



Canadian Centre
on Substance Abuse
Centre canadien **de lutte**
contre les toxicomanies

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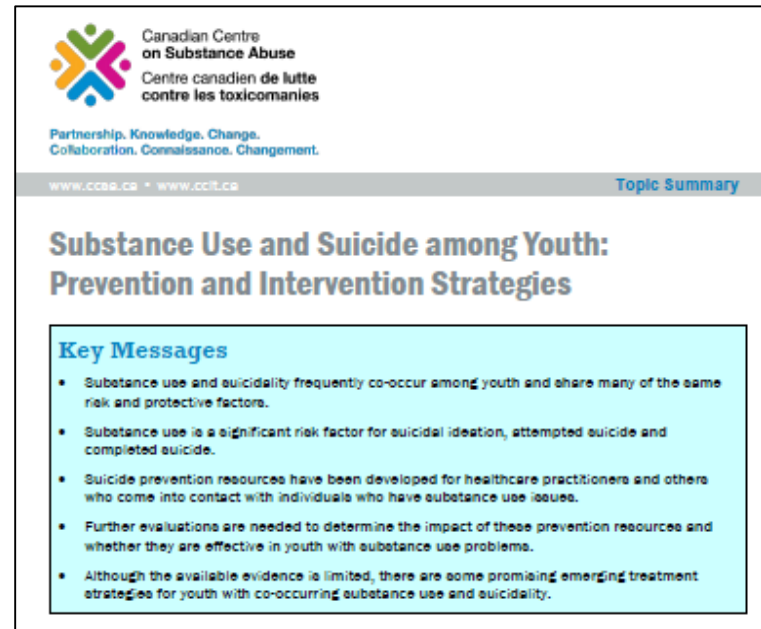
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Substance Use and Suicide among Youth: Prevention and Intervention Strategies

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Learning Objectives

1. Learn about the relationship between substance use and suicide.
2. Learn about youth at risk for suicide.
3. Learn about prevention and intervention approaches to address youth suicide and substance use.



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www.ccsa.ca • www.cclat.ca Topic Summary

Substance Use and Suicide among Youth: Prevention and Intervention Strategies

Key Messages

- Substance use and suicidality frequently co-occur among youth and share many of the same risk and protective factors.
- Substance use is a significant risk factor for suicidal ideation, attempted suicide and completed suicide.
- Suicide prevention resources have been developed for healthcare practitioners and others who come into contact with individuals who have substance use issues.
- Further evaluations are needed to determine the impact of these prevention resources and whether they are effective in youth with substance use problems.
- Although the available evidence is limited, there are some promising emerging treatment strategies for youth with co-occurring substance use and suicidality.

Outline

- About the Canadian Centre on Substance Abuse (CCSA)
- Substance use in Canada
- Suicide, suicidal ideation and attempts in Canada
- Understanding the relationship between suicide and substance use with a focus on youth
- Discussing at-risk youth
- Prevention and intervention strategies in Canada

About CCSA

- Vision: A healthier Canadian society where evidence transforms approaches to substance use.
- Mission: To address issues of substance use in Canada by providing national leadership and harnessing the power of evidence to generate coordinated action.
- Value Proposition: CCSA was created by Parliament to provide national leadership to address substance use in Canada. A trusted counsel, we provide national guidance to decision makers by harnessing the power of research, curating knowledge and bringing together diverse perspectives.

Why CCSA's Work Matters

Health

- Substance use disorder is a disease and should be treated like other chronic diseases and health conditions.
- Contributes to the co-occurrence of mental health conditions, family violence and suicide.
- Major contributor to 60+ diseases like cancer, heart disease, diabetes, HIV/AIDS.
- Illicit drug dependence directly accounted for 20 million disability adjusted life years.

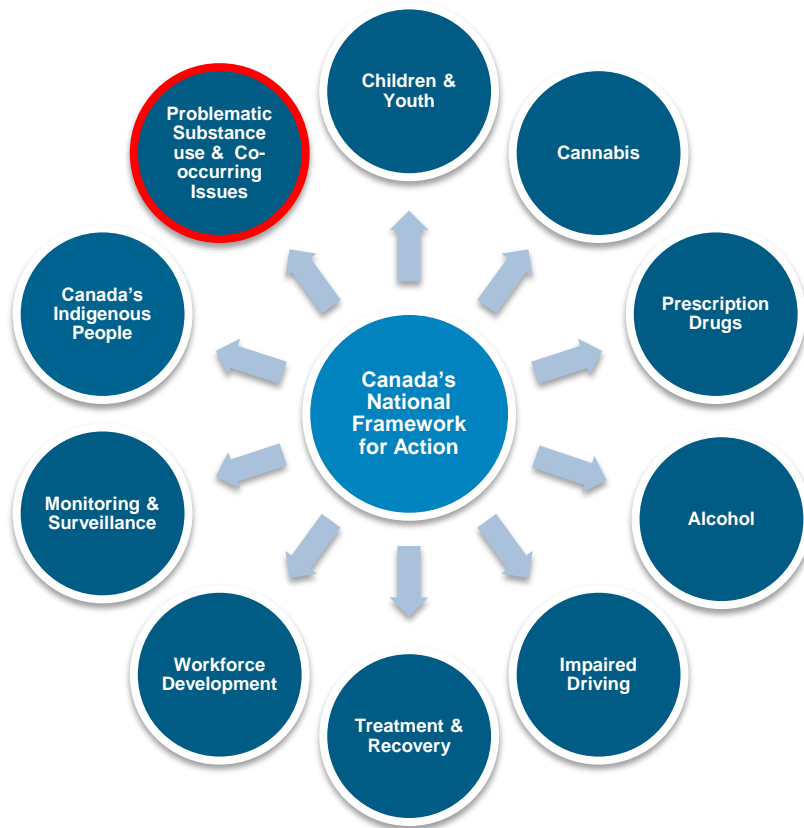
Public Safety

- Significant factor in the commission of crime; as many as 80% of federal offenders have a history of problematic substance use issues.
- Impaired driving accounted for 9,000 deaths in Canada from 2000–2010.

Economics

- Problematic substance use costs over \$40 billion per year in Canada.

National Priorities and Areas of Action



National Framework
for Action (2005):
*Collective action for
collective impact*

Substance Use in Canada

Rate of Past Year Use

- Alcohol: about 1 in 10 report > 3–4 drinks at one time in past 7 days
 - 80.6% males, 71.2% females
- Cannabis very popular: 1 in 10 report past year use, 1 in 4 among young adults.
 - 13.9% males, 7.4% females
- Opioid pain relievers: 1 in 7 report past year use.
 - 14.0% males, 15.7% females
 - Among users 2.3% report abuse



From Canadian Tobacco, Alcohol and Drugs Survey 2013 data

At Risk Populations in Canada

Canadian Youth

- Highest past year use of illicit substances among 15–24 year olds vs. other Canadians.
- Four times more likely than adults aged 25+ to report harm because of drug use (Statistics Canada, 2015).
- Among Canadian youth aged 14 to 24 years who were being treated for substance use problems, 50% of females and 10% of males reported sexual abuse (Ballo et al., 2001).

Older Adults

- Rapidly growing population of baby boomers.
- 18% of older adults (65+) are hospitalized because of heavy drinking (Aging in Canada, 2005).



Suicide in Canada

Deaths by Suicide

- 11.4 per 100,000 in 2012 (WHO, 2014)
- Suicide rate for males is 3 times higher than females. Men aged 40-59 have the highest rates (Statistics Canada, 2012).
- 63.5 per 100,000 in Nunavut (Statistics Canada, CANSIM tables 102-0551, 102-0552)
- Second leading cause of death among youth aged 15–24 (Statistics Canada, 2012)



Suicide Attempts and Ideation in Canada

- **Suicidal ideation:** In 2002, 7% of youth aged 15–19 years reported suicidal ideation in the past-year, compared to <4% of all Canadians aged 15+ (Statistics Canada).
- **Intentional self harm:** Hospitalizations for intentional self-harm from 2009–2014 increased by 102% for girls aged 10–17 years.
 - Hospitalizations due to intentional self-harm was four times higher on average among girls compared to that among boys (CIHI 2014).
- **Attempted suicide:** In 2005, > 5,000 hospitalizations of youth and young adults (15–29 years) were attributed to attempted suicide. Females accounted for 66% (CIHI, 2006).

Learning Objective 1: Suicide and Substance Use

- ~90% of Canadians who died by suicide had a substance use disorder or mental illness at the time of death.
- In 2002, 603 deaths from suicide in Canada were attributed to alcohol use, and an additional 295 were attributable to illegal drug use (Rehm et al., 2006).
- Risk of suicide for adults is elevated 9.8 times among those with an alcohol use disorder, 13.5 times for opioid use disorder and 16.9 times among those with polysubstance use (Wilcox et al., 2004).



Suicide and Substance Use in Youth

- 27%–50% of adolescents who died by suicide met the criteria for a substance use disorder.
- The rate of problematic alcohol use was 7.5 times higher and problematic illicit drug use was 8 times higher among adolescents who died by suicide compared to community controls.
- Rates of alcohol and other substance use disorders are as high as 50% among those who attempted suicide (Esposito-Smythers & Spirito, 2004).

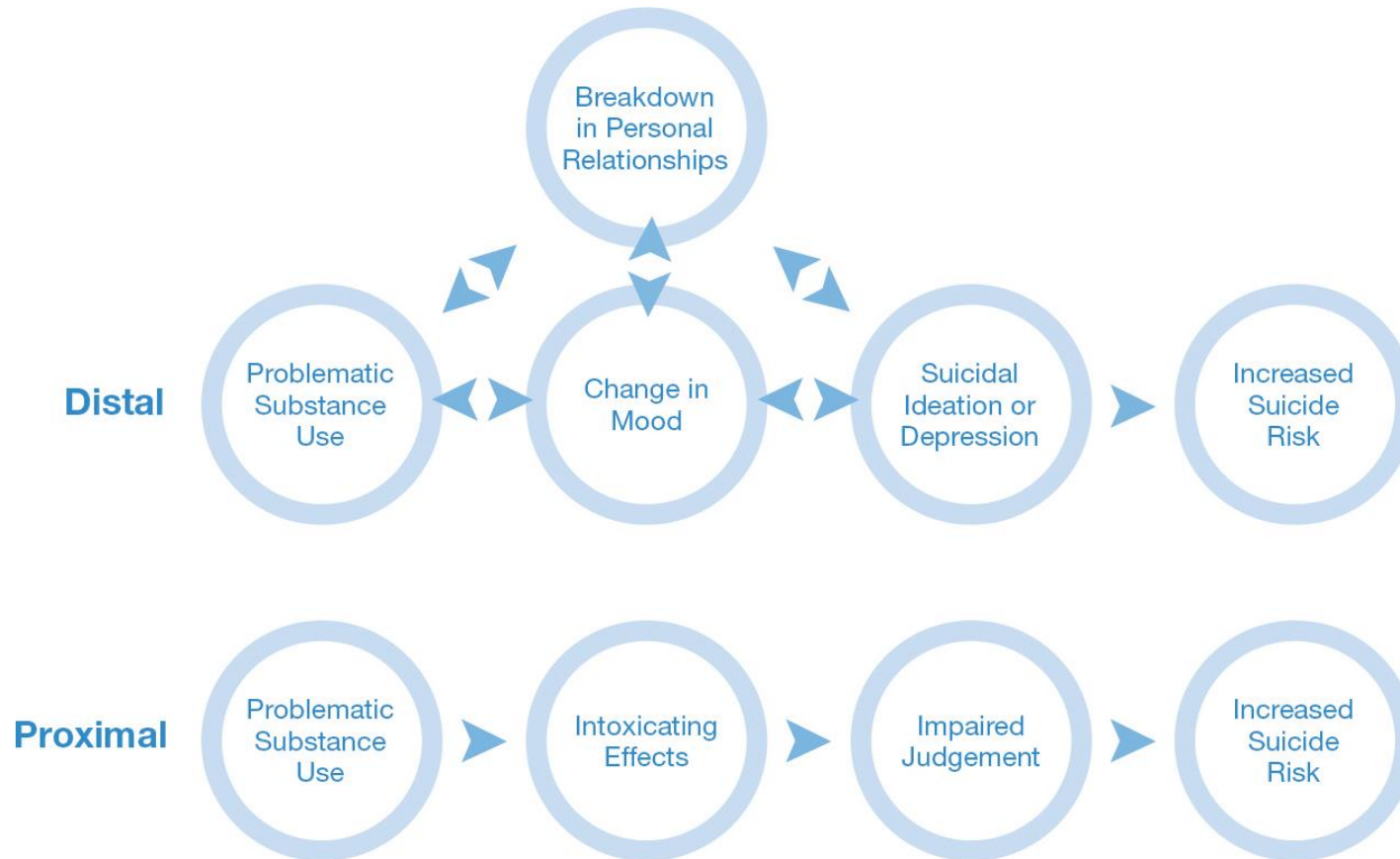


Suicide and Substance Use in Youth (cont.)

- Almost half of adolescents who have attempted suicide reported having consumed alcohol at the time of the attempt (Méan et al., 2005).
- The link between suicide and other, more widely used substances, such as cannabis, is less established.
- Directionality and causality between adolescent substance use and suicide behaviour is unknown.



Understanding the Link



Research Gaps: Suicide and Substance Use

- The influence of acute use of substances on suicidal risk and the progression of suicidal risk across substance using events.
- The implication of substances other than alcohol in suicide.
- Motivations for substance use prior to suicide.
- Efficacy of suicide prevention programs for individuals with co-occurring substance use and suicide.

Learning Objective 2: Understanding At Risk Youth

Early Onset of Substance Use

- Early onset substance use is a possible risk factor for elevated suicide risk.
- Study of 13,917 high school students, earlier age of onset of alcohol use was associated with greater reports of suicidal ideation and suicide attempts (Epstein & Spirito, 2009).
- Youth with problematic alcohol use during teens were four times more likely to have experienced a suicide attempt than those who began later in life (Buydens-Branchey, 1989).

Comorbid Conditions

- Comorbid affective disorders and substance use disorders greatly increase the risk of death by suicide among adolescents (Bukstein, 1993).
- The risk for death by suicide for individuals with both a substance use and affective disorder was 17 times higher than matched controls (Brent, 1993).

At Risk Youth (cont.)

Gender

- Males outnumber females in completed suicides by three to one; females attempt suicide more often (Statistics Canada 2014).
- A meta-analysis of several cohort studies indicated that females with an alcohol use disorder had a 17-fold mortality rate for suicide, whereas males had a five-fold mortality rate (Wilcox et al., 2014).
- Deaths by suicide due to alcohol and drug toxicity were significantly higher in Ontario females aged 16–25 (Rhodes et al., 2012).
- The 102% increase in self-injury among girls between the years 2009–2014 was largely attributed to intentional poisoning (88% of the cases) with such substances as prescription medications, illicit drugs and alcohol (CIHI, 2014).

At Risk Youth (cont.)

Indigenous Youth

- Death by suicide is 4 to 5 times higher than the national average for First Nations and 11 times higher for Inuit (Health Canada, 2015).
- Among Inuit youth, suicide attempts were tied to recent alcohol, cocaine or crack use for females, whereas for males, recent life events and solvent use were strongest correlates of suicide attempts (Kirmayer, 1998).

Other Minority Groups

- LGBT youth report elevated suicide risk and also have high rates of substance use (Marshal et al., 2008; Haas et al., 2010).
- Elevated suicidal behaviour among LGBT youth has been associated with substance use disorders (Fergusson et al., 2005).



Learning Objective 3: Suicide and Substance Use Prevention Activities in Canada

Centre for Suicide Prevention

- Substance Use Disorder and Suicide Prevention Resource ToolKit

Centre for Addiction and Mental Health

- Handbook on suicide prevention and assessment. Advises identification of substance use as a risk factor.

Canadian Association for Suicide Prevention

- Promotes use of tools from the U.S. that identify problematic substance use as a warning sign (e.g., IS PATH WARM)

Prevention and Intervention Approaches

Increasing Awareness and Training for Healthcare Practitioners

- Healthcare practitioners must be trained to identify and address the signs of both suicide risk and substance use.
- 45% of individuals who completed suicide had contact with primary care practitioners within one month of their death (Luoma et al., 2002).
- The American Academy of Pediatrics recommends that pediatricians and family practitioners routinely assess adolescents for risk factors on suicide, including substance use.

Prevention and Intervention Approaches (cont.)

Increasing Awareness and Training for Healthcare Practitioners (cont.)

- **Treatment Improvement Protocol 50** from the U.S. Substance Abuse and Mental Health Services Administration provides guidelines to help front-line substance use counsellors, supervisors and program administrators deal with suicide risk.
- **Question, Persuade, Refer**, the brief standardized community gatekeeper training for suicide prevention, teaches a wide range of staff how to identify and refer individuals into care.
- **Preventing Addiction Related Suicide** developed and pilot-tested to address the co-occurrence of substance use and suicide prevention.

Prevention and Intervention Approaches (cont.)

Policy

- Estonia implemented media campaigns, restrictive policies aimed at reducing alcohol production, increased prices and improved treatment for alcohol use disorder, which was related to a 40% decrease in suicides in which blood alcohol was detected among all ages (Värnik et al., 2007).
- Anti-alcohol campaign in Russia involving increased alcohol prices, restricted time of sales and stricter punishment for public intoxication was related to a 33% decline in violent deaths, including suicide, during its duration (Nemtsov, 2002).
- Legislation passed in Slovenia in 2003 to limit the availability of alcohol products and establish a minimum drinking age of 18 revealed an immediate and persistent reduction in male suicide mortality following implementation (Pridemore & Snowden, 2009).

Prevention and Intervention Approaches (cont.)

Community-based Initiatives

- Postvention
- Suicide contagion:
 - A Canadian study of youth aged 12–17 years observed an increased risk of suicidal ideation and attempts in youth exposed to suicide (Swanson & Colman, 2013).
 - Youth tend to be more affected by suicide contagion than adults, with some reports indicating that clusters of suicide account for 1% to 5% of adolescent suicide deaths (Mercy et al., 2001).

Prevention and Intervention Approaches (cont.)

Community-based Initiatives (cont.)

- Cluster of 11 suicides linked to problematic substance use and 10 deaths by opiate overdoses among youth (ages 16–24) in the United States.
- Comprehensive approach to respond to the crisis (Hacker et al., 2008):
 - Developed a surveillance system
 - Designated hospital beds for those in crisis
 - Provided post-traumatic stress management
 - Held educational forums to teach the signs and symptoms of problematic substance use
 - Made efforts to link those with problematic substance use to resources
 - Provided media training for non-sensational reporting

Prevention and Intervention Approaches (cont.)

- **Community-based participatory research (CBPR)** involves communities in all components of the research process.
 - Cultural enhancement for life promotion among Indigenous youth
 - Reduce negative impact of risk factors
 - Promote protective factors
- A CBPR approach to preventing suicide and alcohol use was adopted for the Yup'ik youth in Alaska (Henry et al., 2008).
 - Provided communities with a toolkit of options for enhancing protective factors, such as self-efficacy, limits on alcohol, positive community and familial factors, etc.
 - The program was associated with the promotion of several shared protective factors against alcohol use and suicide

Suicide Prevention through Treatment Provision

- A series of suicides in New Brunswick:
 - 85% of the deceased contacted mental health or addiction services at least once in the year prior to death.
 - 59% of those who died by suicide had problematic substance use or dependence issues.
- Two gaps identified (Lesage et al., 2008):
 - Need for better promotion of integrated treatment for mental health, substance use and suicidal behaviours.
 - Need to enhance awareness of this co-occurrence to encourage people to access healthcare services if they or those they know have these problems.



Suicide Prevention through Treatment Provision

- Current standard of care is to treat substance use and suicidal behaviour separately.
- Youth with co-occurring issues referred to separate addiction and mental health systems are less likely to receive the treatment they need (Esposito-Smythers, 2011).
- Burden that accessing different treatment streams places on an individual.
- Lack of collaboration between addiction and mental healthcare systems.



Suicide Prevention through Treatment Provision

- Dialectical behaviour therapy (DBT) helps to increase emotional and cognitive regulation to change patterns of behaviour.
 - Higher rates of abstinence and fewer suicide attempts at a 24-month follow-up for those who had received DBT, compared to those receiving community behavioural therapy (Harned et al., 2008).
- Among adolescents more research is needed as the studies to date among this age group have not simultaneously targeted the two behaviours.



Suicide Prevention through Treatment Provision

- **Integrated cognitive behavioural therapy (I-CBT)** includes techniques to limit maladaptive thoughts and behaviours underlying suicidality and substance use.
- A random controlled trial of was conducted with 40 adolescents ages 13–17 with co-occurring suicidality and alcohol or cannabis dependence (Esposito-Smythers et al., 2006). I-CBT resulted in:
 - Fewer heavy drinking days, cannabis use days and cannabis-related problems over the protocol.
 - Fewer suicide attempts, emergency room visits, hospitalizations and arrests.



Summary

- Substance use and suicidality frequently co-occur among youth and represent a significant burden.
- Substance use is a significant risk factor for suicidal ideation, attempted suicide and completed suicide.
- Research on intervention and prevention initiatives is limited, however, suicide prevention resources have been developed for healthcare practitioners.
- Evaluations are needed to examine the impact of these prevention resources as to whether they are effective in youth with problematic substance use.
- Although evidence is limited, there are some promising emerging treatment strategies for youth with co-occurring substance use and suicidality.

Save the Date / Dates à retenir

ISSUES of
SUBSTANCE
CONFERENCE

2017

CONGRÈS
QUESTIONS de
SUBSTANCE

Addiction matters

November 13–15
Calgary, Alberta

• *La dépendance, ça compte*

Le 13 au 15 novembre
Calgary (Alberta)

Questions, Comments, Ideas



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Resources

- *Substance Use and Suicide among Youth (Topic Summary) (CCSA)*
www.ccsa.ca/Resource%20Library/CCSA-Substance-Use-Suicide-Prevention-Youth-Summary-2016-en.pdf
- *Intentional Self-Harm Among Youth in Canada (CIHI)*
www.cihi.ca/web/resource/en/info_child_harm_en.pdf
- *Suicide and Self-inflicted Injury Hospitalizations in Canada (1979 to 2014/15) (PHAC)*
www.phac-aspc.gc.ca/publicat/hpcdp-pspmc/36-11/assets/pdf/ar-02-eng.pdf
- *Collaboration for Addiction and Mental Health Care: Best Advice (CCSA)*
www.ccsa.ca/Resource%20Library/CCSA-Collaboration-Addiction-Mental-Health-Best-Advice-Report-2015-en.pdf
- *Working Together to Prevent Suicide in Canada: The Federal Framework for Suicide Prevention*
www.healthycanadians.gc.ca/publications/healthy-living-vie-saine/framework-suicide-cadre-suicide/alt/framework-suicide-cadre-suicide-eng.pdf

Canadian Substance Use Prevention Initiatives



Substance Use and
Addictions Program:
Prevention Action Plan

Suicide Prevention Initiatives in Canada

National Efforts

- Canadian Association of Suicide Prevention advocates for the prevention of suicide at the national level
- National Collaborative on Suicide Prevention
- Federal Framework for Suicide Prevention



Suicide Prevention Initiatives in Canada

- The **Federal Framework for Suicide Prevention** (released December 2016) highlights six key areas for action:
 - Providing guidelines to improve public awareness and knowledge;
 - Disseminating information;
 - Making publically available existing statistics and related risk factors;
 - Promoting collaboration and knowledge exchange across domains, sectors, regions and jurisdictions;
 - Defining best practices for the prevention of suicide; and
 - Promoting use of research and evidence-based practices for prevention.