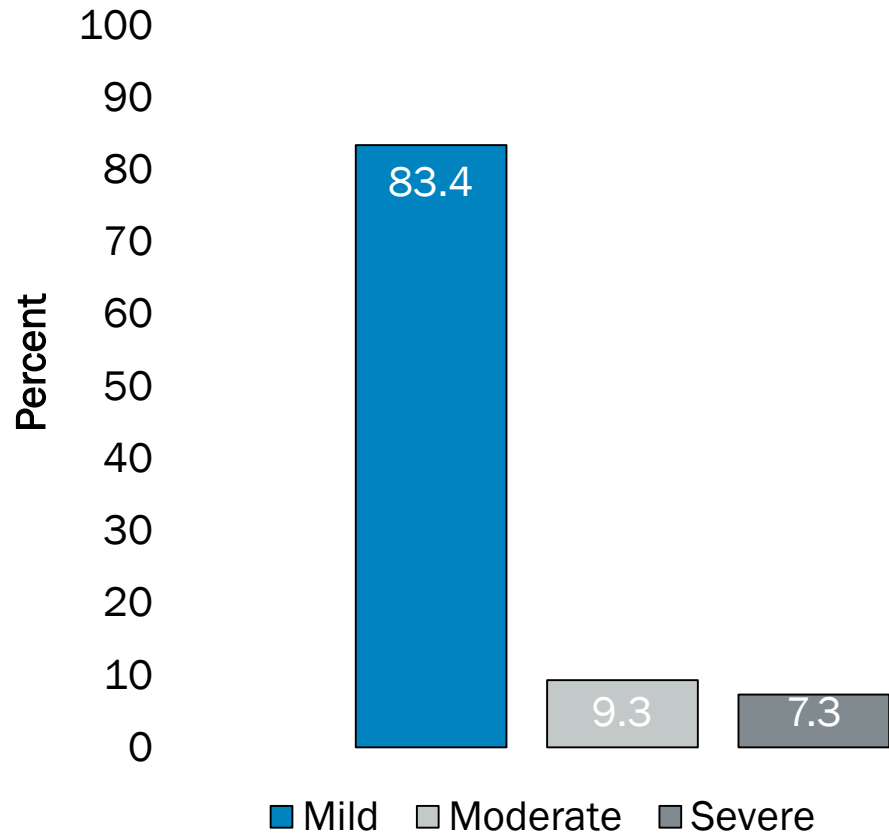
Results: Alcohol-related cases, by region and year



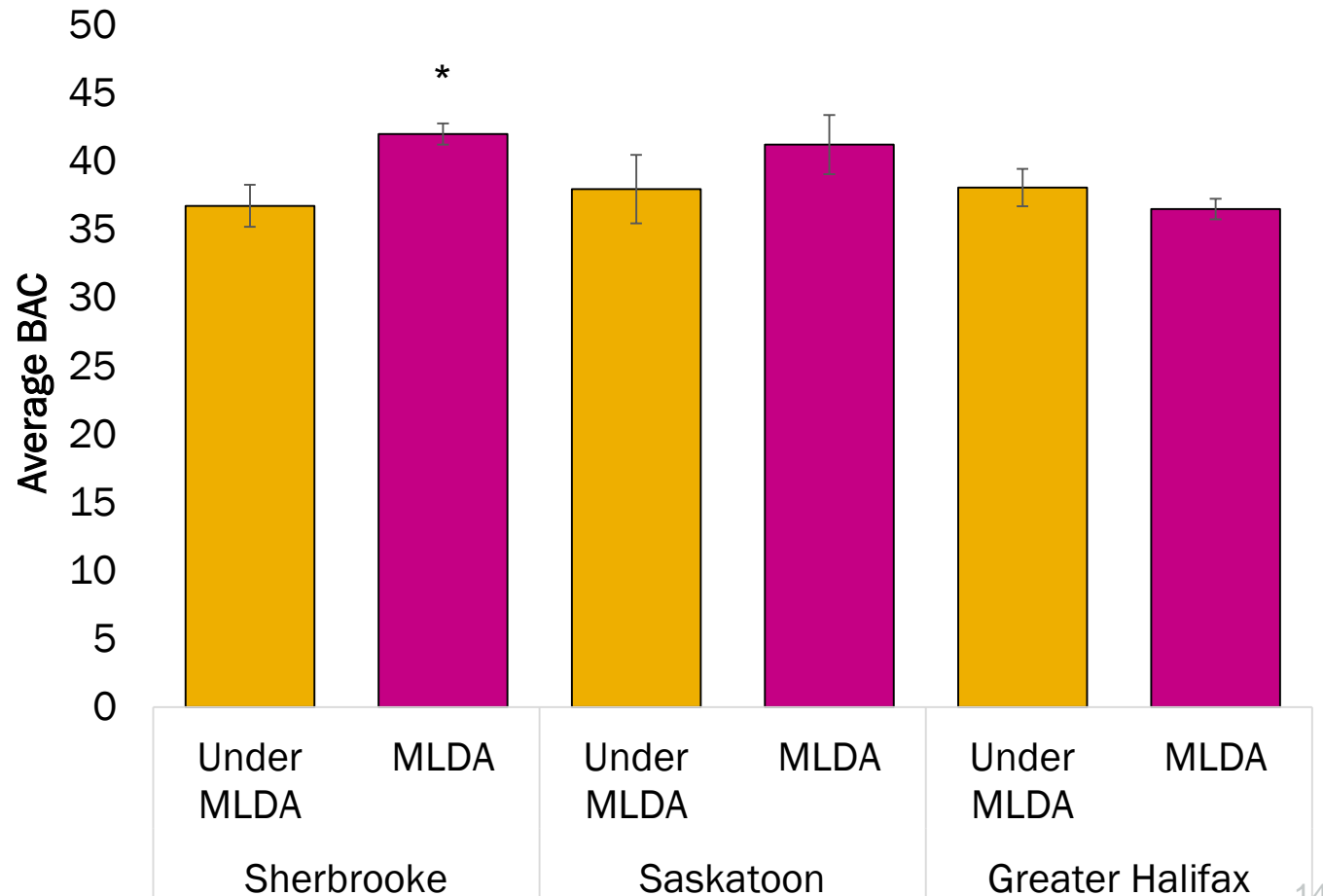
- 33% of all alcohol-related cases presenting to the ED had at least one known comorbidity.
- Between 13.6% (QC) and 18.4% (SK) had visited the ED in the past for a SU emergency.

Results: Glasgow coma scale and BAC

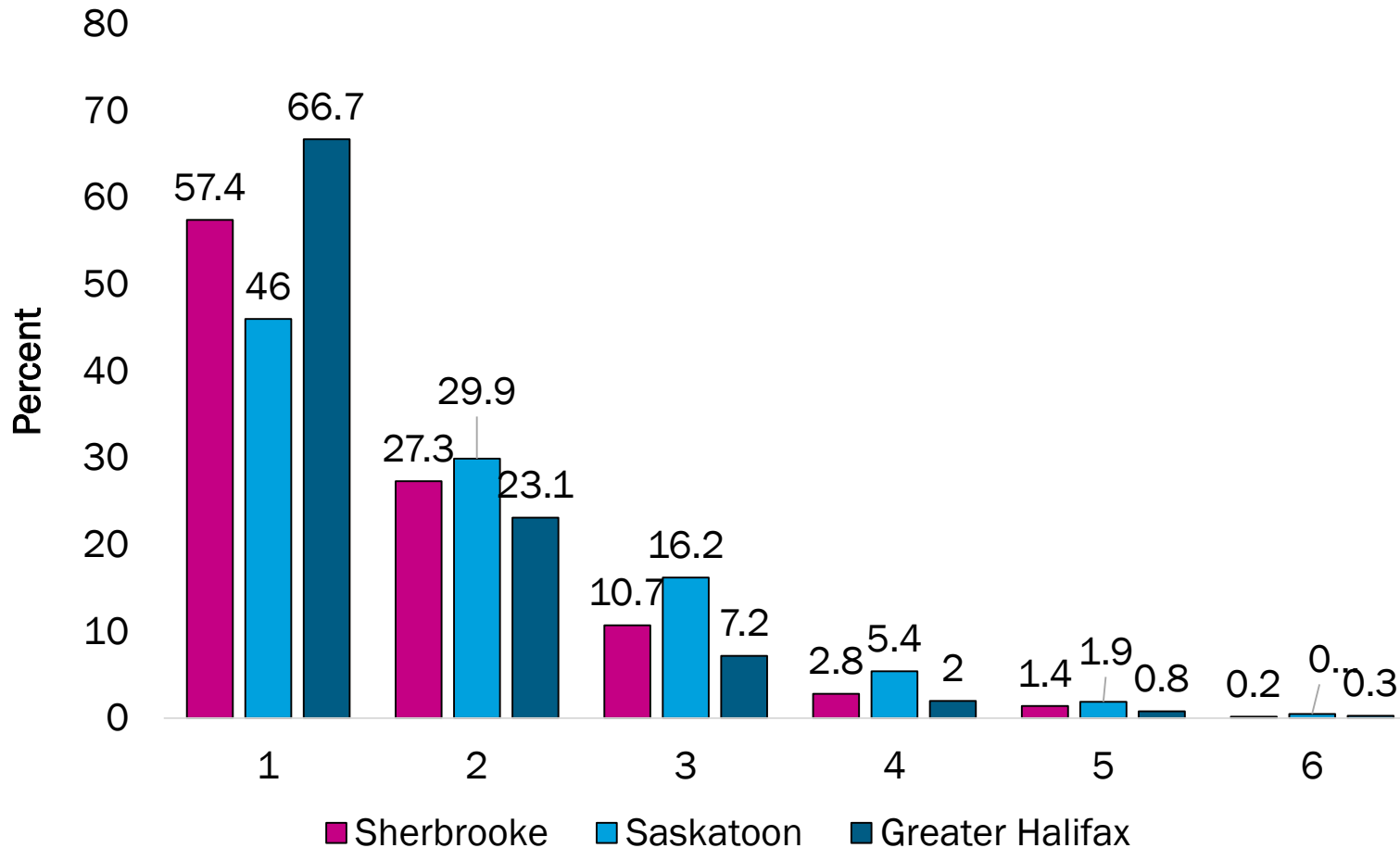
Initial GCS, Alcohol-related cases



Highest Blood Alcohol Concentration



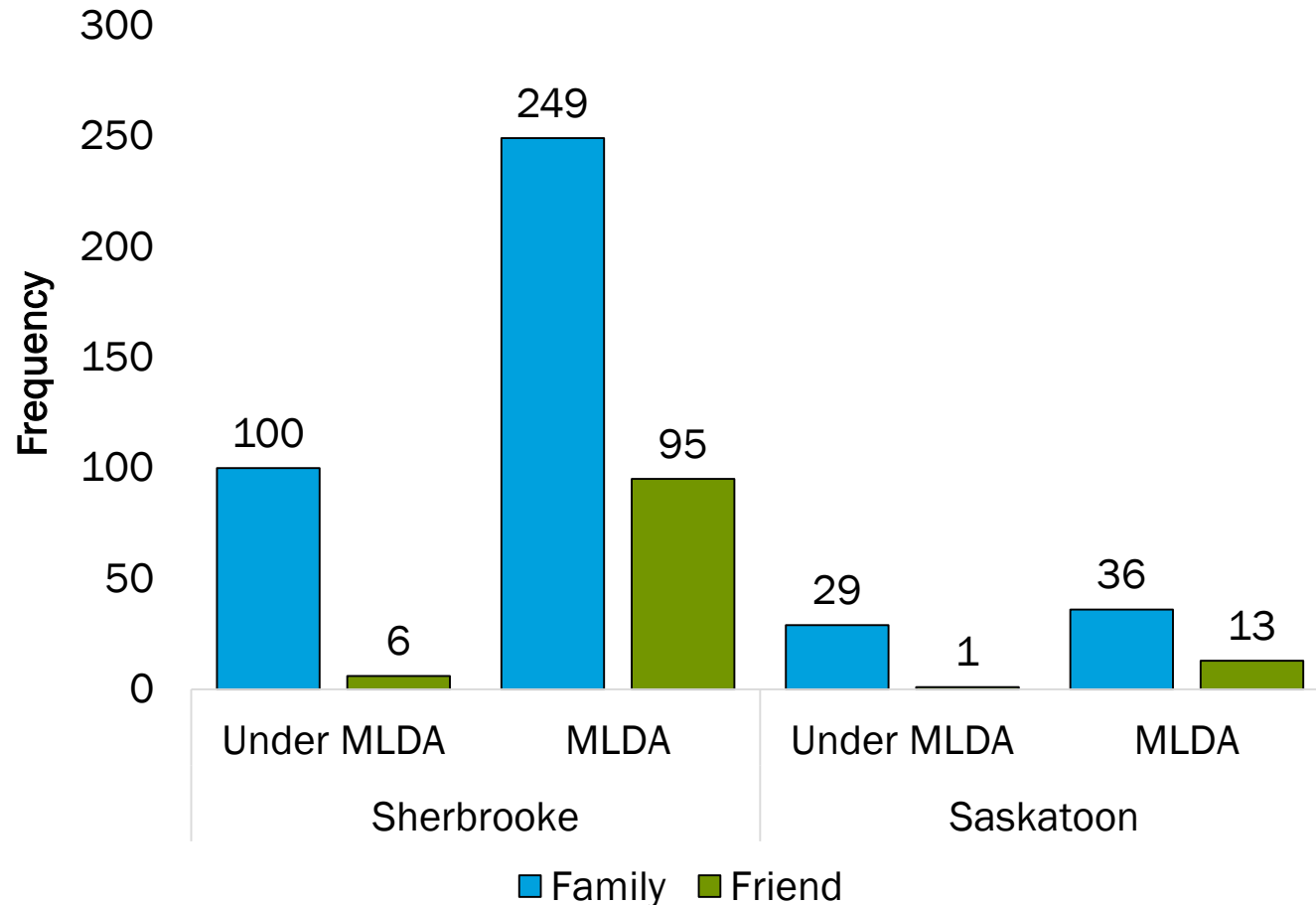
Results: How many, what and where?



- Where the type of alcohol consumed was known, **49.3%** consumed spirits (alone or mixed with other types of alcohol).
- For all alcohol-related cases, **28.4%** consumed alcohol at a bar/pub/nightclub, **9.5%** at home, and **6.8%** at a party or event.



Results: Who did the ED contact?



- For cases where contact was known, 99% of cases in Sherbrooke were in contact with a family member or friend.
- In Saskatoon, of the cases that included this information, only 26% of cases recorded a contact to a family member or friend.

Conclusion



- Many young people across Canada are visiting the ED for what constitute serious medical emergencies, after having consumed alcohol (alone, or in combination with other substances).
- Alcohol remains the key contributor to ED visits among young people.
- Community-level data analysis allows for the detection of local trends to inform prevention and harm reduction efforts specific to each region.
- Data collection practices need to improve to enable a better understanding of contextual variables that precede substance-related ED visits, as well as their outcomes.

What does this mean for cancer prevention?



- The results from this study highlight the acute harms and consequences in young people following alcohol consumption.
- Early patterns of heavy alcohol consumption in young people can lead to increased lifetime risk of certain types of cancer.
 - E.g. High-quality evidence points to increased lifetime risk for the development of breast cancer in women who report consuming multiple drinks in one sitting between onset of puberty and first pregnancy.
- Cancer prevention efforts should begin early in life.

Next steps

- Work with existing partners to raise awareness about the contextual factors that lead young people to visit the ED following use of substances, as well as to implement strategies that may mitigate harms (e.g. follow-up with young person following discharge to assess needs).
- Conduct a similar study in other cities to inform local patterns of use and the nature of alcohol-, cannabis- and opioid-related emergencies in young people (including polysubstance use) during the COVID-19 pandemic.
 - Need to support young people given the substance use and mental health challenges they are facing as a result of the pandemic, and while they emerge from lockdown and begin to socialize again.

CANADA

Wilder than ever: why a pandemic backlash and social media are fuelling mayhem at Canada's universities

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