CAMP STUDY REPORT 2019-2020

YOUTH SUBSTANCE USE PRIOR TO PSYCHIATRIC HOSPITALIZATION

Detailed findings from the <u>C</u>annabis, <u>A</u>lcohol, <u>M</u>ental Health and <u>P</u>atterns of Service Use (CAMP) Study

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McMaster Children's Hospital CHILD AND YOUTH MENTAL HEALTH PROGRAM

McMaster University HEALTH RESEARCH METHODS, EVIDENCE, AND IMPACT

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YOUTH COMPONENT
Detailed Findings

Brief Overview of Purpose & Methodology

The Cannabis, Alcohol, Mental health and Patterns of service use (CAMP) study was a pilot feasibility study to determine the feasibility of assessing substance use among youth admitted to an inpatient psychiatric unit using electronic self-report methods, integrating this with hospital administrative data, and examining the clinical relevance of this data.

Inclusion Criteria:

- Admitted the hospital for mental health concerns
- 12-17 years of age
- Safely & cognitively able to participate
- NO parental consent required
- NO substance use needed to participate

3 Youth Study Components:

6 months later

1. Electronic assessment in hospital

2. Electronic assessment at home

3. Data from Chart and Health Records

Brief summary of data collected under each study component

Electronic Assessment	Chart Review from Admission	Visit history data
1) Demographics 2) Substance Use 3) Mental Health Symptomatology 4) Service Utilization	• **Safety indicators** including harm to self, harm to others, and property damage • **Diagnostic indicators** including most responsible discharge diagnosis and all discharge diagnoses	Number of mental health and substance related emergency department (ED) and psychiatric inpatient admissions **3 years prior to index admission, 6 months prior to index admission, and 6 months following baseline.**

Psychiatric Unit Context

The site for data collection was an acute mental health inpatient unit, admitting patients for crisis stabilization, psychiatric assessment, diagnostic clarification and treatment planning. The site was <u>not</u> a designated concurrent disorders unit or program providing substance use treatment and/or withdrawal management interventions.

This report will provide detailed descriptive sample findings regarding:

- Prevalence, types, & patterns of use

- Substance use & clinical *severity*

- Substance use & clinical *complexity*

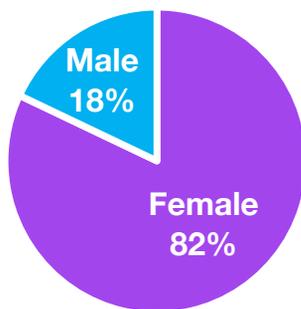- Substance use & health *service use*

Youth Sample Demographics
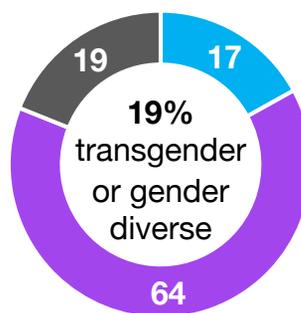
100 youth were included

- Admitted to the hospital for mental health concerns between September and November 2019
- The average length of stay was ~8 days
- 13-17 years of age (mean 15.4 years of age)
- Safely & cognitively able to participate
- 72% White/Caucasian
- 91% have lived in Canada their entire lives
- 25% had 1 or 2 parents born outside of Canada
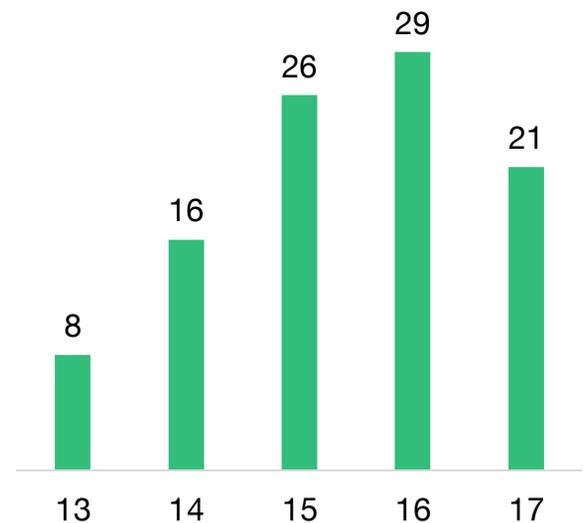
78% **response rate**

Age

			29	
		26		21
	16			
8				
13	14	15	16	17

Biological sex

Male 18%

Female 82%

Gender

19

17

19% transgender or gender diverse

64

Categories of disorders	Most Responsible Discharge Diagnosis (each youth has 1)	Diagnoses in Discharge Summary (each youth can have multiple)
Depressive related disorders	29%	43%
Anxiety and OCD related disorders	22%	64%
Stress and Trauma related disorders	21%	31%
Borderline personality disorder, Cluster B, and emotion dysregulation	5%	41%
ADHD and other neurodevelopmental disorders	5%	20%
Other	17% (no youth had a primary Substance Use Disorder)	17% problems with family relations 12% Eating Disorders 10% Substance Use Disorders 14% Other

**only 99 youth consented to chart reviews, thus n=99 for chart/admin data

Overview of Prevalence of Substance Use

■ lifetime ■ past 3 months

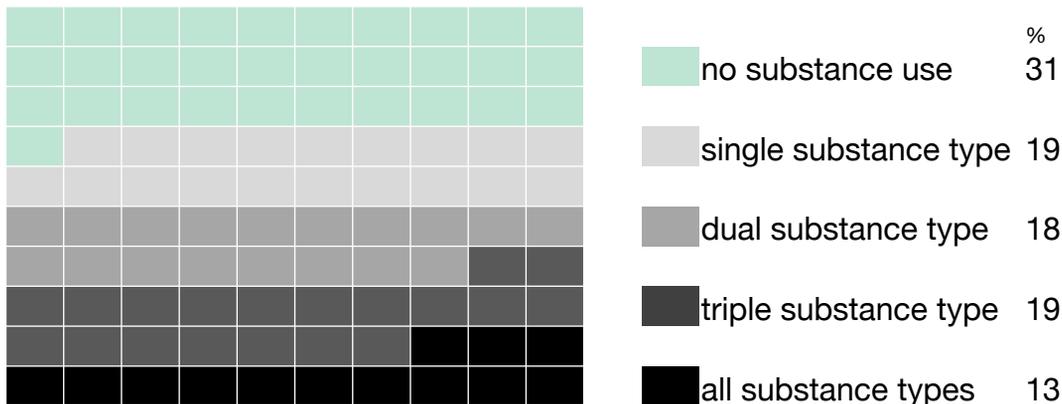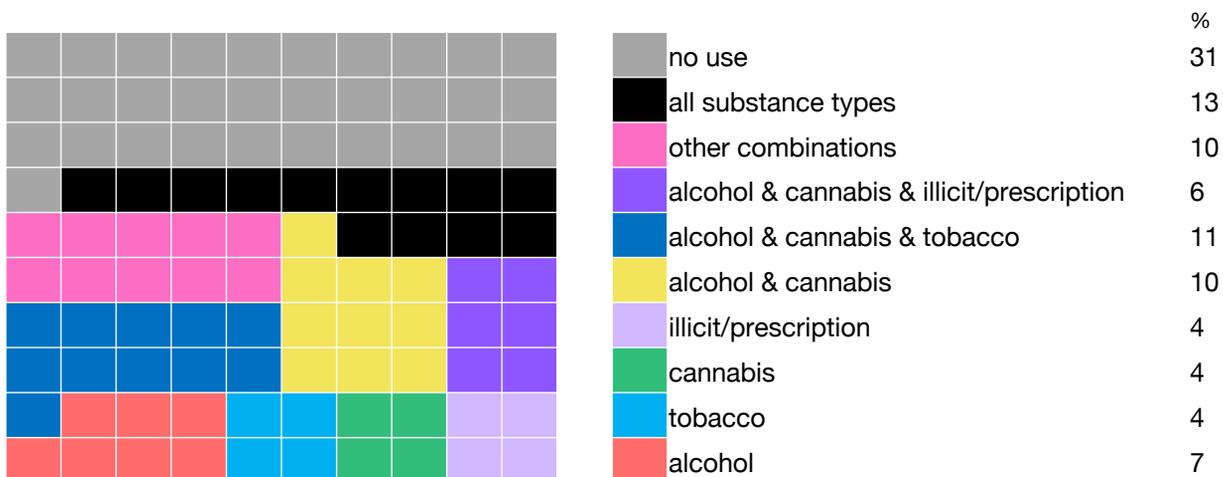| Substance	lifetime	past 3 months
Alcohol	73	51
Cannabis	66	50
Tobacco	47	33
E-cigarettes	42	34
Prescription Opioids	22	18
Sedatives	22	14
Prescription Stimulants	21	11
Cocaine	18	8
Hallucinogens	22	14
Solvents	10	4
Any substance use		69
Any alcohol, cannabis, or tobacco		66
Any prescription drug use		24
Any illicit substance use		17
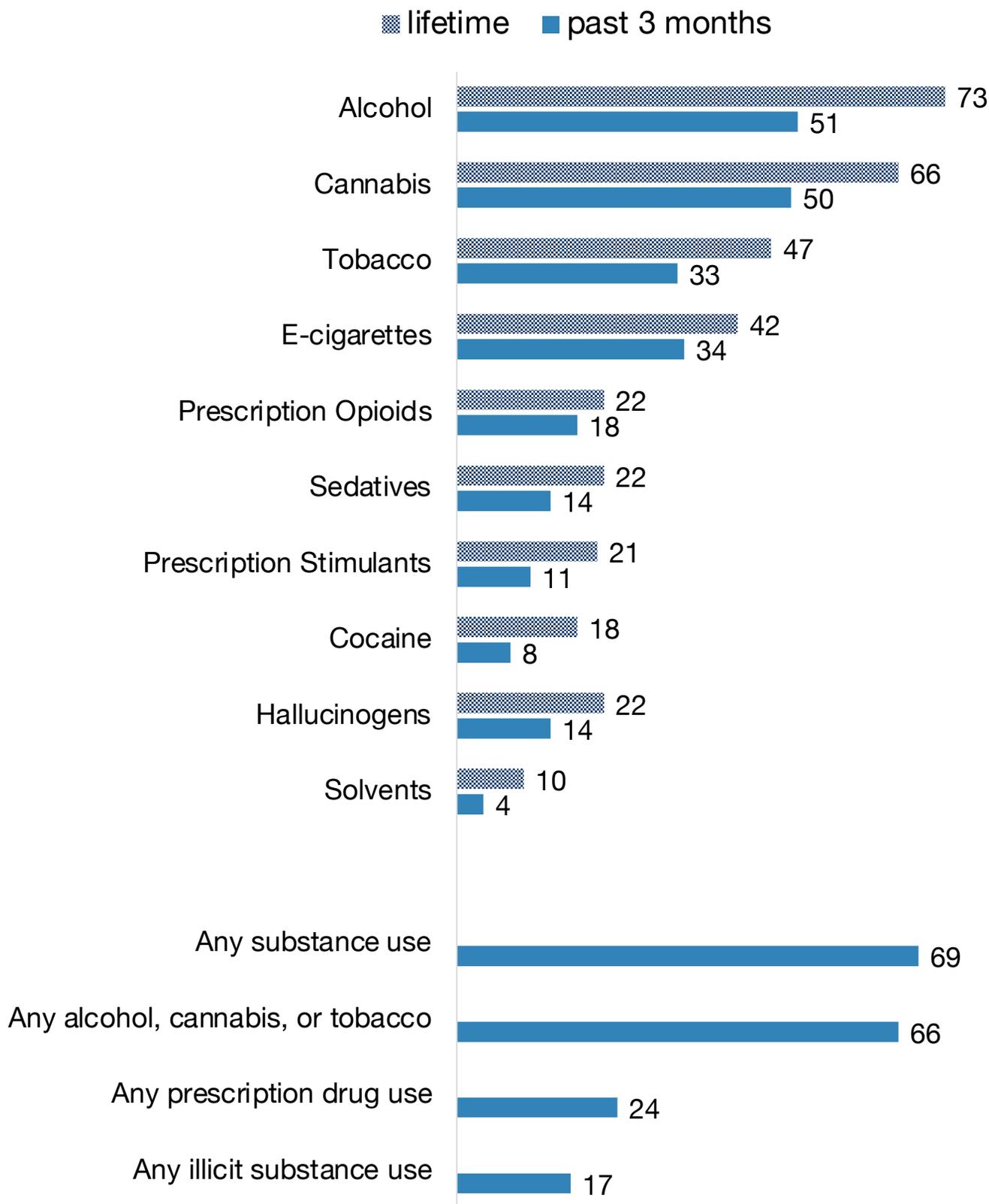
Overview of Patterns of Substance Use

In the 3 months prior to admission, of the youth endorsing any use (n=69):

- Most youth (72%) were using **more than one substance** prior to admission
- The most common patterns of substance use, categorized into alcohol, cannabis, tobacco, and other illicit/prescription drugs were:
    1. **All substance types (19%)**
    2. **Alcohol, cannabis, and tobacco (16%)**
    3. **Alcohol & cannabis (14%)**
- Youth also commonly engaged in **co-use** of substances whereby 60% (n=24) of youth that used both alcohol and cannabis in the 3 months prior to their admission used the substances at the same time and 63% (n=25) of youth using both cannabis and tobacco reported using at the same time.

Overall prevalence of <u>multiple</u> substance use 3 months before admission

	%
no substance use	31
single substance type	19
dual substance type	18
triple substance type	19
all substance types	13

Overall prevalence of substance use <u>patterns</u> 3 months before admission

	%
no use	31
all substance types	13
other combinations	10
alcohol & cannabis & illicit/prescription	6
alcohol & cannabis & tobacco	11
alcohol & cannabis	10
illicit/prescription	4
cannabis	4
tobacco	4
alcohol	7

Cannabis

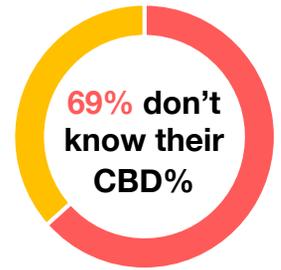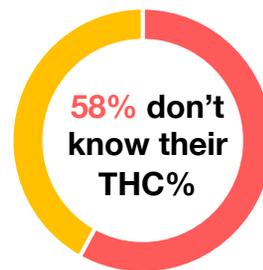## A. Prevalence and frequency of cannabis use

- More than half (66%) had used cannabis at some point in their life

- The average age of initiation was **13.3**

- 45% had used cannabis in the month prior to their admission

- **18% used daily with 15% using more than once a day**

- 11% reported using cannabis for medical purposes but only 1 person reported receiving medical authorization.

Lifetime 66 | Past 3 months 50 | Past month 45

Past month frequency of cannabis

- about 1-3 times a month: 15 (33%)
- 1 to 2 days per week: 3 (7%)
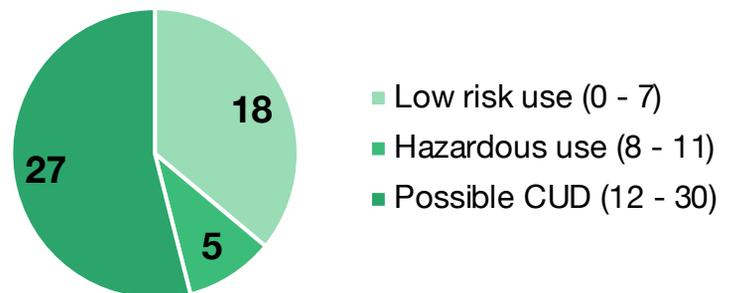- 3 to 6 days per week: 9 20%)
- daily: 18 (40%)
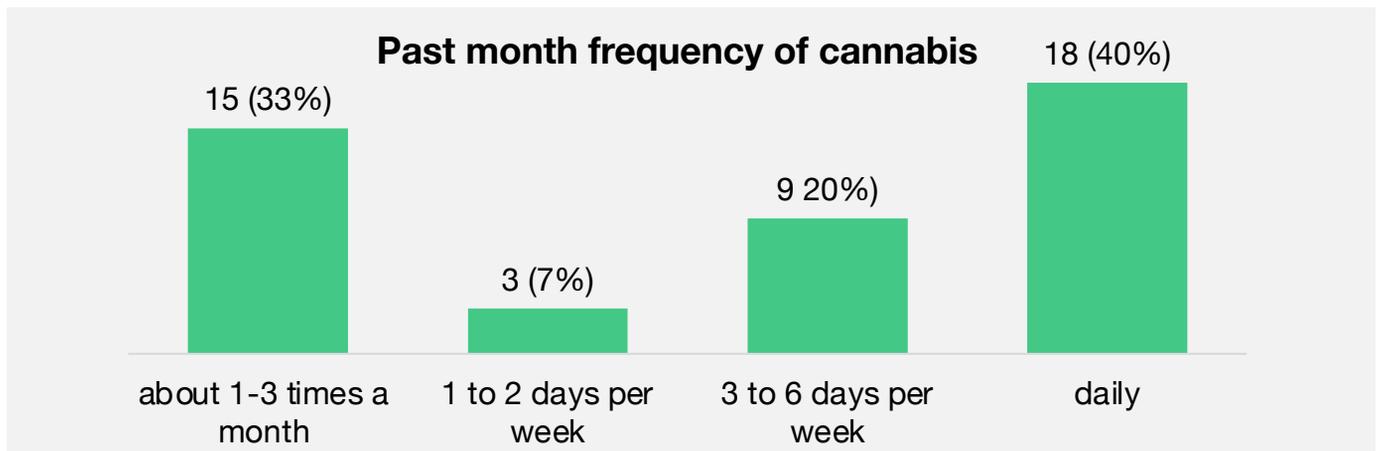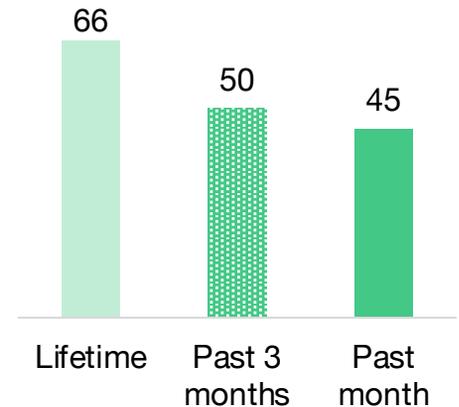
B. Types and characteristics of cannabis use

- Most youth did not know their THC/CBD%

- On average, youth were using 1.23 grams per use day (Minimum 0.125 maximum 4)

- 32 (64%) had scores of >= 8 on the Cannabis Use Disorder Identification Test (CUDIT-R) indicating hazardous levels of use

- More than half (55%; n=25) of youth using cannabis in the past month reported using cannabis **alone** half of the time or more

- Over three quarter (78%; n=35) of youth reported using to cope most of the time or all the time

- 14 (31%) reported spending $0 on their typical weekly/monthly cannabis
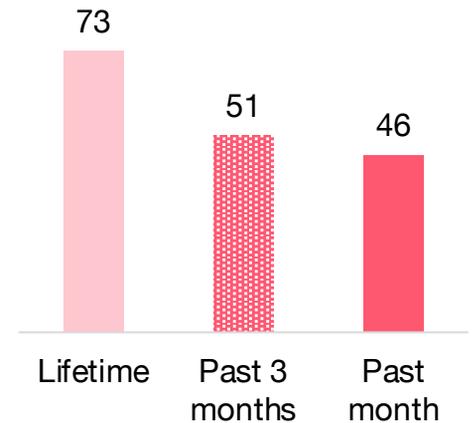
Median 20-24% THC
Median 2-4% CBD

58% don't know their THC%

69% don't know their CBD%

Baseline CUDIT Scores

18 | 27 | 5

- Low risk use (0 - 7)
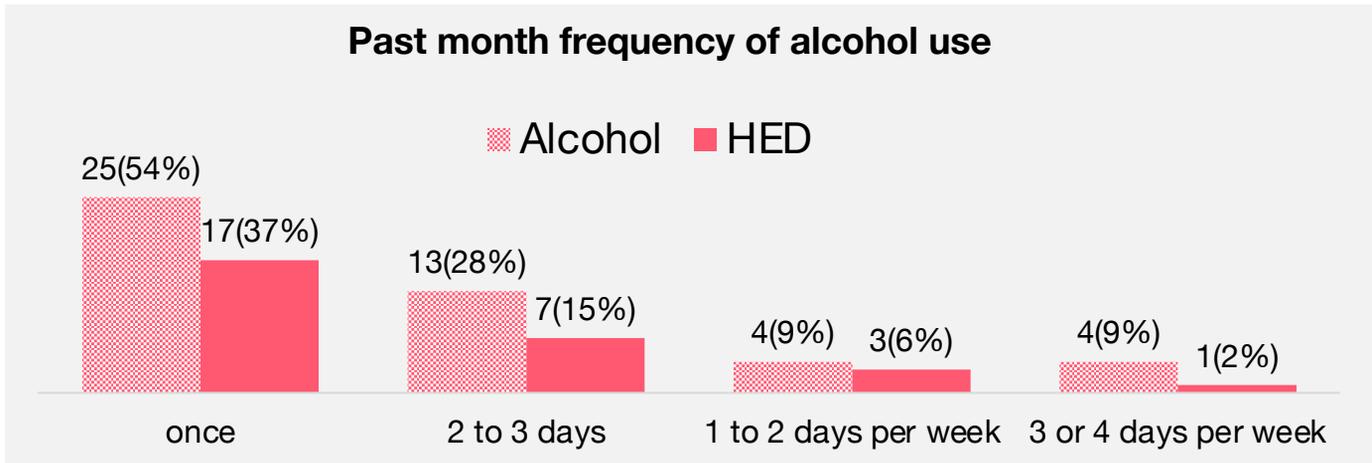- Hazardous use (8 - 11)
- Possible CUD (12 - 30)

Alcohol

A. Prevalence and frequency of alcohol use

- Almost three quarters (73%) had drank alcohol at some point in their life

- 46% had used alcohol in the month prior to their admission

- **29 (63%) engaged in heavy episodic drinking ("binge" drinking) in the month prior to admission**

- 8% were drinking once a week or more

Past month frequency of alcohol use

Alcohol   HED

25(54%) 17(37%) once
13(28%) 7(15%) 2 to 3 days
4(9%) 3(6%) 1 to 2 days per week
4(9%) 1(2%) 3 or 4 days per week

B. Types and characteristics of alcohol use

- 23 (47%) had scores of >= 8 on the Alcohol Use Disorder Identification Test (AUDIT) indicating hazardous levels of use

- Almost 1/4 (24%; n=11) of youth drinking alcohol in the past month reported using alcohol **alone** half of the time or more

- Over 2/3rds (65%; n=30) of youth reported using to cope most of the time or all the time

Baseline AUDIT Scores

- Low risk (0 - 7)
- Risky use (8 - 15)
- Harmful use (16 - 19)
- High risk of AUD (20 - 50)
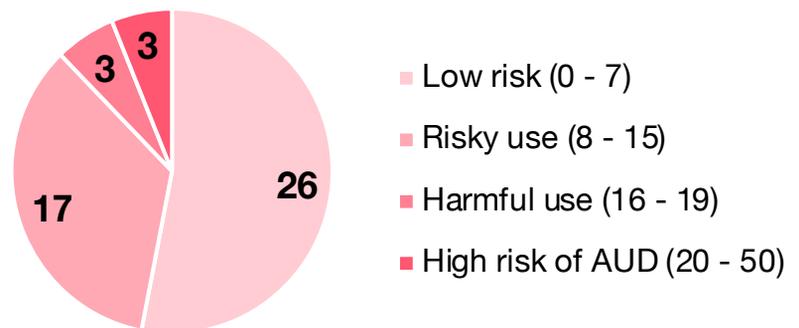
Tobacco Cigarettes and E-cigarettes

A. Prevalence and frequency of tobacco cigarettes and e-cigarettes

- Almost half (47%) had smoked tobacco cigarettes at some point in their life
- 26% had smoked in the month prior to their admission
- **14 (54%) who had smoked in the past month smoked daily**
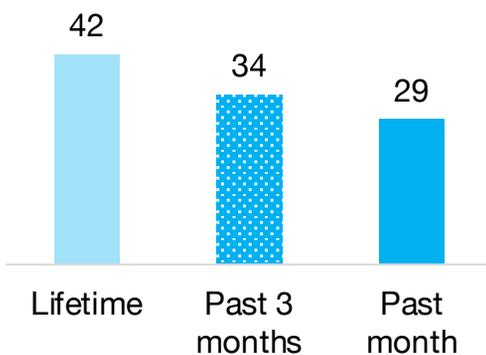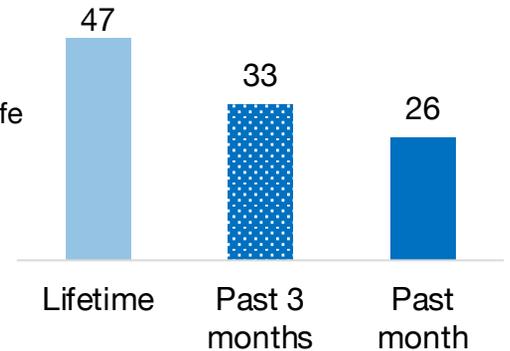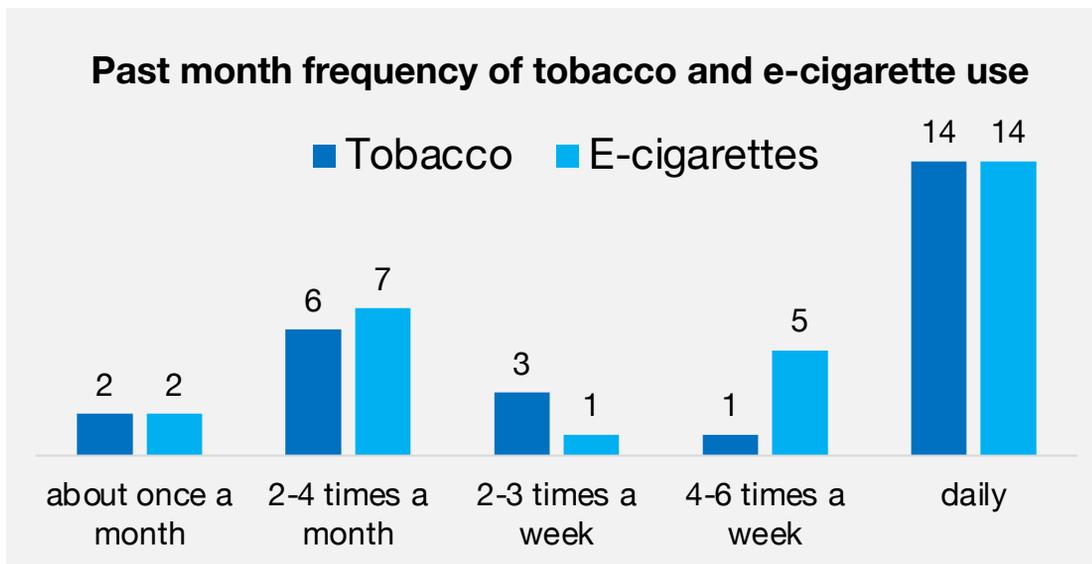
Tobacco cigarettes: Lifetime 47, Past 3 months 33, Past month 26

E-cigarettes: Lifetime 42, Past 3 months 34, Past month 29

- Over 2/5th (42%) had used e-cigarettes at some point in their life
- 29% had used e-cigarettes in the month prior to their admission
- **14 (48%) who had used e-cigarettes in the past month used daily**

Past month frequency of tobacco and e-cigarette use

Tobacco ▮ E-cigarettes ▮

	about once a month	2-4 times a month	2-3 times a week	4-6 times a week	daily
Tobacco	2	6	3	1	14
E-cigarettes	2	7	1	5	14

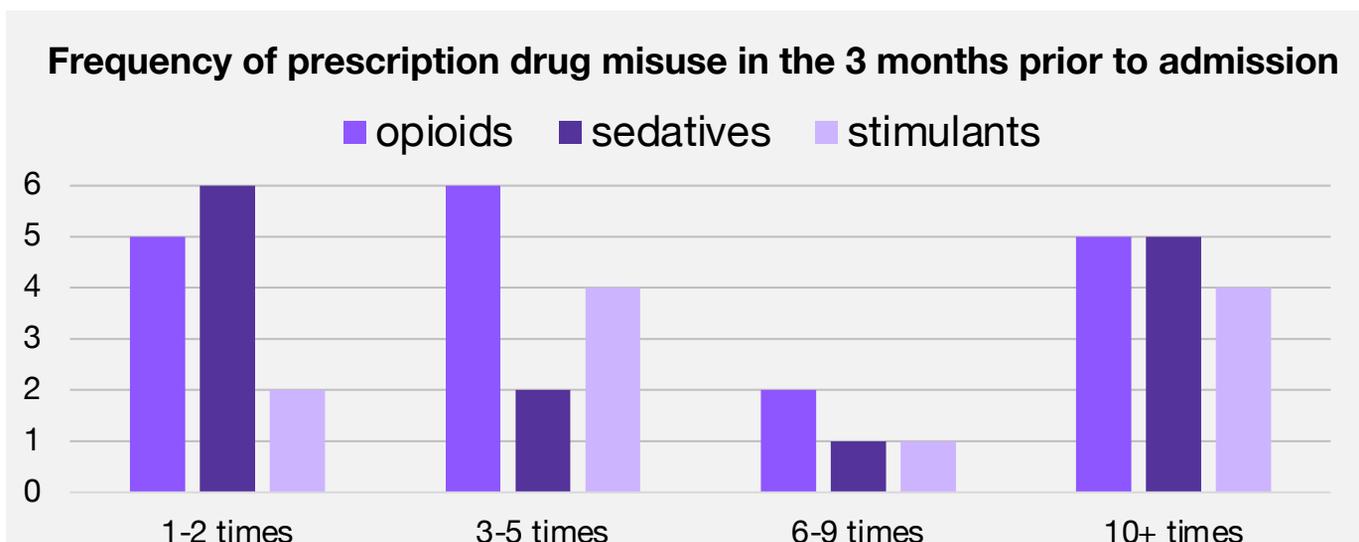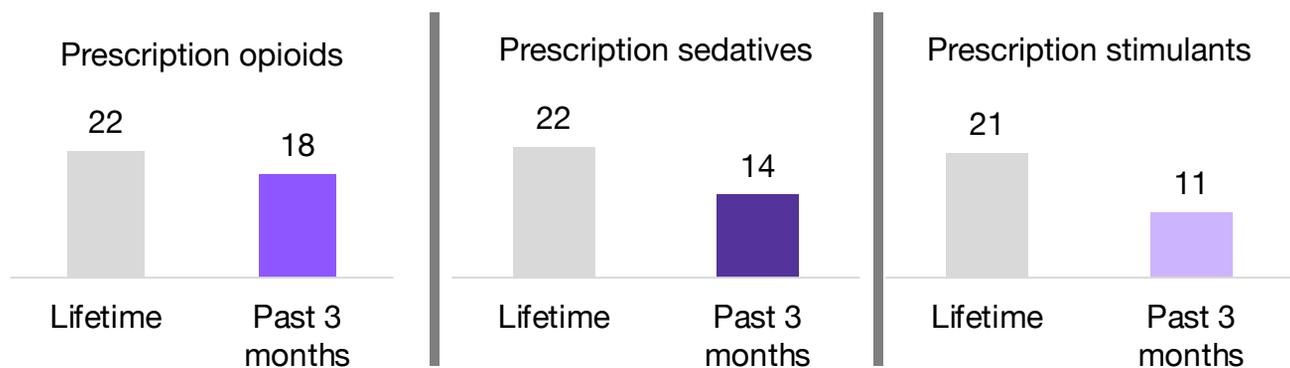## B. Types of e-cigarettes use

On the follow-up survey, a question was added about the type(s) of e-cigarettes used by the youth. Of the youth reporting past 3 months e-cigarette use at 6 months follow-up (n=19/49; 39%):

- Most used e-cigarettes with nicotine (n=15; 79%)
- Only about 1/3rd (n=6; 32%) used e-cigarettes with cannabis
- 2 youth were unsure what was in the e-cigarettes they used

Prescription Drug Misuse

Prevalence and frequency of prescription drug misuse

- 35% of youth endorsed misusing at least one prescription drug at one point in their lifetime

- **Almost 1/4th (24%) had engaged in prescription drug misuse in the 3 months prior to admission**
    - 18% reported prescription opioid misuse
    - 14% reported prescriptive sedative misuse
    - 11% reported prescription stimulant misuse

- 1/3rd (n=8; 33%) reported misusing <u>all three</u> prescription types measured in the 3 months prior to admission

- Although most youth reported engaging in prescription drug misuses at low frequencies, several youth did endorse using 10 or more time in the 3 months prior to admission.

Prescription opioids

22	18
Lifetime	Past 3 months

Prescription sedatives

22	14
Lifetime	Past 3 months

Prescription stimulants

21	11
Lifetime	Past 3 months

Frequency of prescription drug misuse in the 3 months prior to admission

■ opioids   ■ sedatives   ■ stimulants

	1-2 times	3-5 times	6-9 times	10+ times
opioids	5	6	2	5
sedatives	6	2	1	5
stimulants	2	4	1	4

Illicit and Other Drug Use

Prevalence and frequency of other drug use

- 34% of youth endorsed using at least one other drug at one point in their lifetime

- **Almost 1/5th (17%) had used at least one other substance in the 3 months prior to admission**
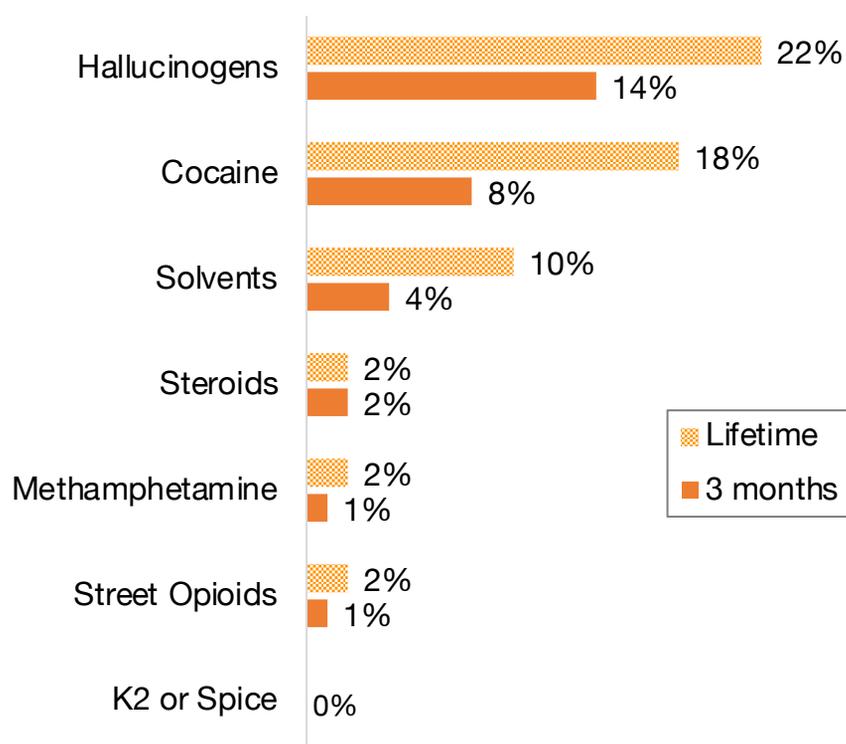
- Most reported using 1 (n=8; 47%) or 2 (n=7; 41%) of these substances prior to admission.

- Although most youth reported engaging in other drug use at low frequencies, several youth did endorse using hallucinogens, cocaine, and solvents 10 or more time in the 3 months prior to admission.

Frequency of other drug use in the 3 months prior to admission						
	Hallucinogens (n=14)	**Cocaine** (n=8)	**Solvents** (n=4)	**Steroids** (n=2)	**Meth** (n=1)	**Street opioids** (n=1)
1 or 2 times	5	4	0	2	1	1
3 to 5 times	5	1	2	0	0	0
6 to 9 times	2	0	0	0	0	0
10 or more times	2	3	2	0	0	0

Substance Reported in Clinical Notes

Substance use prevalence available in electronic medical record compared to youth report

- There were **discrepancies** between what youth indicated their use to be on the self-reported questionnaire and the prevalence of substance use charted by clinical staff in the electronic medical record (EMR). The biggest discrepancies in prevalence were found in nursing admission assessments.

- To note, there are no **current standardized guidelines** regarding the timeline to ask youth about when inquiring about substances and prompts with substance examples are limited for other drugs.

- Thus, discrepancies could be due to differential reporting by the youth, but it is more likely that **discrepancies are due to differences in timelines and specific questions** asked in the survey compared to clinical assessments (for example, the survey provides examples of each substance type).

	Cannabis	Alcohol	Cigarette	E-cigarette	Other
Nursing Admission Assessment					
No information documented	13	9	14	13	13
No substance use	58	56	76	80	74
Any substance use	28	34	9	6	12
Initial Psychiatry Assessment					
No information documented	10	10	10	10	12
No substance use	40	48	73	76	65
Any substance use	49	41	16	13	22
Discharge Documentation					
No information documented	44	49	48	47	48
No substance use	24	32	43	46	39
Any substance use	31	18	8	6	12
Youth reported in the CAMP Survey					
Past 3 months	**45**	**46**	**33**	**34**	**28**

Substance Use & Severity (index)

Correlations between substance use & self reported mental health symptomatology

In general…

1. **Externalizing symptoms** (ODD & CD) were associated with higher frequencies of substance use across all substance types, using alcohol for coping purposes, and Alcohol Use Disorder Identification Test (AUDIT) scores.

2. **Internalizing symptoms** (SP, GAD, MDE, K6) were associated with prescription drug misuse and using alcohol and cannabis for coping purposes.

Empty cells= not statistically significant at p<0.05
+= small sized correlations = τb from 0.1 to <0.3
++= moderate sized correlations = τb from 0.3 to <0.5

|	SP	GAD	MDE	K6	ADHD	ODD	CD	Psy
Frequency of…								
Cannabis						+	++	
Alcohol						+	+	
Tobacco					+	++	++	
E-cigarettes						+	++	
Prescription	+	+	+	+	+	+	++	
Illicit			+		+	+	++	
Coping motives for…								
Cannabis	+	++		++				
Alcohol		++	+	+	++	++	++	
Substance use disorder scores for…								
Cannabis								
Alcohol					+	++	++	++
Frequency using alone…								
Cannabis								
Alcohol				++				++

SP=social phobia; GAD=Generalized Anxiety Disorder; MDE= Major Depressive Episode; K6=Psychological Distress; ADHD=Attention Deficit Hyperactive Disorder; ODD=Oppositional Defiant Disorder; CD=Conduct Disorder; Psy=Psychosis

Substance Use & Severity

Correlations between substance use & clinician documented harm to self or others

Suicidal ideation, plan, or attempts ●————————————————○

Suicidal ideation, plan, or attempts was correlated with tobacco cigarette use $\tau b=0.23$ (p=0.011) but was not association with any other substance.

Pie chart:
- Suicide Attempt 37%
- None or Passive ideation 23%
- Suicide Plan 40%
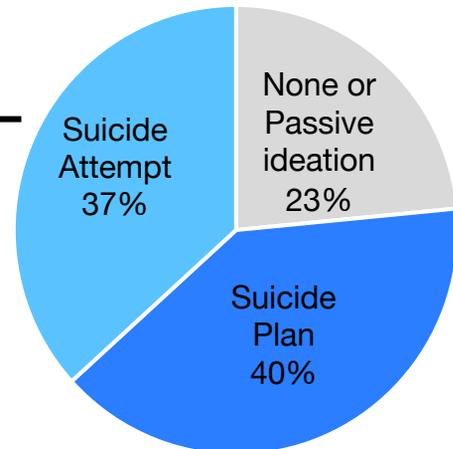
Non-Suicidal Self Injury ●————————————————○

Non-suicidal self injury was not significantly related to any substance use frequency.

Pie chart:
- None 18%
- Previous 20%
- Current 62%
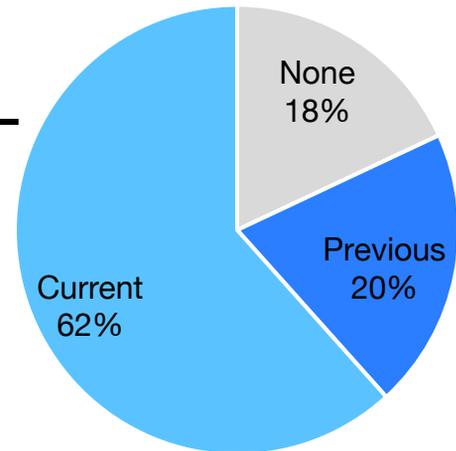
Aggressive threats and behaviours ●————————————————○

Aggressive threats and behaviours were correlated with:
- Cannabis use $\tau b=0.23$ (p=0.016)
- Alcohol use $\tau b=0.21$ (p=0.025)
- Tobacco use $\tau b=0.32$ (p=0.001)
- Prescription drug misuse $\tau b=0.26$ (p=0.009)
- Illicit drug use $\tau b=0.28$ (p=0.005)
- AUDIT scores $\tau b=0.28$ (p=0.022)

Pie chart:
- Harm to property or others 33%
- None 53%
- Threats 14%
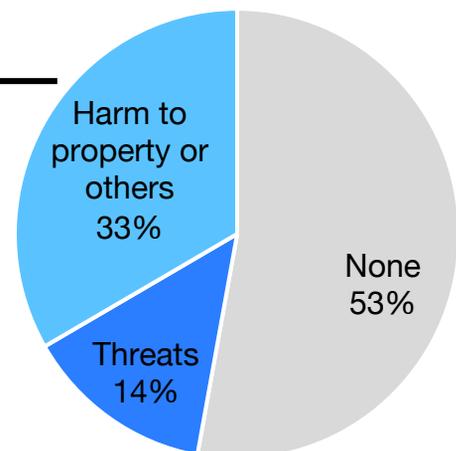
Substance Use & Complexity

Correlations between substance use & number of youth-reported disorders.

Frequency and types of substance use were correlated with higher numbers of psychiatric disorders reported by youth.

Unique categories as per youth-reports:
- ❑ GAD (internalizing)
- ❑ SP (internalizing)
- ❑ MDE (internalizing)
- ❑ ADHD (externalizing)
- ❑ ODD (externalizing)
- ❑ CD (externalizing)

Correlations between substance use & number of physician-reported disorders.

Frequency of prescription and illicit drug misuse and alcohol coping motives and alcohol use disorder symptoms were related to higher numbers of psychiatrist discharge diagnoses.

Unique discharge diagnostic categories:
- ❑ Depressive related
- ❑ Anxiety and OCD related
- ❑ Cluster B/BPD related
- ❑ Trauma and stressor related
- ❑ ADHD & neurodevelopmental
- ❑ Eating Disorders
- ❑ Problems with family relations
- ❑ Substance Use Disorders
- ❑ Other

	Youth Report (exceeding population derived diagnostic thresholds)				Psychiatrist Discharge Diagnoses	
	# total disorders	# INT disorders	# EXT disorders	At least one INT and one EXT disorder	# total disorders	# categories of disorders
Frequency of using…						
Cannabis	+		+	+		
Alcohol	+		+			
Tobacco	+		++	++		
E-cigarettes	+		++	+		
Prescription	++	++	+	++	+	+
Illicit	++	+	++	+		+
Coping Motives for…						
Cannabis	+	++		++		++
Alcohol	++		++	+++	++	+++
Substance use disorder scores for….						
Cannabis						
Alcohol	++		++	++		++

Frequency of using alone not correlated with complexity.

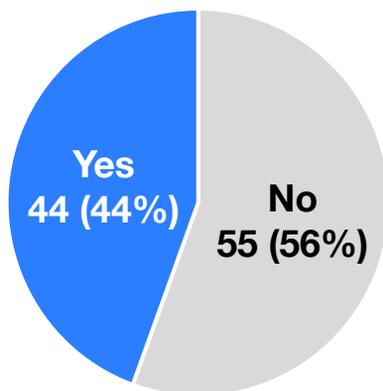+= small sized correlations = r from 0.1 to <0.3; ++= moderate sized correlations = r from 0.3 to <0.5, +++= large >0.5
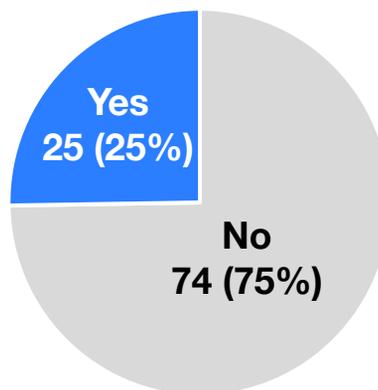
Substance Use & Hospital Contacts

Proportion of youth with any mental health or substance use related
Emergency Department (ED) visit(s)
prior to and after the CAMP index admission

- ED estimates combined general ED and psychiatric ED (i.e., Mental Health Assessment Unit) visits
- The 6-month follow-up period overlapped with the beginning of the first COVID19 wave/lockdown in the area. Thus, these estimates are likely underestimated compared to usual conditions.
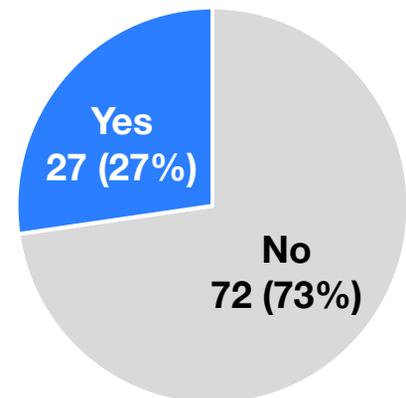
3 years prior

Yes 44 (44%) / No 55 (56%)

6 months prior

Yes 25 (25%) / No 74 (75%)

6 months post

Yes 27 (27%) / No 72 (73%)

45 youth in the CAMP sample were **directly admitted** to the unit, thus not going through the local ED prior to admission. These youth may have been from a different city and not reflected in previous and follow-up ED statistics, underestimating the true prevalence.

Looking only at the youth who **went through ED upon their CAMP index admission** (n=54), estimates are higher:

- **59%** (n=32) ED visit in **3 years *prior*** to index
- **37%** (n=20) ED visit in **6 months *prior*** to index
- **41%** (n=22) ED **6 months *post*** index

After accounting for whether the youth was directly admitted or went through ED:

- Frequency of **e-cigarette use** and using **alcohol alone** were related to a higher odds of re-presenting to ED within 6 months

- Using **cannabis alone** was related to a higher odds of having an ED visit in the 3 years and 6 months prior to index

- Frequency of **prescription drug** misuse was related to a higher odd of having an ED visit in the 3 years prior to index

Substance Use & Hospital Contacts

Proportion of youth with any mental health or substance use related
Psychiatric Inpatient Admission(s)
prior to and after the CAMP index admission

- These estimates combined admissions to the Child & Youth Mental Health unit (including those admitted but remaining in Psychiatric ED) and the Eating Disorder unit.
- The 6-month follow-up period overlapped with the beginning of the first COVID19 wave/lockdown in the area. Thus, these estimates are likely underestimated compared to usual conditions.
- Proportions were similar for youth who were directly admitted or went through ED on index.
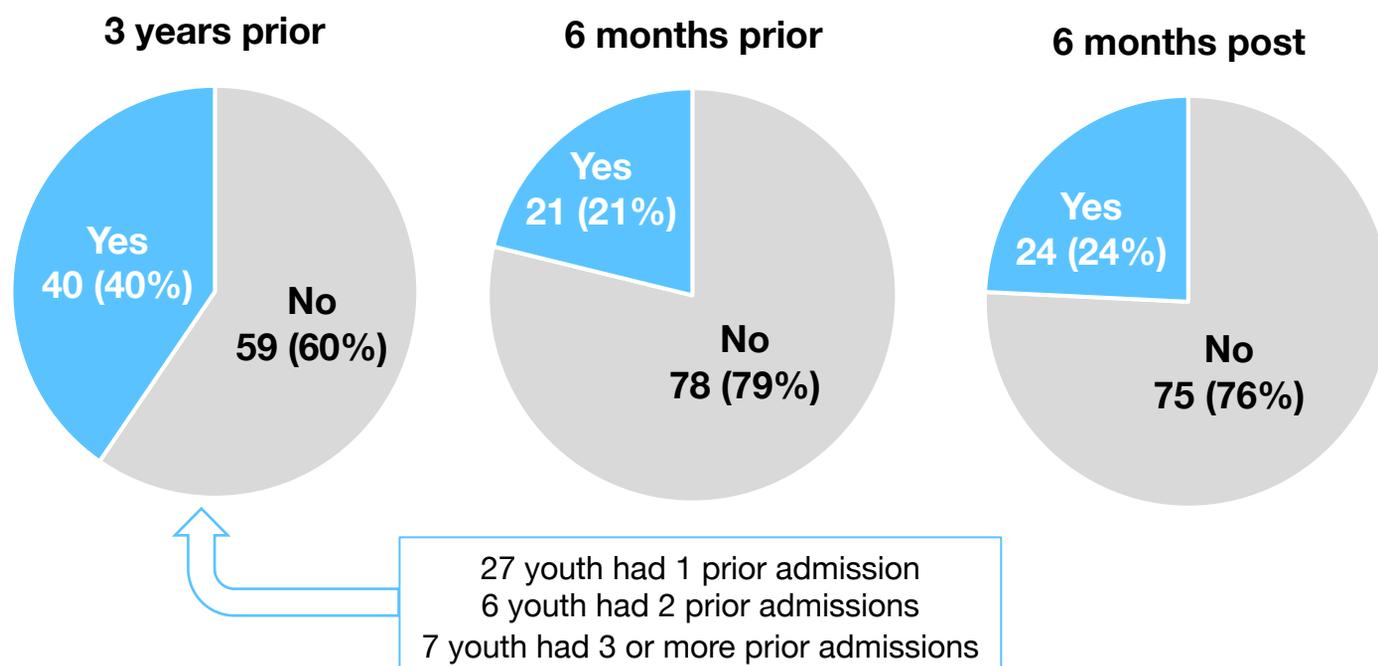
3 years prior	6 months prior	6 months post

Yes 40 (40%) / No 59 (60%)

Yes 21 (21%) / No 78 (79%)

Yes 24 (24%) / No 75 (76%)

27 youth had 1 prior admission
6 youth had 2 prior admissions
7 youth had 3 or more prior admissions

After accounting for whether the youth was directly admitted or went through ED:

- Frequency of **all substances** (i.e., alcohol, cannabis, tobacco, e-cigarettes, prescription drugs, and other drugs) were related to a higher odds of having an inpatient admission in the 3 years prior

- Using **alcohol alone** was related to a higher odds having a prior inpatient admission in the past 3 years and 6 months

Correlations between substance use & Self-reported mental health symptomatology at follow-up

- Youth who used substances prior to index admission had significantly higher self-reported psychiatric symptoms at 6-month follow-up, after accounting for the severity of their symptoms at index.

- Patterns emerged in 6-month follow-up symptoms for youth who increased, decreased, or kept their use the same at follow-up. Youth who increased use tended to have more symptoms while those who decreased (alcohol and cannabis) had lower symptoms. However, most of these results were not significant and sample size was small.

	Follow-up Internalizing Symptoms		Follow-up Externalizing Symptoms		Follow-up Total symptoms	
Baseline Cannabis	1.9*	2.2**	0.89	1.1	2.4*	3.8*
Increased (n=10)		0.5		2.9		3.9
Decreased (n=8)		-3.0		-2.4		-5.0
Baseline Alcohol	1.3	1.6	0.8	1.5	2.5	3.6*
Increased (n=13)		0.1		-0.6		-0.9
Decreased (n=15)		-1.9		-3.0		-5.8
Baseline Cigarettes	2.2**	1.7	1.9	1.7	4.6**	4.1*
Increased (n=7)		2.9		3.4		6.1
Decreased (n=9)		1.9		0.7		2.3
Baseline E-cigarettes	1.8*	1.9*	0.5	0.8	2.7	3.0*
Increased (n=11)		4.0		5.4*		10.4**
Decreased (n=8)		0.5		-0.4		1.5

INTERNALIZING=social phobia + Generalized Anxiety Disorder + Major Depressive Episode;
EXTERNALIZING=ADHD + Oppositional Defiant Disorder;+Conduct Disorder
TOTAL = INTERNALIZING + EXTERNALIZING
* Significant $p<0.05$; ** significant $p<0.01$

2

STAFF COMPONENT
Detailed Findings

Purpose & Staff Characteristics

Alongside policy changes, there has been a push to change clinicians' perspectives *from ruling in co-occurring mental health and substance use disorders to ruling out*. As such, Clinical Best Practice Guidelines suggest assessing for substance use prior to diagnosing mental illnesses and treating concurrently if co-presenting. Despite there being long-standing recommendations for assessing and addressing adolescent substance use in primary care and mental health settings, there remains a practice gap. Common barriers to addressing adolescent substance use include time constraints, lack of training, and uncertainty regarding interpreting and applying results of screening assessments. Importantly, **no specific guidelines exist for if and how to address youth substance use on inpatient psychiatric units**, which contextually are not built or funded to address the co-occurring nature of substance use and mental health crisis. As such, further research and stakeholder input are critical to inform guidelines and advocate for funding and system changes where it is most needed.

Little research has been done exploring the perceptions of frontline staff on inpatient youth mental health units regarding assessing and addressing substance use concerns. **Frontline staff represent a critical stakeholder group** as they have the most patient contact (as a group) compared to other allied health professionals in inpatient settings. As such, staff CAMP study survey was created informed by previous research[9-11] and in consultation with The CAMP Study Team, unit Management and Leadership, and senior frontline staff. The survey included 14 closed and open-ended questions on:

- confidence related to youth substance use
- if and how to assess and address substance use on the unit
- potential barriers and facilitators
- suggestions for training or education

Psychiatric Unit Context

The site for data collection was an acute mental health inpatient unit, admitting patients for crisis stabilization, psychiatric assessment, diagnostic clarification and treatment planning. The site was not a designated concurrent disorders unit or program providing substance use treatment and/or withdrawal management interventions. Although not a focus of the unit, there is recognition of the importance of substance use to the extent of assessment, and less so on treatment.

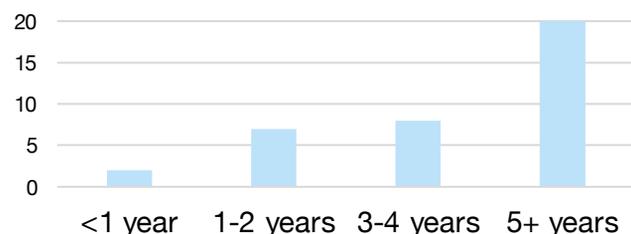## Staff Sample

The frontline staff on the Child and Youth Mental Health Inpatient unit included Registered Nurses (RNs) and Child and Youth Workers (CYWs). Thus, **all regular full time and part-time RNs and CYWs were invited to take part in the anonymous survey**.
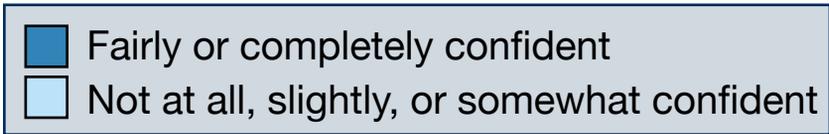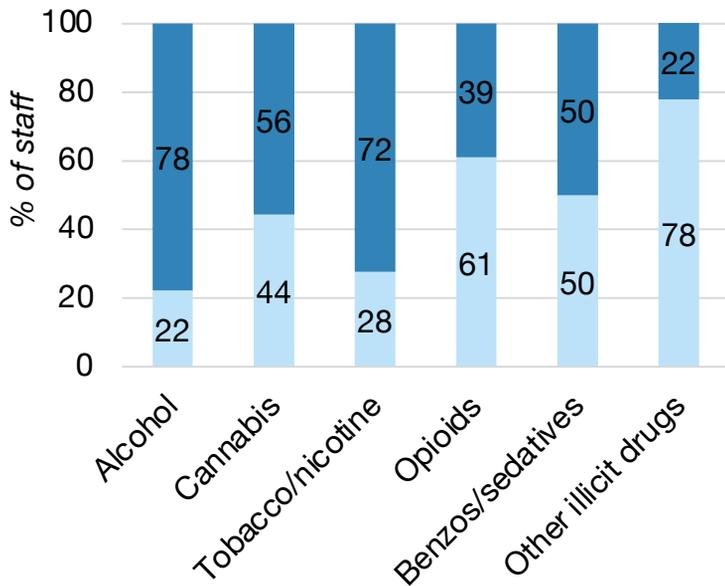
86% Response Rate (n=37/43)

- RNs
- CYWs

49%
51%
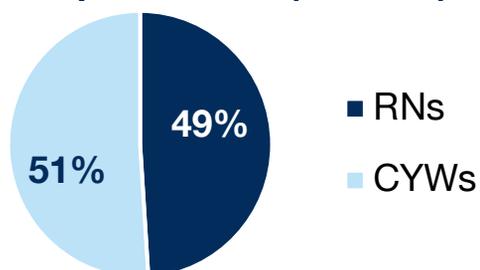
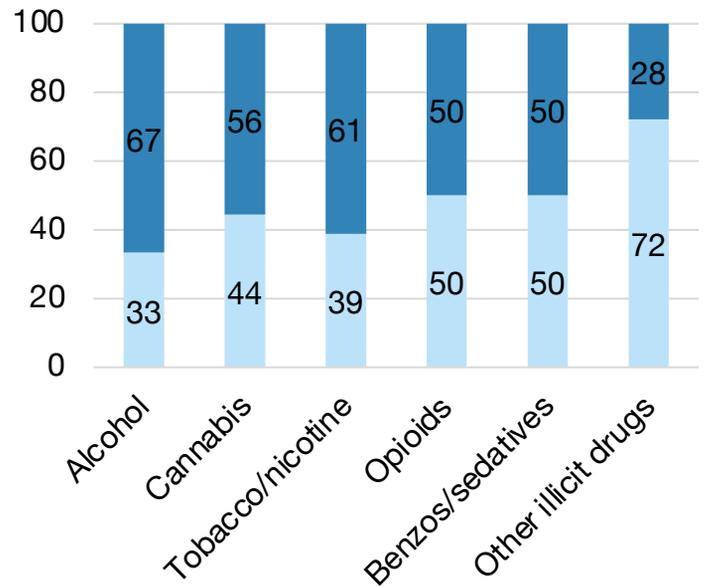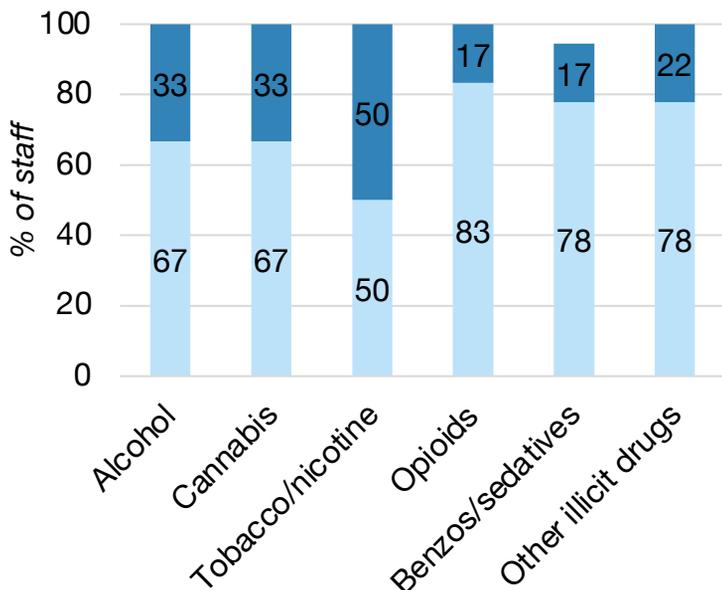Length of time working on the Child and Youth Mental Health Inpatient Unit

Confidence of RNs

Legend:
- Fairly or completely confident
- Not at all, slightly, or somewhat confident

"How confident are you in your knowledge of how these substances may impact youth on the unit?"

Substance	Fairly/completely confident	Not at all/slightly/somewhat
Alcohol	78	22
Cannabis	56	44
Tobacco/nicotine	72	28
Opioids	39	61
Benzos/sedatives	50	50
Other illicit drugs	22	78

"How confident are you in your ability to identify & respond to withdrawal symptoms for the following?"

Substance	Fairly/completely confident	Not at all/slightly/somewhat
Alcohol	67	33
Cannabis	56	44
Tobacco/nicotine	61	39
Opioids	50	50
Benzos/sedatives	50	50
Other illicit drugs	28	72

"How confident would you be in delivering brief psychoeducation on the following substances?"

Substance	Fairly/completely confident	Not at all/slightly/somewhat
Alcohol	33	67
Cannabis	33	67
Tobacco/nicotine	50	50
Opioids	17	83
Benzos/sedatives	17	78
Other illicit drugs	22	78

"How confident would you be in delivering a brief motivational intervention for substance use?"

Legend: not al all | slightly | somewhat | fairly | completely

not at all	slightly	somewhat	fairly	completely
28%	6%	44%	22 %	0

Confidence of CYWs

Legend:
- Fairly or completely confident
- Not at all, slightly, or somewhat confident

"How confident are you in your knowledge of how these substances may impact youth on the unit?"

Substance	Fairly or completely confident	Not at all, slightly, or somewhat confident
Alcohol	68	32
Cannabis	68	32
Tobacco/nicotine	74	26
Opioids	16	84
Benzos/sedatives	26	74
Other illicit drugs	37	63

% of staff

"How confident are you in your ability to identify & respond to withdrawal symptoms for the following?"

Substance	Fairly or completely confident	Not at all, slightly, or somewhat confident
Alcohol	33	72
Cannabis	39	67
Tobacco/nicotine	39	67
Opioids	11	89
Benzos/sedatives	11	94
Other illicit drugs	22	83

"How confident would you be in delivering brief psychoeducation on the following substances?"

Substance	Fairly or completely confident	Not at all, slightly, or somewhat confident
Alcohol	21	79
Cannabis	26	74
Tobacco/nicotine	47	53
Opioids		100
Benzos/sedatives		100
Other illicit drugs		100

% of staff

"How confident would you be in delivering a brief motivational intervention for substance use?"

Legend: not al all · slightly · somewhat · fairly · completely

not al all	slightly	somewhat	fairly	completely
37%	16%	32%	16%	0

Staff Confidence Comments

Comments about confidence in **knowledge** on how substances may impact youth on the unit

- Staff indicated learning about alcohol, cannabis, and tobacco/nicotine over time while working with youth on the unit.
- Staff expressed need for more education to increase their general confidence across all substances but particularly for increasing the breadth of their knowledge regarding *other substances* (e.g., opioids, benzos, stimulants) and *co-use* of substances.

"I feel that on [the unit] we get an opportunity to work with youth who are most often using alcohol or cannabis products, as well as tobacco products, and so over time I have learned more about the use of these substances and how that pertains to Child and Youth Mental Health. "

- RNs and CYWs expressed interest in learning more about how withdrawal may impact group participation and how to support youth in the milieu.
- Although order sets exist, several RNs indicated wanting a more standardized approach to training and withdrawal management.

Comments about confidence in **identifying & responding to withdrawal**

"I think it should involve typical withdrawal symptoms as it impacts what their mood could be like while CYW is running groups etc "

Comments about confidence in **delivering brief psychoeducation** on substances

- Many staff explicitly identified wanting training on delivering psycho-education, even those that had prior training or knowledge.

"it would be nice to be able to have conversations with the kids about these things and be confident in the information you're giving."

Barriers to comprehensive substance use assessments

Barriers	Percentage of staff endorsing each barrier		
	RNs	CYWs	All staff
Lack of training	**72%**	**95%**	**81%**
Time pressures	**72%**	**63%**	**68%**
Unfamiliar with treatment resources in the community	56%	53%	54%
Youth do not often tell the truth about their substance use	33%	58%	43%
Do not know what to do if youth screen positive while on the unit	39%	37%	38%
Screening for substance use is the function of other health services	11%	37%	24%
Uncertainty regarding the effectiveness of available treatments	11%	26%	19%
Lack of funds to make system changes	6%	32%	19%
Do not want youth to worry about who will be informed about their substance use	11%	16%	14%
Lack of space and privacy for conversations	6%	11%	8%
Documentation of substance use problems in the medical record may adversely affect youth	0%	11%	5%
Personally uncomfortable talking about substance use with youth	0%	0%	0%
I do not foresee any barriers to changing screening procedures	0%	0%	0%

Other barriers identified by staff:
- Lack of space for youth going through acute withdrawal and difficulty managing these youth when mixed with other patient (e.g., younger youth)
- Unit culture and ensuring staff are practicing within scope

> *"All of these things are very easy to overcome moving forward it should be a priority and we should not allow barriers to get in the way of proper assessment and intervention"*

Facilitators to comprehensive substance use assessments

Facilitators	Percentage of staff endorsing each facilitator		
	RNs	CYWs	All staff
Adding a space in the Kardex to flag substance use concerns	89%	89%	89%
Training on how to deliver psychoeducation	83%	95%	89%
Training on psychotherapeutic approaches for addressing substance use	83%	89%	87%
Adding specific questions to the electronic medical record	72%	89%	84%
Training on pharmacological options for addressing substance use	89%	79%	84%
Training on how to ask questions related to substance use	72%	79%	76%

Other facilitators identified by staff:
- Larger space in the electronic medical record would assist in comprehensive assessments.
- Adding a question prompt in electronic medical record asking if youth are interest in counselling or health teaching regarding their substance use.
- Have both RNs and CYWs complete substance related intake assessments.
- More adherence and standardization of populating and updating the Care Plan/Kardex with information about substances and withdrawal.

Patient Conceptualization

"What are your thoughts on including substance use (both occasional and regular) in the patient conceptualization and treatment plan on the unit?"

- Many staff explicitly expressed **perceived importance** of including both occasional and regular substance use in the team's conceptualization of the youth (n=16).

> *"essential…important…helpful…great idea…"*
>
> *"I feel that substance use plays a large roll in mental health and it would be helpful to use it as a way to understand the client's experience better and provide more specific support."*
>
> *"It would be great as it would entail a holistic approach in the care of patients"*

- Several staff indicated substance use is already incorporated into conceptualization, particularly for "heavy and problematic use."

- Other staff indicated a need to **better operationalize what "problematic" means**, especially regarding when to include lower levels of use. Since some youth do not experience problems from their substance use (and some may confer benefits), staff want clearer processes on when to incorporate use into the clinical picture that is important for an inpatient setting.

> *"I believe it is important, so long as we know what we are supposed to gain from the information and how it applies to treatment goals"*
>
> *"What [roles/responsibilities/interventions] are essential while on inpatient?"*

- Staff expressed that conceptualization needs to go beyond documenting use in the Kardex and be integrated into **multi-disciplinary discussions** during rounds and care planning.

1 **Staff believe substance use is important and common among youth on the unit and want to improve how they assess and address substance use.**

"I think this is something we definitely need to address more - and in a way that discusses why some of our youth might be using substances in relation to their complex mental health needs."

"I would love to do this more. I think this is a significant gap"

"definitely a need"

"We don't talk or educate patients enough on this topic"

2 **Staff have ideas about how to facilitate improvements in quality of care related to youth substance use:**

❑ Greater **standardization** of comprehensive substance use screening, when and how to integrate substance use into the patient conceptualization, withdrawal identification and protocols, and targeted interventions for youth using substances.

❑ **Separate cohorting**, programming modifications (e.g., later wake up, more programming breaks, lower sensory environments), and separate staffing for youth with more severe co-occurring substance use concerns.

❑ More **direct substance-related interventions** including greater incorporation of substance use into group programming, having more resources to provide youth on substance use, delivering targeted brief interventions and psychoeducation, and having more non-pharmacological supports to help youth cope with withdrawal while on the unit.

❑ More **indirect management and facilitation of appropriate and supportive conversations around substance use,** including both 1:1 and in the milieu.

3 **Staff are open to and want more training on youth substance use**

"Any and all. The more information to better suit the patients, the better"

"Any training on substances and youth."

"All the training"

"Any and all available"

"More training!"

Staff want education to answer the following questions:
❑ What are youth using?
❑ What are the short and long-term effects?
❑ How is substance use related to mental health?
❑ How do substances interact with psychiatric medications?
❑ What does withdrawal look like for each substance?
❑ How do different substances impact the adolescent brain?
❑ What are our community and online resources?

Staff want training on:
❑ Standardized comprehensive assessments
❑ How to incorporate substance use into patient conceptualization
❑ How to support youth experiencing withdrawal of all substances, both pharmacologically and non-pharmacologically?
❑ Milieu management & facilitation of appropriate conversations
❑ Delivering brief psychoeducation and interventions

Staff suggested ways to deliver training/education :
• Formalize training upon hiring, with yearly review/updates
• Brief educational meeting (30 mins) every month delivered by different staff on the unit (e.g., CYWs, RNs, Psychiatrists, Psychology. Social Work, Occupational therapy, etc.)
• Presentation from an addiction's worker
• In class instruction/in-service/workshops/learning sessions/Ppt

Key Points

1 **Substance use is common** among youth admitted to the hospital for mental health concerns.

2 Prevalence and frequency of substance use and multiple substance use was **much higher in this clinical sample than in the general population.**

3 There is preliminary evidence suggesting youth substance use may be related to **clinical severity, complexity, and hospital service utilization.**

4 Frontline staff recommended adopting an **overall approach to respecting the prevalence of substance use** among admitted youth.