



Effective and Comprehensive Approaches to Substance Misuse Prevention among Youth: Literature Review & Environmental Scan

North Bay Parry Sound District Health Unit

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Executive Summary

A literature review and environmental scan were conducted to determine elements of effective and comprehensive approaches to substance misuse prevention in schools and the broader community for youth in grades 7-12. The purpose of the project was to inform part of the North Bay Parry Sound District Health Unit's strategic planning process. A total of 110 documents from both grey and academic literature sources were examined for promising practices in school partnership, education, campaign, social marketing, community partnership, and counseling programs. Information on substance misuse prevention approaches used at 11 Ontario health units was also collected. These promising practices provide important insight on what should be included in successful substance misuse prevention approaches targeted at youth.

Elements to consider in youth-targeted substance misuse prevention:

- 1 Consider what programs and resources already exist before implementing change.
- 2 Facilitators of programs should be relatable to youth and properly trained.
- 3 Substance misuse prevention programs should start young with broad content and follow-up each year while getting more specific about different substances.
- 4 Interventions in schools are good if they are interactive and skills-based.
- 5 Parental support is critical for preventing youth substance misuse. Help families develop stronger communication and connectedness.
- 6 Community support is important for maintaining school-based and family-based programs. The community can also help foster attitude changes about substance misuse among youth.
- 7 Mass media strategies should be *positive* and focus on the benefits that come from not using substances.
- 8 Longer and more intense interventions = more effective!
- 9 Interventions need to be multi-component.
- 10 Theory-based interventions are more effective.
- 11 Special populations require specific considerations. Determine what makes them different and how that is important to the intervention.

Purpose

A literature review and environmental scan were conducted to inform part of the North Bay Parry Sound District Health Unit's strategic planning process. The literature review examined the latest research evidence on elements of effective and comprehensive approaches to substance misuse prevention in schools and the broader community. The environmental scan looked at substance misuse prevention approaches used by other Ontario health units, specifically with schools and school-aged populations. Its aim was to determine which approaches are currently in place across the province, whether any of these approaches contain the elements of effective and comprehensive approaches found in the literature, and to know where these approaches have been implemented for potential future support in local implementation.

Background

The North Bay Parry Sound District Health Unit identified four priorities in the 2014-2018 Strategic Plan, based on local information and support needs identified by stakeholders.

NORTH BAY PARRY SOUND DISTRICT HEALTH UNIT PRIORITIES 2014 – 2018



Priority 1 focuses on fostering healthy behaviours in children and youth. Part of the aim is to prevent substance misuse, in particular tobacco and alcohol use, using a positive mental wellness approach.

Data from the Ontario Student Drug Use and Health Survey (OSDUHS) collected in the 2014/2015 school year from students grades 7-12 show that:

- The proportion of students in the Health Unit region who reported using tobacco cigarettes (excluding a few puffs) in the previous 12 months (12.6%) is similar to the proportion of students in other northern regions (11.7%) and Ontario (8.6%) that reported smoking in the previous year.
- The proportion of students in the Health Unit region who reported alcohol use in the past year (55.4%) is significantly higher than Ontario students who reported alcohol use (45.8%), but similar to students in other northern regions that reported alcohol use (51.5%).
- The proportion of students in the Health Unit region who reported cannabis use in the previous year (29.7%) is significantly higher than Ontario students who reported cannabis use (21.3%), but similar to students in other northern regions that reported cannabis use (22.0%).
- The proportion of students in the Health Unit region who reported illegal substance use in their lifetime (26.5%) is comparable to other northern regions (23.7%) and Ontario (22.8%).

Additionally, certain populations reported higher rates of substance misuse or more harmful behaviours:

- About double the percentage of students who felt disconnected to their school community in the region used tobacco in the previous 12 months (22.5%) compared to students who felt connected to school (11.0%).
- Almost 4 in 10 males in the region reported previous year use of cannabis, compared to about 3 in 10 females in the region, and 2 in 10 males in Ontario.

- A significantly higher percentage of students in the region who perceive their socioeconomic status (SES) to be lower than other students reported use of illegal drugs in the previous year, compared to Ontario students with low perceived SES.
- Almost a third of students in grades 9 and 10 in the region (28.3%) scored as having harmful or hazardous drinking behaviours, significantly higher and about 3 times the Ontario estimate for the same grade level (10.6%).

(NBPSDHU Substance Use Among Youth 2014/15: Executive Summary)

The current approach to substance misuse prevention within the North Bay Parry Sound District Health Unit is similar to preliminary findings regarding approaches used at other Ontario health units which includes knowledge and resource sharing and awareness building events. However, it is well established that comprehensive approaches are required to reduce substance misuse rather than standalone programs or social marketing (Ministry of Health Promotion, 2010). The evidence found in the literature review and environmental scan are meant to inform and improve public health practice in order to foster healthier behaviours in children and youth.

Methods

In order to focus the strategy of this project, evidence-informed public health (EIPH) steps were utilized. Current populations, interventions, comparisons, and outcomes were considered when defining the search focus. The search aimed to find syntheses of literature or promising practices. A small number of single-study articles were included because of their relevance to the topic.

A total of 342 documents were deemed relevant based on title and abstract, and from that 110 documents were included in the review based on relevancy of the entire article. Documents were gathered from both grey and academic literature sources.

For the environmental scan, a request for information on current approaches to youth substance misuse prevention was sent by email to an existing network of contacts at 22 health units. Responses were received by substance misuse prevention contacts at 11 health units. The effectiveness of the approaches was not assessed in this scan.

Scope

The literature review focused solely on interventions or prevention strategies that considered at least one of these elements: comprehensive approach, evidence-informed, in a school setting, considered priority populations, and community-partner based. Treatment based strategies were excluded from the review. The population focused on in this review were youth in grades 7-12.

Approaches that were taken into consideration for the review were school partnerships, education programs, campaigns, social marketing, community partnerships, and counseling programs.

The environmental scan included any approach used by health units with schools or school-aged populations.

Literature Review

Themes that emerged from this literature review were: strategies and procedures for changing intervention strategies; instructors for interventions; age considerations for interventions; school-based strategies; family-based strategies; community-based strategies; mass-media strategies; intervention dose recommendations, the importance of multi-component interventions; theory-based interventions; and special population considerations. Each of the 11 themes describes elements of effective and comprehensive approaches to substance misuse prevention.

Theme 1: Creating and Implementing Intervention Changes

In order to implement promising interventions, health promoters or facilitators of the prevention programs need to:

- Determine what is already being done for programming
- Determine what the current substance misuse habits are within their target population
- Assess their resources and capabilities
- Set goals based on what they want to see happen

(“Building on our Strengths,” 2010).

Research has found that when organizing a team and building capacity, engaging youth during the planning and evaluation process leads to stronger interventions (“Stronger Together,” 2010).

Facilitators should also consider the personal, cultural, and community-based elements of the targeted population and respect the diversity and differences among the population when implementing their substance misuse strategies (Cheon, 2008).

Theme 2: Choosing the Right Facilitators and Training them Properly

It is important that the people delivering the intervention content to the participants are given adequate training (Hanley et al., 2009; UNODC, 2015). Program planners need to focus on the development of effective facilitator training. This will ensure that program facilitators have the knowledge and skills to deliver the information but also the confidence to do it well (Porath Waller et al., 2010).

Research has found that bringing in someone external to the school or community has shown promise in successful interventions (Buckley & White, 2007; Norberg et al., 2013). This person needs to resonate with youth as someone who has experience with drugs and alcohol and who will explain the realities of taking part in those habits (McKiernan & Fleming, 2017). Youth view people who have actually done the drugs and experienced the consequences and benefits from those actions as more legitimate than a teacher,

police officer, or parent (McKiernan & Fleming, 2017).

Another positive source of influence has been found in peers; it has been found that peer-led interventions can prevent substance misuse (Flay, 2009; Georgie et al., 2016).

Promising Qualities for Prevention Intervention Facilitators:

- Relatable to youth,
- Experience with substance use, and
- Judgement free.

A Stop Smoking In Schools Trial (ASSIST Program)

- This intervention found success in training influential students to act as peer supporters in the hallways by encouraging their classmates not to smoke (Campbell, et al., 2008).

Theme 3: Age Considerations

When looking at school-based interventions, considering the different ages, grades, and capabilities of students becomes important.

It is suggested that efforts begin earlier and incorporate consistent follow-up to ensure that students do not forget any important information (McKiernan & Fleming, 2017). Research has found that students believe intervention strategies should begin when they are young, even before they are exposed to bad substances (Hopson & Steiker, 2010). Implementing early will help ensure that children are given the proper knowledge and skills needed to make responsible and informed decisions (Newton et al., 2013).

Important points for interventions are during critical stages of transition from childhood to adolescence to adulthood (NCPC, 2008).

- Elementary School transition to Middle School
- Middle School transition to High School
- High School transition to Post-Secondary

Middle-Aged Child

When targeting middle-aged children content should be broad and focus on teaching social skills, self-control, problem-solving skills, and

healthy behaviours (Onrust et al., 2016). Including parents during this period is important in order to enhance family bonding and ensure that parental support is provided (UNODC, 2015).

Early Adolescents

Programs targeting early adolescents should be interactive and focus on coping skills, decision making, resistance and resiliency skills, and dispel the idea that substance use is normal (UNODC, 2015). Focusing on life-skills such as self-control and decision-making skills, like with middle-aged children, is found to be beneficial for early adolescents as well (Onrust et al., 2016).

Late Adolescents

Late adolescent-focused programs should help youth set goals, provide health education regarding the negative impact substance use can have on their lives, and help them further develop life skills to transition to adulthood smoothly (Onrust et al., 2016). They are beginning to develop their own identity so programs that help them do so positively have found success and better connection with students (Onrust et al., 2016). Including the participation of parents with this age group has found positive results as it helps improve the parent-adolescent relationship (Onrust et al., 2016).



Theme 4: School-Based Strategies

A heavily utilized platform for most child and youth-based interventions or educational programs are in schools. Programs implemented in the school environment should focus on the whole school's character and should be created based off of the needs of the specific school (Jackson, 2012; CSSDP, 2018). Moving forward programs should be highly interactive as those interventions have been found to be more effective than didactic presentations (Porath-Waller et al., 2010).

Content delivered should be relevant by talking about drugs students are currently exposed to, and should enhance students' cognitive, social and emotional skills to improve their ability to make smarter choices (Ministry of Education, 2013). Many adolescents overestimate the number of their peers that actually participate in drug or alcohol use, so education in school should focus on social norms and the number of students who don't use substances (Nadin, 2015; Cairns et al., 2014).

Strong school-based substance misuse prevention interventions are extremely skill-focused, and implemented over many years (Flay, 2009; Faggiano et al., 2008). Implementing substance

misuse content into classroom curriculum has also found to be effective (Twombly, 2008).

Students want to know more about why people start using drugs and not solely information about why substance use is bad (Hopson, 2010). Providing students with the tools to manage stress and pressure will help enhance their refusal skills for later in life (Hale et al., 2014).

Schools with higher attendance rates have lower substance misuse rates (Bonell, 2013). Establishing school connectedness by increasing student participation, improving relationships and creating a positive school culture will help prevent drug use (Dunne, 2017; Fletcher, 2008).

The Unplugged Program

- This program has been successfully implemented into schools in Europe. It has 12 lessons that are incorporated over the full school year and focuses on informing students of the realities, providing them with coping, problem-solving, and decision-making skills, and helping them set positive goals for themselves (Agabio et al., 2015).

Theme 5: Family-Based Strategies

Parenting and family-based interventions have been found to be effective in preventing substance misuse among youth (Allen et al., 2016). Family-based content is critical because although adolescents spend less time with their parents and peers become more important, parents always remain an important influence on their lives (CSSDP, 2018).

Family interventions should focus on providing support to enhance family functioning, stricter parental attitudes to alcohol and drug misuse, teach parent's self-worth, identify family strengths and weaknesses, and emphasize parenting skills (Bekkering et al., 2014; Griffin & Botvin, 2010; Thomas, 2015).

Programs that combine parenting skills and family bonding components appear to be most effective (Griffin & Botvin, 2010). Other successful programs have found that family interventions that work alongside school programs are beneficial because active parental involvement in children's education is a critical piece in preventing substance misuse in youth (Thomas, 2015; Dunne et al., 2017).

Strengthening Families Program for Parents and Youth 10-14

- This extremely successful program works on clarifying expectations, appropriate discipline, managing strong emotions, and effective communication skills (Jackson et al., 2012).

Theme 6: Community-Based Strategies

Looking beyond schools and families, the community as a whole plays a large role in the success of substance misuse prevention strategies. Local partnerships need to be developed to support the programs in schools and to engage families in community-based activities (Bekkering et al., 2014).

Providing opportunities to expand after-school activities such as sports, clubs, art, peer leadership and mentoring are ways that communities can help youth develop a positive sense of self in where they live and give them the confidence to make positive choices (Ministry of Education, 2013). Providing youth with options to spend their time positively will help build up their self-esteem which is an asset in preventing high-risk behaviour (Hopkins et al., 2007).

The community has the capability to change attitudes and accepted norms among youth substance misuse. Providing opportunity and support through schools and family will help foster resiliency and purpose among youth within society (Hopkins et al., 2007; Sigfusdottir et al., 2009).

The Icelandic Model

- This is a successful community-wide program that incorporated schools, family and local community members. They sought out the engagement of community partnerships to enforce curfews, increase sports and recreational extracurricular activities, and created awareness and fostered attitude changes about substance misuse in youth throughout the community (Sigfusdottir et al., 2009).

Theme 7: Mass-Media Strategies

The media has been recognized as another important platform for substance misuse prevention strategies. Effective media campaigns are theory-based and use formative research when designing campaign messages (Brinn et al., 2010). To have an impact messages need to be in the media for a minimum of 4 weeks (Summerlin-Long et al., 2009; Carson et al., 2017).

Messages that do not work:

- Messages that focus on the negative health consequences that come from substance misuse.

Messages that work are:

- Positive messages about not using drugs or alcohol.
- Successful intervention strategies and their outcomes.
- Emphasizing the importance of adult role modeling
- Personal stories from youth about substance misuse and the possible health consequences.

(Summerlin-Long et al., 2009; Carson et al., 2017)

Theme 8: Intervention Dose

A constant theme that emerged in the literature review was the inconsistency of the intervention dose. As important as the content of programs is, the length and intensity can significantly impact the success of the intervention.

Research has found that longer and more intensive interventions are more successful (NCPC, 2008; Carson et al., 2017).

Effective interventions have all ranged in time and intensity; however, based on the literature reviewed it has been concluded that interventions should:

- Have a minimum of 12 hours contact time
- Be at least 1 school year long
- Incorporate follow-up sessions for more than 3 years post-main intervention

(Norberg et al., 2013; Carson et al., 2017; Nadin, 2015; Allen et al., 2016; Agabio et al., 2015)

Theme 9: Multi-Component Intervention Are Best

Regardless of how successful interventions can be, there is no single, most effective way to engage youth when designing a substance misuse prevention program (Dunne et al., 2017; Norberg et al., 2013). However, the best chance at success might involve a combination of approaches (Dunne et al., 2017; Norberg et al., 2013).

Research has found that interventions for substance misuse prevention among youth need to be interactive and multi-faceted (CSSDP, 2018). Effective interventions have involved children's, parenting, and family-skills training components, and have included some combination of mass media, public policy, and community organization (Bröning et al., 2012; Griffin & Botvin, 2010).

Programs need to have clear goals, have age-appropriate content, be community-wide, be school-based, incorporate structured activities, provide social-behaviour education, utilize peer leadership and mentoring, involve families, and include media advocacy (Cheon, 2008).

Project Northlands

- This successful intervention combined classroom and parent interventions with community-based strategies to influence youth not to drink while also changing the availability of substances and community attitudes about norms for youth drinking (Midford, 2010).

Theme 10: Theory-Based Intervention Ideas

It has been established that all interventions should be based on a behaviour change theory (Nadin, 2015). However, many different theories and combinations of them have been utilized.

From this literature, theories that have been incorporated into interventions have been:

- The socio-ecological framework
- The social learning theory
- The health belief model
- The social influence model

(Aura et al., 2016; Carson et al., 2017; Das et al., 2016; Faggiano et al., 2014; Flay, 2009)

Life Skills Training Program & All Stars

- These interventions are based on the social learning and problem behaviour theory. Their goals are to increase students' accuracy about peer norms regarding substance misuse and provide them with skill development and knowledge to avoid substance use (Redmond, 2009).

Project ALERT

- This program is based on the social influence model, the health belief model, the social learning model, and the self-efficacy theory to help students focus on factors that will influence their healthy behaviours and attempts to instill confidence in them to make those healthy decisions. They also work on dispelling inaccurate beliefs about social norms (Redmond, 2009).

Unplugged Program

- This intervention utilizes the social influence approach to help incorporate critical thinking, decision-making, problem solving, creating thinking, communication, interpersonal skills, self-awareness, empathy, stress, normative beliefs and knowledge about substance use (Lee, 2016).

Theme 11: Special Population Considerations

When implementing interventions with special populations, more factors need to be considered in order for programs to be successful. In the case of this review, rural schools, the LGBTQ community, and Indigenous youth were considered within the literature. Research explains that different approaches need to be taken for different populations (McKiernan & Fleming, 2017).

Rural Populations

Things to consider in rural areas are the meaningful and relevant differences within the community, the level of program adaption needed, who will initiate the programs and who will sustain them (Smith & Caldwell, 2007).

LGBTQ Populations

Literature on the LGBTQ community was limited but emphasized the importance of providing

support. Controlling bullying within schools, providing them with people to support them and places for them to go are needed in order to limit their stress and help them develop coping skills. Changing norms within the school will help peers and adults learn to be more accepting (Coulter, 2016).

Indigenous Populations

For Indigenous youth focused interventions two programs have been created; the **SIDPP program** and its modified version the **HAWK²** program.

- These programs have found that keeping content culturally relevant, incorporating cultural legends, and including prominent people within their community to help reinforce positive messages works best. (Raghupathy & Forth, 2012)

Environmental Scan

The types of approaches used at the 11 health units that responded to the information request include: comprehensive approaches with schools, programs, resource sharing, and events.

Comprehensive Approaches with Schools

A number of health units provide support to schools using a comprehensive approach. Some of these approaches do not exclusively target substance misuse as an outcome but focus on overall wellbeing and supporting youth to make healthy choices. Approaches include:

- Developing health promoting school action plans
- Building resiliency and Developmental Assets© (Search Institute)
- Working within the Foundations for a Healthy School framework (Ministry of Education)
- Partnering with school councils and parent involvement committees to identify needs and gaps
- Sharing information and staying connected with school boards on key issues
- Building relationships with children and youth, school staff, parents, and local agencies that work in the substance field
- Building capacity to identify and address substance use and misuse issues within the school system
- Building in curriculum supports regarding substance misuse prevention
- Teacher consultations on substance misuse prevention
- Participating on internal substance misuse committee with school board
- Participating in community opioid and drug strategy groups

Programs

Health units offer a variety of programs to schools, or work with community partners or provincial organizations to offer programs. These include peer education, skill-building, and parenting programs.

Peer education programs:

- The **Challenges, Beliefs and Changes (CBC)** program is offered through Parent Action on Drugs. It is a peer education program delivered by senior high school students to help students in grade 8 or 9 to address decisions about drugs and alcohol and with the transition to high school.
- **What's With Weed (WWW)**, from Parent Action on Drugs, is a peer education program delivered by senior high school students that engages youth between 14-18 years to recognize and reduce, avoid or prevent problems with cannabis use.

Skill-building programs:

- **The Youth Leadership Initiatives** approach out of Toronto Public Health aims to build resiliency among youth leaders aged 12-18 (grade 7 to 12). Public health staff work together with school and community staff to implement the program with youth leaders and support them to learn about the prevention of substance misuse, mental health and well-being. Participating youth leaders receive training to build leadership skills and work towards creating a healthier school/community through a peer led process.
- **The P.A.R.T.Y. program (Preventing Alcohol and Risk-Related Trauma in Youth)** was developed at Sunnybrook Health Sciences Centre. It equips adolescents with injury prevention

knowledge, based on the theory that injuries are predictable and preventable. The goal is to provide young people with information about traumatic injury that will enable them to recognize and mitigate potentially hazardous situations and understand their individual role in injury prevention for themselves and their peers.

- **The Truth and Consequences** program is offered by Simcoe Muskoka District Health Unit. It is an interactive and innovative approach to addressing substance use expectations from the Healthy Living strand of the 2015 H&PE Curriculum. The conference is designed for the Grade 9 curriculum. Individual learning centres are available for Grade 7-12 classes. Secondary schools can implement lesson plans and consider hosting a school wide conference. The lesson plans include:

speaker notes and backgrounder information, student worksheet, curriculum links and rubrics.

Parenting programs:

- **Connecting with Your Teen**, offered by Toronto Public Health, is a two-hour workshop for parents and caregivers of teens, 13 to 18 years of age. The interactive session uses activities like group work, role plays, discussions and sharing to engage parents. It provides parents/caregivers with an overview of the normal developmental issues that teens face and ideas for improving communication with them. The ultimate goal is to support parents in providing a positive influence for their teens and in turn assisting teens to avoid substance use.

Resource Sharing

Parents:

- Health units offer information for parents to support children and youth. Information is offered through websites, booklets, lending displays.

Youth:

- Information is offered to youth through similar channels (i.e. website, booklet, lending display, postcards).

Educators:

- Health units offer educational resources on substance use to schools through their websites or via school nurses. Resources include Fourth R, OPHEA, links to lesson plans, curriculum supports, lending resources and health unit programs.

Events

- Health units have worked with community partners to host events for elementary school students. These events aim to increase awareness around drugs, alcohol and impaired driving. They include stations on different topics (e.g., drugs, alcohol, tobacco, gambling, bullying and

internet safety, and fire safety) through which students rotate.

- Other events include mock crashes, awareness raising around safer partying, and presentations to local school communities.

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