

Chief Medical Health Officer's Report 2019



Better health. Best in health care.



The 2019 Chief Medical Health Officer's Report describes findings from medical charts about the personal, social, and medical circumstances of a sample of young adults, women, and South Asian men who died from illicit drug toxicity in Fraser Health. These analyses help inform how we can better support people who use drugs and their loved ones.

Through implementation of the Fraser Health Overdose Crisis Response Strategy, we continue to work towards minimizing harms from substance use. In collaboration with community partners we are endeavouring to enhance individual and community resilience; optimize access to harm reduction supplies and services; and provide a streamlined, responsive, and integrated system of care for people who use substances and their families. We must continue to work with people with lived and living experience with substance use from all walks of life and cultural backgrounds to further inform service delivery and program development.

April 14, 2020 marked four years since the declaration of overdose as a public health emergency in British Columbia. While illicit drug toxicity deaths generally decreased across Fraser Health in 2019, these gains were erased by the COVID-19 pandemic. Social isolation, stress, lack of work, and disruption of the supply chain all contributed to increased toxicity in the drug supply and increases in the number of overdoses and overdose deaths. We must critically examine our systems of care and modify those that cause harm to people who use drugs. We also must reflect on how we may be participating in the ongoing stigmatization of people who use drugs. Finally, to roll out an even more comprehensive and effective approach, we must continue to advocate for both the decriminalization of people who use drugs and a regulated (pharmaceutical) drug supply.

MARTIN LAVOIE, MD, FRCPC

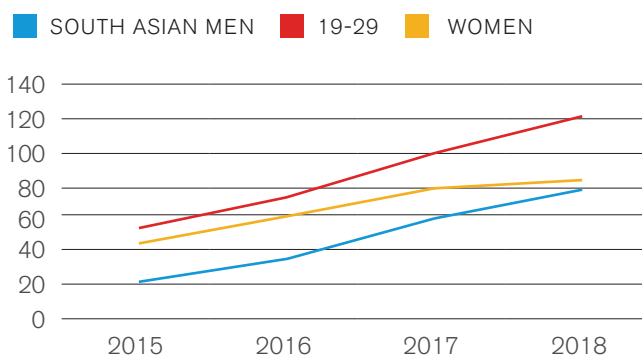
Vice President, Population Health
& Chief Medical Health Officer
Fraser Health

Introduction

In 2017, Fraser Health reviewed the medical charts of 90 men who experienced an overdose in a private residence and were admitted to a Fraser Health hospital in order to better understand the life circumstances of people who had a serious overdose (1). We selected this group as a proxy for those with the largest number of deaths due to drug toxicity. We customized our data collection tool to focus on information that could not be obtained from routine data, such as details about relationships, housing, employment, and recent stressors. From the analysis of these 90 charts, we identified three distinct groups of men – younger men who primarily used opioids, younger men who primarily used stimulants, and older men who primarily used opioids and who reported pain as a stressor. We found that these men often had supportive friends and family, and we acted on this finding by developing and launching Fraser Health's Overdose Awareness campaigns. The chart review revealed that a small but disproportionately high number of men were currently or previously employed in trades occupations; this association between construction occupations and overdose deaths was subsequently reported by Statistics Canada (2) and has also been reported in the United States of America (3). In response to this finding and to enable discussions and implement solutions, Fraser Health began engaging with building trades employers in 2018, and Vancouver Coastal Health has subsequently joined these efforts. A recent Vancouver Coastal Health report also included findings from a chart review, describing the housing, income, ethnicity, substance use, and health service use characteristics of people who died of drug toxicity in their region (4).

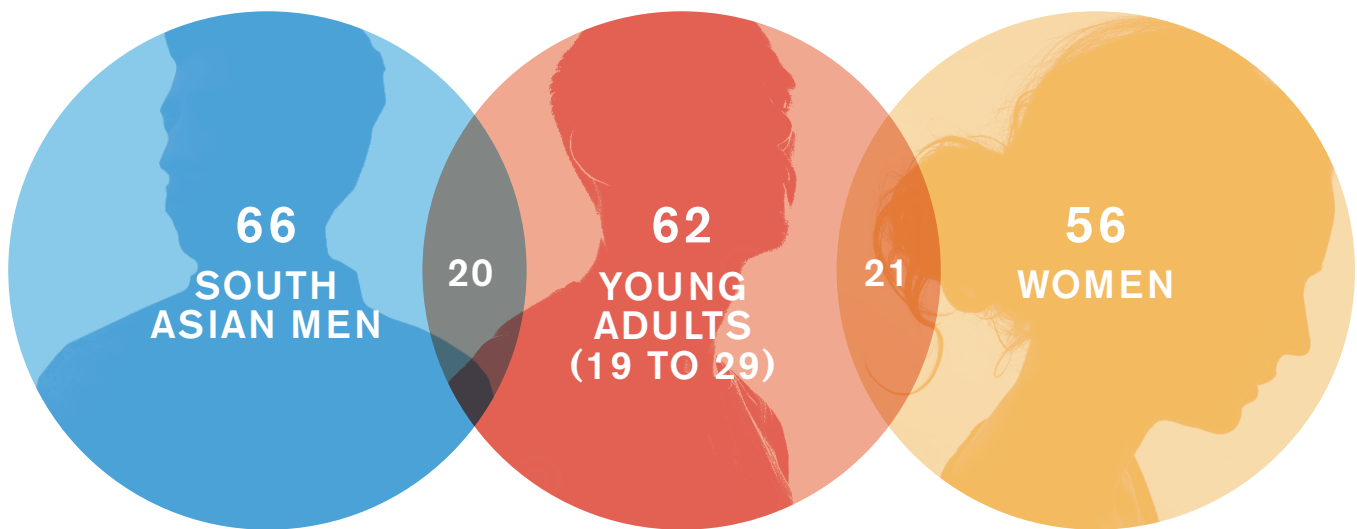
While males between the ages of 19 and 59 continue to account for the largest number of fatal and non-fatal illicit drug overdoses in Fraser Health, detailed data analyses have revealed additional patterns. Between 2017 and 2018, we observed increases in the fatality rates for young adults aged 19 to 20, women, and South Asian men. Knowing the valuable information provided by a chart review, we decided to conduct a detailed review of recent health records for decedents from these demographic groups.

The number of drug toxicity deaths increased between 2015 and 2018



Source: BC Coroners Service data analyzed by Fraser Health. Ethnicity determined using a name-based algorithm (see sidebar on page 5)

Using data provided by the BC Coroners Service, we selected all suspected overdose fatalities between September 2017 and August 2018 where the decedent was a South Asian, aged 19 to 29, or a woman **and** had a British Columbia Personal Health Number. Some decedents met more than one inclusion criterion (e.g. a 24-year-old South Asian man would belong to both the South Asian men and young adult groups). To maximize the number of cases to review, South Asian people of any age or sex who died between September and November 2018 were also included.



Cases eligible for chart review

This latest review included records from Fraser Health emergency departments and hospital admissions in the year before death, with a specific focus on documentation that characterized a person's life circumstances (i.e. social work notes, consultation notes, and discharge summaries). Records from community clinicians and services accessed in other health authorities (e.g. Vancouver Coastal Health, Interior Health) were not available for review.

We revised our previous chart review tool to include information suggested by the literature and people with lived experience that would be relevant to our focus populations, such as ethnicity, immigration,

parenting, interactions with child protection, and adverse childhood experiences. We piloted the tool for feasibility with two research nurses before case reviews began.

Case reviews occurred between December 2018 and April 2019, and included ongoing checks for consistency between the reviewers.

This year's Chief Medical Health Officer's report presents the epidemiology of overdose in three focus populations (young adults, women, and South Asian men) and shares insights that will help us better support people who use substances and their loved ones.

South Asian Men



BACKGROUND

Fraser Health is home to a diverse population of more than 1.8 million residents from Burnaby to Boston Bar to White Rock. According to the 2016 Census of Canada, 42% of Fraser Health residents identified as part of a visible minority. Home to 75% of South Asians in British Columbia, one in six Fraser Health residents identify as South Asian, with even higher proportions in Surrey (33%) (5), Abbotsford (25%) (6), and Delta (20%) (7). These three communities are home to 61% of all South Asians in British Columbia. South Asians in Fraser Health are significantly younger than the overall population: 51% of adult South Asians are between 18 and 39 years of age, compared with 37% for Fraser Health overall (8).

Beginning in the fall of 2017, the Surrey Community Action Team (9) learned of perceived increases in the number of South Asians experiencing overdose, and that those experiencing overdose were young males. Since information on ethnicity is not included in most administrative health data, we used a refined version of a locally developed method (10) to identify South Asians based on distinctive first and last names. The list of surnames used by the researchers correctly identified 77% of people as South Asian. In this report, the term 'South Asian' refers to people identified as South Asian by a name-based algorithm (see sidebar).

Community Action Teams

On February 1, 2018, the Minister of Mental Health and Addictions announced funding for 20 local Community Action Teams (CATs) to help support the overdose response. In addition to people with lived experience, these multidisciplinary tables include representatives from the health, justice, and social service sectors. There are active CATs in Burnaby, New Westminster, Surrey, Langley, Maple Ridge, Abbotsford, Chilliwack (11), Delta, South Surrey/White Rock, Tri-Cities, and Mission. The Surrey CAT has formed a South Asian Community Engagement working group that is taking the lead for engaging the South Asian community.

Measuring ethnic origins

Unlike information on age and sex, ethnicity is rarely included in administrative health data. The most common ways ethnic information is added to data in British Columbia are through linkages with other data sources and name-based algorithms. Reports from the First Nations Health Authority often use the former method and combine administrative data with the First Nations Client File to identify health services used by Status First Nations people.

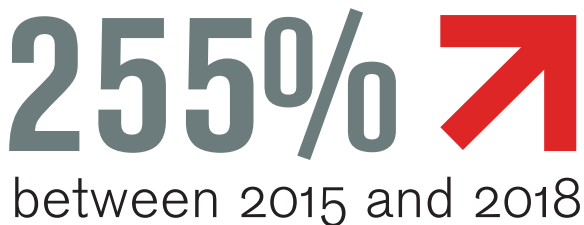
Name-based algorithms use linguistic, religious, and cultural naming patterns to estimate ethnic origins.

Incorporation of ethnicity in overdose surveillance revealed new information:

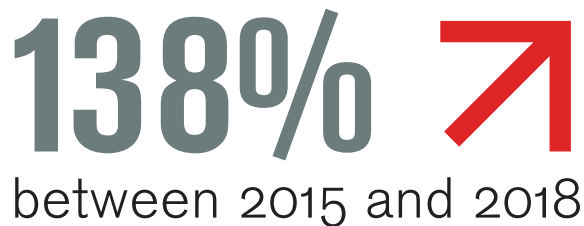
- The number of drug toxicity deaths among South Asian people in Fraser Health increased by 255% between 2015 and 2018; this is much higher than the 138% increase in deaths among other residents of Fraser Health.

Drug toxicity deaths increased more for South Asian than non-South Asian people.

South Asian people in Fraser Health



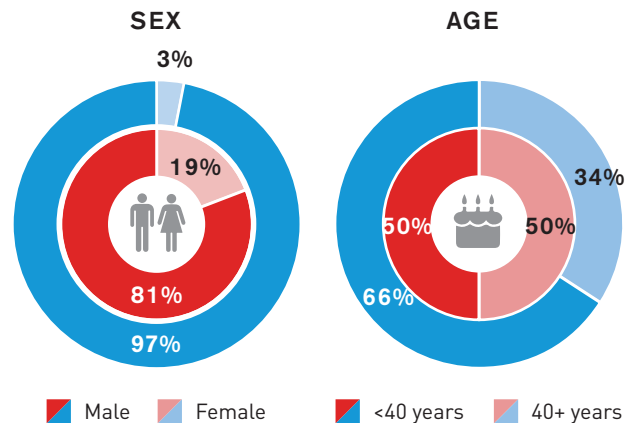
Non-South Asian people in Fraser Health



- Whereas there were 186 fatal overdoses per 1,000 overdoses among South Asian people, there were 110 fatal overdoses per 1,000 overdoses among non-South Asians. This suggests South Asian people may be more likely to die from an overdose than non-South Asian people.
- More South Asian than non-South Asian decedents were men (97% vs. 81%) and under 40 years old (66% vs. 50%).

South Asian decedents are disproportionately young and male

■ South Asian ■ Non-South Asian



There is little recent data about frequency and patterns of drug use among South Asian people outside India (12–14). Using 2008 data collected in English, people of South Asian heritage reported significantly less use of alcohol and illicit drugs than Caucasians (15). This contrasts with other literature that shows that South Asian men have high rates of alcohol consumption and alcohol-related liver cirrhosis, yet these men are underrepresented in

alcohol treatment programs (16). Among the barriers to treatment for mental health and substance use for South Asian people are language barriers, lack of culturally appropriate care, and stigma (17). Immigrant youth and children of immigrants may experience challenges such as language barriers, identity development, parental expectations and conflict, and peer conflict (17).

FINDINGS

We reviewed charts for 37 of the 86 South Asian men who died from suspected drug overdose and had a Personal Health Number between September 2017 and November 2018. The main reason that we did not review the other 49 records was because the person had never been hospitalized in Fraser Health (36/49). As there was only one South Asian woman in this review, they are included only in the focus section on women.

Demographics

Decedents were young men – two-thirds (25/37) were less than 40 years of age when they died. Two-thirds had a wife or girlfriend at some point in the year before they died, and **89% lived in a private residence** with family (65%) or a roommate (14%). Half of these men were fathers (51%), and most had children under the age of 19.

We found documentation suggesting South Asian ethnicity in the charts of two-thirds of decedents, suggesting this method is useful for surveillance in Fraser Health. Compared with chart documentation, two records were misclassified by the name-based algorithm.

Employment and income

Employment status was documented for 26 of the 37 decedents: 43% were working, and 46% were not working or were receiving disability benefits.

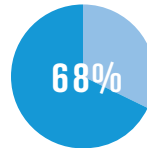


More than half had current or past employment in trades, transport, and equipment operator occupations.

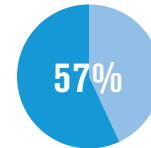
Mental illness and substance use disorders

Half (51%) of these men had chart documentation suggestive of a mental illness, most frequently a mood disorder (38%), psychotic disorder (28%), or having ever attempted suicide (22%). A similar proportion of men had evidence of both mental illness and substance use disorders (49%).

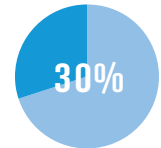
Alcohol was the most commonly documented substance used by decedents (68%), followed by opioids (57%) and cocaine (30%); all decedents regularly used more than one type of drug.



ALCOHOL



OPIOIDS



COCAINE

Where illicit substance use patterns were documented, nearly all men had problematic or high intensity use (25/26). Four out of five (78%) decedents had been diagnosed with at least one substance use disorder, but only one in three had documented engagement in substance use treatment. While substance use was often considered problematic by health care providers or family members, a number of decedents either denied substance use or declined referrals to substance use services.

Stressors

The most commonly documented recent stressor for South Asian men was interpersonal conflict, with 45% having experienced conflict with friends, family, or intimate partners in the year before death. Suicidal thoughts were documented for one quarter of men, and a history of traumatic brain injury or motor vehicle crash was documented for one in five men.

Social supports

Most men had a network of partners, family, and friends in their lives; however, many of these loved ones did not know or acknowledge that the person used substances other than alcohol. One of the ways support from family and friends was visible from chart documentation was the large number of visitors – including some that travelled from out of country – when these men were hospitalized. Many families only wanted a few individuals to know that the reason for hospitalization was overdose. This information was often hidden from friends and family members.

Recent overdose events

Among decedents who presented to hospital after a recent overdose event, most had opioids detected (75%) and used substances alone (83%), often at a residence (15 events) or in a vehicle (four events). Family members and friends rarely had Take Home Naloxone kits and did not always recognize early signs of overdose that are often mistaken as snoring or loud breathing.

SUMMARY

Our chart review of 37 South Asian men who died from drug toxicity revealed information not previously reported in British Columbia.

These South Asian decedents were even younger than South Asians in Fraser Health: 67% of decedents were between 18 and 39 years old, but only 51% of South Asians in Fraser Health are between 18 and 39 years old. Many had wives or girlfriends, children, and lived with family in private residences. Half had current or past employment in trades and transport occupations.

Most of these men had problematic or high frequency substance use, and alcohol was the most commonly used substance, followed by opioids and stimulants. We found a high prevalence of alcohol use disorder and opioid use disorder, but only one in three had participated in treatment. Low engagement with substance use treatment may suggest that existing services do not meet the needs of South Asian men in our communities. Men may want services provided in other languages and that incorporate their culture. Similar to what we have seen across the region, stigma about mental health and substance use from family and friends may also contribute to low uptake of services.

While these men's use of alcohol was known to family and friends, many family members did not know about – or did not acknowledge – the person's illicit substance use. A number of overdoses occurred at home, but family members could not

always recognize an overdose, and Take Home Naloxone kits were rarely on hand. There may be opportunities for culturally-relevant anti-stigma and Take Home Naloxone distribution initiatives to better support the South Asian community in Fraser Health.

Recommendations:

- In conjunction with community partners, engage in culturally-informed discussions about substance use, mental health, and stigma in South Asian communities.
- Increase availability of resources such as Recognizing an overdose, When Words Matter, and overdose/drug alerts in other languages. Promote materials that are available in multiple languages, such as the Overdose Survival Guide.
- Increase availability of services that are culturally acceptable, trauma-informed, and free of discrimination for people who use drugs and their loved ones, including partners, parents, friends, and children. Promotion should be inclusive of harm reduction approaches and services. Enhance community knowledge of existing support services, including the Fraser Health Crisis Line and supports for families and caregivers (18).
- Work with community partners to identify strategies to increase availability of Take Home Naloxone in South Asian communities.
- Engage with the transportation sector so employers from the breadth of occupations in the trades and transport sector are engaged in supporting workers who use substances.
- Fraser Health will work towards enhancing person-level information on social determinants of health. This includes expanding opportunities for patients to self-identify their ethno-cultural, marital, and employment status. This information is critical to identifying and acting to reduce health inequalities.

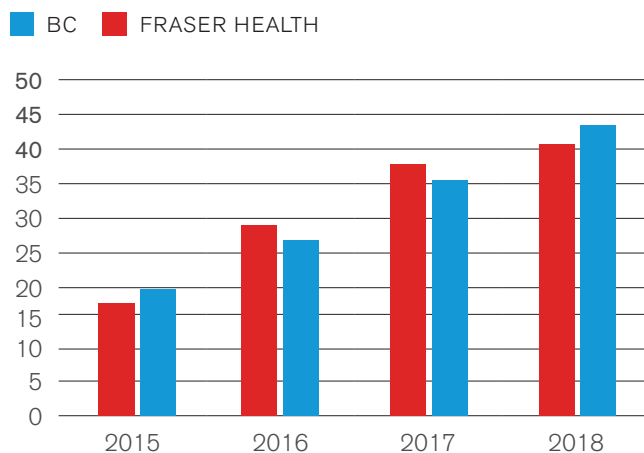
Young Adults



BACKGROUND

Data from the BC Coroners Service shows that the drug toxicity death rate for young adults between 19 and 29 years old in BC increased from 28.7 in 2016 to 40.4 per 100,000 in 2018. In Fraser Health, the fatality rate for young adults per 100,000 increased from 26.4 in 2016 to 43.2 in 2018; in comparison to other age groups, young adults had the highest increase (21%) between 2017 and 2018. In 2018, age-specific fatality rates in Fraser Health were below those of British Columbia overall except for young adults.

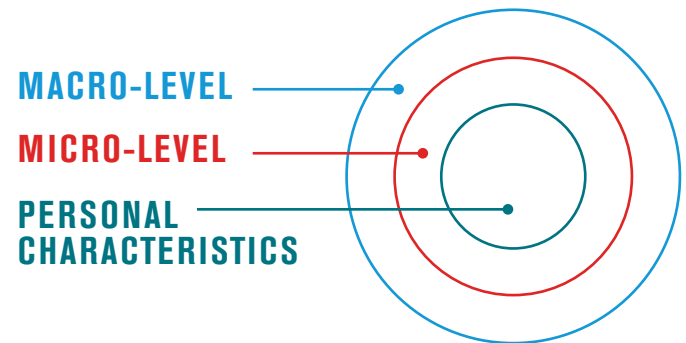
Illicit drug toxicity deaths for young adults (19-29 years old) per 100,000



The primary risk period for initiation of substance use is between 12 and 17 years old, with a peak in usage between 18 and 25 years old (19). Based on the 2017 Canadian Tobacco, Alcohol and Drugs Survey, lifetime substance use for young adults aged 20 to 24 years is common, with 88% using alcohol, 53% using cannabis, and 22% using other illegal drugs, including cocaine, methamphetamine, ecstasy, hallucinogens, or heroin (20).

The majority of research examines the risk and protective factors for substance use and problematic substance use in young adults ranging from 18 to 26 years old. Sex, race/ethnicity, genetic markers, and pre- and post-natal exposures are some fixed risk factors, which are not modifiable (21). The word Drug Report 2018 categorized

risk and protective factors for substance use into the following three categories (19):



- **MACRO-LEVEL** factors include health care access, social connectedness and inclusion, and physical environment.
- **MICRO-LEVEL** factors include influences from:
 - family (e.g. caregiver involvement and monitoring, parenting style, and parental substance use),
 - peers (e.g. exposure to substances, peer relations, and social networking), and
 - school (e.g. school environment, health education and prevention programs, and availability of afterschool activities).
- **PERSONAL CHARACTERISTICS** consist of behaviour and personality, mental well-being, decision-making and problem-solving skills, and reaction to stress.

Other research identified prospective and concurrent predictors of substance use, including smoking, alcohol, cannabis, and other drugs, in young adults. The following table lists some of these predictors. Overall, prospective predictors are those rooted in childhood experiences and concurrent predictors relate to instability, life events, and stress. Prospective and concurrent predictors interact with personal characteristics and experiences to either increase or decrease a person's substance use.

Table: Examples of prospective and concurrent predictors (19,21,22)

PROSPECTIVE PREDICTORS	CONCURRENT PREDICTORS
<ul style="list-style-type: none"> • Adverse Childhood Experiences (see sidebar). • Educational factors, including level of education, academic achievements, and school satisfaction. 	<ul style="list-style-type: none"> • Search for identity and self-perceived competency in being an adult. • Experiencing new challenges, such as moving out of the family home or attending post-secondary education. • Assumption of adult roles, including marriage and parenthood. • Significant transitions, such as changes in employment or intimate relationships.
<ul style="list-style-type: none"> • Behavioural factors: externalizing behaviours such as disruptive or antisocial behaviour, or internalizing behaviours such as depression and anxiety. • Personality traits: impulsivity can increase risk of substance use, while agreeableness and conscientiousness decrease this risk. • Peer factors: selection based on similar beliefs and behaviours as one self, influence by others through socialization, and rejection by others 	

Adverse Childhood Experiences (ACEs)

Traumatic experiences during childhood such as abuse, neglect, and household challenges increase the risk of multiple poor health outcomes. Originally researched by the Centers for Disease Control and Prevention and Kaiser Permanente in the 1990s (23), researchers showed that **childhood trauma is common – 64% of respondents experienced at least one trauma**. Compared to people who experience no ACEs, people who have experienced at least four ACEs have significantly elevated risks of sexual risk-taking, poor mental health, problematic alcohol and substance use, interpersonal violence, and self-harm (24). These ACEs-related risks may then translate into the experience of ACEs by the next generation.

Experiencing ACEs can be difficult; people may internalize their feelings and develop anxiety or depression, or they may act out their feelings with

aggressive behaviours. While both boys and girls can express either of these patterns, internalization is more commonly shown by girls and acting out is more often shown by boys. ACEs influence development of substance use disorder more strongly among women than men – some research has shown that among people with at least one ACE, women have a higher risk of substance use disorder than men (19).

While the risk of poor health is highest for people who have experienced the most adversity, it is not a guarantee. Supports such as positive family and peer relationships, and learning skills for dealing with stress, can reduce the risk of poor health outcomes.

While we included ACEs on the list of life events considered in our chart review tool, we documented whether stressful or traumatic events occurred at any time in a person's life. In our results, stressful life events may have happened at any age.

FINDINGS

There were 103 young adults between 19 and 29 years of age who died from drug toxicity during the study period. We reviewed 48 young adult decedents' electronic medical records. The main reason records were not reviewed was due to the person not having any history of a hospital admission in Fraser Health (39/55 decedents).

Demographics

The average age of decedents was 25 years. More than 80% of young adults who died were male. Ethnicity was documented in medical records or derived through name-based algorithm for 32 decedents (67%), approximately one-third were Caucasian and a quarter were identified as South Asian.

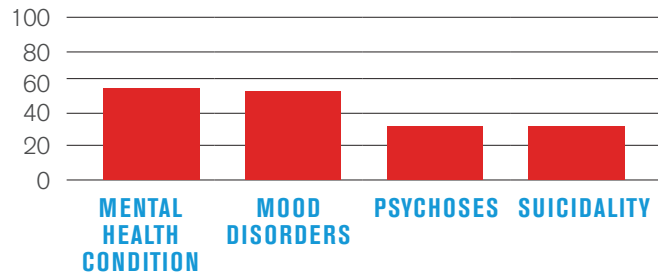
One-third (35%) had an intimate partner and 13% had young children, ranging from newborn to eight years old. More than half (56%) lived with family or a roommate in a private residence, and 21% lived in a congregate setting, such as a shelter, boarding house, or recovery house. Household members (28%) and friends (23%) commonly identified overdoses among these decedents.

Employment and income

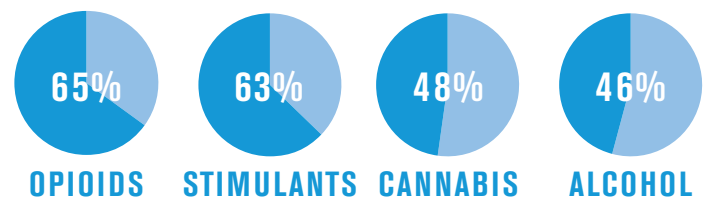
Almost one-third of young adults who died were unemployed and an additional 21% were receiving disability income. One in eight young adults who died were employed in the year before death. Trades, transport, and equipment operators and related occupations were the most common jobs among males (15/40), while sales and service were the most common occupations among females (3/8).

Mental illness and substance use disorders

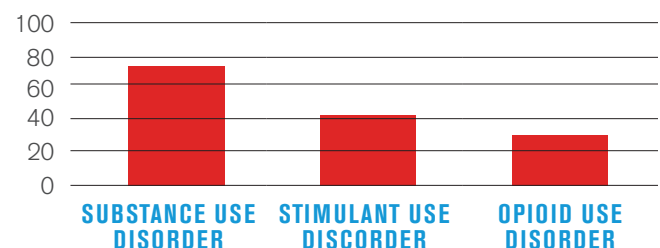
Nearly all decedents had evidence of a mental health condition (69%) or a substance use disorder (73%); a small majority had both mental health and substance use diagnoses (56%). The three most common mental health diagnoses were mood disorders (54%), psychoses (33%), and suicidality (33%).



For decedents whose age at initiation of substance use was documented in medical records, alcohol/cannabis and other drugs were initiated between 12 and 27 years old; the average age of initiation was 15 years for alcohol or cannabis and 18 years for other drugs. Where information on other drugs was documented, average age of initiation was 16 years for MDMA, LSD, and oxycodone; 18 years for stimulants; and 22 years for heroin.



Opioids and stimulants (including cocaine, crack cocaine, amphetamine, and methamphetamine) were the most commonly reported substances used by young adults who died (65% and 63%, respectively). In addition, almost half of decedents regularly used cannabis (48%) and alcohol (46%). The majority of decedents (71%) were high frequency substance users with multiple previous overdose events. Decedents with any stimulant use disorder and opioid use disorder accounted for 43% and 31%, respectively. Among decedents with either of these substance use disorders, only half had a documented history of substance use treatment.



Life events and support

In the 12 months before death, approximately half the young adults who died experienced interpersonal conflict, including romantic relationship problems or fights with family or roommates. Housing instability (29%), suicidal ideation or attempt (29%), physical injury (23%), and relapse of substance use (21%) were other notable stressors. Many patient charts documented evidence of stressful life events, most commonly parental separation or divorce (35%); one in five decedents had documentation suggesting someone in their childhood home had problems with alcohol or substance use. Comments in medical records also noted difficulties in school, behaviour and personality issues, changes in employment status, and loss of loved ones.

Parents and family members were the most common primary support people for these young adults (50%), and they were generally or very supportive. Most of the support persons were aware of decedents' mental health and substance use challenges.

SUMMARY

Our chart review provides insights into the young adults between 19 and 29 years old who died of illicit drug toxicity in Fraser Health.

When ethnicity information was available, the majority of young adult decedents were Caucasian or South Asian. They commonly lived with family or a roommate in a private residence.

Two-thirds of young adults who died had employment status documented in their medical records but only 12% were working.

Most of the decedents were frequent users of illegal drugs, and many had concurrent mental health and substance use diagnoses. On average, decedents began using alcohol or cannabis at age 15, but some began as young as 12. In nearly all cases, alcohol and cannabis were the first drugs the person used, with use of other drugs beginning – on average – three years later; this finding is consistent with Canadian data on substance initiation. Polysubstance use – specifically of opioids and stimulants – was common for these young adults.

Interpersonal conflict and having parents who were separated or divorced were the most common 12-month and lifetime stressors, respectively. While nearly 20% of Canadians report that their parents are separated or divorced (25), 33% of young adult decedents had experienced parental separation. Despite the presence of conflict, parents and friends were primary supports for young adult decedents. Consistent with literature on substance use among young people, these decedents experienced stressful life events, difficulties in school, and recent life or transitional events, such as housing instability, injury, transition of employment status, and loss of loved ones.

Recommendations:

- The BC Centre on Substance Use should promote awareness of clinical guidance documents for management of opioid use disorder among youth (26).
- Increase availability of services that are age-appropriate, culturally acceptable, trauma-informed, and free of discrimination for people who use substances and their loved ones, including partners, parents, friends, and children. Promotion should be inclusive of harm reduction approaches and services. Enhance community knowledge of existing support services, including the Fraser Health Crisis Line and supports for families and caregivers (18).
- Significantly increase availability of evidence-based approaches to preventing or mitigating the impact of stressful life events, including but not limited to:
 - Opportunities to learn positive parenting skills (27, 28)
 - Affordable, high-quality early childhood education (27)
 - Opportunities for social and emotional learning and skills development for children and youth (27, 28), and
 - Promotion of social connectedness and social integration to build resilient communities (28).

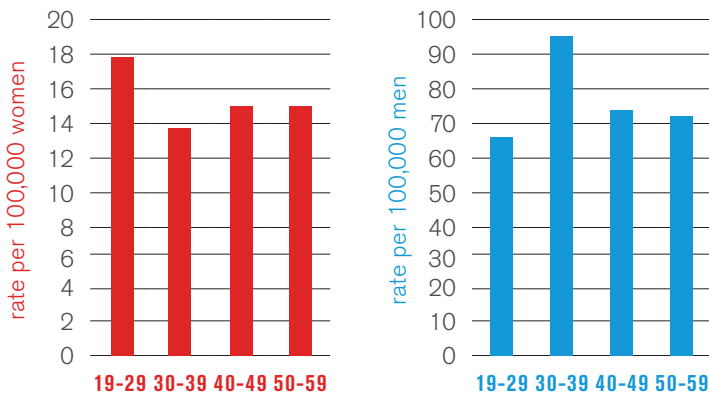


BACKGROUND

British Columbia's overdose emergency is often thought of as a men's health issue given that most fatal and non-fatal overdoses in the general population are among men. While more men than women report using illegal drugs (20), increases in fatal overdose rates from 2015 to 2018 have been similar for men (180%) and women (177%).

While the number and rate of drug toxicity deaths remain highest among males in Fraser Health, different patterns emerge when we analyze data by sex:

- In 2018, fatality rates among women were highest among those aged 19 to 29, but for men the rates were highest among those 30 to 39 years. For both sexes, people 19 to 59 accounted for most deaths.



Both sex (biological factors) and gender (social constructs) influence differences in substance initiation, use, and consequences between men and women. Some of these differences include (19):

- Many women begin using substances under the influence of a male partner who also uses drugs.
- Women who use drugs have higher rates of blood-borne infections than men who use drugs. Females physiologically have increased risk of viral infection, and relational practices like sharing

drug equipment and having unprotected sex increase opportunities for exposure to viruses.

- More women than men identify trauma or relationship stressors as factors that led to starting or continuing to use substances; however, men may be less likely than women to disclose these experiences.
- Women typically start using substances later in life than men.
- Women typically have a shorter duration between initiation of substance use and development of substance use disorders.
- More women than men seeking treatment have both substance use and mental health diagnoses.
- Women who use drugs experience significantly more gender-based violence than women who do not use drugs.
- Women who use drugs experience more medical and social (friends and family, financial challenges, employment opportunities, legal problems, and housing instability) harms than men.

Pregnancy and parenting may present additional challenges for women who use drugs. Many women choose not to tell their maternity care provider about their substance use due to fear of discrimination and being reported to child protection services. Fear of child apprehension may also stop women from seeking treatment for substance use problems. Financial challenges – including the inability to pay for both childcare and outpatient treatment – may restrict access to care, and there are currently only two residential treatment facilities in British Columbia where women can attend with their children.

Despite these clear differences between men and women who use drugs, most of the actions taken to address the current overdose epidemic have not taken gender into consideration (29).

FINDINGS

We reviewed charts for 40 of the 77 women who died from suspected drug toxicity and had a Personal Health Number during the study period. The main reasons that records were not reviewed were that the person had never been hospitalized in Fraser Health (19/37) or their hospitalization was more than 12 months before death (16/37).

Demographics

Women were, on average, 40 years old when they died; half were under 40 years old and half were 40 years or older. Ethnicity was documented for 26 decedents: 20 were Caucasian, four were Indigenous, and two were Asian.

Two-thirds of these women were mothers (65%), and most mothers had at least one child under the age of 19 (58%). Minor children frequently (60%) lived either with relatives or in Ministry of Child and Family Development care; 40% of mothers had their children with them at least part-time. Almost half (47%) of mothers with minor children were involved with the Ministry of Child and Family Development.

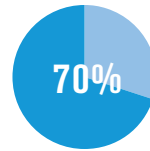
Employment and income

Income source was documented for 35 decedents: 53% were receiving disability income, 18% were employed, and 15% were unemployed. Of those with a documented recent occupation, sales and service occupations were the most common (9/21).

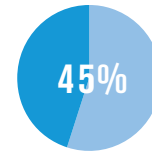
Mental illness and substance use disorders

Nearly all women had evidence of mental illness (85%), a substance use disorder (85%), or both mental illness and substance use disorder (78%). Mood disorders (60%) and psychoses (38%) were the most common mental illnesses; opioid (35%) and cocaine (33%) use disorders were the most common substance use diagnoses.

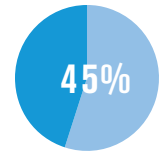
Stimulants such as cocaine, crack, or methamphetamine were the most commonly used substances (70%), followed by alcohol and opioids (45% each). Where documented, inhalation (smoking) was the most common method of using substances.



STIMULANTS









ALCOHOL



OPIOIDS

Stressors

Compared to the other population groups we reviewed, women experienced the most stressors. These women experienced an average of four significant stressors in the year before death, with the most common being

-  43% HOUSING INSTABILITY
-  40% INTERPERSONAL CONFLICT
-  38% PAIN
-  28% CHRONIC HEALTH CONDITIONS
-  33% RESUMPTION OF SUBSTANCE USE AFTER A PERIOD OF ABSTINENCE
-  25% FINANCIAL CONCERNS

Aside from pain concerns, the leading chronic health condition was hepatitis C (HCV), with at least one in four women having this infection (23%). Approximately 1% of Canadians have ever had HCV (30).

Social supports

While a number of women had an intimate partner at any time in the year before death (40%), partners were the primary support person for only 10% of decedents. Chart documentation suggested that family members (44%) and friends (22%) were the most common supports for women.

Adverse life events

Over half (55%) of women experienced or witnessed emotional, physical, and/or sexual abuse in their lifetime. Based on chart documentation, childhood victimization was most often perpetrated by parents, and adult victimization most often by intimate partners. Additionally, one in four noted that someone they lived with as a child had problematic substance use or that their parents had separated or divorced (23%).

SUMMARY

Women who died of drug toxicity in Fraser Health have a different profile than men, and our findings are consistent with the literature on women who use drugs.

While most women were Caucasian, Indigenous women were overrepresented in our data. This is consistent with recent data from the First Nations Health Authority (31) showing that nearly 13% of overdose fatalities in British Columbia are among Status First Nations persons.

Stimulants – especially cocaine – were the drug of choice for the largest proportion of women, followed by opioids and alcohol. Where documented, inhalation was the preferred mode of consumption, consistent with recent information from people who use harm reduction services in Fraser Health (32). Most women's charts included documentation suggesting concurrent mental health and substance use-related diagnoses. Many women experienced multiple significant stressors, including financial concerns, housing instability or homelessness, and health concerns including chronic pain and hepatitis C.

Many of these women had complex family histories, including childhood victimization by parents; parents or siblings with substance use and/or mental health conditions; and victimization in adolescence or adulthood by intimate partners. Despite these complex histories, parents and other family members were women's most common supports. In addition, many of these women had a number of recent stressors, including financial, housing, and health concerns. Most women had children and many mothers had contact with the Ministry of Child and Family Development regarding their children.

Recommendations:

- In the 2016 Census of Canada, 3.7% of Fraser Health residents reported Indigenous origins; however, at least 10% of female decedents were Indigenous. As self-identified ethnicity and Indigenous identity are not routinely collected in administrative health data, the ethno-cultural profile of people experiencing drug toxicity has not yet been fully described. Fraser Health will work towards enhancing person-level information on social determinants of health. This includes expanding opportunities for patients to self-identify their ethno-cultural, marital, and employment status. This information is critical to identifying and acting to reduce health inequalities.
- Ensure that health care practitioners understand whether, when, and under what circumstances to make referrals to the Ministry of Child and Family Development:
 - Duty to report guidelines pertain to living children and do not extend to a fetus. Health care providers are encouraged to remember that sharing information about a pregnant person without their consent is a breach of confidentiality (33).
 - There is no obligation to report a pregnant person who uses substances to the Ministry of Child and Family Development (33).
 - Professionals have legal obligations under the Child and Family and Community Service Act; however, parental substance use – in the absence of other risks – is not grounds for child apprehension or referral to the Ministry of Child and Family Development (33).

- The BC Centre on Substance Use should promote awareness of clinical guidance documents for management of opioid use disorder in pregnancy (33) and among youth (26).
- In light of the high rates of HCV infection among women in our review, Fraser Health and partner agencies must continue to strive for British Columbia's target of 620 sterile needles per person who injects drugs per year. As a necessary complement, Fraser Health will continue to implement its Regional Community Sharps Management Strategy to ensure safe sharps disposal options are available in all communities.
- Enhance community knowledge of existing Fraser Health support services, including the Crisis Line and supports for families and caregivers (18).
- Increase availability of services that are culturally acceptable, trauma-informed, and free of discrimination for people who use drugs and their loved ones, including partners, parents, friends, and children. Promotion should be inclusive of harm reduction approaches and services.
- In light of the prevalence of drug inhalation in Fraser Health, demand for witnessed smoking spaces should be assessed when expanding Overdose Prevention Sites.
- We call upon the Ministry of Health to fund the full complement of sterile inhalation supplies, inclusive of foil, glass straight pipes, and glass bowl pipes. These harm reduction measures can help prevent transmission of infections like tuberculosis, and increase opportunities for connection with a broader group of people who use drugs, including those who are newer to substance use and may not be aware of overdose risk related to inhalation.

LIMITATIONS:

- There were 238 illicit drug toxicity deaths in Fraser Health among persons in any of our focus populations during the review period, of which 105 are included in these analyses. People without Personal Health Numbers or without detailed notes from recent encounters at Fraser Health hospitals were not part of this review. People who did not present for services may be substantially different from those who did.
- Physician and social worker documentation was the primary source for information gathered on family status, employment, ethnic origins, personal and family history, and health challenges. This kind of information is not always disclosed to health professionals, and may be more often disclosed by women compared with men. While the information presented here is likely incomplete, these estimates provide valuable information about people who have experienced drug toxicity death.
- Our focus populations are written up separately, but 20 of the 105 decedents met criteria for two groups (12 South Asian Men and young adult; eight young adult and women).

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This report was prepared by:

Scally Chu, Information & Data Analyst –
Population Health Observatory, Fraser Health

Brooke Kinniburgh, Epidemiologist –
Population Health Observatory, Fraser Health

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Amrit Atwal, Project Director –
Regional Opioid Overdose Response, Fraser Health

Dr. Aamir Bharmal, Medical Health Officer –
Fraser Health

Chris Buchner, Director Clinical Operations –
Population Health, Fraser Health

Rahul Chhokar, Manager – Population Health
Observatory, Fraser Health

Scally Chu, Information & Data Analyst –
Population Health Observatory, Fraser Health

Erin Gibson, Harm Reduction Coordinator –
Population Health, Fraser Health

Allison Hamilton, Director of Practice,
Ministry of Child and Family Development

Carolyn Harrison, Research Nurse –
Population Health Observatory, Fraser Health

Sonya Ishiguro, Project Leader –
Regional Opioid Overdose Response, Fraser Health

Brooke Kinniburgh, Epidemiologist –
Population Health Observatory, Fraser Health

Katherine Moriarty, Harm Reduction Coordinator –
Population Health, Fraser Health

Carolyn Neufeld, Executive Director –
Aboriginal Health, Fraser Health

Dr. Nitasha Puri, Roshni Clinic, Fraser Health

Lianne Radmore, Harm Reduction Coordinator –
Population Health, Fraser Health

Erica Thomson, Peer Coordinator –
Population Health, Fraser Health

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Lori van der Gugten, Research Nurse –
Population Health Observatory, Fraser Health

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Addictions, Fraser Health

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