

Youth and Cannabis in NB: A Public Health Perspective 2018-2020

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BACKGROUND

Cannabis became legal in Canada on October 17, 2018. At that time, it became legal for those aged 19 and older to purchase, possess, cultivate and consume cannabis in New Brunswick. Through its decisions, actions and legislation, the Government of New Brunswick is striving to build a cannabis culture that is safe, legal, responsible and limited to adults (Government of New Brunswick, 2018).

To understand the impact of the national and provincial policy change on youth cannabis use in New Brunswick, systematic monitoring and evaluation is required. The purpose of this report is to describe the latest data on youth cannabis use across New Brunswick for the years leading up to and for two years following legalization, including socio-demographic risk factors, regional and time trends, and hospitalizations.

Within New Brunswick, the legislative framework for cannabis is governed by three acts:

- the *Cannabis Management Corporation Act* establishes the necessary framework for socially responsible management of the distribution and sale of cannabis;
- the *Cannabis Control Act* establishes the legal age for the purchase, consumption and cultivation of cannabis at 19 years old as well as standards for responsible retailing; and
- the *Cannabis Education and Awareness Fund Act* establishes a fund to support research and the development, implementation and delivery of education and awareness programs for harm reduction and the responsible use of cannabis.

At the federal level, the *Cannabis Act* (Canada), which received Royal Assent on June 21, 2018, creates a strict legal framework for controlling the production, distribution, sale and possession of cannabis across Canada (Department of Justice, 2019). Among the key goals that is hoped to be achieved through the *Act* is to keep cannabis out of the hands of youth (Department of Justice, 2019). To that end, the *Cannabis Act* includes measures to prevent youth from accessing cannabis. Age restrictions prohibit giving or selling cannabis to youth under the age of 18 anywhere in the country and providing cannabis to youth or using a youth to commit a cannabis related offence is criminal and can result in jail time (Department of Justice, 2019). The *Act* also places restrictions on promotions and enticements, including prohibiting cannabis products, packaging and labelling that is appealing to youth (Department of Justice 2019).

In order to support safe and responsible use, in June 2018, New Brunswick's Office of the Chief Medical Officer of Health launched a public awareness and education campaign, "I'm in Control", that is evidence-based and focused on the adverse health effects of cannabis. The campaign targeted vulnerable groups, including youth, about the importance of understanding the risks and making informed decisions associated with cannabis. Phase I was launched and included social media messages, radio, newspaper, digital and mobile advertisements aimed at directing the public to www.incontrolNB.ca. Phase II started in the fall of 2018 and targeted youth under 25, and other specific groups. A Cannabis Symposium targeting education administrators to enhance their knowledge, increase awareness of risks to youth and effective ways for harm reduction was held in November 2018.

In 2019, ads were targeted to youth and young adults, parents, breastfeeding moms, heavy users and the general public. In preparation and response for edible cannabis entering the market in December 2019, digital media ads were developed to inform the public on facts and risks of ingesting cannabis. Posters warning of the effects of mixing cannabis and alcohol were also developed and displayed in restobars around the province. The Office of the Chief Medical Officer of Health partnered with MomTalk NB, a popular website and Facebook community for mothers, to host a FAQ on their social media page and website. Other strategies included ads in university and college agendas as well as geotargeting ads to mobile devices around university campuses.

To evaluate the efficacy of its media campaigns, a research company engaged 600 New Brunswickers in measuring their awareness of different media campaigns and evaluating the impact of the messages. The report found that 7 of 10 respondents had seen or heard messages about cannabis in the last 6 months, and 35% identified GNB as the sponsor of the message (this is compared to 11% for the federal government). Three media ads used by GNB were also evaluated and all were found to have performed consistently well.

DATA SOURCES

Canadian Student Tobacco, Alcohol and Drug Survey 2018-2019

The Canadian Student Tobacco, Alcohol and Drugs Survey (CSTADS) collects information on substance use among youth in grades 7 to 12 on a 2-year cycle (Government of Canada, 2019). The survey is funded by Health Canada and implemented by the Propel Centre for Population Health Impact at the University of Waterloo in collaboration with provincial partners (University of Waterloo, n.d.). In New Brunswick, the Propel Centre collaborates with the New Brunswick Health Council (NBHC) to implement the survey; as such, CSTADS is only implemented in the province when it occurs concurrently with the NBHC's New Brunswick Student Wellness Survey (SWS) (every six years). The 2018-2019 cycle of CSTADS included a total sample of 62,850 grades 7 to 12 students across the ten Canadian provinces; the weighted results are representative of over 2 million Canadian students (Government of Canada, 2019). In New Brunswick, 1 in 9 students from grade 7 to 12 from most schools took part in the survey (New Brunswick Health Council [NBHC], 2019). Data were collected between October 2018 and June 2019.

Discharge Abstract Database

The Discharge Abstract Database (DAD) captures administrative, clinical and demographic information on hospital discharges (including deaths, sign-outs and transfers) from acute care facilities in the province (Canadian Institute for Health Information [CIHI], 2020). All DAD records are reported in the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Canada (ICD-10-CA) and the Canadian Classification of Health Interventions (CCI) (CIHI, 2020). Data from August 1, 2020 are onward are preliminary and may change in subsequent reports.

New Brunswick Student Wellness Survey 2018-2019

The New Brunswick SWS collects information on the health and wellbeing of youth in grades 6 to 12 on a 3-year cycle (New Brunswick Health Council [NBHC], 2019). Data is collected by the NBHC directly from 39,000 students in New Brunswick public schools (NBHC, 2019)¹. One-hundred eighty-seven schools participated in 2018-2019, representing 98% of New Brunswick public schools (NBHC, 2019). All students in the school are invited to participate in the survey, in 2018-2019 72% of the students from participating public schools returned their completed survey (NBHC, 2019). Data was collected between November 2018 and May 2019 (NBHC, 2019). New Brunswick SWS data were analyzed by the NBHC.

In this report, some of the 2018-2019 SWS data are compared to the previous survey cycle, the New Brunswick SWS 2015-2016. Although the questionnaire used in the 2018-2019 cycle underwent some changes compared to 2015-2016 (NBHC, 2019), in this report we only compared results from the two cycles where the questions and response options remained unchanged between the two cycles.

A note on student data

Although the CSTADS and SWS both study the same population of New Brunswick students, their results are not directly comparable due to differing methodologies, including differences in how students are sampled, as well as different survey instruments, questions, and definitions used in collecting the data. Looking at the results of both these surveys, however, allows us to get a more complete picture of youth cannabis use in New Brunswick. The CSTADS allows us to compare cannabis use in New Brunswick to Canada and the other provinces. The New Brunswick SWS provides us with a greater breadth of information on youth cannabis use in the province and more frequent data collection in New Brunswick to explore trends over time.

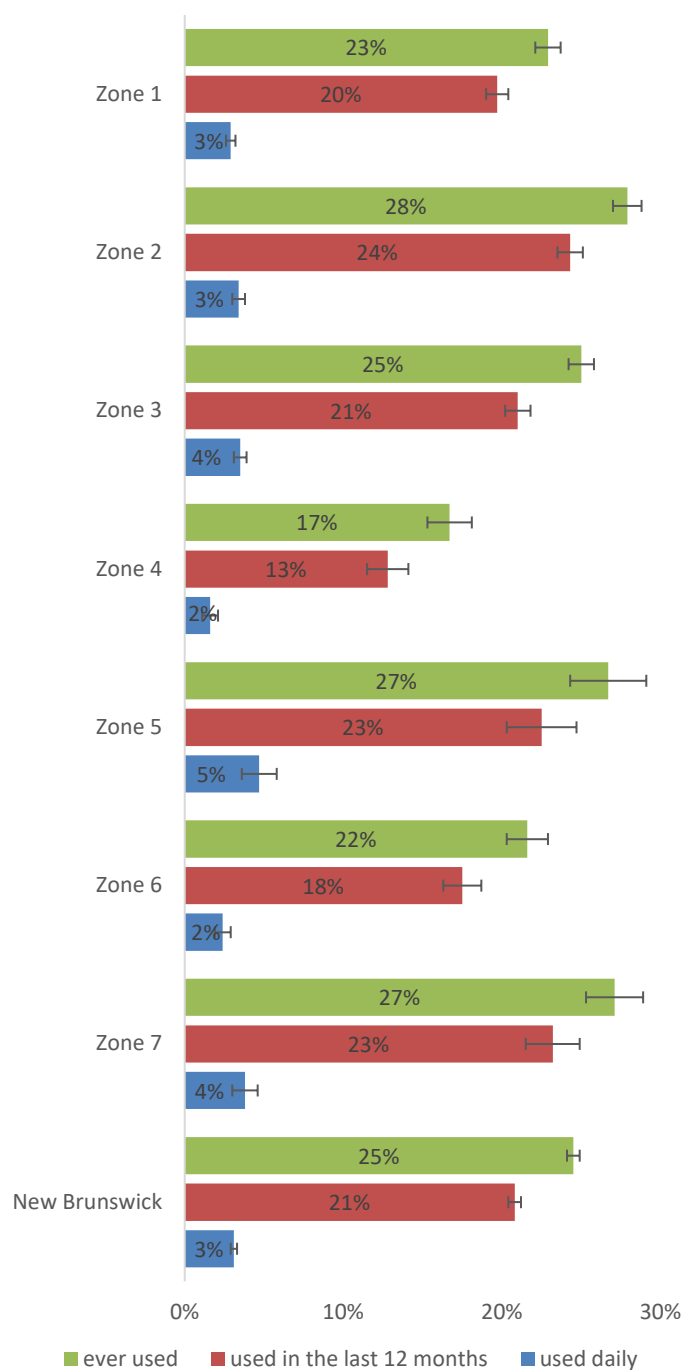
YOUTH CANNABIS AND SUBSTANCE USE

Ever used cannabis

In the 2018-2019 SWS, 24.5% of students in grades 7 to 12 reported ever having used cannabis (a joint, pot, weed, hash) (Figure 1). The average age of initiation was 15 years old. The proportion of students reporting ever having used cannabis in Zone 2 (Fundy Shore and Saint John area) was significantly higher

¹ In 2018-2019 the New Brunswick Student Wellness Survey was conducted concurrently with the Canadian Student Tobacco, Alcohol and Drugs Survey, for which 1 in 9 students from grades 7 to 12 from most schools were sampled to take part in. Those students are not included in the participation rates for the New Brunswick Student Wellness Survey.

Figure 1: Students in grades 7 to 12 who report having used cannabis, by zone, New Brunswick, 2018-2019



proportion of students reporting daily cannabis use (1.6% and 2.4%, respectively), significantly lower than the provincial rate.

than the provincial rate; Zone 1 (Moncton and south-east area), Zone 4 (Madawaska and north-west area) and Zone 6 (Bathurst and Acadian-Peninsula) were significantly lower than the provincial rate (Figure 1). Zone 4's rate was significantly lower than all other zones (Figure 1).

Used cannabis in the last 12 months

The 2018-2019 SWS found 20.8% of grades 7 to 12 students reported having used cannabis in the last 12 months (Figure 1), a slight but significant increase over the last cycle of the SWS (19.1%). Cannabis use in the last 12 months was significantly lower in zone 4 than in any other health care zone in the province at 12.8% (Figure 1). Self-reported use in the last 12 months was also significantly lower in zone 6 than in all other zones, except zone 4, at 17.5% (Figure 1). Use in the last 12 months in zones 2 (Fundy Shore and Saint John area – 24.3%) and 7 (Miramichi – 23.2%) were significantly higher than the provincial rate (Figure 1).

The 2018-2019 edition of the CSTADS found a slightly higher proportion of grades 7 to 12 students reporting having used cannabis in the last 12 months than did the SWS. They found 24.5% of students reported using this behaviour compared to 20.8% in the SWS. Such differences are expected due to the differences between the surveys previously noted. However, the CSTADS data is of interest because it allows for the comparison of New Brunswick to other provinces. At 24.5%, a significantly higher proportion of New Brunswick students reported using cannabis in the past 12 months than did students in Canada as a whole (18.1%). Further, New Brunswick was second only to British Columbia in terms of provincial rates of students reporting consuming cannabis.

Daily cannabis use in the last 12 months

The proportion of students in grade 7 to 12 who reported using cannabis daily was 3.1% in the 2018-2019 SWS (Figure 1), which did not differ significantly from the proportion of students who reported daily use in 2015-2016 (3.5%). Zone 5 (Restigouche Area) had the highest proportion of students reporting daily cannabis use (4.7%), significantly higher than the provincial rate; Zones 4 & 6 had the lowest

Demographics

The 2018-2019 SWS found certain demographic subgroups report using cannabis at significantly higher rates than the province in general. Notably, populations known to experience marginalization, including students living in lower socioeconomic conditions, students with a diagnosed special need, and students who identify as members of the Lesbian, Gay, Bi-sexual, Two-spirit and Queer (LGBTQ) community, are using cannabis at a significantly higher rate than the student population in general (Table 1).

Table 1: Students in grades 7 to 12 who report having used cannabis by demographic characteristic, New Brunswick, 2018-19

	Ever	In the last 12 months	Every day in the last 12 months
New Brunswick	24.5% (24.1%-24.9%)	20.8% (20.4%-21.2%)	3.1% (3.0%-3.3%)
Sex			
Female	23.8% (23.3%-24.4%)	20.1% (19.6%-20.6%)	2.0% (1.9%-2.2%)
Male	25.2% (24.6%-25.6%)	21.6% (21.0%-22.2%)	4.3% (4.0%-4.5%)
Language			
English	27.4% (26.9%-27.9%)	23.5% (23.0%-24.0%)	3.7% (3.5%-3.9%)
French	17.1% (16.5%-17.8%)	14.1% (13.5%-14.8%)	1.7% (1.5%-2.0%)
Immigrant status			
Born in Canada	25.2% (24.8%-25.6%)	21.4% (21.0%-21.8%)	3.2% (3.1%-3.4%)
Born outside of Canada	15.9% (14.7%-17.1%)	13.6% (12.5%-14.7%)	1.8% (1.4%-2.2%)
Special needs			
Students... with a diagnosed special need	33.7% (32.9%-34.6%)	29.0% (28.1%-29.8%)	5.8% (5.4%-6.2%)
without a diagnosed special need	21.1% (20.4%-21.6%)	17.9% (17.4%-18.3%)	2.2% (2.0%-2.3%)
Sexual orientation			
Student self-describes as ...			
LGBTQ	27.2% (26.1%-28.3%)	23.4% (22.4%-24.5%)	4.1% (3.6%-4.6%)
not LGBTQ	24.9% (24.4%-25.4%)	21.1% (20.7%-21.5%)	3.0% (2.8%-3.1%)
Lower socio-economic conditions	41.4% (39.0%-43.5%)	36.3% (34.2%-38.5%)	9.5% (8.2%-10.8%)
Higher socio-economic conditions	23.7% (23.2%-24.1%)	20.0% (19.6%-20.4%)	2.8% (2.6%-3.0%)

Data source: New Brunswick Student Wellness Survey 2018-2019

Students living in lower socioeconomic conditions are the population subgroup reporting the highest rates of cannabis use in the province (Table 1). The New Brunswick SWS uses a student’s responses to the question “Some young people go to school or to bed hungry because there is not enough food at home. How often does this happen to you?” as a proxy for determining a student’s socio-economic position. 41.4% of students identified as living in lower socio-economic conditions reported ever having tried cannabis compared to just 23.7% of students living in better socioeconomic conditions (Table 1). Further, students living in lower socio-economic conditions were significantly more likely to report having used cannabis in the last 12 months than their socio-economically better off counterparts (36.3% versus 20.0%) as well as significantly more likely to report daily use in the last 12 months (9.5% versus 2.8%) (Table 1).

Students who reported having a diagnosed special need (27% of survey population) were the population subgroup with the second highest rates of cannabis use in the province (Table 1). Included in this group are students with one or more of the following diagnoses: autism spectrum disorder, behavioural disorder, blind or low vision, deaf or hard-of-hearing, attention deficit hyperactivity disorder or attention deficit disorder, intellectual disability, language/speech impairment, learning disability, physical disability, mental health disability, gifted or other diagnosis. Of the students with a diagnosed special need, 33.7% reported having tried cannabis, 29.0% had used in the past 12 months, and 5.8% had used every day in the last 12 months, compared to 21.1%, 17.9% and 2.2%, respectively, among students without a diagnosed special need (Table 1).

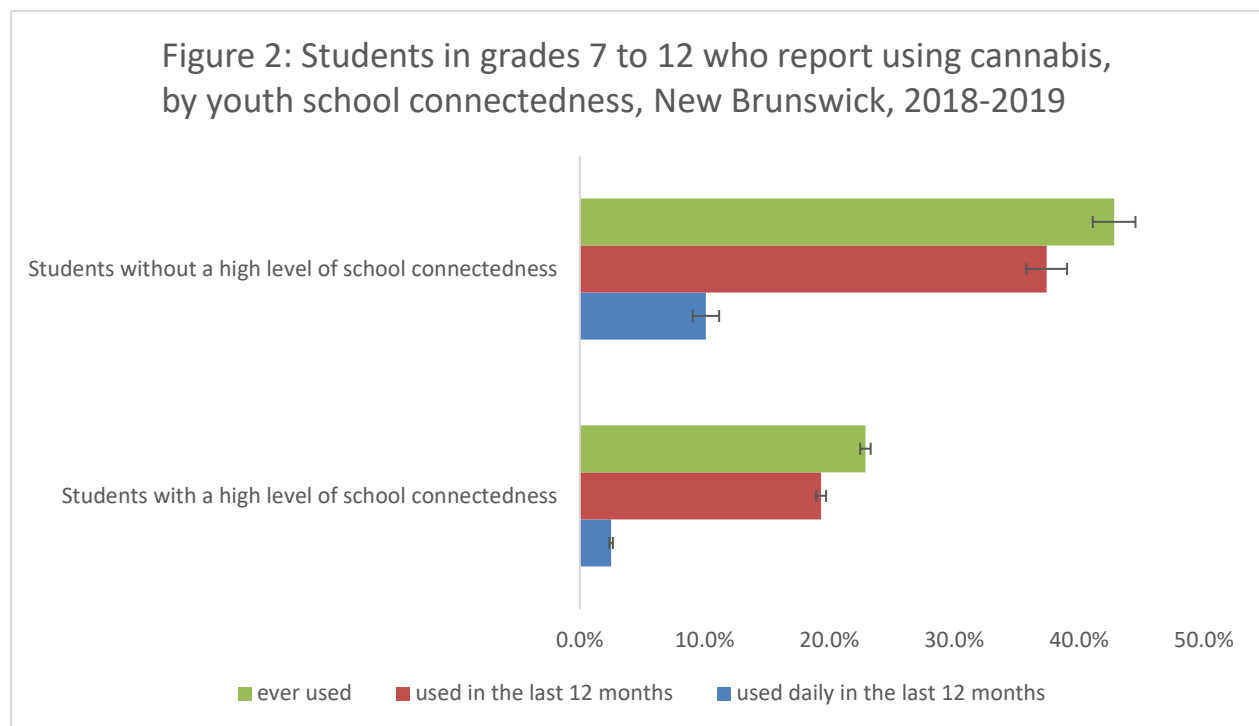
Students who identified as gay or lesbian, bisexual, two-spirit, asexual or questioning also reported higher levels of cannabis use (Table 1). Students who identified as LGBTQ were significantly more likely than students who didn’t identify as LGBTQ to report ever using cannabis (27.2% versus 24.9%), using cannabis

in the last 12 months (23.4% versus 21.1%) and using cannabis every day in the last 12 months (4.1% versus 3.0%) (Table 1).

Other notable differences between subgroups include significantly higher usage rates among students who were English speaking compared to French speaking, higher usage rates among students born in Canada compared to students born outside of Canada, and higher usage rates among the male sex compared to the female sex (Table 1).

Other factors

The NBHC has found that most New Brunswick students (92%) in grades 7 to 12 have a high level of connectedness to their schools based on the School Connectedness Scale (NBHC, 2019; Resnick et al., 1997). Students with a high level of connectedness to their school reported significantly lower cannabis use than students without a high level of school connectedness (Figure 2). 42.8% of students who did not have a high level of connectedness to their school reported having tried cannabis, 37.4% had used in the last 12 months, and 10.1% used daily in the last 12 months (Figure 2). 22.9% of students with a high level of connectedness to their school reported have tried cannabis, 19.3% had used in the last 12 months, and 2.5% used daily in the last 12 months (Figure 2).



The NBHC has found that 15% of New Brunswick students in grades 7 to 12 have a high level of oppositional behaviour as determined by the NBHC’s scale (NBHC, 2019). Some examples of oppositional behaviours include cutting classes or skipping school, disobeying parents, talking back to teachers and getting in to fights (NBHC, 2019). Students with a high level of oppositional behaviour report a high level of cannabis use: 56.0% have used cannabis, 50.5% have used cannabis in the past 12 months, and 11.9% used cannabis daily in the last 12 months. In contrast, students that did not report a high level of oppositional behaviour reported lower levels of cannabis use: 18.6% have used cannabis, 15.3% have used cannabis in the past 12 months, and 1.4% have used cannabis daily in the last 12 months.

Hospitalizations related to cannabis

In the two years following cannabis legalization, there has been a decrease in the number of youth hospitalized for a behavioural/mental disorder due to cannabis. In the year leading up to cannabis legalization (October 2017-September 2018), 20 youth ages 12-18 were hospitalized in an acute care facility across the province (a crude rate of 36 per 100,000 youth; with an additional 3 youth admitted to a psychiatric facility in the province). In the year following cannabis legalization (October 2018-September

2019), 14 youth were hospitalized in an acute care facility (25 per 100,000; with an additional 2 admitted to a psychiatric facility). Ten youth (18 per 100,000) were hospitalized in an acute care facility the following year (October 2019 to September 2020).

With respect to hospitalizations for poisonings by cannabis, no youth were hospitalized in an acute care facility the year prior to legalization, only one was hospitalized in the year after and no one was hospitalized the subsequent year.

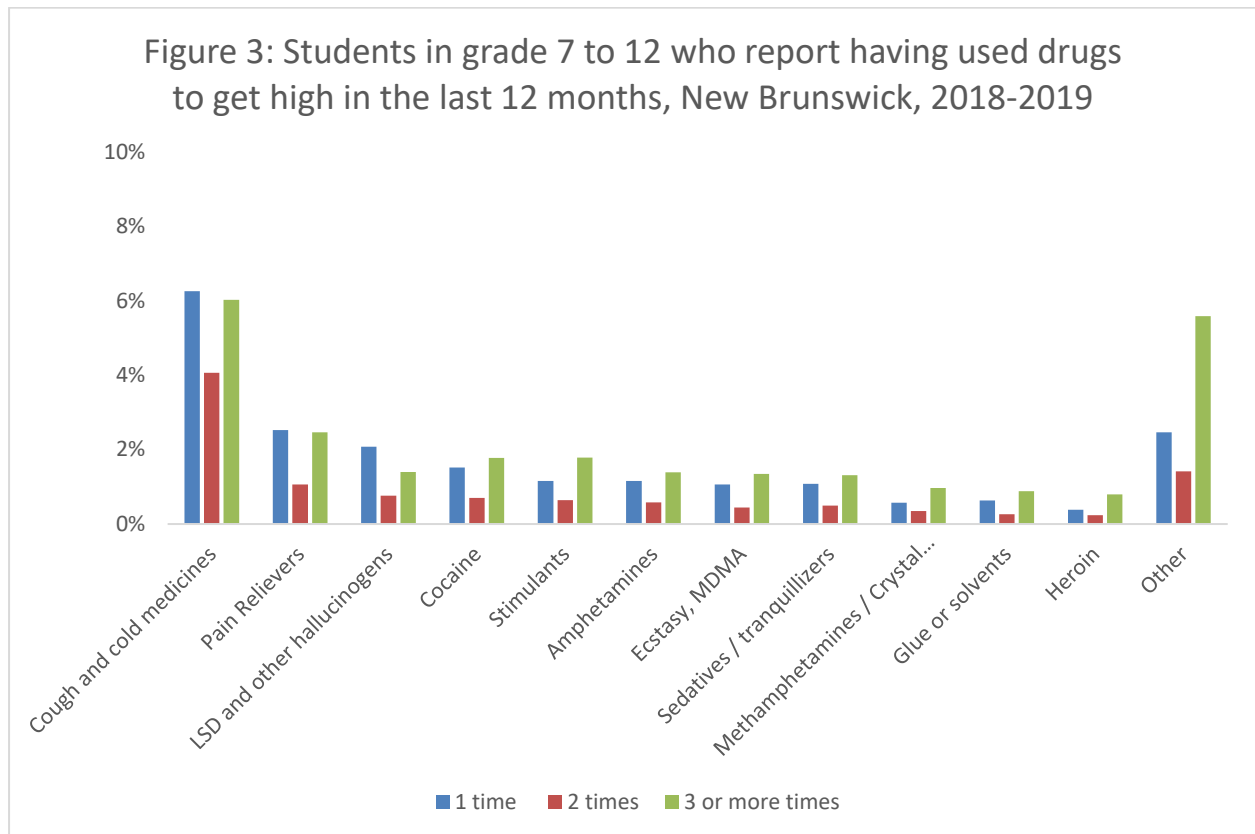
Hospitalizations in an acute care facility for schizophrenia does not indicate a notable change in trend. In the year leading up to legalization, 11 youth were hospitalized in an acute care facility for a diagnosis of schizophrenia (a crude rate of 20 per 100,000 youth). In the year following legalization, 8 youth were hospitalized (14 per 100,000 youth), and 13 were hospitalized the subsequent year (23 per 100,000 youth).

Other substance use

With respect to heavy drinking, the 2018-2019 SWS found that 14.6% of students in grades 7 to 12 reported consuming five or more drinks at one time, at least once a month in the past 12 months. This is down significantly, from 2015-2016, when 16.8% of students reported the same heavy drinking behaviour.

With respect to smoking, 4.8% of students in grades 6 to 12 reported smoking daily while 13.6% reported smoking daily or occasionally. The proportion of students who report smoking daily or occasionally is up significantly from 2015-2016 when 11.2% of students reported this kind of smoking behaviour.

With respect to illicit drugs, the SWS found that 24.6% of students in grades 7 to 12 reported having used illicit drugs in the last 12 months to get high. Cough and cold medications were the most common substance reportedly used at least once in the last 12 months to get high, followed by other substances, and pain relievers (e.g., Fentanyl, Percodan, Percs, Demerol, Oxycontin, Oxycodone, Oxy, Oxyneo, OC, APO, Codeine, Morphine) (Figure 3).



Students in grades 7 to 12 report engaging in some risky behaviours related to substance use. Nine-point three percent of the student population in grades 7 to 12 report driving an off-road vehicle (e.g., snowmobile, ATV, dirt bike) after drinking alcohol, using cannabis, or other illegal drugs in the last 12 months. More

students, 17.2%, report riding in an on-road vehicle (e.g., car, van, truck) driven by someone who had been drinking alcohol, using cannabis, or other illegal drugs in the last 12 months.

CONCLUSION

At 24.5%, a significantly higher proportion of New Brunswick students reported using cannabis in the past 12 months than the national average (18.1%) in 2018-19. New Brunswick youth reported slightly higher rates of cannabis use in the last 12 months in the 2018-19 SWS than they did in the 2015-16 SWS. Students who are members of communities that experience marginalization reported using cannabis at significantly higher rates than students who are not members of marginalized communities in 2018-2019. Notably students living in lower socio-economic conditions, students living with a diagnosed special need, and students who identify as members of the LGBTQ community all used cannabis at higher rates. Further, students who reported high levels of oppositional behaviour and without a high level of connections to their school, reported using cannabis at higher rates in 2018-19. Since cannabis legalization, cannabis related hospitalizations have not gone up.

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