Nova Scotia
Adolescent Withdrawal Management Guidelines 2013

NOVA SCOTIA

Contents

Introduction

Nova Scotia has invested in numerous specialized addiction services for adolescents during the last decade. The District Health Authorities (DHAs) have leveraged provincial enhanced-services funding for youth to develop a vast range of much-needed supports and services for adolescents and concerned/significant others. Adolescent work has been further enhanced through funding made available through Health Canada's Drug Treatment Funding Program (DTFP). Between 2009 and 2013, Nova Scotian youth and families have benefited from targeted funding for youth at risk of substance abuse. In accordance with DTFP funding criteria, projects have included capacity-enhancement activities designed to increase the ability of service providers within the community to identify, refer, and support youth at risk of substance use. Other activities focused on early intervention for youth at risk and their parents. Target populations have included rural, street-involved, in-care, and aboriginal youth. System capacity and staff competencies related to health promotion and prevention and treatment of substance use and gambling among adolescents continue to grow. One of the system's greatest assets is the expertise attained by adolescent addiction workers.

Unfortunately, a significant gap remains along the continuum of supports and services for adolescents. Until recently, the expansion of adolescent services has not included a close examination of withdrawal management. Currently, there are no youth-oriented withdrawal management services in Nova Scotia that wholly meet the needs of this population. To address the current gap in withdrawal management, key provincial stakeholders/experts have reviewed best and promising practices and approaches with respect to adolescent withdrawal management to help inform a comprehensive system of adolescent-specific withdrawal management services in Nova Scotia.

At present, there is no unity across Canada regarding which approach best serves the needs of adolescents. Provinces and territories differ widely in their approaches to adolescent withdrawal management programs, reflecting disparate needs, ideologies, and resources. A literature review and report on youth-specific withdrawal management programs and strategies across Canada was commissioned and released in 2007; it was updated in 2011 to help inform the work of the Provincial Adolescent Withdrawal Management Working Group.

The formal call for provincial Withdrawal Management Guidelines came from the Provincial Adolescent Withdrawal Management Working Group during a meeting held January 9–10, 2012. The following themes emerged from the provincial working group:

- Adolescent clinical therapists and community outreach workers should play a role in admission, treatment, and discharge planning specific to withdrawal management.
- Adolescent Withdrawal Management (AWM) requires a time-sensitive response.
- Every door is the right door—if an adolescent is seeking withdrawal management but does not meet admission criteria, he/she should be linked to another appropriate service.
- Adolescent programming, even withdrawal management, must take into consideration developmental needs and activity requirements appropriate for the context.
- Core Competencies should include knowledge of withdrawal management medical protocols for adolescents.
- Specialized Staff Competencies should include knowledge of adolescent development and the impact of substance use on the developing brain.
- Staff must be trained in Cultural Competency and Cultural Safety, to enhance the treatment experience for First Nation and other populations.
- Staff must recognize that withdrawal management is just one component of the treatment experience.
- Having linkages with other parts of the treatment system, such as Community-Based Services, is critical.
- Consistent guidelines for "flow" in and out of withdrawal management must be provided.
- Treatment planning must consider the client's readiness for change.
- Roles must be clarified with respect to caring for adolescents and helping them navigate the system.
- Standardized provincial assessment is needed, while recognizing that "over-assessment" can be a barrier to access.

A subcommittee of the Provincial Adolescent Withdrawal Management Working Group was formed, and other experts on the subject were consulted, to adapt the Australian document *YSAS Clinical Practice Guidelines: Management of Alcohol and Other Drugs Withdrawal*. Careful consideration of the themes listed above, related literature, and results from youth stakeholder meetings helped to determine the strengths and limitations of Australian guidelines for the Nova Scotia context and to shape this document to better fit the needs of Nova Scotia.

The guidelines are meant to support management of substance-use withdrawal for 13- to 18-year-olds in all settings that are expected to provide withdrawal management services to adolescents. This may include an adult withdrawal management unit, a pediatric unit or in the future, an adolescent specific withdrawal management unit. The document is intended to support and inform all staff who have a role in assisting adolescents with the withdrawal management process. This includes helping adolescents access withdrawal management services, helping adolescents stay connected to the continuum of services once they complete withdrawal, and supporting family and concerned/significant others as required. To fill a long-standing information gap, this document places particular attention on the medical withdrawal protocols for adolescents. This document also takes into account psychosocial and spiritual considerations necessary for the provision of holistic care. Users of this document must note that the medical protocols are to be used only as a guide; decisions regarding dosage levels must be based on a thorough substance-use history and comprehensive medical assessment of each individual client.

This document was developed with the intent of addressing issues of withdrawal management for adolescents aged 13-18years. However, much of the contents of this document will very adequately apply to youth/young adults, and in some jurisdictions referred to as transitional aged youth who present with addiction and withdrawal management issues, The neurodevelopmental issues faced by young adults (ages 18-25 years) are extremely similar to adolescents. Accordingly, the psychosocial , medical and mental health issues facing young adults with alcohol and substance use disorders are also similar to adolescents. In fact, the needs of youth in withdrawal management settings and other addiction treatment settings often are more similar to those of adolescents than of adult clients/patients. Therefore the contents of this document may well inform clinical practices for transitional aged youth as well as adolescents.

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The redevelopment of this document has also been guided by principles outlined in the document A Systems Approach to Substance Use: Recommendations for a National Treatment Strategy (NTS, 2008). Availability and accessibility, matching, responsiveness, and collaboration and coordination have all been considered and have been incorporated into this document. The tiered framework represents a continuum of different levels of supports and services that correspond to the acuity, chronicity, and complexity of risks and harms associated with substance use. Withdrawal management services in Nova Scotia are found predominantly in the upper two tiers—Tier 4 or Tier 5—of the framework as described in the NTS, and involve more intensive, specialized services than the lower three tiers. Clients seeking services in tiers 4 and 5 are among the most harmfully involved of our clients. The acuity, complexity, and chronicity of any adolescent's presentation of mental health and substance-use status should determine the extent of specialized services required.

In all cases, it is essential that adolescents are helped to move between tiers and/or access multiple tiers according to their need. For this reason, it is suggested that a navigator or case manager

function be established to ensure that adolescents are not lost between the cracks. This function increases the probability that an adolescent will remain connected with the continuum of care following his/her involvement with withdrawal management, thereby increasing the chance of recovery and enhanced health. This is particularly important in light of the fact that adolescence is the primary life period for physical, emotional, and mental development.

This document also helps to advance the goals of the 2012 Nova Scotia Mental Health and Addiction Strategy, "Together We Can: The plan to improve mental health and addictions care for Nova Scotians." Enhancing the full spectrum of mental health and addiction services for youth figures prominently in the strategy, as well as recognizing our responsibility to better meet the need of all diverse groups and communities. By placing emphasis on cultural competency and culturally safe environments, these guidelines are directing those responsible for providing withdrawal management services to ensure that every possible action is taken so that every young person has the best chance of feeling safe while participating in withdrawal management services.

Highly specialized services for adolescents who require medical withdrawal management and treatment for a mental health disorder (Tier 5) cannot realistically be provided in all jurisdictions throughout the province. Given the small proportion of adolescents that would meet the criteria for Tier 5, provincially centralizing that level of service is being explored.

From a population standpoint, this province must also consider the most effective way to provide client-centred, safe, and efficient withdrawal management services for adolescents who don't meet the criteria for Tier 5 but require medical withdrawal management. Being accountable to our entire population and to Accreditation Canada's quality dimensions has forced the addiction services system to analyze all possibilities. While it may not be ideal to co-locate adolescents and adults on the same in-patient withdrawal management unit, implementation of these guidelines will enhance staff competencies in addressing adolescent needs. Subsequently, it is expected that integration of these guidelines into practice, will improve the treatment experience and treatment outcomes for adolescents receiving withdrawal management services. As well, whenever possible, localized interventions have a greater likelihood of providing coordinated shared-care approaches. Thus, the unintended consequences of not providing these services within a reasonable geographic area must be considered against the unintended consequences of providing services in an environment primarily intended for adults.

Matching intensity with need involves understanding culture and context and the opportunities that exist therein. Withdrawal management units should be interested in every adolescent's circle of support and circle of care, both of which involve building understanding and relationships within the context of community and making adolescent treatment more seamless along the continuum. Consideration must also be given to urban vs. rural cultural differences. Unless the move is considered essential, adolescents should not be displaced from their community of supports. Furthermore, centralizing all adolescent withdrawal management services carries a risk of bottlenecking a service to a population that should be our first priority.

Primary principles of withdrawal management

Managing withdrawal symptoms is a component of a comprehensive treatment strategy. A withdrawal syndrome is the predictable constellation of signs and symptoms following abrupt discontinuation or rapid decrease in intake of a substance that has been used consistently over time. The signs and symptoms of withdrawal are usually the opposite of the direct pharmacologic effects of the substance.

Identification and management of intoxication and withdrawal states

As described in the Principles of Addiction Medicine, intoxication is the result of being under the influence of, and responding to, the acute effects of alcohol or another drug of abuse. It may include feelings of pleasure, altered emotional responsiveness, altered perception, and impaired judgment and performance (Reis, Feillin, Miller, & Staitz, 2009). Recognizing intoxication states is essential in determining a course of treatment. Intoxication states can range from euphoria or sedation to life-threatening emergencies when overdose occurs. Each substance has a set of signs and symptoms that are seen during intoxication. The initial challenge is diagnosis, as intoxication can resemble many medical and psychiatric symptoms.

Identifying intoxication must commence with a thorough assessment that includes client history, physical examination, and, in most cases, laboratory screening. Of immediate concern is overdose. It is critical to know what substances have been taken and in what quantity. In cases where a client is unable to provide the information, a family member or concerned other may be able to provide important information.

When screening for substances, urine is often used because of the relatively high concentration of drugs and metabolites present in urine and the stability of metabolites when frozen. Screening is especially important when client history is vague. Understanding the specificities and cross-reactivities of the particular urine drug screen is vitally important to the interpretation of the screen. It is also important to know the usual duration of detectability of specific substances and how that is affected by the quantity ingested. Individual factors such as fluid intake, excretion, and rates of metabolism must be taken into account.

Substance withdrawal occurs as a result of a cessation of, or reduction in, heavy and prolonged substance use. Substances in a given pharmacological class produce similar withdrawal syndromes; however, the onset, duration, and intensity are variable, depending on the particular agent used, the duration of use, and the degree of neuroadaptation.

Reis et al. (2009) state that neuroadaptation refers to sensitization and tolerance. Sensitization—an enhanced response to a drug—occurs as a result of prior intermittent, rather than continuous, exposure to the drug. It is the opposite of tolerance and is sometimes referred to as reverse tolerance. The precise pharmacologic, neurobiologic, and behavioural factors that determine sensitization and tolerance are not well understood.

The American Society of Addiction Medicine (ASAM) lists three immediate goals of detoxification:

- to provide a safe withdrawal from the drug of dependence and enable the patient to become drug-free;
- to provide a withdrawal that is humane, thus protecting the patient's dignity; and
- to prepare the patient for ongoing treatment of his/her drug dependence.

Three essential and sequential steps include:

- assessment/medical evaluation and accurate diagnosis;
- stabilization; and
- fostering patient readiness for and entry into treatment.

Withdrawal treatment is most effective when interventions are tailored to the assessed importance of each of the dimensions.

Early recognition of withdrawal

A withdrawal syndrome or withdrawal symptoms will usually develop progressively after cessation or rapid reduction in substance use; therefore, early recognition and ongoing monitoring, along with prompt management of the initial and milder withdrawal state, can prevent progression to more severe stages and complications. It is also important to discuss the options that young people have when it comes to withdrawal, as not all young people will request or require a medicated withdrawal. It is essential to consider that some withdrawal states can be life-threatening (e.g., alcohol and benzodiazepines) and also that many medical and psychiatric conditions can mimic intoxication and/or withdrawal states. The assessment should prioritize the substances that need pharmacologic withdrawal support.

Assessment

Principles of assessment

In assessment, young people's insight into their situation and history should be considered and valued, and withdrawal education should always be presented in the context of adolescent development. Some young clients may have underdeveloped literacy skills; therefore, verbal and visual education tools are more appropriate than extensive handouts of information. Taking a strengths-based approach lends itself to a more engaging process and helps to facilitate a discussion of resources to build on, including self-esteem, community supports, coping skills, past successes, talents, and motivation for treatment. The goal is to develop a better understanding of the young person; explain to the young person how this assists in the formulation of a withdrawal plan as well as subsequent treatment plans.

The purpose of assessment is to determine, in collaboration with the young person, appropriate treatment options. Assessment should be comprehensive and should focus on all aspects of the young person, including health, social supports, and other factors that may impact on his or her treatment. The assessment should be conducted in a calm environment, and sufficient time should be allocated to establish rapport. Interpersonal skills of staff will assist in the establishment of a supportive and caring environment. The environment should help the young person feel welcome and relaxed during the assessment, so it is important that the physical layout of the room and its impact on the young person are considered.

Assessment should include consultation with other care providers and/or significant others.

Comprehensive assessment

An assessment template can be found in Appendix IV. Some of the following information has been adapted from the SAMSHSA Treatment Improvement Protocol as well as from existing provincial standards. In all cases, it is the joint responsibility of all professionals involved in the ongoing care of the adolescent to ensure that an adequate assessment has been undertaken before ongoing management commences; this is especially important where interventions with medications are involved.

The aims of assessment

Assuming triage assessment has been completed, the remaining objectives of full needs assessment will be to:

- detail the current and past history of substance misuse;
- identify and assess complications of substance misuse;
- identify and assess the presence of complex needs;
- confirm active substance misuse objectively;

- collect other information necessary to determine the appropriate immediate, medium, and long-term management plan; and
- engage the client with treatment.

The assessment may include, but is not limited to, the following:

Reason for presentation

This would include identifying the reason for seeking treatment, who made the referral, and how the adolescent is feeling about the referral. The reason given for presentation may be useful in determining motivation and stage of change, and for indicating the overall direction of the treatment plan. This should include noting any client ambivalence or expectations of the treatment experience.

Current and past substance abuse

- Ascertain the substances, including alcohol, tobacco, prescription drugs, and over-the-counter medication, that are currently being used. Also determine whether the adolescent gambles.
- Assess past use of substances, especially those that were consumed on a daily basis. It is critical to gather information regarding how old the adolescent was when he/she first used and what substance(s) was used, as well as route of administration.
- The history should include the length of time using, the frequency and pattern of use for each substance, and the quantity of the substance used. This can also give an indication of developing tolerance, which may determine whether medication will be required for withdrawal.
- It can be helpful to ask if the adolescent has ever gone through a stage where he/she has drunk alcohol every day, then explore further. Ask about the pattern of use throughout this daily use, e.g., bingeing at night or drinking throughout the day.
- It is important to ascertain whether or not the pattern of use has changed over time, and to determine when/if the use became daily and if it has been heavier in the past. Do not assume that the current use is the heaviest.
- Note the time of last use, what was used, and the quantity. This may inform the need for immediate treatment planning.

- Determine whether the adolescent has had any periods of abstinence. This enables you to explore experiences of withdrawal during those times and how he/she managed. Explore the strategies used to reduce use and the triggers that caused relapses.

Medical history

- Identify the presence of any concurrent medical/physical illness(es) that may mask, mimic, or exacerbate withdrawal. This will require a full medical history (past hospitalization, etc.) and examination, noting, for example, previous illnesses, ulcers or other gastrointestinal symptoms, chronic fatigue, recurring fever or weight loss, nutritional status, recurrent nosebleeds, infectious diseases, medical trauma, and pregnancies. This information should be taken prior to withdrawal, and any pre-existing medical conditions should be monitored throughout the withdrawal episode. Identification and treatment of concurrent conditions and careful monitoring of physical and mental health during withdrawal are important in the overall outcome of the adolescent's wellbeing.
- Women who enter the detoxification unit may benefit from a comprehensive physical examination, including a gynecological and obstetrical examination. Staff sensitivity to the needs of female clients is critical. It is especially important for a physician to be involved before implementing any protocol on pregnant or nursing women.
- Collect information on all prescribed drugs, including the reasons for taking them.

Emotional, spiritual, developmental, and mental health

- Identify any history or current issues related to emotional and mental well-being, such as history of depression, anxiety, and/or any previous treatment or interventions related to the identified issues.
- Young people who have a history of self-harm may express this during an episode of withdrawal. Triggers and interventions for self-harm should be explored prior to withdrawal, and a management plan around self-harm may be necessary.
- Often psychosocial issues may appear insurmountable to young people when they cease their substance use. For this reason, exploring the use of coping strategies to reduce anxiety and depression during this time may be useful. While it is not within the scope of these guidelines to discuss the treatment of anxiety or depression outside the context of withdrawal, it may present as an opportunity for referral and assessment by staff while the young person is substance-free.
- A critical issue to address is suicide risk, as there is significantly increased risk in adolescents with substance-use disorders, especially with co-morbid depression.
- Collect information on the adolescent's sexual history, including sexual orientation, sexual activity, sexual abuse, sexually transmitted diseases (STDs), and STD/HIV risk behavior status (e.g., past or present use of injecting drugs, past or present practice of unsafe sex, selling sex for drugs or food).

- Identify developmental issues, including the possible presence of attention deficit disorders and/or learning problems, and influences of traumatic events (such as physical or sexual abuse).
- Explore the adolescent's understanding of spirituality and any formal or informal religious or spiritual affiliations or practices.

Family and social support

- Detail as much information as possible regarding current and past living arrangements and relationship status with family. It is important that the adolescent be asked to identify who he/she considers to be the primary caregiver/support system.
- Explore the family history, including the parents', guardians', and extended family's history of substance use, mental and physical health problems and treatment, chronic illnesses, incarceration or illegal activity, child management concerns, and the family's ethnic and socioeconomic background. It is helpful to note substandard housing, homelessness, proportion of time the young person spends in shelters or on the streets, and any pattern of running away from home. Issues regarding the youth's history of child abuse or neglect, involvement with the child welfare agency, and foster care placements are also key considerations. The family's strengths should be noted, as they will be important in intervention efforts. This section should include primary and other languages of the household.

School, volunteer and employment

- As school engagement is an important indicator of current and future well-being, gather as much detail as possible on past and current school engagement. This would include the adolescent's history of positive and/or negative encounters with teachers and other school staff, curriculum, and extracurricular activity. This should also include an overview of academic, behavioral performance, or attendance issues. If the adolescent has had an opportunity to be employed or volunteer, it will be important to gather an understanding of whether or not this has been impacted by substance use.

Peer relations and recreation

- Identify current and past peer groups and whether or not that has changed over time, and the motivation for aligning with the current peer group. Gather an understanding of satisfying and unsatisfying aspects of current relationships. Note interpersonal skills, any gang involvement and neighborhood description. This is an also an opportunity to ascertain the degree of community engagement and/or community supports.
- Capturing an adolescent's skills, talents, hobbies, and interests will enable a tailored, holistic, and strengths-based treatment plan.

Legal

- Note any involvement with the justice system, including types and incidences of behavior and attitudes toward that behavior.

Motivation

The assessment of motivation is largely a matter of clinical judgment. First, it is important to answer the question: Motivated for what? Is the motivation for abstinence or stabilization? Is the motivation for a period of intensive treatment or for a low-key, "low-threshold" approach? If the adolescent is not immediately motivated to make changes in the substance misuse behaviour, is there motivation to make changes in other aspects of behaviour such as work, accommodation, and personal relationships?

Engaging Youth

The information in this section entitled, "Engaging Youth", has been extracted from the Health Canada document entitled The Best Practices—Early Intervention, Outreach and Community Linkages for Youth with Substance Use Problems, which points out key actions for working with youth who have substance-use problems:

- Recognize that the motivations for substance use may vary.
- Convey understanding and acceptance.
- Engage youth as collaborators.
- Be flexible and creative in meeting and planning activities.
- Incorporate and build upon positive family or community connections.
- Express concern regarding youths' health and well-being.
- Maintain a positive connection during the process of change.
- Reach out using youth-focused media formats.
- Select developmentally appropriate approaches.
- Address family relationship concerns as part of early intervention efforts.
- Increase service-provider awareness of barriers to access encountered by youth.

To engage youth, youth workers can utilize approaches like motivational interviewing (MI), an approach that has been identified as promising for working with adolescents. This client-centred intervention entails using collaborative decision-making processes, applying strategies to increase awareness of problem substance use, and implementing motivational strategies to facilitate client commitment toward action to decrease and eliminate substance use. Key techniques of MI include:

- reflective listening;
- open-ended questioning;
- summarizing reflection;
- identifying discrepancies between personal goals and behaviours;
- affirming strengths; and
- encouraging small-step plans and behaviours.

Motivational interviewing has been seen as particularly beneficial for use with adolescents who show a strong identification with problem substance or alcohol use and resistance to adults who try to direct or influence their behaviour (Dunn et al., 2001; Masterman & Kelly, 2003).

When examining continued treatment, youth workers need to be sensitive to the youth's doubt about the value of meeting a counsellor or helper. Concerns should be shared openly, with the intent of establishing a common goal for the session.

Characteristics of effective youth workers include:
- being credible to youth (Rhodes, 1996);
- exhibiting genuine and accepting attitudes (Collaborative Community Health Research Centre, 2002);
- demonstrating a non-judgmental approach to drug use norms, culture, and behaviours (Collaborative Community Health Research Centre, 2002; Health Canada, 1996; Rhodes, 1996; Self & Peters, 2005);
- having a real-life understanding of the social context of use for youth, e.g., street sense (Self & Peters, 2005); and
- adopting a flexible approach with realistic expectations (Collaborative Community Health Research Centre, 2002).

Positive community linkages are a source of social support, be it with family, peers, or school (Murray & Belenko, 2005). Community linkages also refer to community-based services that are accessible and responsive to youth early on in their addiction behaviour (Dembo & Walters, 2003).
Positive community linkages for youth should focus on:

- strengthening youths' attachment to prosocial relationships, activities, agencies, and programs;
- reducing exposure and attachments to antisocial groups and norms;
- enhancing school attendance and academic performance;
- increasing opportunities to learn and practice skills that facilitate achievement of personal educational and career goals;

- engaging youth and family members in planning;
- encouraging collaborative responses among health providers, community members, and police in addressing specific substance-use problems in the community; and
- creating service networks among agencies that effectively address the needs of youth at risk (Collaborative Community Health Research Centre, 2002; Murray & Belenko, 2005).

Efforts are strengthened when youth are meaningfully connected to a variety of community activities and relationships. Without these linkages, efforts to reduce problematic substance use may be significantly impeded (MacLean & d'Abbs, 2002). Areas of community connectedness include having a safe place to live, receiving support from family or other community members, being involved in an educational or career-related program, and participating in recreational services.

Reassurance

Young people who enter withdrawal settings are in highly supportive environments with 24-hour staff care. These Units are designed to reduce overall anxiety and subsequently create a positive experience of withdrawal. It is useful to explain the benefits of admission to the unit, such as:

- the young person is no longer exposed to cues at home,
- patterns of substance use are broken, and
- removal to another environment can automatically reduce the level of withdrawal symptoms.

Connection to the Continuum of Services

We know the importance of youth connectedness and engagement. Canadian research tells us that youth who are connected have a decreased likelihood of suicide attempts, lower rates of substance use, and lower levels of depression. It is through engagement that youth develop the skills that are needed for better mental health outcomes, become empowered, and make connections to community (Dyer, 2011). Thus, when talking about in-patient youth substance-use services, a core component of care is about youth engagement and connectedness, as these processes promote better health outcomes. Client retention and engagement are issues for health-related services, and it is commonly accepted that service users who drop out of treatment have a greater likelihood of returning to problematic substance use. There is little research available that primarily focuses on youth-oriented treatment retention; however, retention is often addressed when considering effective treatment approaches and methods (Health Canada, 2001).

To ensure that youth engage with in-patient programming, staff must first make the youth feel welcome, supported, and safe. The first 72 hours will be the most difficult for youth; during this time special care should be taken to ensure that the youth are receiving enough support. For some this may be more time alone; others may need more intense contact from service providers. From the beginning, a focus on engaging youth in the program fosters a sense of belonging, which encourages positive peer and staff alliances (British Columbia Ministry of Health, 2011).

Effective treatment and supports set the tone for youth to engage in their own treatment. There are many elements that contribute to effective in-patient treatment. Successful approaches to substance-use treatment and support for youth involve programs and services that respond to the diversity of youth and see the whole person, not just the substance use. There is consensus in the literature that treatment outcomes for people with problematic substance use are more successful when the therapeutic alliance between client and counsellor is flexible, warm, affirming, and honest. It is vital that program staff show respect and trust towards each program participant, as youth respond better to non-hierarchical structure and philosophy. Furthermore, research indicates that youth respond better to experimental styles of learning, with a treatment focus on strengths (British Columbia Ministry of Health, 2011).

In 2001 Health Canada published Best Practice Treatment and Rehabilitation for Youth with Substance Use Problems. Section 2.10 highlights the importance of client retention in treatment and provides perspectives from key experts, who identified best practices related to retention in the areas of assessment and intake, program philosophy and approach, outreach to families, and program content.

Assessment and intake:

- trying to match client readiness with treatment objectives and methods; and
- making detailed information available for both client and family.

Program philosophy and approach:

- considering youth relapse not as a failure but as a part of recovery and an opportunity to learn;
- taking a harm-reduction approach;
- focusing on client life goals and the impact of substance use on these, rather than primarily focusing on substance use;
- forming a supportive service user–service provider alliance, with the service user directing goal and treatment planning;
- providing treatment that considers youth within a system—family, peers, school, community; and
- considering youths' spiritual, mental, emotional, and physical needs.

Outreach to families:

- actively involving and engaging family and others whom the client deems to be of importance.
- Program content:
- utilizing a broad psycho-educational approach;
- providing a treatment environment that incorporates a range of recreational activities and is safe and fun; and
- ensuring that learning and programming are experiential whenever possible.

Ensuring that youth continue to engage over the continuum of care requires effective transition plans for each youth returning to the community. In order to be effective, transition planning should be a collaborative process between youth, services provider, and those whom the youth has identified as important. Evidence- and practice-based literature identifies key elements to include in transition planning: ways to receive ongoing treatment; relapse prevention tips; access to appropriate community services; and strengthening of personal and social supports. Transition back into and engagement with the community are most successful when there are effective partnerships between community-based services and inpatient programs. To maintain and build upon progress that youth have made while in-patients, it is essential that appropriate supports in the community be engaged in the youths' care as well, such as Community Services, and Education (British Columbia Ministry of Health, 2011).

Adolescent Development

Adolescence is a period of significant change and transition—the period between childhood and adulthood that is marked with a series of challenges and developmental goals. It is a period of rapid physical, mental, and social growth. Young people begin to experience a greater awareness of the world they live in, and often begin to form new and meaningful relationships. Identification of self in terms of feelings, beliefs, values, attitudes, and self-perceptions becomes integral in a young person's life. It is important to remember that although we are able to identify specific developmental stages, adolescents are not a homogeneous group.

Adolescence can be defined as the period of transition from childhood to adulthood, characterized by:

- efforts to achieve goals related to the expectations of the mainstream culture;
- spurts of physical, mental, emotional, and social development (WHO, 1984).

Chronologically, adolescence occurs between 12 and 18 years of age.

Development changes

Adolescent development can be categorized into four areas of change: physical, emotional, sexual, and cognitive. Developmental changes within these areas are interconnected, and they have an impact on a young person's well-being. Within each area, certain developmental tasks must be mastered in order for the adolescent to move into adulthood.

Physical development

The marked growth and development in adolescence is significantly different from other life stages. The onset of puberty begins when certain physical and sexual changes start to take place, such as the development of secondary sexual characteristics (e.g. pubic and underarm hair) and, in girls, breast development and the onset of menstruation. A surge in body size and shape takes place and other physiological changes, such as the rapid growth of the digestive and circulatory systems, also occur.

- While biological changes are generally thought to be complete with the attainment of puberty, there is continued development throughout adolescence as the body matures in shape and size. (Peterson & Taylor, 1980)
- The age of onset of puberty differs between boys and girls, and varies for individuals within each gender. Puberty in girls may begin between the ages of 10 and 14 years, and in boys between 10 and 16 years.

Cognitive development

A young person's way of thinking, or cognition, transforms from the "concrete/operational" stage between 7 and 11 years of age to a "formal operational" stage (Piaget, 1969), which is characterized by the development of abstract thought, the ability to solve problems and consider wider, inter-related issues, and the emergence of idealism regarding issues related to themselves and their environment.

Moral reasoning advances during adolescence as the young person starts to become concerned about social order and justice. According to Kohlberg (1973; cited in Frydenburg, 1997), "post conventional moral reasoning" (that is, the effort by adolescents to define their own moral rules rather than accept them from the group or an individual), is distinguished from "pre-adolescent reasoning" by an implicit, reciprocal contract between the individual and society. Through this phase of moral reasoning and abstract thought, young people develop their own values, beliefs, moral judgments, and conscience, and begin to recognize certain benefits in complying with the rules determined by society.

Summarizing normative developmental tasks

It is important for young individuals to achieve certain normal developmental tasks in order to become positive and healthy young adults. In summary, these are:

- acceptance of physical changes/body image;
- gaining of independence (The adolescent becomes emotionally independent of parents and other adults. The desire for autonomy from parents and their authority can lead to outbursts of anger as well as feelings of loss as they move away from childhood security);
- development of new relationships with peers of both sexes and the joining of peer groups (These are important steps for the young person's psychological development);
- establishment of self-identity (Young people develop their own opinions based on their own values, morals, and ideals, independent of their family. Adolescents often will take risks and be extreme in their views, as they exercise their belief of right and wrong. Woven into this fabric is how their peers view them—acceptance by peers is vital);
- acceptance of sexual identity (The adolescent accepts himself or herself as a sexual being and adopts a sex role in line with his/her own self-concept and body image); and
- preparation for and selection of a career choice that corresponds with their ability, attitudes, self-image, and values.

Developmental sub-stages of adolescence

The table below, outlining the developmental sub-stages of adolescence, is adapted from an article on adolescent psychiatry. Each stage represents different developmental tasks and behaviours. When working with young people it is important to understand that the stages of adolescence are transitional.

Table 1: Developmental sub-stages of adolescence

	Determinants	Tasks	Behaviours
Early adolescence 12–14 years	Biological changes	Initial separation–individuation from parents	Preoccupation with self and self-image, mood swings, stronger connection to same-sex peer group
Middle Adolescence 15–17 years	Cognitive development, upsurge of sexual drive, emotional development	Peer attachments, awareness of own sexuality, consideration of vocational choice	Idealism, risk-taking, challenging structures, rebelliousness, identifying with peers, omnipotence, romantic attachments
Late Adolescence 18–21 years	Preparation for adult life	Completion of separation–individuation from parents, understanding and integration of self-identity, acquisition of goals, ideals, values	Career choice consolidation, development of relationships that are based on care and equality

Source: Bashir, M. and Schwarz, M., , Adolescent Psychiatry.
Taken from P. J. V. Beumont and R. B. Hampshire (Eds.), Text Book of Psychiatry (1989)

Psychological/Emotional Development

Psychological/emotional developments take place as adolescents separate from their parents and move towards forming their own identities. This process usually involves risk-taking behaviours and acts of rebellion in order to define separation and independence from the parents. Examples of this may include experimenting with substance use and avoiding set commitments and responsibilities.

In adolescence, peers play an important role in psychological development as young people spend more time with their "group." This involvement develops social skills, broadens interests and values, and teaches competition, co-operation and communication skills. Peers provide youth with support and a sense of belonging as adolescence brings physical and social change, with the associated challenges of identity formation and understanding their place in the family and the community.

Emotional maturation occurs during adolescence. Intense feelings of love and other emotions connected to newly formed relationships as well as changes to the parent/child relationship can cause anxiety and stress. Fluctuating emotions and mood swings may also occur due to the hormonal activity. Developmentally, it is important for the young person to experience these feelings and emotions, and to gain understanding and insight by learning ways to cope.

Sexual identity

Adolescence is the time when sexual needs and sexual identity come to prominence. As a result of puberty, young people become sexual beings and start to be exposed to issues related to their own sexuality.

In moving away from the primary influence of the family, the adolescent moves towards identifying with and seeking support from the same-sex group with whom they share similar interests. Middle adolescence sees the move towards mixed-sex groups. With this come feelings of attraction to and intimacy with members of the opposite or same sex. Confusion is common, as adolescents negotiate the diverse, and at times conflicting, messages and information from family, media, society, and their peers.

For a young person to form a positive sexual identity, many levels of sexuality need to be considered within the context of his or her own identity. Self-concept and self-esteem, body image, emotions, feelings, culture, relationships, peer pressure, and gender construction, as well as ethical and moral values and opinions, need to be explored in order for sexual identity to develop.

Brain Development

The following information has been included in the guidelines in an attempt to make a connection between adolescent psychosocial development stages discussed in the previous chapter and the effects of adolescent substance abuse in the context of our growing awareness of age-related brain changes.

Adolescent development is usually discussed in behavioural terms, as characterized by a shift in orientation from an acceptance of the "parental world view" to a more "personalized view." Other aspects of this developmental period include:

- restructuring the self-concept;
- redefining the concept of others and their influence on self;
- reappraising social standards and values; and
- redefining the roles of parents and adults as "guides" and "decision makers" to equals, and moving from dependence to independence in thought and action.

The big question here is "Who Am I?"
Such self-examination inevitably entails:

- trying out various adult roles;
- evaluating the response of others to these experiments;
- adjusting to sexual maturity;
- adapting to the demands of new social relationships;
- changing the nature of peer relationships; and
- exploring vocational choices.

Research is constantly changing scientists' understanding of the human brain and its growth; therefore, there is an increasing appreciation of developmental biology in these processes. Brain development (or learning) is a process of creating, strengthening, and discarding synapses. Synapses organize the brain by forming neural pathways that connect different parts of the brain. Exposing the brain to complex environments will encourage synaptic growth.

The teenage years turn out to be a complicated time in the brain, with cells fighting it out for survival and the connections between different regions being rewired and upgraded. Some abilities, such as quashing offensive behaviour and empathizing with others, keep maturing well into the twenties. The passage from childhood to adulthood is not straightforward. Some researchers now see the teenage remodelling as analogous to the "developmental window" that allows the brain to be molded by experience in infancy. There are ways in which teenage brains perform quite differently from either childish or adult ones.

Grey Matter

Humans achieve their maximum brain-cell density between the third and sixth month of gestation. During the final months before birth, pruning eliminates unnecessary brain cells. By the time a child is 6 years old, his or her brain is 90–95% of its adult size. Between the ages of 6 and 12, neurons grow "bushier," making connections to other neurons and creating new pathways for nerve signals. The thickening of neurons and their dendrites peaks when females are about 11 and males 12½, at which point a serious round of pruning (discarding of synapses) commences.
The final, critical part of this second wave occurs in the late teens. Unlike the prenatal changes, this neural waxing and waning alters not the number of nerve cells but the number of connections, or synapses, between them.

From birth to early childhood there is an excessive production of neurons. Whenever neurons are engaged in a task they enter an excitatory phase in which they fire. When one cell fires, it tends to reduce the level of excitation required for the other cells in the same network to fire. The phrase "cells that fire together, wire together" characterizes this process. After a certain period of time these circuits become hard-wired and all the cells in a given network will fire in concert. This process, in which the brain's grey matter thins while the white matter thickens, forms the biological substrate of learning, and is sometimes referred to as "Neural Darwinism." Gray matter is thinned out at a rate of about 0.7% a year, tapering off in the early 20s.

Those cells that fail to form significant connections with others do not thrive—the "use it or lose it" principle. For example, the more that sport is played at this age, the more pathways involved in, for instance, hand/eye coordination are strengthened, while if the individual is at the same time less involved in painting, the brain areas specializing in those functions get pruned. So our brains are sculpted by our interactions with our environment, which suggests that Nature's concern is increased efficiency.

Another consequence of cells firing together is the retrograde exchange of neurotrophic factors (neurotrophic factors promote cellular growth) from the postsynaptic to the presynaptic cells. Until around the age of 12 neurons grow bushier, then the pruning process commences with the sensory functions first, then coordination, and lastly executive functions.

There is an instinctive need to stimulate the brain and engage in exploratory behaviour, which gives rise to adolescents actively seeking out intense feelings and growing eager to leave the nest to follow their own paths. This process is traditionally seen as thrill- and novelty-seeking by adults, who view this behaviour as problematic.

It appears that novelty is the key, as new experiences foster and promote brain development. Importantly, according to Volkow (NIDA), impoverished environments lead directly to a lack of receptors, which is associated with addiction.

White Matter

As stated above, at this time the brain's white matter (composed of fatty myelin sheaths that encase axons and make nerve-signal transmissions faster and more efficient) thickens. In other words, during adolescence fewer but faster connections are developed in the brain. This development proceeds in stages from the occipital region to the frontal region. Brain centres that mediate direct contact with the environment by controlling such sensory functions as vision, hearing, touch, and spatial processing reach maturity (through proliferation and pruning) earliest. Next are areas that coordinate those functions, such as the part of the brain that helps you know where the light switch is in your bathroom even if you can't see it in the middle of the night.

The very last part of the brain to be pruned and shaped to its adult dimensions is the prefrontal cortex, home of the executive functions: planning, setting priorities, organizing thoughts, suppressing impulses, weighing the consequences of one's actions.

Hormonal Changes

Hormones remain an important part of the adolescent brain story. At the same time as the brain switches from proliferating to pruning, the body comes under the hormonal assault of puberty. These two events are not closely linked, however, as brain development proceeds on schedule regardless of whether the child experiences early or late puberty.

During adolescence the adrenal sex hormones estrogen and testosterone are extremely active in the brain, attaching to receptors throughout the brain and exerting a direct influence on serotonin and other neurotransmitters that regulate mood and excitability.

Testosterone surges during puberty make an almond-shaped part of the limbic system—called the amygdala—swell. The limbic system generates emotions such as fear and anger, and the swelling of the amygdala can intensify feelings of aggression or fear, so feelings reach flashpoint more easily and adolescents actively seek out situations where they can allow their emotions and passions to run wild.

There is a hormone–brain relationship contributing to the appetite for thrills, strong sensations, and excitement. This thrill-seeking evolves to promote exploration—an eagerness to leave the nest and seek one's own path and partner.

In tasks such as identifying emotions displayed on faces, both children and young adolescents rely heavily on the amygdala, while adults rely more on the frontal lobe, a region associated with planning and judgment. During research, adults make fewer errors in assessing photos of people, while under-14s tend to make mistakes. In particular, the under-14s identify fearful expressions as angry, confused, or sad. This developmental physiology may explain why adolescents so frequently misread emotional signals, seeing anger and hostility where none exists. Teenage ranting ("That teacher hates me!") can be better understood in this light.

Risk vs. Opportunity

Experiments involving driving simulators have been used to observe teens and adults as they decide whether to run a yellow light. The results show that both sets of subjects make safe choices when playing alone, but in group play teenagers start to take more risks in the presence of their friends. This usually ceases in those over age 20, so age difference is a relevant factor in decision making and judgment under conditions that are emotionally arousing or have high social impact. Interestingly, most teen crimes are committed in groups. Research shows that the nucleus accumbens (the region in the frontal cortex that directs motivation to seek rewards) in adolescents responds differently than in children or adults. In studies where adolescents are given a medium or large reward for performing correctly, the nucleus accumbens reacts more strongly than in children and adults. When given a small reward, the teenage nucleus accumbens response is decreased below that of children and adults, as if the small reward represented no reward at all in the teen's view.

A reward centre on overdrive coupled with planning regions not yet fully functional could make an adolescent an entirely different creature from an adult when it comes to seeking pleasure. This may contribute to the fact that adolescents are prone to engaging in behaviours that have a really high excitement factor, a really low effort factor, or a combination of both.

The adolescent brain's developmental changes may contribute to the occasional emotional turmoil that teenagers experience. The fact that judgment is still developing may also explain adolescents' tendency to take risks. When new, exciting activities cause neurons to release neurotransmitters, such as dopamine, that make you feel good, risky behaviour may produce emotional rewards, too.

Adolescents and Stress

Research conducted on female adolescent mice shows that their brains respond to stress differently than those of adults and prepubescent individuals. Anxiety is regulated by the brain's principal inhibitory neurotransmitter, GABA (gamma-amino-butyric-acid), which counteracts the effect of glutamate, an excitatory neurotransmitter in the brain's limbic system. Stress causes the release of a steroid known as THP (allopregnanolone), which in adult and prepubescent individuals increases the calming effect of GABA in the limbic system. However, in the above-mentioned research, it was shown that THP had the opposite effect in adolescent mice. It appears that THP has two roles: one in the limbic system where it is calming, and another in the hippocampus where, in adolescents, it stimulates. The hippocampus is important for emotion regulation, and this paradoxical role of THP is the reason for the adolescent brain behaving differently. The underlying mechanism appears to be different levels of expression of a type of receptor (the "alpha-4-beta-delta" GABA receptor) in the hippocampal brain region known as CA1. In adults and preadolescents, the receptors are in low numbers so the overall effect of THP is a calming one. However, in adolescents, the expression of these receptors is high, so for these individuals the anxiety-raising effect of THP in the hippocampus outweighs the calming effect it has in the limbic system. Researchers were able to reverse the puberty effect in the mice by genetically altering the number of receptors.

The net effect is that whatever the adolescent's reaction to stress is likely to be—whether to cry or to be angry—it will be amplified. The researchers indicate that, though to adults it may seem like an overreaction, it's the only thing the teenager can do. This study is thought to be the first to suggest an underlying physiological, as opposed to a behavioural–psychological, explanation for teenage mood swings.

Sleep Patterns

The pineal gland, situated at the base of the brain, produces melatonin (a chemical that signals the body to begin shutting down for sleep) as nighttime approaches and daylight recedes. It takes longer for melatonin levels to rise in teenagers than in younger children or adults, regardless of exposure to light or stimulating activities. This may contribute to the change in sleep patterns often associated with teenage years, resulting in teenagers staying up late and sleeping until lunchtime the next day.

Chemical Messengers

When a neuron's dendrites become stimulated, it sends an electrical signal through the cell body and down a long axon. At the end of the axon the neuron then releases neurotransmitters, which send signals to nearby neurons across synapses.

The brain relies on about 50 different neurotransmitters. Examples include:

- acetylcholine (ACTH)—affects brain activity related to attention, learning, and memory;
- dopamine—stimulates feelings of pleasure and affects arousal levels;
- endorphins and enkephalins—reduce stress and ease pain;
- glutamate—plays a vital role in learning and long-term memory;
- noradrenaline—stimulates mental and physical arousal and heightens mood; and
- serotonin—affects mood levels, sleep, appetite, and other functions.

After a neurotransmitter stimulates a nearby neuron by attaching to receptors on its dendrites, the presynaptic neuron's terminal absorbs it through a process called "reuptake." Reuptake keeps neurons from constantly being fired.

Substance abuse interferes with the body's normal release and uptake of neurotransmitters. For example, nicotine acts like ACTH and dopamine, methamphetamine mimics dopamine, PCP interferes with glutamate receptors, and MDMA mimics serotonin. In most cases, the brain's responses reinforce the use of the substance. Over time, the body demands more of it until the person becomes addicted.

Substance Abuse and Brain Development

With recent developmental neuroscience research indicating that adolescence is a key period of neuromaturation, there is growing support for the idea that the adolescent brain may be more vulnerable to the effects of addictive substances than the adult brain.

In summary, the remodeling of the brain that takes place from childhood through to the early 20s is thought to ensure more efficient communication between cortical and subcortical brain regions, facilitating optimal functioning within cognitive, emotional, motivational, and sensorimotor systems. However, it appears that the brain does not mature uniformly across this developmental phase of life. Instead, there is a graded progression of cortical maturation within the medial and lateral frontal areas (regions responsible for higher cognitive functions) that continues into late adolescence, whereas the deeper and more posterior brain structures (regions responsible for more primitive functions) mature much earlier.

Although relatively fewer studies have examined developmental changes in brain function (as opposed to structure), differences in affective, motivational, and cognitive capacity during adolescence appear to be consistent with reported maturational neuro-anatomical findings. For example, early adolescence is characterized by increases in affective reactivity, peer-directed social interactions, risk taking, and sensation seeking, while decision making and self-regulatory skills (i.e. frontal executive functions) do not fully mature until early adulthood.

Growing literature from animal studies suggests that adolescent substance use disrupts neuro-endocrine functioning, and can induce greater effects on neural plasticity and cognition than in adults. Substance use during adolescence can also elicit altered sensitivity to later drug exposure, impair adult cognitive functioning, and even induce cortical damage. Substantially less work has been conducted in adolescent humans, although there is increasing evidence of developmental harms.

A number of studies have reported smaller hippocampal volumes among adolescents and young adults with alcohol use disorders compared to healthy matched controls. In one of these studies, hippocampal volumes were positively correlated with age of first use and negatively correlated with duration of use.

Adolescents with alcohol-use disorders have also been reported to have smaller prefrontal cortices and white-matter volumes, with significant correlations noted between prefrontal cortical volumes and measures of alcohol consumption. Such structural abnormalities are in keeping with reported alcohol-related neurocognitive impairments among adolescent drinkers, as well as recent findings in functional imaging.

While most research to date has been conducted among adolescent drinkers, young drug users have also been found to demonstrate neurocognitive impairments. Young people who begin using cannabis before the age of 17 seem to be more vulnerable to cognitive impairments and show reduced brain grey matter. Chronic inhalant misuse has also been associated with cognitive impairment, sometimes resulting in permanent and irreversible cognitive deficits and structural brain abnormalities.

In one study of 55 chronic users (mean age of 30 years, with the majority commencing use in adolescence), almost 44% had structural brain changes. The extent of these structural brain changes was related to cumulative dose. There was also a strong correlation between white-matter abnormalities and greater cognitive impairment.

Another study recently reported that chronic cocaine use substantially interferes with normal white-matter maturation, particularly in frontal and temporal brain regions. Enhanced white matter connectivity (especially within these structures) is one of the key maturational processes to occur during adolescence, suggesting that early-onset substance use may affect the development of fronto-temporal white-matter circuits, potentially resulting in disturbed memory and executive and affective functioning.

Studies of high-risk populations (e.g., family history of alcohol-use disorders) suggest that impairments in frontal functioning are apparent prior to drug use exposure and can predict later substance use. High-risk young people also fail to demonstrate appropriate age-related decreases in grey-matter volume. Such studies, however, report no differences in hippocampal volume, suggesting that any observed structural findings most likely relate to substance exposure rather than premorbid vulnerability.

The limited research on the neurobiological effects of alcohol, tobacco, inhalants, and cannabis use during adolescence is at odds with their high rates of use during this important developmental period; animal evidence suggests substantially increased risks. Accordingly, it should be a research priority to conduct studies that examine changes in brain structure and function during early adolescence.

Such research is essential if we are to assess the neurobiological impact of substance use during adolescence (including the extent of recovery following abstinence), and identify robust neurobiological markers of risk. This research is also essential in order to assess the impact of exposure to specific drugs, as well as possible synergistic effects with polydrug use.

Gender Differences

Together, the Canadian Centre on Substance Abuse and the British Columbia Centre of Excellence for Women's Health highlight how substance abuse and addiction vary between males and females. Common patterns of use for girls and women have been widely acknowledged. A recent study in British Columbia shows a gendered relationship with benzodiazepine use, where females are twice as likely as males to be prescribed benzodiazepines to help cope with difficult life situations, such as grief and stress. Health Canada also highlights that female youth often have a lower tolerance than males to the effects of alcohol. In addition, female youth tend to experience symptoms of dependence more quickly and are often more susceptible than males to health problems related to alcohol and drug consumption. Research indicates that for most substances male youth are more likely than female youth to use substances at problematic levels (Health Canada, 2001).

Research has shown that mental health problems and substance abuse are interconnected, and are worsened by a female's experience of victimization, trauma, and violence (Canadian Centre on Substance Abuse and BC Centre of Excellence for Women's Health, 2005). Histories of sexual and physical abuse are positively associated with increased substance use and are more frequent among female than male youth. Research suggests that some female youth use substances to ameliorate mood, increase confidence, cope with problems, loosen inhibitions, lose weight, or enhance sexual experiences (Health Canada, 2001).

Research shows that social attitudes with regard to substance use and addiction also have an impact on girls and women, as there is greater stigma attached to a female with a substance-abuse problem than to a male. Girls and women also experience more opposition from friends and family members than males do to enter into treatment (Poole & Dell, 2005).

It is difficult to ascertain the extent to which females use alcohol and other drugs during pregnancy, given the stigma that is associated with maternal use (Poole & Dell, 2005). However, services for pregnant youth are seen as critical for decreasing the psychosocial and physiological effects of problem substance use for both the youth and the developing fetus/child. Pregnancy provides an opportunity to reach out to the youth, given the youth's concern for the health and well-being of the unborn child (Health Canada, 2001). It is necessary to keep in mind that pregnant youth face many challenges associated with their own treatment needs as well as accessing prenatal services; concerns related to family care and responsibilities decrease the likelihood of entering into a treatment program (Poole & Dell, 2005).

The impact of substance use on developmental tasks

It is often difficult to separate the adaptive aspects of adolescent substance use from the maladaptive. Adolescents find themselves in a constant state of transition, and substance use may give meaning to the changes occurring or block unwanted feelings and emotions, such as depression and anxiety. Substance use may become "immensely attractive to the adolescent in the throes of developmental transformation" (Trad, 1993).

Substance use can be maladaptive to the adolescent when it starts to become problematic and blocks the normative developmental tasks from being achieved by the young person.
When a young person engages in problematic substance use, the achievement of developmental tasks can be impeded. We need to understand that differing patterns of substance use, as well as consequences of use, will exist for each individual adolescent, and that these will vary depending on the young person's stage of development.

Factors such as social, ethnic, and cultural issues may influence drug use. Sensitivity to different cultural and linguistic group values and attitudes will allow the worker to be more responsive to additional complexities faced by young people from various backgrounds. Workers also need to keep up to date with current trends in drug use.

Most drug use engaged in by young people and adults is not problematic. It is useful to understand that young people, in general, use a variety of drugs in a variety of ways, for a variety of reasons. No drug is instantly addictive. How much people use, and how often, depends much more on their personality and lifestyle than it does on the particular drugs being taken.

There is a fine line between substance use being constructive and adaptive or destructive and problematic. The definition of problematic substance use will depend on the values and attitudes of the person providing the definition. A useful question to ask is:

- For whom is the substance use a problem (or not a problem) and for what reason?

The table below highlights how typical adult perspectives on drug use may differ from those of the adolescent.

Table 2: Differences in Perspective

Adult Perspective	**Adolescent Perspective**
Stupid/foolish	Exciting/fun
Easily influenced	Proof of belonging
Acting without regard for consequence	Testing limits/not caring
Dangerous	Thrilling/exhilarating

The degree to which substance use is problematic or functional for young people will vary according to the developmental subgroup to which they belong and a myriad of factors, unique to the circumstances of each individual. The following is a useful definition:

- Substance use that puts a young person at risk of serious harm and/or impinges on that young person's ongoing successful development can be defined as problematic.
- Focusing on immediate risk as well as longer-term developmental risk helps to avoid the narrow definition of entrenched and habitual drug use as the only types of problematic drug use. For example, a twelve-year-old whose use is experimental or social/recreational may, through sheer lack of information and experience, be at risk of serious harm.

Quite often, problematic substance use does have the effect of marginalizing the young person, limiting the development of alternative strategies for coping, and further entrenching substance-using behaviour. In these circumstances, the worker may be called to manage a young person who is using in a habitual or dependent fashion. (The type of drugs taken, the style and patterns of use, and the meaning attributed to use is often different from that of adult substance users.)

When drug use and its consequences become problematic for a young person, he or she may come to the attention of service providers. This is most likely to occur when the young person's life circumstances become overwhelming; he or she feels unable to cope and would like practical assistance to sort things out. Seeking assistance does not automatically come with a goal to stop drug use, or even to change behaviour. This is particularly so if the person feels coerced (e.g., by family or others such as police) to attend treatment.

Culturally Effective Services

Introduction

While mental health and addictions services are intended and assumed to be safe and representative of cultures of care and individual support, this is not always the case. This section of the Adolescent Withdrawal Management Guideline Document builds upon initiatives already undertaken with the Department of Health and Wellness to ensure that Nova Scotians receive culturally competent patient-centred care. Cultural Competence requires that: (1) health-care providers have effective skills, knowledge, and attitudes, (2) organizations have inclusive procedures and guidelines, and (3) health systems have adequate funding, interpretation services, a diverse workforce, sound policies, and supportive leaders and champions.

Tools such as the Cultural Competence Guidelines for the Delivery of Primary Health Care in Nova Scotia (found at http://www.healthteamnovascotia.ca/cultural_competence/CulturalCompetenceGuidelines_Summer08.pdf) are a tremendous resource and should be utilized along with the information in this document. In addition, A Cultural Competence Guide for Primary Health Care Professionals in Nova Scotia can be found at http://www.healthteamnovascotia.ca/cultural_competence/Cultural_Competence_guide_for_Primary_Health_Care_Professionals.pdf

The following link provides guidance on integrating Cultural Competence and Health Literacy so that Nova Scotia's diverse populations can be reflected in pictures, written information, advertisements and posted signage, and written material for all literacy levels in the languages commonly spoken in their service areas.
http://www.gov.ns.ca/health/primaryhealthcare/documents/Messages%20for%20All%20Voices-%20Full%20Length%20Tool.pdf

This section gives a brief overview of specific demographics that are underserved and vulnerable to mistreatment by approaches to care that represent colonialism, racism, homophobia, xenophobia, and sexism in Nova Scotia. The complex struggles and intersecting identities of Aboriginal peoples, Black Nova Scotians, immigrants, refugees, and LGBTQ individuals require mental health and addictions practitioners to be aware of the historical causes of marginalization. Practitioners should also be aware of existing agency and healing cultures currently building consensus on individual and community well-being in a globalized world of diverse languages, lifeways, and sexualities.

As we work with young people in a reflective and informed practice, we can understand the context of youth's contemporary struggles for self-determination as they demand reflexivity and transparency from institutions of care to ensure ethical and effective interactions between professional care workers and communities.

Social determinants are crucial factors in the health and well-being of Canadians. If we can understand how and why they work—and how our services and institutions can be strengthened and our resources more equitably distributed—we will also be able to understand and act to improve the factors that allow us to live longer and healthier lives (Raphael, 2010).

Being able to respond to and understand the diverse populations of Nova Scotian youth in a withdrawal management setting will be key in retaining youth in the continuum of services and supports. If youth feel that they are understood and that every attempt is made to match services to their unique needs, they are more likely to establish a positive attitude about addiction services and will be more open to further exploration of their harmful use of substances and/or gambling. White and Kleber (2008) have documented historical and current examples of iatrogenic injury in traditional addiction treatment and have produced a guide offering suggestions on how to prevent such harm. They urge medical professionals to examine and reflect on the vulnerability of marginalized populations accessing addiction treatment:

> Harmful effects of addiction treatment are often written off as symptoms of the client's addiction pathology or as products of medical psychiatric comorbidities. If we attribute positive change in clients to the potency of key treatment ingredients, we must also consider that negative change in some clients may flow from these same potent forces. Members of historically disempowered groups are particularly vulnerable to iatrogenic injury, e.g., women, children, elderly, ethnic minorities, prisoners, and persons experiencing stigmatized conditions, e.g., mental illness, addiction. (p. 9)

Whether he/she is African Nova Scotian, First Nations, immigrant, gay, lesbian, bisexual, or transgendered, a young person's motivation will be very much impacted by the degree to which he/she feels accepted, understood, and safe. When working from a cultural competency model, it is important to ensure that all people are included in the definition. Often culture is seen as encompassing racial or ethnic groups but, historically, people with disabilities, LGBTQ populations, faith communities, or women experiencing stigmatization in institutional practices have been left out.

There are some differences in these groups in terms of how culture is defined, but there are also similarities. While LGBTQ people share similar experiences that shape their identities, the LGBTQ culture is often hidden in response to heterosexist stigma. LGBTQ youth may not identify with the culture of their family of origin or geographic community. Similarly, intergenerational disruption and displacement of indigenous families has impacted the complexity of the cultural identities of indigenous youth raised in state care. One of the effects of this multifaceted oppression is a general level of self-protection and distrust of others and of official systems, especially education and health-care systems. As a result, youth often do not access health services except in emergencies, or they access services but are uncooperative or do not disclose their identities to health services personnel. The fear of experiencing homophobia and transphobia or the fear of having to disclose one's marginalized identity is a large barrier to accessing services (Eliason, 2010; Lombardi & van Servellen, 2000). Alcohol and substance-abuse programs and services are no exception. In one study, results showed that 50% of transgender individuals reported they did not seek treatment for an addiction issue because of fear of an anticipated transphobia. Another significant percentage stated they did seek treatment but did not disclose their identity (Nuttbrock, 2012).

There is not extensive literature available on substance use patterns among ethno-cultural minority youth. Substance-use problems among minority groups may not be reported due to cultural factors, as there is a set of beliefs within many ethno-cultural minority cultures that discourages the acknowledgement and exploration of alcohol- and drug-related problems. Many cultural traditions support youth receiving help from informal networks rather than from formal community structures. Low reporting numbers may also be a result of a lack of sensitivity and cross-cultural training for service providers, the presence of racism in mainstream services, and a lack of culturally appropriate services (Health Canada, 2001).

In her 2007 study of race and nation in Canada, "Exalted Subjects," Dr. Sunera Thobani highlights plural concepts of sovereignty as a nuanced way to understand the alienation and agency of marginalized peoples in Canada. She cites Black theorist Dr. Achille Mbembe to convey the ongoing presence of historical control and violence in the lives of racialized people living in Canada:

> Black subjectivity and alienation were constituted in the racial violence that typified the encounter of the 'native' with modernity and defined the form of sovereign power imposed on their lives … Instead it recognizes that the colonized subject/object was formed—and lives—within the soul destroying brutality that was/is the colonial order. (p. 12)

While many similarities can be drawn between the impact of colonialism on First Nations communities and Black communities in Nova Scotia, there are historically different factors that are important to consider in relation to managing withdrawal services for African Nova Scotian youth. Specifically, service providers should be aware of the history of slavery of African Nova Scotians (Robertson, 1996; Rommel-Ruiz, 2006; Whitfield, 2010) and the displacement of indigenous Black communities such as Africville (Vincer, 2008; Sehatzadeh, 2008). Africville was a vibrant African-Canadian community in Halifax that can be traced back to 1838 when descendants of American slaves settled on the shore of Halifax Harbour. In the 1960s racism intensified when Africville land, increasingly valued for its location on a Halifax waterfront, was expropriated by the city of Halifax. The entire community was relocated, and many residents were moved in garbage trucks. All their land was taken, their homes destroyed (McGibbon & Etowa, 2009).

First Nations populations experience poverty, violence, and incarceration disproportionately to their Canadian counterparts. There are more First Nations children in state care now than at the height of the residential school system (Blackstock, 2007), and intergenerational trauma among First Nations youth is a consequence of the colonial legacy of the residential school system (Native Women's Association of Canada, 2011). Investigations have confirmed rampant institutional abuse that occurred in residential schools, group homes, orphanages, and custodial centres. This institutionalized violence against First Nations communities includes physical, sexual, verbal, and emotional abuse, as well as the ontological violence of denying political, legal, linguistic, religious, family, and economic sovereignty.

Ignoring the context in which trauma occurs and is named results in the individual being held inherently responsible for his/her response to highly distressing circumstances, and even for the experience itself. As a result, the potential for stigmatization is further heightened (Feinstein & Dolan, 1991). Returning to a theme of self-determination in a colonial context, "cultural safety" is a goal for practitioners and requires a participatory approach that involves the clients in defining their needs, struggles, and agency. As described by Mikkonen and Raphael (2010),

> cultural safety supports self-determination, where safety is determined by the user of the health system, not the system itself. Cultural safety moves beyond cultural sensitivity to analyzing power imbalances, institutional discrimination, colonization and relationships with colonizers, as they apply to health care. (p. 17)

Practicing cultural effectiveness includes operating from a gender-based analysis, recognizing how gender affects individual experiences with addiction. For example, female, male, and transgender youth are in different and unequal social positions and, therefore, will have unique needs in a withdrawal management setting. Transgender people may develop addictions due to the stigma imposed on them through a rigid binary-gender model. Women may need withdrawal management to replace unhealthy coping mechanisms like binge drinking to numb the pain and trauma of male violence. These examples are not meant to essentialize but to recognize that these differing root causes require different solutions (Status of Women, 2009). As transgender people and women are oppressed in our current culture, gender consequently determines unequal access to resources, material support, and recovery. It is therefore important to employ a gender-based analysis and approach to support positive health outcomes while recognizing and honouring difference.

First Nations

In the arrangement of Canada's social affairs, only the assimilated Indian has been offered even the prospect of wellness. For those who resisted or refused the benefits of assimilation, government policies assured a life of certain indignity. That is the essence of life in the colony: assimilate and be like us or suffer the consequences. (Kirmayer & Valaskakis, 2009, p. xi)

Historical Context of Turtle Island

The colonially-generated cultural disruption affecting First Nations … compounds the effects of dispossession to create near total psychological, physical and financial dependency on the state. The cumulative and ongoing effects of this crisis of dependency form the living context of most First Nations existences today. This complex relationship between the effects of social suffering, unresolved psychophysical harms of historical trauma and cultural dislocation have created a situation in which the opportunities for a self-sufficient, healthy and autonomous life for First Nations people on individual and collective bases are extremely limited. (Alfred, 2009, p. 42)

Understanding appropriate approaches to addictions and mental health work with Aboriginal communities, families, and youth requires perspective on past treatment of indigenous children in Canada. Aboriginal children, particularly First Nations children, became the central target for assimilation strategies through their forced attendance at residential schools and out-of-community adoption into non-Aboriginal families. These efforts were part of an orchestrated plan of forced assimilation that emerged at roughly the same time in Canada, Australia, and New Zealand in accordance with British colonial policy (Armitage, 1995).

The Canadian government informally recognized indigenous communities of Canada as peoples or nations, but they were viewed as uncivilized and hence unable to exercise rights as citizens in a democratic polity. The Bagot Commission Report (1844) argued that reserves in Canada were operating in a "half-civilized state" and that in order to progress toward civilization, Aboriginal peoples needed to be imbued with the principles of industry and knowledge through formal education. This report began a shift in Indian policy in Canada, away from the principle of protection and toward active assimilation. This shift was reinforced by the Davin Report (1879), which recommended a policy of "aggressive civilization." Aboriginal adults and Elders were described by this second report as having "the helpless mind of a child." To be integrated into the emerging nation, therefore, Aboriginal children had to be separated from their parents and "civilized" through a program of education that would make them talk, think, and act like mature British Canadians.

From 1879 to 1973, the Canadian government mandated church-run boarding schools to provide education for Aboriginal children (Miller, 1996). Following the recommendations of the Davin Report, residential education for Aboriginal children in Canada was modelled after the system of boarding schools for Native American children in the United States (Miller, 1996; Milloy, 1999). Although portrayed as places of education and enlightenment, most of the residential schools in fact functioned as "total institutions" (Goffman, 1961) or "carceral spaces" (Foucault, 1977)—enclosed places of confinement with a highly regimented social order apart from everyday life. The schools were located in isolated areas, and the children were allowed little or no contact with their families and communities.

There was a regime of strict discipline and constant surveillance of every aspect of their lives, and cultural expression through language, dress, food, and beliefs was vigorously suppressed.

Over the span of 100 years, about 100,000 Aboriginal children, mainly First Nations, were taken from their homes and subjected to an institutional regime that fiercely denigrated and suppressed their heritage. At their height, there were 80 residential schools operating across Canada, with a peak enrolment in 1953 of over 11,000 students. Although some families welcomed the opportunity for formal education of their children, others desperately tried to avoid sending their children to the schools (Johnston, 1988). The extent of the physical, emotional, and sexual abuse perpetrated in many of the residential schools has only recently been acknowledged (Haig-Brown, 1988; Knockwood & Thomas, 1992; Lomawaima, 1993; Milloy, 1999). Beyond the impact on children of abrupt separation from their families, multiple losses, deprivation, and frank brutality, the residential school system denied Aboriginal communities the basic human right to transmit their traditions and maintain their cultural identity (Chrisjohn, Young, & Maraun, 1997).

Intensive surveillance and control of the lives of Aboriginal peoples in Canada went far beyond the residential school system. Assimilation of Aboriginal peoples was the explicit motivation for the removal of Aboriginal children to residential schools. Aboriginal parents were not necessarily seen as "unacceptable" parents, only as incapable of educating their children and passing on "proper" European values (Fournier & Crey, 1997; Johnston, 1983).

Beginning in the 1960s, the federal government effectively handed over the responsibility for Aboriginal health, welfare, and educational services to the provinces, despite remaining financially responsible for status Indians. Provincial child and welfare services focused on the prevention of "child neglect," which emphasized the moral attributes of individual parents, especially mothers, and on enforcing and improving care of children within the family (Swift, 1995). In the case of Aboriginal families, "neglect" was mainly linked to endemic poverty and other social problems, which were dealt with under what social workers referred to as "the need for adequate care." However, improving care within the family was not given priority, and provincial child-welfare policies did not include preventive counselling services for families, as they did in the case of non-Aboriginal families. Since there were no family reunification services for Aboriginal families, social workers usually chose adoption or long-term foster care for the Aboriginal children they took into care, resulting in Aboriginal children experiencing much longer periods of foster care than their non-Aboriginal counterparts (MacDonald, 1995).

As a result of heightened surveillance and concerns about child welfare, large numbers of Aboriginal children were taken from their families and communities and placed in foster care. By the end of the 1960s, between 30% and 40% of the children who were legal wards of the state were Aboriginal, in stark contrast to the rate of 1% in 1959 (Fournier & Crey, 1997). By the 1970s about one in four status Indians could expect to be separated from his or her parents; rough estimates on the rates of non-status and Métis children apprehended from their families show that one in three could expect to spend his or her childhood as a legal ward of the state. Eventually, many of these children were adopted into non-Aboriginal families in Canada and the United States. Termed the "Sixties Scoop," this practice lasted almost three decades—and statistics indicate that there is still an overrepresentation of Aboriginal children in the care of non-Aboriginal institutions and foster families (Gough et al., 2005).

The large-scale removal of Aboriginal children from their families, communities, and cultural contexts through the residential school system and the "Sixties Scoop" had damaging consequences for individuals, families, and whole communities. Much like former residential school students, who often returned to their communities in a culturally "betwixt and between" state, Aboriginal children relegated to the care of the state or non-Aboriginal families have experienced problems of identity and self-esteem as a result of growing up at the margins of two worlds. Physical and sexual abuse, emotional neglect, internalized racism, language loss, substance abuse, and suicide are common in their stories (Fournier & Crey, 1997; York, 1990).

First Nations' Mental Health and Substance Abuse Statistics

Suicide is the most dramatic indicator of distress in the Aboriginal populations. In many communities, First Nations, Inuit, and Métis have elevated rates of suicide, particularly among youth; however, rates are in fact highly variable (Kirmayer, 1994; Kirmayer et al., 2007). In Quebec, for example, the Inuit, Attikamekw, and several other nations have very high rates of suicide, while the Cree have a rate comparable to that of the general population of the province (Petawabano et al., 1994). This variation has much to teach us about the community-level factors that affect suicide risk.

Compared to the general population, a smaller proportion of Aboriginal people consume alcohol—79% versus 66%, respectively (First Nations Information Governance Committee, 2007). However, the rate of problem drinking is higher in the Aboriginal population, with 16% of First Nations individuals reporting heavy drinking on a weekly basis, compared to 6% in the general population. The Northwest Territories Health Promotion Survey found that 33% of the territories' Aboriginal persons were considered heavy drinkers, compared to 17% in the non-Aboriginal population (Northwest Territories Bureau of Statistics, 1996). In the same survey, use of cannabis was also greater for Aboriginal persons (27%) than for non-Aboriginal persons (11%). The survey also asked about the history of solvent use and found that the percentage of Aboriginal people who had used solvents was particularly high (19%), compared to 2% among non-Aboriginal people.

A survey of drug use in Manitoba assessed Aboriginal (Indian and Métis residents off-reserve) and non-Aboriginal adolescents over four consecutive years from 1990 to 1993 (Gfellner & Hundleby, 1995). The Aboriginal groups had consistently higher rates of use of marijuana, non-medical tranquilizers, non-medical barbiturates, LSD, PCP, other hallucinogens, and crack. For both LSD and marijuana, the average rate of use for Aboriginal adolescents was over three times the corresponding non-Aboriginal rate. In the same survey, glue-sniffing was more frequent among the Aboriginal group than among the non-Aboriginal groups.

Inhalant use (e.g., gas, glue, solvents) is an increasing problem among young people worldwide but is much more common in some Aboriginal communities than in the general population (Howard et al., 1999; Neumark, Delva, & Anthony, 1998; Weir, 2001). In a survey of Inuit youth in one community in Quebec, 21% reported having used solvents at one time, and 5% had used them within the past month (Kirmayer, Malus, & Boothroyd, 1996). Individuals who had used solvents were eight times more likely to have made a suicide attempt. The 2004 Nunavik Health Survey found that 6% of respondents had used solvents in the previous 12 months; for those 15 to 19 years of age, the rate was 13.5% (Muckle et al., 2007).

Narratives and life histories suggest that the residential school experience has had enduring psychological, social, and economic effects on survivors (Haig-Brown, 1988; Milloy, 1999; York, 1990). The links between events and outcomes made by individuals in their narratives give a clear picture of how suffering is understood and experienced, and can identify plausible connections for more systematic study.

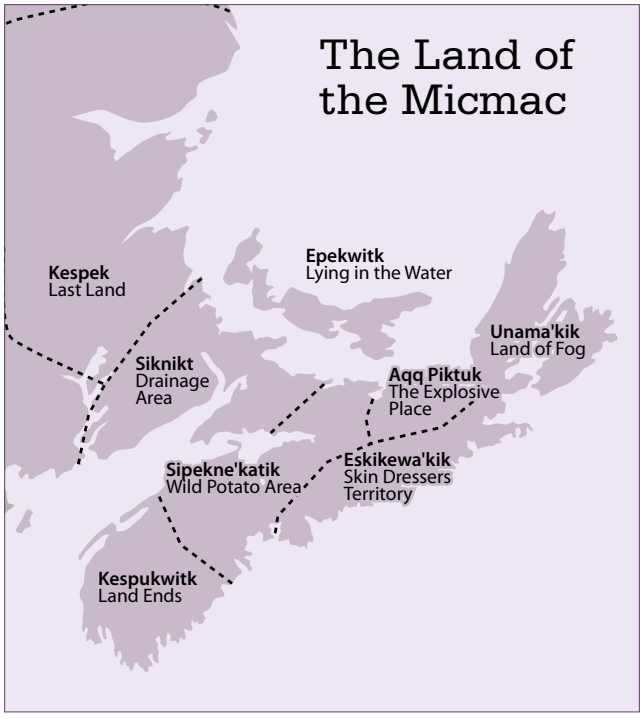
Transgenerational effects of the residential schools include the structural effects of disrupting families and communities; the transmission of explicit models and ideologies of parenting based on experiences in punitive institutional settings; patterns of emotional responding that reflect the lack of warmth and intimacy in childhood; repetition of physical and sexual abuse; loss of knowledge, language, and tradition; systematic devaluing of Aboriginal identity; and, paradoxically, individualizing and essentializing Aboriginal identity by treating it as something intrinsic to the person and thus static and incapable of change. These factors point to a loss of individual and collective self-esteem, to individual and collective disempowerment, and the destruction of communities. The Red Road Project is one example of a First Nation–led project in Mi'kma'ki intended to strengthen the connection between indigenous cultural traditions and youth resilience related to addictions.

The Red Road Project

Conceived in early 2012 by community chiefs, the Red Road Project aims to educate First Nations youth about the dangers of using illegal substances.

The project encourages youth to say no to the peer pressures for substance abuse, and raises awareness of the damaging effects of substance abuse not only to the person using, but also to their family, friends, and larger community. The project's name, "Red Road," stems from the Native American concept of being on the right path in life in harmony with our Creator.

"A positive lifestyle is when you're doing what makes you feel good, not doing what everyone else is doing."



Source: http://www.danielnpaul.com

Our vision: Believe. Conceive. Achieve.
RESPECT: Our Homes. Our Elders. Our Selves.
"Respect your body and your body will respect you."—Eskasoni Chief Leroy Denny

Indigenous Youth in Nova Scotia

Mi'kma'ki is the homeland of the Mi'kmaq. The Mi'kmaw Nation has lived in the area now known as the Atlantic Provinces and the southern Gaspé Peninsula since time beyond the reach of memory, record, or tradition. The traditional homeland and archaeological findings from both the Debert site in Colchester County and the Red Bridge Pond site in Dartmouth have given evidence of Mi'kmaw presence in and around the area for more than 10,500 years. Mi'kmaw people depended on the land for their sustenance and as such were a nomadic people who lived and travelled throughout Mi'kma'ki according to the time of year and the seasonal pattern. Mi'kma'ki was divided into seven districts: Kespukwitk, Sipekni'katik, Eskikewa'kik, Unama'kik, Epekwitk aq Piktuk, Siknikt, and Kespek. Consequently, in an effort to maintain orderly conduct and good relationships between families, travel throughout Mi'kma'ki was based on respect for those whose hunting territory one may be travelling through.

L'nu

(plural Lnu'k) is the self-recognized term for the Mi'kmaq of New Brunswick, Newfoundland, Nova Scotia, Quebec, and Maine, meaning "human being."

First Nation(s)

is a term that came into use in the 1970s to replace the word "Indian," a term that many people found offensive. First Nations refers to people who are the descendants of the original inhabitants of Canada.

Aboriginal

means "existing from the beginning." Aboriginal people include Métis, Inuit, and First Nations, regardless of whether they live in Canada and regardless of whether they are registered under the Indian Act of Canada.

Indigenous Peoples

According to a common definition, they are the descendants of those who inhabited a country or a geographical region at the time when people of different cultures or ethnic origins arrived. It is estimated that there are more than 370 million indigenous people spread across 70 countries worldwide, from the Arctic to the South Pacific. Practicing unique traditions, they retain social, cultural, economic, and political characteristics that are distinct from those of the dominant societies in which they live. The new arrivals later became dominant through conquest, occupation, settlement, or other means (UN Factsheet on Indigenous Peoples).

There are 13 Mi'kmaq First Nations in Nova Scotia, with community populations ranging from about 240 in the Annapolis Valley First Nation to about 4,000 in the Eskasoni First Nation. In total, there are about 13,500 registered Indians in Nova Scotia and of these, around 4,700 live off-reserve. The First Nation population is much younger than the general population, with a median age of 25.4 versus 41.6 for the total population. The Registered Indian population in Nova Scotia is represented through a series of 13 band councils and two tribal councils, the Confederacy of Mainland Mi'kmaq, and the Union of Nova Scotia Indians. The Union of Nova Scotia Indians tribal council represents the five First Nation communities within Cape Breton (We'koqma'q, Wagmatcook, Membertou, Eskasoni, and Chapel Island First Nations) along with two First Nations located in mainland Nova Scotia (Indian Brook and Acadia First Nations). The remaining six communities (Bear River, Annapolis Valley, Glooscap, Millbrook, Paq'tnkek, and Pictou Landing First Nations) are represented by the Confederacy of Mainland Mi'kmaq (N.S. Office of Aboriginal Affairs, 2011).

First Nations people in Nova Scotia, including youth who are in need of withdrawal management services, rely on community initiatives, such as the recently founded Red Road Project, and provincially funded withdrawal management services offered through the District Health Authorities. As a health service, Addiction Services has the responsibility to do all they can to ensure a culturally relevant experience for all who enter their programs. Cultural safety can only be determined by the client, and achieving cultural safety comes as the result of an ongoing reflective process, not from a

single training event. All levels of a system must be fully engaged and open. Cultural safety extends beyond cultural awareness and sensitivity within services. It includes reflecting upon cultural, historical, and structural differences and power relationships within the care that is provided. It involves a process of ongoing self-reflection and organizational growth for service providers and the system as a whole to respond effectively to First Nations people (National Native Addictions Partnership Foundation, 2011).

Cultural Safety

The National Native Addictions Partnership Foundation (NNAPF) has produced a document, "Working with First Nation's People: Culturally Safe Toolkit for Mental Health and Addictions Workers Literature Review." This toolkit is grounded in a "Cultural Humility" framework (Eisenbruch & Volich, 2005). In 1998, Melanie Tervalon and Jann Murray-Garcia came up with the concept of cultural humility, which is defined as:

> a lifelong commitment to self-evaluation and self-critique, to redressing the power imbalances in the patient-physician dynamic, and to developing mutually beneficial and non-paternalistic clinical and advocacy partnerships with communities on behalf of individuals and defined populations. (p. 117)

Six stepping stones describe a process towards cultural safety and build upon one another with a foundation of cultural humility.

- The first step is Critical Reflection, a social theory that emphasizes self-reflection and is pertinent in cultural safety because understanding what one brings to the environment will develop a critical mindset (Pockett & Giles, 2008).
- The second step is Cultural Awareness, which addresses the diversity within each client and assists with integrating Aboriginal and Western therapeutic practices (Papps, 2005).
- The third step is Cultural Sensitivity, which constitutes a recognition that there are differences between cultures (Chandler, 2002).
- The fourth step is Cultural Competence, which is a process that the health-care worker goes through to achieve a culturally safe environment for the client (IPAC-RCPSC, 2009).
- The fifth step is Reciprocity, a moral theory that First Nations people value. It is "the outline of our non-voluntary social obligations—the obligations we acquire in the course of social life ... examples include some of our obligations to our families, to future generations, and to obey the law" (Becker, 1990).
- The sixth step is Cultural Safety. It is important to locate cultural safety within the context of cross-cultural relationships, between Aboriginal service receivers and non-Aboriginal service deliverers, and to consider how the concepts affect relationships, power structures, and trust. Cultural safety can be viewed as an outcome determined by the client, where cultural competence is one component achieving cultural safety (Brascoupé, 2009). Cultural safety is also created by

environmental factors such as health-care environments that promote health with culturally specific attention—health environments that make space for cultural forms of prayer, including the use of smudging, the role of elders, or round rooms for cultural practices, or display native-specific artwork that promotes health. Another contributing factor in creating cultural safety is having health-care policies that facilitate the delivery of health-care services, e.g., policies that include the role of elders and cultural spiritual practices as part of a multi-disciplinary approach (IPAC-RCPSC, 2009).

The NNAPF Culturally Safe Toolkit summarizes what is necessary to be skilled in practices of cultural respect and work effectively with First Nations communities. A health-care provider must: acknowledge one's cultural practices, individual behaviours, and institutional affiliations, and the impact that they may have on First Nations people;

- understand and acknowledge the impact of colonialism on First Nations people;
- learn about First Nations people's diverse cultures and their values and beliefs;
- act differently from our usual cultural preferred ways in order to respond to the issues we have learned about;
- take initiative to create cultural safety; and
- continuously review and be open to direct and indirect feedback.

African Nova Scotians

This section uses terminology informed by the social work research published in Race and Wellbeing (Benjamin et al., 2010). The term "African Canadian" is used to refer to all people of African descent living in Canada, regardless of their place of birth. This term is used interchangeably with "Black Canadians" and "Black people"; some comparisons are made to circumstances in African-American communities as well. In 2001, Canadian-born Blacks made up 90% of all Blacks in Halifax, compared to 45% in Calgary and 40% in Toronto. An estimated 20,000 Black people live in Nova Scotia, with about 13,000 of them living in the Halifax Census Metropolitan Area (CMA). Blacks also constituted the largest racial minority group in Halifax. While 7% of the population identified as a racial minority, 52% of racial minorities identified as Black (Benjamin et al., 2010). The population growth of African Nova Scotians between the 1996 and 2002 censuses (8.6%) indicates an increase in the younger population profile. (McNiven, Canmac Economics, Jozsa Management and Economics, & David Sable and Associates, 2006).

Like their urban counterparts, African Nova Scotians living in rural and remote regions encounter serious cultural barriers to appropriate health care, but in contrast to urban people of African descent, their situation is compounded by geographic isolation. Even when they have the financial

and social resources to access health services, they may not find culturally sensitive providers, programs, or facilities available within a reasonable distance (Lawrence, 2000; Etowa, Bernard, Oyinsan, & Clow, 2007).

Forced relocation, political disenfranchisement, inadequate access to education, and the apprehension of racialized children by White child welfare authorities are historical sources of stress and community trauma that continue to impact Black communities and their experiences of assessment and treatment by a European colonial health-care system.

These experiences are documented as historically impacting Black communities in Nova Scotia. Intergenerational impacts are traced within African Nova Scotian communities, whose residents are descended from slaves, free peoples, Black Loyalists, and historical migrations of Black people from Jamaica and the United States. These families have been in Nova Scotia for over 400 years and express a range of regional and national affinity, identifying as "Black Nova Scotians," "African-Canadians," "indigenous Blacks," and "people of African descent." This population has unique intergenerational experiences of settlement and "citizenship" that differs from Black populations migrating more recently from Africa and the Caribbean who may also identify as African Canadians.

For these African Canadian youths, the process of growing up in a White-dominated society can be seen as a process of being "othered"—of being put outside the dominant group. African Canadian youths testify that even when they are Canadian-born, they are represented by the dominant culture as not "belonging," as not "really" Canadian (Kelly, 1998). In her educational monograph "Under the Gaze," Jennifer Kelly (1998) refers to "racialization" as "giving raced meanings to social situations." Kelly's work focuses on how racialized Canadian youth form concepts of Black identity in predominately White secondary schools. Her work is relevant to the historically influenced meanings generated in interactions between African Nova Scotian youth and state-run adolescent withdrawal management services.

Approaches to Treatment

A critical examination of black cultural traditions and the realities of inner city living are important to consider in forming an understanding of substance abuse in this population. Research and treatment that lacks this perspective is less likely to identify key interventions for primary, secondary, and tertiary prevention. (Britt, 2004, para 19)

Specific dominant-culture stereotypes about Black youth have historically defined ethnocentric and class privileged approaches taken by European health-care professionals in the colonial context of Canada (Capell, Dean, & Veenstra, 2008). These racist categorizations are important to name and challenge as they impact clinical practice. Orientalist stereotypes about wild, primitive, risky, and ruthless behaviour being expected in Black youth (Bass & Kane-Williams, 1993) represent a form of judgemental victim-blaming reproduced by concerned yet insensitive health-care professionals. Discriminatory, culturally inadequate health-care practices, drug enforcement policy, and racialized policing (Comack, 2012) combine to marginalize Black communities, and they are factors in determining when and if Black youth access addictions and mental health services.

Historical impacts of mistreatment within White-dominated institutional settings is a factor in Black community health practices, which may pursue formal "care" only as a final option when alternative informal approaches have been exhausted and a health challenge has reached an acute stage. This self-determined approach to care may be viewed as irresponsible by health-care professionals who do not understand the historical forces and alternative agency that results in prevalence of late-stage interventions in health concerns of marginalized populations (Etowa et al., 2007).

Drug and alcohol addictions, manifesting as self-medication for intergenerational post-traumatic stress, intersect with underground economies of drug trafficking, sexual exploitation, and crime (Duran & Duran, 1995).

Many African Americans have been subjected to violence as a primary oppressor, which robs the community of the resources needed to solve drug problems. Violence does not only present in the form of crime or domestic disputes but also in the context of racial discrimination, lack of access to food and clothing, homelessness, overcrowded living conditions, lack of health insurance, and restricted social welfare policy. Black women have experienced other forms of violence, such as sexual harassment, gender discrimination, and a lack of protection from domestic violence (Britt, 2004, para 9).

This inherited presence of criminalized poverty, police brutality, child protection intervention, gendered violence, and drug-related violence in the lives of African Nova Scotian youth must be recognized by health practitioners as an affective factor and a social determinant of health. When social service and care workers presume security of person, security of identity, and security of collective affinity, they risk imposing a meritocratic world view that renders racial inequality invisible. A critical violence-informed approach can contextualize observed trauma in colonial settings. Poverty and its accompanying determinants of health are not inherent or essential elements of African Nova Scotian youth experience; however, acknowledging the class, national, religious, gender, sexual, and cultural diversities of African Nova Scotians is a critical part of applying a transcultural approach that resists restrictive definitions of racialized groups.

In terms of identity, community, spirituality, and personal transformation, spirituality plays an important role in community life that impacts young people's avenues for support and motivation. Spirituality is often, but not necessarily, affiliated with religious institutions and is a well-documented factor in recovery:

> Research has shown that integration of culturally specific factors such as spirituality into treatment of substance abuse is consistently associated with better outcomes and lower rates of relapse. It can help negate the hardships in the lives of substance abusers, which

> often are precursors to addiction and causes relapse for patients in recovery. In addition, spirituality can help treat cultural pain, which is an emotion that is experienced by a person who is a member of a racial, ethnic, or religious group, particularly one that has suffered oppression. (Britt, 2004, para. 20)

A clear commitment of support to individual and collective sovereignty for Black people, as well as sensitivity to past and present manifestations of racist colonial violence, are key priorities for health practitioners working with Black youth.

> Socioeconomic considerations are eminent determinants of African-American drug use. Experts on substance abuse disorders agree that poverty and other socioeconomic factors have a great impact on the prevalence of substance abuse in the African-American community. A 1992 study identified poverty, illiteracy, limited job opportunities, poor education, high availability of drugs, and stresses of the urban lifestyle as underpinnings of substance abuse in the black community. Other researchers have found that environmental factors, such as the large number of liquor stores in African-American communities, influence the heavy use of alcohol among Black Americans. (Britt, 2004, para. 8)

The range of connections between personal, collective, professionalized, and spiritually transcendent approaches to healing culturally sensitive research perspectives and treatment options is the key to closing the gap of substance-abuse disparities in the Black community.

Migrant Youth

Immigrants, refugees, and displaced peoples migrate to Nova Scotia from a variety of countries around the world. The demographics and regional sources of newcomers are constantly in flux and are connected to displacing factors such as human rights abuses, as well as geopolitical forces such as war, natural disasters, and economic crises. As the source countries of immigrants shift with global events and trends, addictions and mental health-care workers must continually cultivate a transcultural practice that validates the experiences and struggles of immigrants and refugees. Furthermore, established previous waves of immigrants will have a different set of care needs than recent newcomers.

> When caring for immigrant patients of minority language and cultural backgrounds, the risk of making a mistake can be compounded in instances where, because of language and cultural barriers between the providers and the recipients of health care, critical information about a patient is not obtained. Ethnic stereotyping, ethnocentrism, bias, and discrimination can also contribute to unsafe patient care. (Johnstone & Kanitsaki, 2012, p. 1314)

The selective settlement of a particular demographic of immigrants, refugees, and non-status peoples, determined mainly by the policies of the federal government, creates a complex web of culture, bureaucracy, and health-care situations. New youth and families coming to Canada face many cultural differences, language barriers, and new systems and political structures (Garza, 2007; McCreary Centre Society, 2011). Chui and Ring's (1998) research states that:

> programs aimed at immigrant youth should take account of whether youth are in the country intentionally or as a result of being forced to leave their country of origin (e.g. due to war or famine). Refugee youth have often had little or no preparation for life in their new country, whereas immigrants who have planned their arrival often have access to established friends or family and more English language skills. (p. 20)

If families or individuals have settled in a region where they are connected to an established community of similar language and culture, there is a range of supports and factors that are best understood through the language of the community. Addictions services staff must acknowledge and validate the language and its associated cultural connection for the community; translation services, including tele-translating services, are valuable to access, as using community members or children as de facto translators compromises the client's right to confidentiality within their new community.

In contexts involving the health care of immigrant patients of minority language and cultural backgrounds, the risk of things going wrong can be disproportionately high compared to patients whose language and culture are congruent with the majority population and health-service providers. Despite this imbalance, immigrant disparities in patient safety (more commonly referred to as "ethnic disparities in patient safety") have received relatively little attention in the international patient safety literature. (Johnstone & Kanitsaki, 2012, p. 1313)

Khadka, Yan, McGaw, and Aube (2011) also highlight that, while refugees make up about 10 % of Canada's newcomers, they face the most barriers when settling in Canada due to their previous life experiences. This process is particularly challenging to youth, as they may have left their families and experienced severe trauma in the migration process. Metropolis British Columbia makes reference to Hyman, Vu, and Beiser's (2000) study on Southeast Asian newcomer youth to Canada, where they disclosed difficulty adjusting to their new school, feelings of being marginalized, and internal conflict with opposing values. Similarly, Anisef and Killbride (2009) found that newcomer youth in Canada had difficulty following new rules and authority; low language proficiency resulted in lower academic levels and frustration; and both males and females "felt pressure to dress fashionably as defined by their Canadian peers" (p. 14). This peer pressure, a lack of inclusiveness in mainstream peer culture, and the accumulated stresses of settlement generate unique vulnerabilities to addictions. It is acknowledged that substance use problems among minority groups may not be reported due to cultural factors, as there is a set of beliefs within many ethno-cultural minority cultures that discourages the acknowledgement and exploration of alcohol- and drug-related problems.

Many cultural traditions favour youth receiving help from informal networks rather than from formal community structures. Low reporting numbers may also be a result of a lack of sensitivity and cross-cultural training for service providers, the presence of racism in mainstream services, and a lack of culturally appropriate services (Health Canada, 2001). The dominant cultures of Canadian youth programming may be unfamiliar to newcomer families, and can result in a lack of interest, and even distrust and fear of participating, in youth programming (Garza, 2007). The McCreary Centre Society

(2011) highlights work by Keleher & Armstrong (2005), in which they suggest that any program that aims to work with immigrant youth needs to:

- identify population groups of interest;
- work in partnership with local refugee or cultural centres and community leaders;
- ensure high levels of community engagement with all stakeholders;
- establish social arenas that build connection and trust in multicultural contexts; and
- become sustainable by ensuring processes for skills development, establishing ongoing support mechanisms, changing community attitudes, and creating connections that did not previously exist.

Garza (2007) highlights some key points for staff members who will be working with immigrant youth:

- Be aware of the demographics of the changing populations in their local community.
- Know about specific circumstances and conditions of the home countries of immigrant youth.
- Understand and respect cultural norms of local immigrant youth.
- Remain open-minded, empathic, and resourceful.
- Support youth, while maintaining strong connections to family and local community.

Lesbian, Gay, Bisexual, Transgendered, and Questioning Youth

Lesbian, gay, bisexual, transgender and queer (LGBTQ) youth experience all the usual challenges of adolescence combined with the added challenges of holding an identity that relegates them to a position of minority in a society that values conventionality. As a result, LGBTQ youth often suffer the effects of discrimination, ignorance, and hate as they try to accept, assert, and integrate their identities. Working effectively with LGBTQ youth requires an awareness of LGBTQ youth, comfort with the language of identity, and knowledge of their unique issues and challenges.

Homophobia, Transphobia, and Heterosexism

LGBTQ youth are a socially marginalized group, susceptible to higher levels of addiction and mental health challenges due to the negative and damaging effects of discrimination and isolation. This often comes in the form of homophobia, transphobia, and heterosexism. Most LGBTQ youth will experience varying levels of these, not only as they grow up but throughout their lives. It is because of the damaging effects of homophobia, transphobia, and heterosexism that LGBTQ youth find themselves overrepresented in rates of suicide, self-harm, homelessness, and substance use and abuse. Homophobia and transphobia are the more overt and discriminatory behaviours that often come from fear, hatred, and ignorance. LGBTQ youth experience homophobia and transphobia through violence, name-calling, rumours, harassment, and rejection. This can occur in their schools, their communities, and their own homes.

Heterosexism is the underlying societal assumption that heterosexuality is superior and celebrated and that anything else is inferior, wrong, or non-existent. It is ingrained in our systems and institutions and can be more subtle and harder to identify than homophobia and transphobia because it is about assumptions. LGBTQ youth experience the effects of heterosexism through absence from curriculum, limited identity options on forms, and assumptions about family and relationships. Understanding the role that homophobia, transphobia, and heterosexism play in the lives of LGBTQ youth is vital to providing quality and competent care.

In three recent Canadian reports, LGBTQ youth showed higher-than-average challenges in feeling accepted and safe. In a national school climate survey (Taylor et al., 2008), three quarters of LGBTQ students reported feeling unsafe at school, with 95% of transgender youth reporting feeling unsafe. Over half of LGBTQ students felt that they were not accepted at school and could not be themselves. The Nova Scotia Task Force on Bullying and Cyberbullying listed LGBTQ youth as the most-targeted group (MacKay, 2012). The Nova Scotia Strategic Framework to Address Suicide lists LGBTQ youth as one of the top three groups at risk for suicide in Nova Scotia (Provincial Strategic Framework Development Committee, 2006). These figures join previous and current research papers that document high levels of homelessness, school absenteeism, self-harm, and substance abuse among LGBTQ youth (Darwich, Hymel & Waterhouse, 2012; Eliason, 2010; Green & Feinstein, 2012; Lombard & van Servellen, 2000; Marshal et al., 2008).

Sexual Orientation versus Gender Identity

Sexual orientation and gender identity are often confused or combined. However, they are two separate aspects of our identity. Our sexual orientation is about our attractions and affections; our gender identity is about how we see ourselves—as male, female, both, neither, or somewhere in between. Each one of us has a gender identity that is separate from our sexual orientation. One does not rely on the other. It is important to understand the difference in order to ensure that LGBTQ youth get the information, support, and understanding that is relative to their identities. Often myths and stereotypes that surround LGBTQ people (e.g., the myths that gay men want to be women or

that most are more feminine) cause confusion. This sets up an expectation that sexual orientation has something to do with one's concept of gender, and often transgender youth are mistaken for lesbian or gay youth. However, transgender youth may or may not be lesbian, gay, bisexual, or queer, just as LGBQ youth may or may not also be transgender. Transgender youth and LGBQ youth have some similar experiences but also very different ones. It is important to address both populations and not assume that addressing one will address the other.

LGBTQ Youth and Alcohol

There is little research available on LGBTQ youth and alcohol, and practically no research available on transgender youth on any issue. With regard to the research that is available, there are some problems that stem from the challenge of identifying and reaching this population, the inconsistent way that alcohol use and abuse is defined, and the small sample sizes (Center for Substance Abuse Treatment, 2001). Some studies show that there is a greater prevalence of alcohol use among LGBTQ youth than their heterosexual peers; others show that use is on par with heterosexual peers (Center for Substance Abuse Treatment, 2001; Green & Feinstein, 2012; Marshal et al., 2008; Rosario, Scrimshaw, & Hunter, 2009). However, there is some support for the hypothesis that regardless of higher levels of use, LGBTQ youth use alcohol for different reasons. LGBTQ youth often use alcohol because of personal shame or stigma, to deny their same-sex feelings (LGBQ) or gender conflict (T), or as a way of coping with the negative effects of homophobia, transphobia, and heterosexism (Center for Substance Abuse Treatment, 2001; Darwich et al., 2012; Marshal et al., 2008).

LGBTQ Youth and Health Care

One of the effects of homophobia, transphobia, and heterosexism on LGBTQ youth is a general level of self-protection and distrust in others and in our systems, especially our education and health-care systems. As a result, LGBTQ youth often do not access health services except in emergencies, or they access services but are uncooperative or do not disclose their identities to health services personnel. The fear of experiencing homophobia and transphobia or the fear of having to disclose one's identity is a large barrier to accessing services (Lombardi & van Servellen, 2000). Alcohol- and substance-abuse programs and services are no exception. In one study, results showed that 50% of transgender individuals reported they did not seek treatment for an addiction issue because of fear of an anticipated transphobia. Another significant percentage stated they did seek treatment but did not disclose their identity (Nuttbrock, 2012).

Disclosure/Coming Out

One of the experiences unique to LGBTQ youth is the process of coming out—disclosing one's sexual orientation and/or gender identity to others. This is often a significant series of events that can be marked by both an increase and a decrease in anxiety and fear. For many LGBTQ youth, coming out can be a relief and an opportunity to gain support, be true to themselves, and be free from the challenges and negative effects of hiding. For others, coming out can lead to rejection, an introduction of or increase in victimization, and social isolation. Coming out can be both a risk and a reward for LGBTQ youth, and it is something they often control very closely. In an environment that seems homophobic, transphobic, or heterosexist, youth are less likely to disclose their identities. In order to provide sensitive services to LGBTQ youth it is important to understand the significance and challenges of the coming-out process and how that affects the LGBTQ individual. It is also important to understand the challenges of not coming out and the reasons behind it (Rosario, Scrimshaw, & Hunter, 2009; Taylor et al., 2008).

One of the barriers or fears regarding coming out is the worry that the information will be spread beyond the control of the individual. Confidentiality is of the utmost importance in order to gain and maintain trust. Youth who have been "outed" are often at a greater risk for suicide, anxiety, and other risk factors (Bakker & Cavender, 2003; Rosario, Hunter, & Scrimshaw, 2009; Taylor et al., 2008). Many LGBTQ youth will try to control who knows their identity, so they may be out to friends but not family, or vice-versa. It is important not to assume that because an LGBTQ youth is out in one aspect of their lives that they are out in all aspects of their lives. Understanding where someone is in the coming-out process will give health-care providers a better position with which to offer services.

Invisibility

One of the most common, yet often easily mended, barriers to accessing health care is invisibility. This is often the result of unchecked heterosexism, such as the absence of more than two choices for gender on forms; intake questions that assume heterosexuality; pamphlets, magazines, or posters in waiting areas that do not present images of LGBTQ people; and policies that exclude sexual orientation or gender identity, to name a few.

Having well-trained, supportive staff and inclusive policies may not be enough if LGBTQ youth aren't aware of it. LGBTQ youth who don't see themselves represented will most likely default to a position where they believe they are not welcome. Some LGBTQ youth may be in a place where they are too afraid to disclose despite the messages of acceptance around them. This is a result of the pervasive and powerful effects of homophobia, transphobia, and heterosexism that have shaped their lives.

Transgender Youth

Transgender youth share some similarities with LGBQ youth but have many unique issues. While LGBQ youth can more easily hide their identities even after they have disclosed, transgender youth can be identified through their name or pronoun change or the way they dress. This can often make them targets for transphobia. Transgender youth may also be in the mental health system in other ways if they wish to access hormones or surgery. Their experiences with the health-care system, whether good or bad, will shape any future experience. In Nova Scotia, transgender youth have limited access to hormones and surgery options. As a result they rely on the things they can control in order to express their gender identity: clothes, hair, accessories, pronouns, and names. Tucking and binding are two ways that transgender youth shape their bodies to match their identities. Each can be harmful if not done properly but are often essential to their body image. It is important to learn more about how transgender youth express their identities in order to provide respectful, relevant, and competent care.

Cultural Competency and LGBTQ Youth

When working from a cultural competency model, it is important to ensure that LGBTQ people are included in the definition. Often culture is seen as encompassing religious, racial, or ethnic groups but not people with disabilities or LGBTQ populations. There are some differences in these groups with regard to how culture is defined, but there are also similarities. While LGBTQ people share similar experiences that shape their identities, the LGBTQ culture is often hidden. LGBTQ youth are not born into a culture that is linked to their family of origin or geographic community. This makes it challenging to those who don't know or have access to other LGBTQ people. The stigma and marginalization that is brought on by homophobia and transphobia is often not shared by others in their family (Bakker & Cavender, 2003; Center for Substance Abuse Treatment, 2001).

Things to consider in a cultural competency model for LGBTQ youth:

Accessibility

- Acknowledge that LGBTQ youth exist and may need treatment for alcohol-related issues.
- Provide visibility to LGBTQ youth through language, posters, written materials, and policy.
- Ensure that staff are trained and knowledgeable on LGBTQ youth issues.
- Be familiar with the language youth are using around LGBTQ identities.
- Understand the role that homophobia, transphobia, and heterosexism play in the lives of LGBTQ youth.
- Create safe and welcoming environments that are free from harassment and judgment.

Modalities

- Consider the comfort level and disclosure in any group programs.
- Educate other clients about LGBTQ issues, and challenge homophobia and transphobia.
- Challenge language and stereotypes.
- Ensure that confidentiality is maintained and respected.
- Consider the level of disclosure that an LGBTQ youth might have with their families.
- Consider that families may not be supportive of LGBTQ identities.

Continuum of care

- Be knowledgeable of community resources.
- Know what support is available for help with identity development, coming out, or dealing with homophobia or transphobia.
- Recognize that LGBTQ youth may have limited support systems, and work to strengthen them.
- Recognize the value of role models.

Coming out

- Recognize and understand the significance of coming out.
- Determine where LGBTQ youth are in the coming-out process.
- Be aware of both the risks and rewards of coming out.
- Know what to do if an LGBTQ youth comes out to you.

Gendered programs and spaces

- Ensure that programs that separate clients by gender allow transgender youth to access the program of their identified gender.
- Ensure, in residential programs, that transgender youth have access to washrooms, showers, and sleeping arrangements that correspond to their identified gender, or are otherwise safe.
- Ensure that staff and other clients respect access to those spaces for transgender clients without disclosing a transgender client's status.
- Ensure that there is a policy in place to protect transgender youth.

Hormones

- Ensure that transgender youth on hormones are able to access their medication when needed.
- Consider the consequences of alcohol withdrawal and treatment for those on hormones.
- Understand the transition process for transgender youth, and determine where they may be in that process.

Dress codes

- Ensure that transgender youth can dress and present themselves as the gender they identify.
- Ensure that staff dress codes allow transgender staff to dress as they identify.
- Pronouns and names
- Respect transgender youth by using the pronoun and name preference they identify.
- Ensure that there is a policy in place to address names and pronouns when no legal change has been made.
- Check with transgender youth on when to use their preferred name and pronoun and when not to.

Glossary

Coming Out
when a person who is lesbian, gay, bisexual, or transgender begins to tell other people, such as friends, family, co-workers, etc. It is a life-long process and begins with the acknowledgement to oneself that one is lesbian, gay, bisexual, or transgender.

Bisexual
a person who is emotionally and physically attracted to both men and women. This doesn't have to be an equal feeling. Someone could be more attracted to men or more attracted to women, but feels he/she can have relationships with either.

Gay
men who are emotionally and physically attracted to other men. Often gay is used as a blanket term to refer to gay and lesbian people.

Gender Identity
our deeply felt, internal sense of being male or female, neither, both, or somewhere in between. This could be biological, emotional, and sociological.
Homophobia the fear, hatred, and ignorance of people who are lesbian, gay or bisexual. Homophobia is linked to attributes and behaviours.

Heterosexism
the belief that being heterosexual is the only normal and natural way to be and anything else is abnormal, unnatural or non-existent. Heterosexism is institutional, and is about assumptions and invisibility.

Lesbian
a woman who is emotionally and physically attracted to other women.

Queer
people who are lesbian, gay, and bisexual. Although historically used as a negative term, queer is commonly used by the community, the academic world, and the media as an inclusive term.Some people will also identify as queer, preferring it over other labels (LGBTQ), and will use it in a positive way.

Sexual Orientation
where our attractions lie. Whether we are attracted to men, women, or both. Everyone has a sexual orientation.

Transgender
Individuals who are not comfortable with the sex and gender assigned to them at birth (this can often be problematic for someone, and range from physical discomfort to serious mental health issues like depression and anxiety). To recognize this specific experience, many will self-identify as transgender. Many (but not all) transgender people will undergo medical transition to bring their bodies into alignment with their gender identity.

Transition
process that transgender people go through to become more comfortable in terms of their gender. Transition may or may not include things like changing one's name and pronoun, taking hormones, having surgery, changing legal documents to reflect one's gender identity, coming out to loved ones, dressing as one chooses, and accepting oneself among many other things. Transition is an individual process.

Transphobia—the fear, hatred, and ignorance of transgender people or any gender variation and expression that is seen as unconventional.

Trauma-Informed Care

Trauma-informed services embed an understanding of trauma in all aspects of service delivery (Poole, 2012). They place priority on trauma survivors' safety, choice, and control, and they create a treatment culture of non-violence, learning, and collaboration. In contrast, trauma-specific services directly address the impact of trauma and facilitate trauma recovery and healing. Trauma-informed practice aims to help individuals make connections between their experience of trauma and substance use or mental health concerns. Client engagement, retention, and outcomes improve when services are emotionally and physically safe, provide strength-based opportunities for learning and building coping skills, and provide clients with choice and control.

Research found that trauma-related symptoms are elevated among youth with histories of potentially traumatic events, and that many of these youth believed their use of substances was connected to their histories of traumatic experiences (Rosenkranz & Henderson, 2009). It has also been suggested that trauma history may affect the degree and source of motivation for accessing treatment, with potential implications for treatment engagement (Rosenkranz et al., 2011). Knowing that shame may motivate people to enter, though not necessarily stay in, treatment, it will be important to enhance other, more positive forms of motivation to encourage people to continue to attend. These findings point to the importance of using a trauma-informed perspective in treatment services. In order to be responsive to clients' needs, assessment and treatment planning must be conducted in a trauma-informed way. The overarching principles that guide our assessment and treatment planning—creating safety and empowering youth—reflect this trauma-informed approach, but also respond to the needs of youth who do not report trauma histories.

Essence of trauma-informed services

Trauma-informed services are successful when they are embedded into treatment services, regardless of the population for whom the services are provided (Rosenkranz et al., 2012). When working with youth in withdrawal management settings, the following components for a comprehensive and trauma-informed service should be considered:

Empowerment in treatment planning

Treatment planning is a collaborative process between client and clinician, guided by the assessment results and giving consideration to the client's interests and preferences. Within a harm-reduction framework, treatment plans aim to create safety in the lives of youth and to empower them to make positive changes.

Involvement and control in goal-setting

Youth are often told "what is good for them," what changes they "need" to make, what their goals should be, what their treatment plan should look like, and who should be involved in their treatment. In recognizing that a significant aspect of healthy development for youth who are transitioning from adolescence into adulthood is increased autonomy, staff will empower youth to contribute to the development of their own treatment plans. This also allows for those who have had little control over previous experiences (e.g., trauma) to have new experiences in which the control for the direction their lives will take is placed back in their hands.

Harm reduction

Harm reduction and minimizing risk are crucial in addressing the needs of youth.
Choice about family involvement—As part of treatment planning, youth are encouraged to consider the extent to which they want family to be involved in their treatment. Including family in treatment usually increases retention and improves treatment outcomes, but for some youth family may be a source of trauma. It is important to empower youth to make decisions regarding family involvement in their treatment, and, under guidance of treatment staff, to decide who is important to them and whom they would like to engage in the treatment process with them.

Choice in treatment options

Non-traditional treatment options, such as music, art, recreation, and cooking groups, should be included in the choices available to youth.

Making connections between trauma and current coping strategies

Youth with trauma histories often engage in risky behaviours, including excessive substance use, self-harming, unhealthy eating, and involvement in emotionally or physically dangerous interpersonal interactions and relationships. Assistance in connecting the current behaviours and feelings of these youth to their past experiences can help them develop alternative self-understanding that is not laden with negative judgments. This can help youth to begin making choices that will reduce their current risks and harms. A focus on practising alternative coping skills can be very effective in reducing risks and harms.

Creating safety

Creating a sense of emotional and physical safety is central to trauma-informed service provision. Creating a safe environment is essential, as it will consider factors that may be uncomfortable or distressing for youth and mitigate the potential for treatment to be traumatizing or re-traumatizing. Considerations include using respectful language, clarifying youth rights and responsibilities, paying attention to self-endangering behaviours, assessing each client's readiness to engage in group treatment, considering aspects of the physical environment, and attending to staff safety.

Levelling off power imbalances

To ensure that youth are well-informed about what they are entitled to and what they may expect, youth rights and responsibilities are discussed when youth enter the program and again at the outset of the various treatment components. A focus on youth rights and responsibilities acknowledges and attempts to address the potential impact of power imbalance and dynamics inherent in a therapeutic environment. Attention must be paid to confidentiality, language, respect, and other strategies for maintaining safety.

Expressing distress safely

Throughout treatment, staff must make it a priority to attend to youth distress and self-endangering behaviours and to check in with clients regularly regarding safety. Safety plans are developed proactively with all youth who are identified to be at high risk for suicide or other self-harming behaviour.

Treatment planning also must consider the varying backgrounds and presentations of youth and offer modification to content as appropriate. Group content can be offered individually for youth who are not yet able or willing to participate in groups. Considerations are also made regarding group composition and therapist gender-matching.

Lastly, in order to provide trauma-informed and sensitive services, staff members require a safe space to address their own issues related to working with a challenging population with complex needs.

Family Involvement

Families are often the most important resource that adolescents have in their journey through treatment. Family can play a key role in supporting and helping a youth achieve his or her goals. Despite this knowledge, family engagement continues to be a challenge in many adolescent treatment settings. Some of the barriers to family engagement include the assumption that families are "the problem" or that they are just looking for someone else to find a solution. Some programs will indicate that they don't have the staff, time, or expertise to work with families. Some programs will say that client confidentiality prevents them from involving family. Finally, an additional barrier has been the limited definition and understanding of who constitutes family. Family should be defined by the youth, and may or may not include the youth's biological family. Whomever the youth defines as family will influence treatment planning and the role of family in that plan. Further, whomever the youth defines as family will affect the kind of involvement that family has in the treatment. It is important to understand that each family situation is different; therefore, the way in which a family is approached will vary depending on specific circumstances.

The age, maturity, readiness for change, and family history of the adolescent will also influence how family involvement takes shape. These issues might not be readily apparent through an early assessment but will become so as trust develops, as the adolescent becomes more stable through the withdrawal process, and as staff have the opportunity to directly observe the adolescent. The examples described below illustrate a small sample of family scenarios. One cannot make assumptions about family; therefore it is crucial to conduct ongoing assessments to determine the manner in which family or concerned significant others need to be involved.

- 15-year-old Luke: He initially rejects involving his parents because he views their attempt to set boundaries as being overly intrusive and says they don't trust him. He says he has things "under control."
- 16-year-old Emma: Her parents feel overwhelmed, betrayed, and exhausted from trying to deal with their daughter's substance-abusing behaviour—suspension from school, trip to emergency room for accidental overdose, and brushes with the law. They see Emma's time in withdrawal management as an opportunity for respite.
- 18-year-old pregnant Holly: Holly, who is aboriginal, has been estranged from her mother and has spent the past couple of years couch-surfing. Her pregnancy has motivated her to seek help for her addiction and has got her thinking about reconnecting with her mother but she doesn't know how to go about it.
- 17-year-old Jenna: Jenna has been in a serious relationship with a person of the same gender and age. This individual has been substance-free for several months and is interested in supporting Jenna through the treatment process.

Addiction Services programs must recognize families as part of the solution to adolescent substance-abuse treatment and recovery. Involving family and creating a parent-professional collaborative partnership will improve outcomes for the adolescent.

Program staff sometimes think that family work is synonymous with family therapy, but that is not the case. Family work is likely to occur in all tiers of addiction supports and services, while family therapy is more likely to occur as a component of Structured Treatment or intensive Community Based Services. Family therapy calls for a highly specialized skill set that requires much clinical training, experience, and ongoing supervision. Family work can include a whole range of activities, from recognizing the role of family in treatment to providing information to families to referring them to other services. Staff must be assessed for competency, comfort, and training with respect to the ability to provide family work and family therapy, and programs must not offer services beyond the skill level of staff.

Within the context of withdrawal management, a lot can be done to engage families in an effective and appropriate manner. Information and education are key. It is crucial that families understand the treatment process and the reality of recovery. Without information, families may not understand the importance of a treatment and recovery plan for their adolescent, the potential adverse consequences, and the impact of substance-abuse problems on other family members. Families need to be aware of the continuum of services and supports available, and understand how family participation improves treatment outcomes and strengthens the recovery process. Family involvement should be an essential part of intake, treatment, and recovery planning, as well as the foundation for effective parent-professional partnerships.

In the context of withdrawal management, the following guidelines should help to determine the level of family involvement and corresponding activities:

- Involving family is the clinical norm. Let it be known up front that the program is client- and family-centred.
- Via the clinical framework, acknowledge the strengths that family can bring to the therapeutic process.
- Working in teams can be instrumental in determining the degree to which families are involved.
- As early as possible, ask the adolescent to identify who he/she perceives as their family or support system.
- When family involvement is not indicated, clearly document the reasons in the client's file.
- Explain at the start the limitations to family contact/visitation during the withdrawal period.
- Connect client and family with Community Based Services as early as possible.
- Ensure that all withdrawal management staff have competencies that enable them to work with families—including education and basic supportive counselling.
- Address family members' feelings and provide them with support.
- Make an effort to match clinical staff and clients, based on skills and level of family intervention required.
- Ensure that programs and clinical interventions creatively engage family in the youth's treatment process. For example, if a family cannot be present then a telephone meeting might be an appropriate option.
- In circumstances where family members are not initially involved, look for further opportunities to invite family to participate in the treatment process, e.g., other affected groups, education sessions.
- Work closely with Community Based Services to ensure that withdrawal management staff are not having to work beyond their scope and means in supporting families.
- Be well acquainted with other formal or informal family-centred community programs, and be prepared to refer as necessary.

Youth Resilience

For decades, the concept of resilience has been providing a way to understand youth's positive development under adversity and the factors and processes that help youth avoid harmful, self-destructive, or antisocial behaviours, mental disorders, and threats to their physical well-being. Resilience has long been viewed by service providers as a key factor to help youth with substance abuse and addictions disorders recover from and cease future use and abuse of drugs and alcohol (Dickson et al., 2002; Hawkins et al., 2002; Wills et al., 2008). Resilience is viewed as a complex set of relationships between the youth, family, community, and service providers who come together to help youth navigate safely through times of adversity and to negotiate for services that meet the specific cultural and contextual needs of the youth. Resilience has been defined thus:

> In the context of exposure to significant adversity, resilience is both the capacity of individuals to navigate their way to the psychological, social, cultural, and physical resources that sustain their well-being, and their capacity individually and collectively to negotiate for these resources to be provided in culturally meaningful ways. (Ungar et al., 2008, p. 225)

In order to facilitate resilience in youth, the International Resilience Project (an international resilience-based research project, which conducted extensive research in Atlantic Canada), has shown resilience to be reliant on the following: access to material resources; access to supportive relationships; development of a desirable personal identity; experiences of power and control; adherence to cultural traditions; experiences of social justice; and experiences of social cohesion with others (Ungar et al., 2008). These seven factors of resilience (described below) create a social environment that provides meaningful cultural and contextually specific interventions to youth, which helps them successfully navigate their way through times of significant adversity (Ungar et al., 2008).

Access to resources

Access to material resources, as Ungar et al. (2008) define it, is the youth's access to "financial assistance, education, food, shelter and clothing, medical care, and employment" (p. 7). Numerous studies have shown that youth who have access to basic necessities typically demonstrate more resilience than those who have limited access to these resources (Beauvais & Oetting, 1999; Nettles, Mucherah, & Jones, 2000). In a withdrawal context, Curry et al. (2007) have shown that, as expected, youth who have access to smoking cessation programs are better able to quit smoking than youth who do not access these programs. Santisteban et al. (2011) have shown that youth who have access to therapy and counselling sessions for drug use and/or abuse were shown to have higher rates of drug cessation than youth who did not have access to therapy and counselling sessions.

Access to support relationships

Ungar et al. (2008) state that forming supportive relationships with others offers a sense of belonging, emotional support, and feelings of love, compassion, and trust to youth who have experienced, or are currently experiencing, trauma. These relationships are not limited to a youth's family and friends but also include front-line workers, teachers, and community members who provide supports to youth during times of stress. Forming and maintaining trusting relationships with other people has been shown to be central in the resilience literature for decades (Kumpfer, 1999; Walsh, 2006). In Nova Scotia, Ungar, Liebenberg, Dudding, Armstrong, and van der Vijer (in press) have shown that youth who received quality service intervention and who also established meaningful relationships with front-line staff, such as mental health and addictions workers, become more resilient and better able to navigate adversity than youth who do not.

Development of a desirable personal identity

The third factor is concerned with how youth think of themselves and their personal beliefs, future goals, values, and strengths (Ungar et al., 2008). Hines et al. (2005) have shown that youth who adopt positive identities, who have future goals, and who have high self-esteem are better able to navigate times of significant adversity than youth who possess negative identities, who do not have any future goals, and who have low self-esteem. An important part of identity construction and maintenance also refers to the youth's racial, ethnic, gender, and/or sexual identities, which have been shown to be important in numerous studies of resilience (Costigan, Su, & Hua, 2009; Evans et al., 2012; Settles et al., 2010).

Experience of power and control

The fourth factor refers to whether children believe they can control and change their lives (Ungar et al., 2008). Ungar, Liebenberg, Landry, and Ikeda (2012) have shown that youth who access multiple services (addictions, justice, social services, etc.) are most likely to engage in intervention plans when relationships between front-line staff and the youth and their families are built upon empowerment. Other intervention styles, such as where service providers take responsibility away from a youth's parent(s)/caregiver(s) to facilitate the youth's well-being, or where service providers expect the youth and their families to take sole responsibility for their own care, have been found to create tension and conflict between the service providers and the youth and/or their families (ibid.) This causes the youth to resist and avoid taking part in intervention strategies (ibid.).

Adherence to cultural traditions

Adherence to cultural tradition refers to how youth connect to their culture and how well service interventions engage with their cultural identity (Ungar et al., 2008). Previous studies have shown that youth who adopt positive cultural identities do better in school (Byrd & Chavous, 2009), refrain from engaging in illegal or high-risk behaviours (Caldwell et al., 2004), and demonstrate better coping skills than youth who do not possess strong connections to their culture (Evans et al., 2012; Settles et al., 2010).

Experiences with social justice

Experience with social justice refers to how youth interpret and react to forms of discrimination and prejudice (Ungar et al., 2008). Caldwell et al. (2004), Lee (2005), and Sellers et al. (2006) have shown that possessing a strong racial and ethnic identity allows ethno-racial youth to be better able to cope when they experience racism. A strong racial or ethnic identity is associated with ethno-racial youth who are more aware of their rights, personal strengths, and capacity to resist racism. For ethno-racial minorities, these skills are associated with higher levels of academic achievement (Lee, 2005), engaging in less violent behaviours (Caldwell et al., 2004) and high levels of psychological well-being (Sellers et al., 2006). Likewise, youth who do not possess skills and supports to help them navigate experiences of discrimination have been shown to use drugs and alcohol as a means of coping (Brody et al., 2012).

Experiences with social cohesion

The final factor that facilitates resilience, as identified by Ungar et al. (2008), is the youth's experiences of social cohesion. Social cohesion refers to youth's belief that they are connected to something larger than themselves—the feeling that their lives have meaning, their presence matters, and their involvement is noticed. This section refers to the social ecology or environment in which the youth are operating (e.g., school, treatment, etc.) and whether they feel an attachment to that environment and the people who operate in it. Ungar, Liebenberg, Dudding, Armstrong, and van der Vijer (in press) have shown that youth who receive treatment in cohesive environments are more resilient than youth who are administered treatment in settings that do not try to establish a cohesive and supportive relationship with youth.

It should be noted that the seven aspects of resilience are interrelated, meaning that affecting change in one aspect will likely to influence a youth's success in another. Research conducted by Ungar et al. (2008) shows that, while resilience may not be derived from all seven factors at one time, international research has shown that resilience is dependent on several factors acting simultaneously. Involvement in treatment, for example, may not just provide youth with access to intervention services, it also provides youth with the opportunity to establish new relationships with adults and peers, the potential to create a powerful identity, and a sense of cohesion and belonging that may be absent in their lives.

It should also be noted that a universal approach to facilitating resilience in youth does not exist. As Bottrell (2007, 2009) has shown from her research with at-risk and high-risk youth, there needs to be a flexible approach to intervention services. There is no uniform way in which you can intervene with every youth experiencing adversity; rather, interventions must be tailored to meet the specific needs of each youth. Youth come from diverse backgrounds (for example, some may have supportive family members, others may not), so services need to meet these contextual differences. In addition, youth also possess their own norms and values, ideas of success, and cultural beliefs. As Ungar et al. (2008) have shown, service interventions that complement rather than conflict with these beliefs achieve a higher degree of success than service interventions that do not.

Engaging youth to foster resilience

Research on resilience is providing insight into the complex interactions between individuals and the nested systems that shape positive development in contexts where children face above-average levels of adversity. As yet, there have been limited studies dedicated to finding out how to engage youth from Nova Scotia in an intervention setting with the purposes of facilitating resilient actions and behaviours. Research conducted by Ungar, Liebenberg, and Ikeda (2012) with youth accessing multiple services (addictions, mental health, justice, education, social welfare) in Atlantic Canada identifies six factors that are conducive to facilitating change in youth with complex needs who live in challenging situations:

- services are multi-level;
- services are coordinated;
- services are continuous over time;
- services are negotiated with clients;
- services provided are only as intrusive as they need to be; and
- services used have been previously shown to be effective.

The first factor, multi-level services, means bringing together professionals from different areas of expertise (addictions, mental health, justice, education, social welfare) to plan, implement, and administer an intervention strategy that addresses the complex needs of clients accessing multiple services. However, forming a relationship between multiple service providers alone is not enough; service providers who are included in this relationship must also coordinate with one another to ensure that youth can get to their appointments, and that clients are not receiving conflicting messages and information on how to navigate their way through adversity. There must be fidelity between service providers to ensure that each member is aware of the needs of the youth and the proper way for the youth to meet those needs.

The second factor is that treatment interventions are more effective for Atlantic Canadian youth if those interventions are carried out over a long period of time. Providing continued services to youth not only allows them to access help over a long period of time but it also helps to build meaningful relationships with service providers.

For the third factor, research (Ungar et al., 2008; Ungar, Liebenberg, & Ikeda, 2012) has shown that Atlantic Canadian youth respond better to interventions if they are able to help decide how services will be delivered to them.

Findings from Ungar, Liebenberg, and Ikeda's research (2012) also show that intervention strategies that provide a space for youth to influence their own intervention strategy have proven to have greater success than ones that do not.

The fifth effective intervention strategy for service providers in Nova Scotia is that services should be no more intrusive than they need to be, meaning that intervention efforts should interfere with a youth's life as little as possible unless it is required. Allowing youth to form and maintain relationships that exist outside an intervention dynamic provides them with the opportunity to create and/or maintain meaningful relationships with other people who will act as social supports once treatment has ended.

The final factor is that services considered effective by program evaluators are the services that typically show the highest success rates. While this may sound obvious to some, it is included to show the importance of service providers staying up to date on the most effective treatment strategies. New treatment options will always be created to replace current ones, and these newer strategies give service providers more effective treatment options to help facilitate resilience in youth.

Taken together, these six intervention strategies have been shown to help Atlantic Canadian youth with complex needs to avoid individual, family, and community risk factors that jeopardize their well-being.

Withdrawal Protocols

Substance Withdrawal

These guidelines and the medical protocols for withdrawal management that follow recognize the use of the Diagnostic and Statistical Manual of Mental Disorders (DSM) in defining "substance withdrawal.". The DSM-V defines substance withdrawal as

> … the development of a substance-specific maladaptive behavioural change, with physiological and cognitive concomitants, that is dueto the cessation of, or reduction in, heavy and prolonged substance use.The substance-specific syndrome causes clinically significant distress or impairment in social, occupational, or other important areas of functioning. The symptoms are not due to a general medical condition, and are not better accounted for by another mental disorder.

The DSM-V suggests that there is no evidence of a physiological withdrawal from substances such as hallucinogens, or volatile substances, and that withdrawal is usually, but not always, associated with substance dependence. The inclusion of cannabis withdrawal is new to the DSM V.

Most individuals in withdrawal have a craving to reuse the substance to reduce their symptoms, and this may be the case with many young people who engage in a period of abstinence from their substance of choice. Some young people experience a range of physical and emotional symptoms upon cessation of these substances. For the purpose of these guidelines, references to withdrawal from these substances is made to capture symptoms that may require treatment rather than to suggest the actual presence of a physiological withdrawal.

Young people may also present for withdrawal episodes from substances that are not covered in these guidelines, e.g., GHB (Gamma-hydroxybutyrate), Special K (ketamine), magic mushrooms (psilocybin), LSD, and bath salts.

For the purpose of these guidelines, polysubstance use is defined as the use of two or more drugs on a single occasion or within a defined period to achieve a particular effect. This makes withdrawal syndromes difficult to assess. Adolescents are more likely to be polysubstance users.

Nicotine

Smoking is the leading cause of preventable death, and tobacco is the only consumer product that kills one half of its users when used as directed (WHO, 2003). The vast majority of adult smokers started when they were youth (Batra, Patkar, Weibel, & Leone, 2002). Recent survey data indicate that almost five million Canadians aged 15+ smoke, and that the vast majority of them smoke on a daily basis (Health Canada, 2006). According to the U.S. Department of Health and Human Services (2008), among adults who have ever smoked daily, 90% tried their first cigarette before age 21. Most who do not quit during high school will continue to smoke for 16–20 more years (Pierce & Gilpin, 1996). Adolescents are very interested in quitting: 82 % of smokers aged 11–19 are thinking of quitting (U.S. Department of Health and Human Services [USDHHS], 2008) and 64% have already made a

quit attempt (Health Canada, 2002). Young people vastly underestimate the addictive potential of nicotine, and both occasional and daily smokers are likely to think that they can quit at any time (Fiore, Jaen, & Baker, 2008). However, the rate of failed adolescent quit attempts exceeds that of adult smokers; only 4% of smokers aged 12–19 successfully quit smoking each year (USDHHS, 2008). We know that individuals can become dependent on cigarettes after smoking as few as 100 cigarettes (Heyman, 2002), and that the health benefits of quitting smoking are significant; quitting before the age of 30 restores life expectancy to that of a person who never smoked (Doll, Peto, Boreham, & Sutherland, 2004).

In addition to the known health risks inherent in smoking, there is evidence that nicotine, the main addictive component of tobacco, increases the use of other drugs. One laboratory study showed that participants who smoked regular cigarettes worked harder to obtain alcohol compared to those who smoked denicotinized cigarettes (Barrett, Tichauer, Leyton, & Pihl, 2006). Furthermore, a study of substance abusers reported that tobacco use was associated with increased craving for cocaine (Epstein, Marrone, Heishman, Schmittner, & Preston, 2010). Therefore, availability of smoking cessation for youth has much broader health implications.

According to Health Canada (2010), 12.2 % of Canadian youth aged 15–19 continue to report being a current smoker; in Nova Scotia that number is even higher, with a prevalence rate of 15.8%. Higher yet is the prevalence for our Nova Scotia high-risk adolescent population. At one residential facility for at-risk youth in the Metro Halifax area, an informal survey of 29 residents was administered by staff. The results showed that 90% had tried tobacco, and 55% of these at-risk youth were smoking on a regular basis. Additionally, a Health Canada–funded stop-smoking research and treatment project for youth in rural northern Nova Scotia, which targeted six high schools and collected data from 161 students, found that the average length of time that the youth had smoked before coming to the program was 3.6 years and they smoked, on average, more than 11 cigarettes daily.

Nicotine Treatment in Addiction Treatment Settings:

Although there has been some reluctance to treat tobacco dependence in addiction-treatment settings, recent studies suggest treatment is effective, does not jeopardize recovery, and may even improve sobriety from drugs and alcohol (Hughes, 1996; Hughes, Novy, Hatsukami, Jensen, & Callas, 2003; Hurt, Eberman, Slade, & Karan, 1993). In general, quitting smoking does not appear to negatively affect abstinence from other substances (Burling, Burling, & Latini, 2001; Rustin, 1998) and can even enhance recovery (Bobo, Walker, Lando, & McIlvain, 1995; Pletcher, 1993). Evidence also suggests that substance users can successfully quit smoking along with, or shortly after, quitting other substances (Hurt, Eberman, Croghan, Offord, Davis, Morse, et al., 1994; Martin et al., 1997). Furthermore, concurrent treatment of nicotine and other dependencies can contribute to fewer relapses with alcohol and drugs (Bobo at al., 1995; Bobo, McIlvain, Lando, Walker, & Leed-Kelly, 1998; Currie, Nesbitt, Wood, & Lawson, 2003; Martin et al., 1997; Patten & Martin, 1996; Patten, Martin, Myers, Calfas, & Williams, 1998; Patten et al., 1999).

Pharmacology of Nicotine

Nicotine dependence is a progressive, chronic, relapsing disorder (Henningfield, Schuh, & Jarvik, 1995). Unlike other drug dependencies, however, tobacco dependence is still normalized in society and the harmfulness is often minimized. Addiction to nicotine is a complex brain disease with significant behavioural characteristics (American Society of Addiction Medicine [ASAM], 2011), and it affects the pleasure and reward circuitry of the brain (Erickson, 2007). Addiction involving nicotine typically originates with use in adolescence when the brain is still developing and is more vulnerable to the effects of nicotine (National Center on Addiction and Substance Abuse at Columbia University [CASA], 2012). It is not nicotine itself but the thousands of toxins present in tobacco and its combustion products that are responsible for the vast majority of tobacco-caused disease (Ontario Medical Association, 2008). Nicotine can be a highly addictive drug—as addictive as heroin or cocaine (USDHHS, 1988). Its potential for addiction differs primarily by the rate and route of nicotine dosing; the most addictive method of nicotine delivery is inhalation of nicotine through cigarettes (Benowitz, 1998). Because nicotine from cigarettes is absorbed through the lungs, nicotine levels in the blood reach a peak within seconds then decline rapidly, and this pattern is repeated and reinforced with every inhalation; the quick delivery of nicotine to the brain results in a faster and more intense response, which leads to addiction (Benowitz, 1996).

The areas of the brain affected by nicotine addiction are among those that are responsible for survival, including areas associated with motivation, decision making, risk and reward assessment, pleasure seeking, impulse control/inhibition, emotion, learning, memory. and stress control (Dackis & O'Brien, 2005). Virtually all addictive substances affect the pleasure and reward circuitry deep in the brain, which is activated by the neurotransmitter dopamine (Erickson, 2007). With repeated use of nicotine, the brain begins to expect this stimulation (release of dopamine) and an addicted individual may experience intense desire or cravings whenever nicotine is not readily available, especially when the individual is exposed to cues associated to their nicotine use (ASAM, 2011; Hyman, 2007). Nicotine dependence is established rapidly, even among adolescents (USDHHS, 2008). It has been estimated that as few as 100 cigarettes can form dependency (Heyman, 2002). A large and growing body of scientific research has demonstrated clearly that addiction involving nicotine is a complex brain disease (CASA, 2012).

The diagnosis of addiction is based on its symptoms, including compulsive use of addictive substances (e.g. nicotine), significantly impaired function, and persistent use despite negative consequences (ASAM, 2011).

The Diagnostic and Statistical Manual of Mental Disorders (DSM-V, 2013) lists the diagnostic criteria for Nicotine Withdrawal:

- Nicotine has been used daily for at least several weeks.
- There has been an abrupt cessation of nicotine use, or reduction in the amount of nicotine used, followed within 24 hours by four (or more) of the following signs:
  - dysphoric or depressed mood;
  - insomnia;
  - irritability, frustration, or anger;
  - anxiety;
  - difficulty concentrating;
  - restlessness;
  - decreased heart rate; and
  - increased appetite or weight gain.
- The symptoms in Criterion (b) cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- The symptoms are not due to a general medical condition and are not better accounted for by another mental disorder.

Nicotine is a Central Nervous System (CNS) stimulant. It has a half-life of about 30–120 minutes. The pharmacological effects of nicotine are broad and diverse. In a non-tolerant individual, 200–300 mcg of nicotine can produce:

- dizziness;
- headache;
- sweating;
- nausea;
- abdominal cramps; and
- possible vomiting and weakness.

However, in smokers, these symptoms abate as tolerance develops. In regular smokers, nicotine may produce the following effects:

- mild euphoria;
- increased arousal;
- enhanced ability to concentrate;
- feeling of relaxation; and
- temporary relief of withdrawal.

Nicotine Replacement Therapy (NRT)

Any person withdrawing from nicotine and exhibiting any of the above symptoms can be considered for withdrawal using the NRT medications outlined in the protocol. The decision to use this protocol is the responsibility of the Staff Nurse and is based on nursing assessment of the client. The NRTs listed below can be used in combination to manage nicotine withdrawal symptoms, based upon nursing assessment.

Nicotine replacement therapy, when used as directed, provides lower doses of nicotine at a slower rate than smoking and serves to ease nicotine withdrawal symptoms (Stead, Perera, Bullen, Mant, & Lancaster, 2008). For many smokers, NRT works best as an aid to managing nicotine-related cravings when used in conjunction with psychosocial therapies. In most cases of acute care treatment, a therapeutic level of nicotine is reached and then use is reduced in order to eliminate the medication entirely or reach a maintenance level (Fiore, Jaen, Baker, Bailey, Benowitz, et al., 2008). NRT is considered a cornerstone in clinical guidelines for smoking cessation in the U.S. (Fiore et al., 2008). The Ontario Medical Association (OMA) released a set of recommendations around nicotine cessation aids and recommends that NRT should be made available to young people under the age of 18 who want to stop smoking. It is also recommended that people who smoke should be encouraged to individualize their NRT dosage to meet their nicotine needs. Lastly, it is recommended that people who smoke should be encouraged to use NRT for as long as needed to prolong tobacco abstinence, with periodic assessments to evaluate the continued use of nicotine being offered to the patient/client (OMA, 2008).

Use of NRT has been shown to be safe in adolescents; however, it should be noted that research with youth and nicotine treatment is in its infancy, and as a result there is little research proving that these medications are adequate in promoting long-term smoking abstinence in adolescents (Fiore et al., 2008). Additional research is ongoing in this area.

The following is a list of NRT products that can be utilized based on nursing assessment:

- nicotine transdermal patch
- nicotine inhaler
- nicotine gum
    - Nicorette® (2mg of nicotine)
    - Nicorette Plus® (4mg of nicotine)— if deemed necessary, an order will need to be written (Clinical Practice guidelines dosing—Treating Tobacco Use and Dependence 2008)

NRT Dosing

Fagerström 1–6 points (see Appendix I)
May prescribe 14-mg patch or inhaler for 6 weeks
Then 7-mg patch for 4 weeks
During this time client can take 2-mg gum every hour prn (max 20 pieces/day)
Fagerström 7–10 points
May prescribe 21-mg patch for 6 weeks
Then 14-mg patch for 2 weeks
Then 7-mg patch for 2 weeks

During this time the client may use the nicotine inhaler for 10 min at a time to a max of 6 times per day or 2-mg gum every hour prn to a max of 20 pieces per day.

Ensure that the nicotine inhaler and cartridge are taken from the client after each use. Also, when applying a nicotine patch ensure that the previous patch is passed back; do not assume the client has thrown it in the garbage. It is important to note that no nicotine products should be used after 2000h due to their stimulant affect. This is important to prevent nightmares. Never apply a patch after 1800h, and ensure that all patches are removed by 2000h.

Mechanisms should be in place to review, measure, and revise this protocol as necessary.

Although there is scant literature on pharmacotherapy for smoking cessation in adolescents, some studies have shown positive outcomes for the use of buproprion (Muratmoto et al, 2007). This study concluded that "sustained-release bupropion hydrochloride, 300 mg/d, plus brief counseling demonstrated short-term efficacy for adolescent smoking cessation. Abstinence rates were lower than those reported for adults, with rapid relapse after medication discontinuation". A recent study comparing verenaicline to buproprion for the treatment of smoking cessation in older adolescents showed "no serious adverse events' (Gray et al, 2012), or side effects from the use of these agents in adolescents aged 15-20 years.

Alcohol

Alcohol intoxication

Alcohol is a central nervous system depressant, which causes depression of respiration, coughing reflex, gag reflex, and cardiovascular function, and may therefore induce various cardiac arrhythmias.

Signs of intoxication:

- smell of alcohol
- ataxia and slurred speech
- loss of inhibition
- depression
- altered behaviour and cognition
- altered mood/emotions
- inappropriate behaviour/emotional responses
- relaxation, euphoria, confusion, disorientation
- analgesic and anaesthetic effects
- altered consciousness
- positive breath/blood alcohol reading

Signs of alcohol overdose:

- strong smell of alcohol
- stupor or coma
- cold and clammy skin
- hypothermia
- hypotension
- laboured and noisy respiration
- tachycardia (heart rate >100) or bradycardia (heart rate <60)
- positive blood alcohol reading

The pattern of alcohol use in adolescents is generally of a bingeing nature and not the more common chronic, regular, if not daily use that presents in adult alcohol use disorders. With less regular use, the individual is very unlikely to develop neuroadaptation leading to any obvious physical withdrawal symptoms. Despite the very uncommon presentation of significant alcohol withdrawal in the adolescent population, it is helpful to note that the onset of alcohol withdrawal syndrome usually begins 6 to 24 hours after the last alcoholic drink. In young people who have a tolerance to alcohol, the withdrawal syndrome may begin while there is still a significant blood alcohol reading.

The severity of alcohol withdrawal ranges from mild (simple) to severe (complex). Severe alcohol withdrawal is potentially life-threatening. Early recognition and correct management of the initial, milder stages of withdrawal is crucial in prevention of its progression into the severe, life-threatening stages. Alcohol-related seizures can occur at any time during withdrawal and peak within 24-48 hours. Some adolescents may experience visual, tactile, or auditory hallucinations during severe withdrawal.

Features of alcohol withdrawal

Mild withdrawal

Signs and symptoms may occur 6–24 hours after stopping or substantially reducing alcohol intake. Simple withdrawal symptoms usually peak within 48 hours and rapidly subside over the following 1–2 days.

Symptoms include:

- mild anxiety
- headaches
- insomnia/sleep disturbance/vivid dreams

Signs include:

- achycardia
- mild sweating/perspiration
- slight tremor (6-8Hz, best brought out by extension of hands or tongue)
- hyperactive reflexes
- hyperthermia
- mild dehydration
- mild hypertension

Moderate withdrawal

Signs and symptoms occur within 24 hours and subside 72 hours after stopping or substantially reducing alcohol intake.

Symptoms include the above plus:

- moderate anxiety (will respond to reassurance)
- anorexia
- nausea and vomiting
- abdominal cramping

Signs include the above plus:

- dehydration
- moderate sweating, particularly facial
- facial flushing
- diarrhea
- mild tremor

Severe withdrawal

Signs and symptoms may occur in 24–48 hours or may be delayed until more than 48 hours after stopping or substantially reducing alcohol intake. Delays in onset can be caused by administration of other central nervous system depressants, e.g., opioid analgesia or anaesthetics. The usual course of withdrawal is 3–5 days, but can be up to 14 days.

Symptoms include the above plus:

- acute anxiety (may or may not respond to reassurance)
- hyperventilation and panic
- agitation
- disorientation
- fever
- confusion & delirium
- hallucinations—tactile, visual, or auditory
- hypersensitivity to stimulation (noise and light especially)

Signs include the above plus:

- excessive perspiration
- moderate to severe hypertension (danger sign is a diastolic pressure greater than 120mmHg)
- or hypotension
- marked tremor
- fever
- withdrawal seizures

Alcohol Withdrawal Seizures

Grand mal seizures are one manifestation of alcohol withdrawal. Withdrawal seizures usually begin 8–24 hours after the last drink and may occur before the blood level has reached zero. Most are generalized major motor seizures occurring singly or in short bursts of several seizures occurring over a period of 1–6 hours. The peak incidence of withdrawal seizures is within 24 hours after the last drink, corresponding to abnormalities in EEG readings. Less than 3% evolve into status epilepticus.

There is an increased risk of seizure activity in patients with a history of prior withdrawal seizures. The risk may also increase if an individual is undergoing concurrent withdrawal from benzodiazepines or other sedative-hypnotics, and there is evidence to suggest that genetics may also play a factor.

Clients who have a history of seizures during drug withdrawal and are receiving a prescription of phenytoin will remain on this medication during treatment.

Alcohol Withdrawal Delirium and Delirium Tremens (the DTs)

Progression to severe alcohol withdrawal symptoms, including delerium tremens, is a very uncommon presentation in adolescents. Young adults, who may have had more opportunity to develop a chronic a regular pattern of use of alcohol, may present in progressed alcohol withdrawal.

Milder alcohol withdrawal delirium occurs more often; at the severe end of the spectrum it progresses into delirium tremens (the DTs). The DTs is the most severe form of alcohol withdrawal syndrome, and is a medical emergency. The DTs usually develop 2–5 days (most often 3–4 days) after cessation or significant reduction of alcohol consumption, but may take 7 days to appear. The usual course is 2–3 days, but can be up to 14 days. Anecdotally it is unusual for adolescents to suffer from the DTs; however, if the young person has been abusing alcohol for a significant length of time, he/she may experience the DTs in withdrawal if he/she is not medicated. Dehydration, infection, cardiac arrhythmias, hypotension, kidney disease, and pneumonia may be precipitating factors.

Delirium tremens manifests as:

- acute confusion accompanied by profound disorientation to place and time
- dehydration
- delirium
- elevated body temperature
- sweating
- extreme fear
- hypertension
- tachycardia
- tremor
- hallucinations—tactile, visual, or auditory
- severe agitation
- severe sleep-wake cycle disruption

Alcoholic hallucinosis and delirium tremens can occur if the young person has a history of heavy alcohol consumption, is undergoing severe withdrawal, and/or is not being adequately medicated for alcohol withdrawal.

Managing Alcohol Withdrawal

Purpose

To provide staff with protocols/guidelines for the management of alcohol withdrawal.

Principle

To manage alcohol withdrawal by minimizing progression of withdrawal, by accurate assessment of substance history and relevant health issues, and by early recognition and treatment of withdrawal.

Associated documentation

Nursing Assessment and Admission form as per district policies
CIWA-A(See Appendix II)

Equipment

Alcometer

Assessment

See previous documentation re: assessment

Pathology investigations

1. Urine drug screen, if concerned about undisclosed substance use
2. bHCG (pregnancy test prior to administering any medication)

Other tests to consider (these investigations should be included as the clinical presentation applies. Adolescents and young adults are very unlikely to have medical complications of chronic alcohol use, including end organ damage. Therefore the routine use of CXRs and ECGs is not applicable in this population)

1. TB test
2. CXR
3. ECG
4. Hepatitis A and B immunity, Hepatitis C
5. STIs (including RPR, HIV)

Assessment of withdrawal symptoms using the CIWA-A

Primary Goal:

To assure clinical stability.

The Clinical Institute Withdrawal Assessment tool (CIWA-A; see Appendix II) has well-documented reliability, reproducibility, and validity. It takes 2–5 minutes to complete, allows rapid documentation of the patient's signs and symptoms, and provides a simple summary score that facilitates accurate and objective communication between staff. A score below 10 indicates mild withdrawal, 10–18 moderate withdrawal, and over 18 severe withdrawal. Patients with low scores in the first 24 hours have little to no risk for severe withdrawal. High scores early in the course are predictive of the development of seizures and delirium, but other medical conditions that can result in elevated scores need to be ruled out.

Risk factors for severe withdrawal include:

- history of prior DTs or withdrawal seizures
- tachycardia on admission
- blood alcohol level of >100mg/dL on admission
- serum electrolyte abnormalities
- medical comorbidity (especially infection)

Characteristics NOT useful in predicting severe withdrawal include:

- amount of daily intake
- duration of heavy drinking
- age
- gender

The CIWA-A-Ar should be used for young people experiencing mild, moderate, or severe alcohol withdrawal. It measures the impact of pharmacotherapy, and the information it provides about the course of withdrawal is used to communicate the experience of withdrawal and the frequency and severity of symptoms. Even for young people who appear asymptomatic, the CIWA-A will confirm the absence of a withdrawal syndrome.

The CIWA-A may give "false positive" high scores if the young person has a high anxiety state due to fear, unfamiliar surroundings, or other causes. Scores high on Anxiety, Agitation, and even Tremor may lead to a total score of over 10 without necessarily being due to alcohol withdrawal. This can lead to over-prescribing of diazepam.

To avoid this the objective signs, such as blood pressure, pulse rate, and sweating, should be considered, as well as whether anxiety symptoms correlate with the time interval since the last drink and the likely onset of withdrawal symptoms. If symptoms are relieved by discussion and explanation, they are more likely to be due to general anxiety than a physiological withdrawal state. If a young person who is not a regular heavy drinker has had a recent heavy binge of alcohol and is experiencing nausea, the symptoms may be due to a hangover rather than alcohol withdrawal. The treatment of a hangover relies more on rehydration and mild analgesics than on diazepam.

The CIWA-A was developed for alcohol withdrawal only, not for polydrug use or for any other substance withdrawals. If the young person has a history of recent benzodiazepine dependence/abuse as well as alcohol dependence/abuse, then some of the withdrawal symptoms may be due to benzodiazepine withdrawal. This may render the CIWA-A less useful in monitoring progress than in "pure" alcohol withdrawal. In some instances this combined alcohol/benzodiazepine withdrawal may require a diazepam tapering-dose regime, rather than relying on the CIWA-A to assess diazepam treatment.

FREQUENCY OF CIWA-A

A CIWA-A score is completed on admission and initiated when the alcometer reading is below 0.150. CIWA-A scores are then taken approximately every 2–3 hours until the withdrawal symptoms subside. However, a patient who is sleeping should not be awakened just for the purpose of scoring.

Pharmacological Management of Alcohol Withdrawal

When medicating adolescents in withdrawal, body weight and stature must always be considered, as adult doses may result in over-medicating of small-stature adolescents. The recommended dosages in these guidelines may need to be reduced.

Diazepam

Oral diazepam is used to treat alcohol withdrawal symptoms. Diazepam is prescribed in a reducing-dose regime, but may need to be titrated over the first 24–48 hours to stabilize the young person. Other symptomatic medication may be indicated. Medication is indicated for adolescents with moderate to severe alcohol withdrawal. Adolescents with mild alcohol withdrawal should not require pharmacological support.

1. Give diazepam 5–20mg, q1h when CIWA-A is >8–10 (symptom-triggered therapy), to a maximum of 50mg within 24 hours.

2. Diazepam may be prescribed as 5–10mg q6h (fixed-dose therapy), with a further prn order to a total of 50mg daily for the first 1–3 days if the young person is showing signs of severe withdrawal (assessed with CIWA-A), has a history of withdrawal seizures, or needs to avoid all withdrawal for medical reasons. If the dose exceeds 40mg daily for the first 1–3 days, the reducing-dose regime should be assessed each day. The young person will generally only require medication over the first 4–5 days of withdrawal.

3. If the young person has had a previous admission to the residential withdrawal unit, it is valuable to review the management of his or her last withdrawal. The previous levels of diazepam can be used as a guideline for the management of his or her current withdrawal syndrome.

4. In the following circumstances, the young person will require a medically supervised setting for withdrawal:
• if initially there is a blood alcohol reading and the young person is showing clinical signs of withdrawal;
• if there is a history of complicated withdrawal (seizure, delirium); and/or
• if withdrawal is severe and not able to be managed on a maximum of 50mg of diazepam daily.
It is important to ensure that female clients are not pregnant, as carbamazepine is teratogenic. It also interacts with other medications that undergo hepatic metabolism, so it must be used cautiously in those individuals with concurrent medical illness.

Thiamine

- Thiamine 100mg po daily for 3 days, plus a comprehensive multivitamin daily

Alcohol consumption can cause nutritional deficiencies, especially of B-group vitamins. If the young person has had inadequate nutrition over some weeks and is drinking heavily, he or she may become Vitamin B1 (thiamine)–deficient, which can cause neurological damage. Thiamine deficiency is a major cause of Wernicke's encephalopathy/Wernicke-Korsakoff syndrome. This is an acute condition associated with high-risk levels of alcohol use, or any condition that has caused poor nutritional status and its sequelae (e.g., malnutrition, anorexia, or bowel disease). If the condition is not treated effectively and early, it can lead to permanent brain damage and memory loss. It can occur in heavy drinkers (80mg BAC daily for adult males and 60mg BAC daily for adult females), whether young or older.

The body can only absorb a small amount of oral thiamine per day, and it can only be stored by the body for a few days.

Agitation and delirium

Ativan 1–2mg po given once for severe agitation

Nausea and vomiting

Diphenhydramine 25–100mg q6–8h prn

Diarrhea

Loperamide Hydrochloride 2mg
4mg initially, then 2mg after each loose bowel action, to a maximum of 16mg/day

Headaches

Acetaminophen 325–650mg q4h prn
Ibuprofen 200–400mg q4h prn, not to exceed 1200mg/day
The amount of acetaminophen administered to adolescents who are Hepatitis C–positive must be monitored, as it may adversely affect liver function.

Benzodiazepines

Benzodiazepine intoxication

Benzodiazepines have a general central nervous system depressant effect, which is dose-dependent. As the dose increases, there is progression from sedation through hypnosis to stupor. They cause respiratory depression, but this effect is minimal unless other central nervous system depressants are taken (e.g. alcohol and opioids). When alcohol or opioids are used in conjunction with benzodiazepines, the depressant effects of each of the substances may be potentiated. This could result in respiratory depression that may be life-threatening. Sometimes benzodiazepines produce a paradoxical reaction of disinhibited behaviour and violence.

Signs of intoxication:

- ataxia and slurred speech
- poor motor co-ordination
- dizziness
- blurred vision and nystagmus
- eyes appear "glassy"
- drooling
- poor memory recall
- confusion
- drowsiness
- stupor
- disinhibition and emotional instability

Signs of benzodiazepine overdose:

- slurred speech
- stupor or coma

Benzodiazepine Withdrawal

The pattern of benzodiazepine use in adolescents is generally of a bingeing nature and may not produce any obvious physical withdrawal symptoms. Adolescents who use benzodiazepines on a regular basis may develop tolerance to the sedative effect and can show symptoms of withdrawal. Benzodiazepine use should not cease abruptly, therefore a dose-reduction regime is recommended.

The benzodiazepine withdrawal syndrome varies between individuals and according to duration and consistency of use, amount used, and type (short-, medium- or long-acting) of benzodiazepine used.

Table 3

Benzodiazepine (brand name)	Equivalence to Diazepam 5mg	Onset of Action	Time to Peak Concentration	Duration (t1/2)
Long-Acting				
Chlordiazepoxide (Librium)	10mg	1–3h	0.5–4h	100
Chlorazepate	7.5mg	<1h	0.5–2h	100
Diazepam (Valium)	5mg	<1h	0.5–2h	100
Flurazepam (Somnol)	15mg	<1h	0.5–1h	100
Intermediate-Acting				
Alprazolam	0.5mg	1–3h	1–2h	12–15
Bromazepam (Lectopam)	3mg	1–3h	1–4h	8–30
Clobazam	10mg	1–3h	1–4h	10–46
Clonazepam (Rivotril)	0.25mg	1–3h	1–2h	20–80
Lorazepam (Ativan)	1mg	1–3h	2–4h	10–20
Nitrazepam (Mogadon)	5mg	1–3h	2–3h	16–55
Oxazepam (Serax)	15mg	>3h	2–4h	5–15
Temazepam (Restoril)	15mg	1–3h	2–3h	10–20
Short-Acting				
Triazolam (Halcion)	0.25mg	<1h	1–2h	1.5– 5

A clinically significant withdrawal syndrome is most apt to occur after discontinuation of daily therapeutic dose (low dose) use of benzodiazepine for at least 4–6 months or, at doses that exceed two to three times the upper limit of recommended therapeutic use (high dose), for more than 2–3 months.

The severity of withdrawal is influenced by:
1) dose
2) duration of use

The latency to onset of withdrawal is related to elimination half-life.

Elimination half-life	Onset/Latency	Peak of withdrawal	Duration from start of withdrawal symptoms
Short-Acting	within 24 hours	1–14 days (usually earlier)	7–21 days
Long-Acting	2–7 days (usually within 5 days)	1–20 days (usually later)	10–28 days

Features of Benzodiazepine Withdrawal

Vital Signs

- tachycardia
- hypertension
- fever

Central Nervous System

- anxiety
- sleep disturbances
- depression
- irritability and aggression
- aches, pains and numbness
- headaches and dizziness
- sweating
- hypersensitivity to noise, light and touch
- impaired concentration and memory
- nightmares
- agoraphobia
- feelings of unreality
- depersonalisation
- panic attacks
- increased muscle tension and twitching
- delusions
- paranoia
- hallucinations
- tremors

Gastrointestinal

- anorexia
- diarrhea
- nausea

High-Dose (severe) Withdrawal

- seizures/convulsions
- delirium
- death

Host factors negatively affecting withdrawal severity

1. psychiatric comorbidity
2. concurrent use of other substances
3. family history of alcohol dependence
4. concurrent medical conditions
5. female gender

Managing Benzodiazepine Withdrawal

Purpose

To provide protocols for the management of benzodiazepine withdrawal.

Principle

To ensure that benzodiazepine withdrawal is managed by minimizing progression of withdrawal, by accurate assessment of substance history and relevant health issues, along with early recognition and treatment of withdrawal.

Medication

Diazepam (Valium)
Metoclopramide (Maxeran)
Prochlorperazine (Stemetil)
Paracetamol

Assessment

1. Detailed history of benzodiazepine use:
    - type of benzodiazepine
    - quantity of benzodiazepine
    - route of administration
    - pattern of use and for how long—always document the time of last use
    - symptoms of dependence
2. Concurrent use of other substances (especially alcohol, but also including all other prescribed or non-prescribed licit or illicit drugs)
3. Previous withdrawal attempts:
    - withdrawal symptoms experienced
    - symptomatic medication used
    - any complications
4. Medical and psychiatric history
5. Family history of substance use and psychiatric or medical (especially seizure) disorders
6. Psychosocial history, including current social status and social support

Examination

1. Evidence of intoxication
2. Evidence of withdrawal symptoms—record a baseline of withdrawal symptoms by using an objective benzodiazepine withdrawal scale
3. Vital signs and weight

Pathology investigations

1. Full blood examination
2. Urine drug screen if concerned about undisclosed substance use (note: the UDS may not pick up some benzos, e.g. clonazepam)
3. Hepatitis B and C, HIV, and BBV screening if injecting drug-user
4. Breathalyzer

Note: Pre- and post-test counselling must always be given prior to and following blood-borne virus screening.

Management of Withdrawal

The above-described symptoms of withdrawal refer only to benzodiazepine dependency, which usually takes 2–4 weeks of daily benzodiazepine use to develop.

The diagnosis of benzodiazepine dependence should be made, based on history, as part of the initial assessment process.

The list of symptoms may not be relevant to benzodiazepine binge users, and this group generally does not require a slow tapering benzodiazepine regimen. They may require management of anxiety, where low doses of benzodiazepines for a few days may be sufficient to manage symptoms.

Supportive Care

1. Information about what to expect
2. Supportive counselling from the nurse and other allied health workers
3. Education about drinking fluids and maintaining nutrition throughout the withdrawal period

Pharmacological Management of Benzodiazepine Withdrawal

When medicating adolescents in withdrawal, their body weight and stature must always be considered, as adult doses may result in over-medicating of small-stature adolescents. The recommended dosages in these guidelines may need to be reduced.

1. Assess benzodiazepine use as accurately as possible
2. Convert to a long-acting benzodiazepine (diazepam)
3. Ascertain that the young person is exhibiting clinical signs of benzodiazepine

Pharmacokinetic Properties of Benzodiazepines

Table 4

Generic Name	Trade Name	Onset of Action[1]	Daily Dosage Range (mgs)	Approximate Equivalent Dose (mg)[2]	Active Metabolites
Short-Acting					
Midazolam	Versed®				Yes
Triazolam	Halcion®, Generics	Fast	0.25–0.5	0.25	No
Intermediate-acting					
Alprazolam	Xanax®, Generics	Intermediate	0.75–4.0	0.5	Yes
Bromazepam	Lectopam®	Intermediate	6–60	6	Yes
Clobazam	Frisium®, Generics	Intermediate		10	Yes
Clonazepam	Rivotril®, Generics	Intermediate	1.5–20	1	No
Lorazepam	Ativan®, Generics	Intermediate	1–10	1	No
Nitrazepam	Mogadon®, Generics	Intermediate	5–10	5	No
Oxazepam	Serax®, Generics	Slow	30–120	15	No
Temazepam	Restoril®, Generics	Intermediate	15–30	15	No
Long-acting					
Chlordiazepoxide	Librium®, Generics	Intermediate	5–100	10	Yes
Clorazepate	Tranxene®, Generics	Fast	15–60	7.5	Yes
Diazepam	Valium®, Generics	Fast	4–40	5	Yes
Flurazepam	Dalmane®, Generics	Fast	15–30	15	Yes

Source: Adapted from the Compendium of Pharmaceuticals and Specialties, 2000.

Notes:

1. Fast < 1 hour Intermediate 1–3 hours Slow > 3 hours
2. Approximate equivalent dosages:
   There is no agreed-upon equivalency table for the benzodiazepines. The above equivalencies may vary slightly for each individual.

Procedure

Medication

Diazepam (other options are clonazepam and chlordiazepoxide)

1. Some adolescents may require their short-acting benzodiazepine to be converted to a long-acting benzodiazepine and stabilized on a dose prior to commencing on a reduction regime (especially if there has been long-term use).
2. Generally it is recommended that a short-acting benzodiazepine be substituted for a long-acting benzodiazepine before a reduction is commenced. As long-acting benzodiazepines remain in the bloodstream longer, this can facilitate a more tolerable reduction.
3. Diazepam is used for pharmacological management of benzodiazepine withdrawal.
4. The young person may require a medically supervised withdrawal if:
   - there is a history of high/prolonged usage
   - there is a history of seizures associated with benzodiazepine withdrawal
   - withdrawal is severe and not able to be managed on the maximum dose of 50mg of diazepam daily

   Generally, a fixed-dose schedule should be used, with prn for breakthrough in the first week to establish the dose; after that, prn benzodiazepine should not be used.
5. As a general rule, patients tolerate more dose reduction and with shorter intervals early in the tapering process, and then require decreased dose reduction over longer intervals as the taper progresses.
6. Generally, reductions would be 10% of the average daily use. In the Residential Withdrawal Units, however, the reduction may be achieved at a faster rate under medical supervision.
7. The final 25–35% of the taper should be slowed down to half the previous dose reduction per week, and the interval for dose reductions doubled.
8. It may be necessary to halt reductions and plateau the dose if symptoms are severe or if the young person is experiencing severe psychosocial stressors.
9. Once a reduction has commenced, the reductions should be made more slowly rather than increasing the dose again.

An excellent resource for Benzodiazepine tapering is benzo.org.uk/manual. This website has tables for conversion of many different ehaviorgines to diazepam and also schedules for weaning down the diazepam.

Nausea & vomiting

- Diphenhydramine 25–100mg q6–8h prn

Headaches

- Acetaminophen 325–650mg q4h prn
- Ibuprofen 200–400mg q4h prn, not to exceed 1200mg/day

The amount of acetaminophen administered to adolescents who are Hepatitis C–positive must be monitored, as it may adversely affect liver function.

Cannabis

Cannabis Intoxication

Cannabis in small doses is a central nervous system stimulant and depressant, and in high doses is mainly a depressant. The main active constituent is Delta 9-tetra-hydrocannabinol (THC), which causes the psychoactive effects of cannabis. THC is stored in the fat cells of the body and produces an accumulative effect over time. Tolerance and dependence can occur with prolonged regular use, which may lead to symptoms following cessation.

Cannabis mainly affects the central nervous and cardiovascular systems.

There is growing evidence and medical literature that indicates an association between regular cannabis use and the development of psychosis. Most individuals who present with cannabis induced psychosis have a history of risk for psychosis (a family history of psychotic illnesses or a pre-morbid history of mental health changes that, in retrospect, are often identified as pre-psychotic symptoms. A presentation of cannabis induced psychosis is more common than a presentation of significant withdrawal symptoms associated with the cessation of cannabis use. A first episode, or early presentation, of psychosis in an adolescent or young adult may be an indication for referral to a mental health professional., in some cases, referral to an acute care setting (hospital Emergency Department) for medical and psychiatric assessment may be required. Risk assessment is strongly advised to determine the appropriate setting for medical care of a young person with new psychosis.

Symptoms of intoxication:

- relaxation
- euphoria
- disinhibition
- sleepiness
- hunger
- feeling of wellbeing
- perceptual distortions
- impaired memory
- depersonalization

Signs of intoxication:

- conjunctival injection
- tachycardia (sometimes with palpitations)
- orthostatic hypotension (sometimes resulting in syncope)
- dry mouth
- impaired coordination

Peripheral effects of cannabis

- tachycardia (heart rate >100)
- vasodilation
- bronchodilation
- muscle relaxant
- orthostatic hypotension
- reduced intra-ocular pressure
- anti-emetic
- analgesia
- anticonvulsant effects

Acute toxicity:

- anxiety
- confusion
- panic attacks
- delusions of persecution
- visual hallucinations
- short-term memory and attention impairment
- impairment of motor skills

Cannabis Cessation

Symptoms of cannabis cessation:

- anxiety, restlessness and irritability
- insomnia
- lethargy
- cravings
- increased body temperature
- tremors
- mild depressive features
- panic attacks
- nightmares
- anorexia
- nausea and vomiting
- sweating (especially night sweats)
- headaches
- mood swings

Much less common are physical symptoms such as gastrointestinal distress, diaphoresis, chills, nausea, shakiness, and muscle twitches.

The DSM V has now recognized and has included marijuana withdrawal, the criteria are as follows:

1. Had recently stopped using marijuana after having used it heavily for a long time.

2. Experiences at least 3 of the following withdrawal symptoms within several days of stopping marijuana use:

- Anger, irritability or feelings of aggression
- Depressed mood
- Feelings of restlessness
- A loss of appetite (or weight loss)
- Insomnia or other sleeping problems
- Feelings of anxiety or nervousness
- Physical symptoms of withdrawal, such as headache, stomach pains, increased sweating, fever, chills or shakiness. To count as a symptoms of withdrawal at least one of the above listed physical symptoms must be present and the severity of the symptom(s) must be great enough to cause substantial discomfort

3. The symptoms of withdrawal are severe enough to cause the person substantial problems with functioning at work or in social situations – or significant impairment in functioning in other important areas.
4. The symptoms of withdrawal cannot be better explained by another physical or mental health condition.

Managing Cannabis Withdrawal

Purpose

To provide staff with protocols for the management of symptoms caused by the cessation of cannabis.

Principle

To manage cannabis cessation by minimizing progression of symptoms, by accurate assessment of substance history and relevant health issues, and by early recognition and treatment of symptoms.

Medication

Benzodiazepines are not indicated for cannabis withdrawal except in exceptional cases (i.e. extreme anxiety, psychosis, and/or aggression) and then only on an extremely limited, prn basis.

Assessment

1. Detailed history of cannabis use
   - pattern of use and for how long
   - method of administration, e.g., ingested, "joint," or "bong"
   - symptoms of dependence
2. Concurrent use of other substances, including the use of tobacco and cannabis mix
3. Previous withdrawal attempts:
   - withdrawal symptoms experienced
   - symptomatic medication used
   - any complications
4. Medical and psychiatric history

Examination

1. Evidence of intoxication
2. Evidence of withdrawal symptoms—record a baseline of withdrawal symptoms by using an Objective Cannabis Withdrawal Assessment Scale
3. Vital signs and weight

Pathology investigations

1. Urine drug screen, if concerned about undisclosed substance use

Management of Withdrawal
Some adolescents will report experiencing some minor physical symptoms in the first few days following cessation of marijuana use.

1. Often adolescents may respond better to a period of reduction and controlled use of cannabis before they decide on an episode of abstinence.
2. Symptoms of cessation can also be minimized if the young person has been reducing his or her cannabis use over time.
3. When the young person is referred for withdrawal in a residential withdrawal setting, it is advisable for him or her to be managed by reducing the cannabis while waiting to be admitted.

Supportive Care
1. Information about what to expect
2. Supportive counselling
3. Education about drinking fluids and maintaining nutrition throughout the withdrawal period

Pharmacological Management of Cannabis Withdrawal

Most adolescents do not require medication for the cessation of cannabis. Often cannabis is mixed with tobacco (e.g. "joints") and there may be symptoms of nicotine withdrawal when the amount of tobacco is reduced through the cessation of cannabis.

As there are risks involved in introducing adolescents to benzodiazepines, extreme caution must be used in prescribing them, even for a short time. The pros and cons must be considered before medicating young people with benzodiazepines. For the purpose of cannabis withdrawal, benzodiazepines are usually used as a last resort.

Procedure
Monitor the withdrawal episode and note how the young person is coping

Medication
When medicating adolescents in withdrawal, their body weight and stature must always be considered, as adult doses may result in over-medicating of small-stature adolescents. The recommended dosages in these guidelines may need to be reduced.

Headaches
- Acetaminophen 325–650mg q4h prn
- Ibuprofen 200–400mg q4h prn, not to exceed 1200mg/day

The amount of acetaminophen administered to adolescents who are Hepatitis C–positive must be monitored, as it may adversely affect liver function.

Generally you should not exceed 4000mg of acetaminophen in a 24-hour period.

Agitation or aggression

- Low-dose second-generation antipsychotic (e.g. olanzapine 5mg, quetiapine 25–50mg)

If diazepam is indicated:

- Diazepam up to 20mg daily in divided doses initially, reducing doses over 3–5 days (maximum of 5 days medication)

Nausea and vomiting

- Diphenhydramine 25–100mg q6–8h prn

Opioids

Opioids are a class of drugs that include opium, morphine, and codeine produced directly from the poppy plant and heroin, which is further synthesized and then a variety of other semi-synthetic and full synthetic formulations. They are prescribed as analgesics for both cancer related and non-cancer pain. The use of opioids for illicit purposes has a long standing history that has most recently been highlighted by the massive upswing in use of prescription opioids for recreational use, in particular by young people. Nova Scotia , as well as other jurisdictions in Canada, has witnessed a shocking impact of prescription opioid use, abuse and dependence. The need for treatment of Opioid Use Disorders and opioid withdrawal has dramatically increased.

Types of opioids

Table 1 shows the generic names, trade names, and approximate equivalent dose of opioids available in Canada, broken down by agonists, agonists–antagonists, and antagonists.

Prescription Opioids Available in Canada

Table 5

Generic Name	Trade Name	Route of Administration	Approximate Equivalent Doses
Agonists			
Alfentanil	Alfenta	Intravenous	0.4–0.8mg
Codeine	Various	Oral	200mg
Fentanyl	Duragesic	Transdermal	NA
Hydrocodone	Tussionex	Oral	
Hydromorphone	Dilaudid	Oral	4–6mg
Methadone		Oral	
Morphine	MOS, MS Contin	Oral	30mg
Oxycodone	Percodan	Oral	30mg
Pethidine	Demerol	Oral	300mg
Sufentanil	Sufenta	Intravenous	75mg
Tramadol	Tramacet	Oral	0.01–0.04mg
Agonists–Antagonists			
Buprenorphine-naloxone	Suboxone	Sublingual	NA
Butorphanol	Apo-Butorphanol	Intranasal	2mg
Nalbuphine	Nubain	Subcutaneous	10mg
Pentazocine	Talwin	Oral	180mg
Antagonists			
Naloxone	Targin	Intravenous	NA
Naltrexone	Revia	Oral	NA

Notes:

The doses (milligrams) are approximately equivalent to 10 milligrams of morphine intramuscular.
NA = non-applicable

With the exception of methadone and buprenorphine, the opioid agonists and agonists–antagonists are considered short-acting, with their analgesic effect lasting approximately 4–6 hours.

Signs and symptoms

Signs and symptoms of opioid intoxication

- euphoria
- sedation
- analgesia
- constipation
- itching and scratching
- miosis (constricted, "pinpoint" pupils)
- bradycardia (heart rate <60)
- hypotension
- respiratory depression
- recent use of injection sites (if intravenous user)

Signs of opioid overdose

- respiratory depression (<12 breaths/min) ****most important sign****
- laboured and noisy breathing
- hypothermia
- bradycardia with weak pulse
- miosis (constricted, "pinpoint" pupils)
- cyanosis
- decreased level of consciousness

Signs and symptoms of opioid withdrawal

- hot and cold flushes
- sweating
- yawning
- lacrimation
- rhinorrhea
- mydriasis (dilated pupils)
- piloerection (erection of the hair follicles—"goosebumps")
- nausea and vomiting
- anorexia
- diarrhea
- tremor
- muscle twitches
- muscle and joint aches
- abdominal cramps
- anxiety and restlessness
- insomnia
- cravings
- lethargy and weakness

Onset of opioid withdrawal symptoms

Opioid withdrawal symptoms may begin 6–12 hours after the last dose, peak at 48–72 hours, and subside after 7–10 days. The timing of onset and duration of withdrawal is protracted if the individual is using long acting opioids, such as methadone. The severity of the withdrawal from opioids is determined by a number of factors including:

- dosage
- frequency
- chronicity of use
- route of administration
- extent of other drug and alcohol abuse
- the extent of drug-related medical and psychiatric complications

Signs of toxicity or overdose

Nursing staff should assess the young person for signs of toxicity or overdose. If the young person is drowsy, do not administer any medication (particularly opioids or benzodiazepines) that is likely to make him/her more sedated.

Stage 1

- slurred speech
- unsteady gait and poor balance
- drowsiness
- slowed movement, slow eating
- stupor (confusion)
- nodding off for prolonged periods

Stage 2: Coma—Serious Emergency

- unrousable, unresponsive, unable to be awakened
- snoring, gurgling, or spluttering when breathing
- slow or shallow breathing, or apnea
- floppy limbs and neck
- blue lips and fingers
- pale, clammy skin
- eyes rolling back

The young person MUST be reviewed by the pharmacotherapy prescriber as soon as toxicity or over-medication is suspected. However, if the young person is in Stage 2 (coma) , call an ambulance immediately and administer Narcan and respiratory support. All withdrawal units should have pulse oximeters as part of vital sign checks. In an emergency, administer oxygen (if available) and commence CPR. All withdrawal units should have narcan on site.

Managing Opioid Withdrawal

Purpose

To provide staff with an understanding of the toxicities associated with opioid use as well as the medications used for the effective management of opioid withdrawal symptoms.

Principle

To ensure that staff manage opioid withdrawal by minimizing progression of withdrawal, by accurate assessment of substance history and relevant health issues, and by early recognition and treatment of withdrawal.

Clinical Management

Assessment

1. Detailed history of opioid use:
   - type of opioid
   - quantity of opioid
   - route of administration
   - pattern of use and for how long—always document the time of last use
   - route of administration (oral, nasal, or idu can all result in dependence)
2. Concurrent use of other substances
3. Previous withdrawal attempts:
   - withdrawal symptoms experienced
   - symptomatic medication used
   - any complications
   - previous medical management of opioid withdrawal
   - previous history of Opioid Substitution Therapy (Methadone or Suboxone Maintenance Treatment)
4. Medical and psychiatric history

Examination

1. Evidence of intoxication
2. Evidence of withdrawal symptoms
3. Vital signs and weight
4. Injection sites (if injecting drug user)
5. Physical signs of liver disease, e.g., jaundice

Pathology investigations

1. CBC, electrolytes, glucose, creatinine, BUN
2. Liver function tests
3. Hepatitis B and C and HIV screening (if injecting drug user)
4. Urine drug screen, if concerned about undisclosed substance use

Pre- and post-test counseling must always be given prior to and following blood-borne virus screening.

Supportive care

1. Information about what to expect
2. Supportive counselling
3. Psychological support from carers in Home-Based Withdrawal
4. Education about drinking fluids and maintaining nutrition through withdrawal period

Assessing the severity of opioid withdrawal symptoms

The Clinical Opiate Withdrawal Scale

Clinical considerations

When medicating adolescents in withdrawal, their body weight and stature must always be considered, as adult doses may result in over-medicating of small-stature adolescents. The recommended dosages in these guidelines may need to be reduced.

It is important that young people being started on Methadone or Suboxone are educated about the possible risks of toxicity and overdose. The risk of overdose is highest in the first 14 days of treatment, due to either a dose that is too high or low tolerance to the medication. The use of other depressant medication also adds to the risk.

Pharmacological management of opioid withdrawal

There is substantial evidence for three different Pharmacotherapies for the pharmacological management of opioid withdrawal:

- Suboxone (buprenorphine/naloxone)
- Methadone
- Abstinence Based treatments: including symptomatic treatment with Clonidine (Capapres)

The following is included in the Centre for Addiction and Mental Health (CAMH) Burpenorhine Clinical Guidelines from 2011 (2012 updated version)):

- While scientific data on the use of methadone and buprenorphine in adults with opioid dependence is plentiful, there is very little literature about substitution therapy in adolescents (13-18years) and less so, in youth and young adults (18-25 years). A few studies from the 1970s address the use of methadone for detoxification and substitution therapy in adolescents. Recent literature from Australia and the United States has examined the use of buprenorphine for replacement therapy and for medication assisted withdrawal management. [6,7, 8,9,10,11,12,13,14,15]. Data on short-term detoxification with buprenorphine shows evidence of decreased use of opioids and enhanced engagement in treatment following a 3 day detox schedule. [11]. Longer withdrawal schedules are more likely to increase rates of abstinence and sustained engagement in recovery. Pending research results comparing 1-2 week and 3 month detoxification schedules, both in combination with psychosocial therapy, are eagerly anticipated. [10].

- With respect to age for treatment initiation, the recent studies include participants between the ages of 13- 18 years, with no burden of complications or poor outcomes in younger versus older adolescents. At present, buprenorphine/ naltrexone products are licensed for use in the U.S. for persons age 16 years and older. Jurisdictions in Europe, are licensed to treat adolescents 14 years and up. In Canada, at present, Suboxone is licensed only for patients 18 years or older. Use in younger individuals would be an off label use of Suboxone and the adolescent should be advised of this.
- Recent studies clearly reveal that buprenorphine with behavioral interventions is significantly more efficacious in the treatment of opioid-dependent adolescents relative to combining clonidine and behavioral interventions. [9].
- Concern over inducing tolerance by administrating methadone is one reason why the availability of the partial agonist buprenorphine has been seen as a useful alternative for young opioid users. Younger patients who present for treatment of opioid dependence often have a shorter history of drug use than treatment –seeking adults. Reflections from Australian experience include:
  " In treating young people with relatively brief histories of heroin use, and often with significant polydrug use, it is sometimes easier to recognize quite severe drug related problems than to be confident that the person is using opioids regularly enough to produce neuroadaptation." [7]
- Buprenorphine with its higher affinity for the opioid receptor than full agonists, provides a block that may diminish patients' ability to become intoxicated with other agonists while receptors are saturated. Buprenorphine therefore, has several advantages over methadone, including lower abuse potential and a stronger safety profile. Additionally, with buprenorphine's slow dissociation from the mu receptor, discontinuation of buprenorphine treatment results in reduced withdrawal symptoms relative to discontinuation of full agonists. This represents an advantage over methadone in a population where detoxification or stabilization and expedited withdrawal schedules are desirable.
- For adolescent and youth who are diagnosed as opioid dependent, treatment options should be offered including medically supported withdrawal management, opioid assisted withdrawal management, and substitution therapy. Buprenorphine offers distinct advantages over methadone for substitution therapy in adolescents and young adults. At present, buprenorphine is not liscenced in Canada for medication assisted detoxification. Buprenorphine for opioid withdrawal management would be an off label use, at present.
- The use of buprenorphine to treat opioid use disorders in adolescents and youth is well established in Europe and Australia. Recent literature from the United States shows that combining buprenorphine with behavioral interventions is significantly more efficacious in the treatment of opioid dependent adolescents relative to combining clonidine and behavioral therapy (8). The pharmacologic advantages of a partial agonist over a full agonist render buprenorphine favourable in medication assisted withdrawal treatment for opioid dependence in young persons.[7]. Optimal duration of detoxification pharmacotherapy is the topic of ongoing research. US research suggests that that longer duration (12 weeks versus 14 days) of buprenorphine treatment significantly improves outcomes (10). Australian data reviewing treatment retention in adolescent patients (age 14-17 years) treated with methadone or buprenorphine for opioid dependence suggests that buprenorphine be the first line pharmacotherapy for substitution treatment. [7].

The prescribing of methadone and suboxone should be done in consultation with a physician who has an exemeption to prescribe long acting opioids in the treatment of opioid dependence. The protocols for prescribing should be in compliance with the nova scotia guidelines for prescribing methadone. An outline of some suggested protocols for prescribing suboxone or methadone are as follows:

Suboxone (buprenorphine/naloxone) for chemical withdrawal

Procedure

The goal is to have withdrawal symptoms relieved for 24 hours and to then initiate a tapering regime off the stabilization dose.

To determine a stabilization dose of Suboxone (buprenorphine/naloxone):

Day 1

1. Patients who are experiencing objective signs of opioid withdrawal (COWS equal to or greater than 13) and whose last use of a short-acting opioid (see Table 1) was more than 12 to 24 hours prior to the initiation of induction can receive a first dose of 4/1mg of Suboxone .
2. Give the first sublingual tablet (supervised) only when the patient is in withdrawal. If the patient is not in withdrawal, Suboxone may precipitate withdrawal because it displaces other opioids from the opioid receptors.
3. If the initial dose of Suboxone is 4/1mg and opioid withdrawal symptoms subside but then return (or are still present) after 2 hours, a second dose of 4/1mg can be administered.
4. The total amount of Suboxone administered in the first 24 hours should not exceed 8/2mg.

Day 2

1. Patients who do not experience any difficulties with the first day of Suboxone dosing and who are not experiencing withdrawal symptoms on Day 2 are considered stabilized from their opioid withdrawal symptoms.
2. The daily stabilization dose of Suboxone is equivalent to the total amount of Suboxone that was administered on Day 1. On Day 3, the tapering regime may begin (see Tapering Regime below).
3. Doses may be subsequently increased in 2/0.5 to 4/1mg increments each day, if needed for symptomatic relief, with a target dose of 12/3 to 16/4mg per day to be achieved within the next 2 days. Once a stabilization dose is achieved, the tapering regime (see below) may be instituted.

Tapering Regime

Decrease the stabilization dose by 2/0.5mg increments every 1–2 days based on symptom relief. Refer to Table 2 for an example of the establishment of a stabilization dose and tapering regime for Suboxone.

Suboxone (Buprenorphine/Naloxone)*
Stabilization and Tapering Reduction Regime

Table 6

Day	Suboxone buprenorphine/naloxone)	Total daily dose
Establishing the stabilization dose		
Day 1	• For COWS ≥ 13, give an initial dose of 4/1mg** • Observe in 2 hours • If still experiencing opioid withdrawal symptoms (COWS ≥ 13), administer another 4/1mg dose	4/1–8/2mg
Days 2–3	Assess withdrawal symptoms using COWS	
	For COWS ≤ 13, give the total Day 1 dose for Days 2 and 3 and then initiate taper on Day 4	4/1–8/2mg
	For COWS ≥ 13, give the total amount of Suboxone on Day 1 and increase dose every 2 hours to a dosage range of 12/3 – 16/4mg	12/3 – 16/4mg
Tapering Schedule (example based on a stabilization dose of 12/3 and 2/0.5mg decreases every 2 days)		
Day 4		10/2.5mg
Day 5		10/2.5mg
Day 6		8/2mg
Day 7		8/2mg
Day 8		6/1.5mg
Day 9		6/1.5mg
Day 10		4/1mg
Day 11		4/1mg
Day 12		2/0.5mg
Day 13		2/0.5mg
Day 14		0mg

Notes

*Suboxone (buprenorphine/naloxone) is available in two different sublingual dosage strengths:

- 2 mg buprenorphine / 0.5 mg naloxone
- 8 mg buprenorphine / 2 mg naloxone

The purpose of the naloxone component is to deter intravenous administration of the sublingual tablet.

**To achieve a loading dose of 4/1mg (i.e. 4mg of buprenorphine / 1mg naloxone), two (2) of the 2mg Suboxone sublingual tablets should be dosed simultaneously. Dissolution takes about 2 to 10 minutes.

Adapted from: Kahan, M., Srivastava, A., Ordean, A. & Cirone, S. (2011).

Some individuals will either request or require longer treatment than 2 weeks. Opioid Substitution Therapy (OST) for adolescents with Opioid Use Disorders is appropriate for those individuals who have been assessed by a physician who is educated in the use of Suboxone for the treatment of Opioid Dependence and who are deemed clinically suitable for Suboxone OST.

Methadone for chemical withdrawal support

Procedure

Monitor vital signs prior to the administration of each medication dose.

Day 1

To determine methadone stabilization dose:

- Administer Methadone 20mg po x 1 loading dose for Clinical Opiate Withdrawal Scale (COWS) scores equal to or greater than 13.
- Three hours post loading dose, administer Methadone 5mg po q3h prn while COWS score remains equal to or greater than 13, to a maximum total dose of 40mg in 24 hours.

For individuals stabilized on less than methadone 40mg, contact physician for specific methadone tapering schedule. Do not proceed with orders below.

Day 2

Methadone 20mg po bid
First dose to be administered a minimum of 6 hours after last dose on Day 1.

Day 3

Begin Methadone Tapering Schedule (See Taper Algorithm below) this regime is NOT what would be prescribed in the community, but as long as there is 24 hour medical support, this may be feasible. In the community, a maximum starting dose of only 30mg is permitted due to safety issues and risk of overdose and death.

Methadone Withdrawal Taper Algorithm

Table 7

Taper Day	Morning Dose (mg)
1	35
2	35
3	30
4	30
5	25
6	25
7	20
8	20
9	15
10	15
11	10
12	10
13	5
14	5
15	0

For adolescents and youth who may request or require longer treatment with opioid substitution, methadone maintenance treatment is an option. In this case, the individual should be seen and assessed by a physician with education in the treatment of Opioid Dependence with Opioid Substitution Therapy and an exemption to prescribe methadone, if methadone maintenance is the treatment of choice.

Clonidine

Clonidine is seldom used as an opioid withdrawal medication. Historically it is not well tolerated by adolescents. However, many youth may not be interested in treatment with an opioid substitute and may request abstinence based treatment. In this case, symptomatic/supportive medical management of withdrawal is possible with the use of clonidine and other medications to treat withdrawal symptoms. Also, for youth who are interested in Suboxone assisted withdrawal mamagement, if they are not yet in withdrawal with a COES scale >13, they may be well supported with medicaiotns for symptomatic relief of withdrawal symptoms. In anticipation of administering Suboxone, which has a sedative effect, usually other sedative medications would be avoided.

Procedure

Monitor the young person's blood pressure prior to administering clonidine to ensure that the possible resultant hypotension will not adversely affect the recipient.
Give an initial test dose of clonidine to determine the effects on blood pressure.
Monitor blood pressure every thirty minutes for two hours following the administration of the test dose.
If there are no adverse reactions to the test dose, commence a reducing regime of clonidine.
If the young person's systolic reading is over 80 mmHg and pulse is over 60 b.p.m. for both readings, and the young person is not complaining of or showing signs of dizziness, the clonidine dose may be given.

Precaution: Use clonidine with caution in patients with pre-existing heart disease or those who are on antihypertensives. Caution patients about the risk of dizziness/syncope, and advise them to avoid driving or using the bathtub until they know how they will tolerate the dose.

Table 4 illustrates the Clonidine protocol to manage opioid withdrawal symptoms.

Clonidine Protocol

Table 8

Protocol for clonidine dosing

If BP >90/60:	Give 0.1mg t.i.d.–q.i.d. prn for 5–7 days Warn about postural symptoms, drowsiness, driving; no prolonged hot showers or baths (venous dilatation can cause hypotension)
If 0.1mg ineffective:	Increase to 0.2mg t.i.d.–q.i.d. prn Monitor for hypotension
Continue	Can be used for 5–7 days as an outpatient

Source: Kahan, M. & Wilson, L. (2002).

Symptomatic Medication Regime

Aches and pains

Ibuprofen (Advil/Motrin) 200–400mg q4h prn, not to exceed 1200mg in 24 hours

Nausea & vomiting

Diphenhydramine 25–100mg q6–8h prn

Diarrhea

Loperamide Hydrochloride 2mg
4mg initially, then 2mg after each loose bowel action, to maximum of 16mg/day
or
Loperamide Hydrochloride (Imodium) 2mg t.i.d.

Precaution: To prevent any possible drug interactions, do not use any medication containing atropine (e.g., Lomotil) if the young person is being administered clonidine.

Stimulants

Some common stimulants:

- amphetamine (speed)
- methamphetamine (crystal, meth, ice, speed)
- cocaine (coke)
- methylphenidate (Ritalin)
- khat (plant-derived CNS stimulant)

Stimulant Effects

Stimulants are central nervous system stimulants that have a peripheral sympathomimetic action.

Signs of intoxication:

- talkative
- vague concerns
- fidgety
- scratching
- twitching/shaking
- tremor
- ambivalent
- nervous tension
- rocking
- sniffing
- stereotypical motor behaviour
- repetitiveness/pressure of speech
- euphoria and exhilaration
- enhanced self-confidence
- disinhibition
- tangential thinking
- decreased appetite
- tachycardia
- hypertension
- tachypnea (rapid, shallow breathing)
- hyperthermia
- mydriasis (dilated pupils)
- dry mouth
- nausea and vomiting
- insomnia
- confusion
- aggression
- paranoia
- panic

Stimulant Toxicity

Table 9

Organ System	Medical Effects
Head, eyes, ENT	Pupil dilation, headache, bruxism
Pulmonary (especially if drug is smoked)	Hyperventilation, dyspnea, cough, chest pain, wheezing, hemoptysis, acute asthma exacerbation, barotrauma (pneumothorax/mediastinum), pulmonary edema
Cardiovascular	Tachycardia, palpitations, increased BP, arrhythmia, chest pain, myocardial ischemia/infarct, ruptured aneurysm, cardiogenic shock
Neurologic	Headache, agitation, psychosis (especially tactile hallucinations), tremor, hyperreflexia, small muscle twitching, tics, stereotyped movements, myoclonus seizures, cerebral hemorrhage/infarct (stroke), cerebral edema
Gastrointestinal	Nausea, vomiting, mesenteric ischemia, bowel infarct or perforation
Renal	Diuresis, myoglobinuria, acute renal failure due to rhabdomyolysis
Mild fever	Mild fever, malignant hyperthermia

Signs of acute toxicity:

- paranoia, hyperarousal, and bizarre, violent, and erratic behaviours
- severe headache (onset immediately after using amphetamines should alert to the possibility of intracranial hemorrhage)
- cerebrovascular accident (cocaine/other stimulant use should be considered in any young person presenting with a cerebrovascular accident)

If there are any troubling signs or symptoms of acute stimulant intoxication, patients should be assessed in an Emergency Department early because there are some complications with high morbidity and possible mortality.

Signs of chronic use:

- weight loss
- memory impairment
- poor concentration and attention
- sleep disturbances
- hallucinations and flashbacks
- depression
- panic attacks
- acute psychotic episodes resembling paranoid schizophrenia

Methylene dioxy-methamphetamine (MDMA, Ecstasy)

MDMA is similar in structure and affect to amphetamines, but acts as a hallucinogen as well. MDMA stimulates the central nervous system and also affects perception.

Signs of MDMA intoxication:

- tachycardia
- hypertension
- hyperthermia
- increased confidence
- jaw-clenching, bruxism
- feelings of well-being
- nausea
- feelings of closeness to others
- anxiety
- anorexia
- sweating

Signs of acute MDMA toxicity:

- hyperpyrexia/hyperthermia
- extreme hypertension
- dehydration
- tachycardia
- cardiac arrhythmia
- hallucinations
- seizures

MDMA taken in greater quantities may produce:

- vomiting
- floating sensations
- irrational or bizarre behaviour
- hallucinations
- convulsions

Features of stimulant withdrawal

In first 2–3 days ("crash"):

- exhaustion
- increased sleep
- depression, anxiety

Following days or weeks:

- irritability and anxiety
- cravings
- mood swings
- poor concentration
- hypersomnolence/sleep disturbances (increased dreaming due to increased REM sleep)
- increased appetite
- depression
- paranoid delusions and psychotic phenomena

Managing Stimulant Withdrawal

Purpose

To provide staff with protocols for the management of stimulant withdrawal.

Principle

To manage stimulant withdrawal by minimizing progression of withdrawal and by accurate assessment of substance history and relevant health issues.

Medication

Diazepam (Valium)

Assessment

1. Detailed history of stimulant use:
   - type of stimulants used
   - quantity of stimulants used
   - pattern of use and for how long
   - route of administration (cocaine—inhaling crack, snorting powder, injection)
   - risk of complications from acute or chronic toxicity
2. Concurrent use of other substances
3. Previous withdrawal attempts:
   - withdrawal symptoms experienced
   - symptomatic medication used
   - any complications
4. Medical and psychiatric history

Examination

1. Evidence of intoxication
2. Evidence of withdrawal symptoms
3. Vital signs and weight
4. Injection sites (if injecting drug user)
5. Physical signs of liver disease, e.g., jaundice

Pathology Investigations

1. Full blood examination
2. Hepatitis B and C and HIV screening (if injecting drug user)
3. Liver function tests
4. Urine drug screen, if concerned about undisclosed substance use
5. bHCG if female

Pre- and post-test counselling must always be given prior to and following blood-borne virus screening.

Supportive Care

1. Information about what to expect
2. Supportive counselling from the nurse and other allied health workers
3. Psychological support from carers in Home-Based Withdrawal
4. Education about drinking fluids and maintaining nutrition throughout withdrawal period
5. Emphasis on rest, exercise, and healthy diet

Pharmacological Management of Stimulant Withdrawal

Although amphetamine use is increasing, most users are not dependent.

While amphetamine withdrawal is a well-described clinical entity, there is little evidence-based information on medication that will ameliorate withdrawal discomfort in the short or long term, or facilitate long-term abstinence.

Most adolescents do not require medication for stimulant withdrawal. However, some adolescents may require a short course of diazepam if there is severe agitation or aggression.
As there are risks involved in introducing adolescents to benzodiazepines, caution must be used in prescribing them, even for a short time. The pros and cons must be considered before medicating young people with benzodiazepines.

Risks of benzodiazepine use are:

- potential for abuse
- delayed return of normal sleep patterns
- development of dependence on benzodiazepines
- interaction with other medications/substances

If the young person is using Ecstasy, it is very important that the medical practitioner is aware of this, as prescribing Mono-Amine Oxidase Inhibitors (MAOIs) may lead to a hypertensive crisis in the young person.

Medication

When medicating adolescents in withdrawal, their body weight and stature must always be considered, as adult doses may result in over-medicating of small-stature adolescents. The recommended dosages in these guidelines may need to be reduced.

Agitation or aggression

- de-escalating techniques

If diazepam is indicated:

- diazepam 5–10mg initially
- repeat after 30–60 minutes if necessary
- maximum of 20mg daily for 2 days, reducing the dose over next 3–5 days

Serotonin toxicity ("serotonin syndrome")

Stimulants have the potential to cause serotonin toxicity, particularly if taken in combination with antidepressants or antipsychotics.

Serotonin toxicity may be a mild, self-limiting condition or be potentially fatal, and presentation can be very variable, but neuromuscular signs are usually prominent.

The triad of changes includes:

1. mental status changes (anxiety, confusion, agitation, lethargy, delirium, coma)
2. autonomic hyperactivity (low-grade fever, tachycardia, diaphoresis, nausea, vomiting, diarrhea, dilated pupils, abdominal pain, hypertension, tachypnea)
3. neuromuscular abnormalities (myoclonus, nystagmus, hyperreflexia, rigidity, trismus, tremor)

Other features of serotonin toxicity:

- diarrhea
- lightheadedness or dizziness
- bladder or bowel dysfunction
- headache
- blurred vision
- nasal congestion
- convulsions
- coma

Management of serotonin toxicity

Mild cases:

- provide supportive care
- seek medical advice
- give diazepam, up to 20mg daily in divided doses
- maintain observation until symptoms resolve

Severe cases:

- call ambulance and transport to hospital for medical intervention

Stimulant-induced psychosis

Cases of psychosis will be referred out to the Emergency Department.

It is advisable to monitor adolescents for any signs of drug-induced psychotic phenomena, which can occur in susceptible adolescents following stimulant use.

Emerging psychotic symptoms should be monitored, with a referral to the appropriate mental health service for ongoing assessment/treatment.

Volatile substances

Volatile substance intoxication

Volatile substances include a range of products typically used by adolescents to produce the effects of intoxication. They act as a depressant on the central nervous system.

Types of volatile substances:

- adhesives
- aerosols
- cleaning agents
- solvents and gases
- petrol

Signs of intoxication:

- excitement and euphoria
- disinhibition
- drowsiness
- halitosis—breath often has acetone (nail varnish) smell
- nausea and vomiting
- flu-like symptoms
- epistaxis (nosebleeds)
- disorientation
- lack of coordination
- dizziness
- slurred speech

Effects will vary according to the substance used.

Long-term effects:

- tremors
- weight loss
- lethargy
- increased thirst
- anemia
- gastritis and colitis
- ruptured blood vessels in eyes causing redness and eventually leading to blindness
- damage to the nervous system, liver, and kidneys
- cognitive impairment
- aggression
- depression
- paranoia

Signs of acute toxicity:

- laryngeal spasm
- stupor
- coma
- cardiac arrhythmias
- convulsions
- "sudden sniffing death"

Features of volatile substance withdrawal:
These are usually mild, but can be severe with protracted and heavy use.

- anxiety
- depression
- anorexia
- nausea and vomiting
- irritability
- aggression
- dizziness
- tremors
- headaches
- tachycardia
- diaphoresis

Managing volatile substance withdrawal

Purpose
To provide staff with protocols for the management of inhalant withdrawal.

Principle
To manage inhalant withdrawal by minimizing the progression of withdrawal, by accurate assessment of substance history and relevant health issues, and by early recognition and treatment of withdrawal.

Medication
Diazepam (Valium)
Metoclopramide (Maxeran)—oral and intramuscular
Prochlorperazine (Stemetil)—oral and intramuscular
Acetaminiphen

Assessment
1. Detailed history of inhalant use
    - type of substance
    - pattern of use and for how long
    - symptoms of dependence
2. Concurrent use of other substances
3. Previous withdrawal attempts:
    - withdrawal symptoms experienced
    - symptomatic medication used
    - any complications
4. Medical and psychiatric history

Examination

1. Evidence of intoxication
2. Evidence of withdrawal symptoms
3. Vital signs and weight

Pathology investigations

1. Full blood examination
2. Urine drug screen, if concerned about undisclosed substance use
3. STI screen v
4. Hepatitis screen
5. bHCG

Management of Withdrawal

Supportive Care

1. Information about what to expect
2. Supportive counselling
3. Education about drinking fluids and maintaining nutrition through withdrawal period

Pharmacological Management of Inhalant Withdrawal

While there is no evidence of a physical withdrawal syndrome associated with the cessation of inhalant use, anecdotally we find that some adolescents will experience some minor physical symptoms in the first few days following cessation of use.

Most adolescents do not require medication for inhalant withdrawal. Staff may implement coping strategies that address the anxiety and sleep disturbance. However, some adolescents may require a short course of diazepam if there is severe agitation or aggression.

As there are risks involved in introducing adolescents to benzodiazepines, caution must be used in prescribing them for even a short time. The pros and cons must be considered before medicating young people with benzodiazepines.

Risks of benzodiazepine use:

- potential for abuse ++++++
- delayed return of normal sleep patterns
- development of dependence on benzodiazepines
- interaction with other medications/substances

Procedure

Monitor the withdrawal episode and assess how the young person is coping

Medication
When medicating adolescents in withdrawal, their body weight and stature must always be considered, as adult doses may result in over-medication of smaller-stature adolescents. The recommended dosages in these guidelines may need to be reduced.

Anxiety and aggression
If diazepam is indicated:
- diazepam up to 20mg daily in divided doses initially, reducing doses over 3–5 days
- maximum of 5 days medication

Nausea and vomiting
Metoclopramide 10mg t.i.d. oral as required
OR
Prochlorperazine 12.5mg t.i.d. oral as required
Intramuscular injection may be required if there is severe vomiting.

Dystonic reactions can be a side effect of metoclopramide and prochlorperazine, and adolescents must be closely monitored for the onset of this. Benztropine mesylate (Cogentin) 2mg by intramuscular injection will resolve the symptoms.

Review by a medical practitioner following the onset of dystonic reactions is essential.

Headaches
Acetaminophen 1000mg q6H prn and ibuprofen 600mg Q8H prn

The amount of acetaminophen administered to adolescents who are Hepatitis C–positive must be monitored, as it may adversely affect liver function. Generally, paracetamol should not exceed 4g in a

Tattoos, Piercings, and Needle Sharing—Hepatitis C

The following information is taken from: Best Practices—Early Intervention, Outreach and Community Linkages for Youth with Substance Use Problems (Health Canada, 2008)

Injection drug users, sex-trade workers and homeless youth are younger cohorts at risk for transmission of blood-borne pathogens such as HIV and hepatitis B and C (Boivin, Roy, Haley, & Galbaud du Fort, 2005; Health Canada, 2001). Research has suggested that one in four individuals injecting drugs may be under the age of 20 (Health Canada, 2001). Youth who share drug use paraphernalia, such as syringes, rinse water, intranasal straws and pipes, are at risk of infection. …

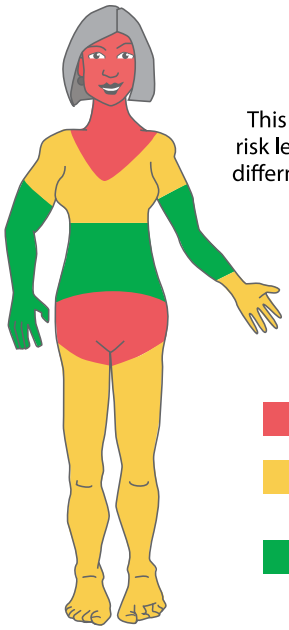
Youth who use cocaine may be at greater risk of contracting blood-borne pathogens because of the high number of drug administrations per day. Demands on drug use paraphernalia (injection or inhalation) increase the tendency to share supplies among users (Health Canada, 2001).

A study by Mills et al. (2004) examining the patterns of heroin use reported that youth (aged 18 to 24) on average first initiated heroin use at age 16 and subsequently injected at age 17. Of this cohort, 41% had overdosed in their lifetime, with 24% overdosing within the past 12 months. Approximately one in five had borrowed used needles, while another third indicated they had given needles to others. Females were twice as likely as males to have borrowed used needles (Mills et al., 2004). As part of an enhanced surveillance of Canadian street youth, nearly 30% of youth who injected drugs reported that they had not always used clean injection equipment. Approximately 31% reported they had borrowed used equipment from someone else at least once (Public Health Agency of Canada, 2006).…

Intervention approaches for youth who inject drugs should include flexible policies and low-threshold programs designed to engage and retain youth in needed support and treatment options (Health Canada, 2002a; Public Health Agency of Canada, 2006). Efforts should also include additional services that address specific basic need, health and support services. Outreach is often a critical component in initiating early intervention approaches (Health Canada, 2002a).

The following information is taken from the Canadian AIDS Treatment Information Exchange (CATIE)

Many Canadian networks follow a harm-reduction approach to drug use, HIV, and Hepatitis C. Harm-reduction activities are mostly based on avoiding having one person's blood coming into contact with another person's blood. The Canadian AIDS Treatment Information Exchange (CATIE) provides an abundance of best practice guidelines and information. The following three diagrams from CATIE embody a harm-reduction approach:



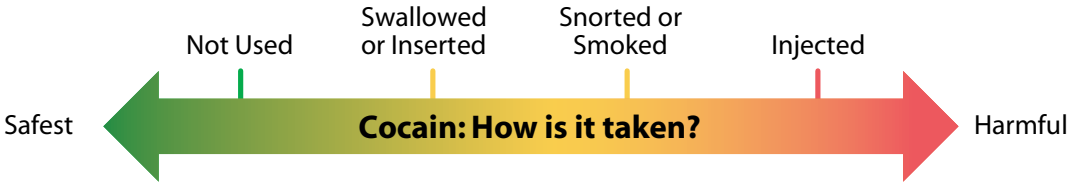
This diagram shows the risk levels of inecting into differnet areas of the body.

Dangerous! Never inject here!

Better NOT to inject here, but safer than red. Inject with caution slowly

These are the safest and best veins to use (rember to rotate sites!).

If you can't go to a needle exchange, try finding the equipment at a pharmacy. If you're in prison, cleaning your own equipment with bleach can stop some skin infection, but reusing equipment that someone else has already used means you can get Hep C, even if you clean it. Using sterile unused equipment every time you inject in a safer option



The way you take drugs changed how risky they can be. Basically, eating them is safer than injecting, while not using at all is the safest

Tattooing and body-piercing practices that do not adhere to recommended guidelines also pose health risks (Health Canada, 2008).

Sleep Disturbance in Withdrawal

Sleep disturbance is common among substance users. Ongoing substance use is also a contributing factor to sleep disturbances.

It is extremely common for young people to experience difficulty sleeping during withdrawal. As sleep disturbance is one of the main primary health issues for adolescent substance users, it is important to give young people an opportunity to develop effective sleeping strategies. The use of medication to induce sleep should be considered as the exception, as most medication will often delay the return of normal sleep patterns and has the potential for abuse.

During assessment it is important to explore sleep disturbance with the young person.

Sleep disturbance usually involves the initiation, maintenance, or quality of sleep; it may be helpful to ask the following:

1. Do you have problems going to sleep?—initiating sleep
2. Do you have problems staying asleep?—maintaining sleep
3. Do you feel refreshed when you wake up?—quality of sleep

During a Home-Based Withdrawal or admission to a Residential Unit, the following strategies can be used to promote healthier sleep patterns.

Strategies to help improve sleep during withdrawal

- Encourage the young person to accept that difficulty sleeping is part of withdrawal and will pass. When he or she gets annoyed about not sleeping, this causes anxiety, which results in more sleeplessness.
- Encourage a regular bedtime routine and regular sleep/wake schedule. Get the young people up at the same time each morning even if they are still tired. This often results in them becoming sleepier at night.
- Encourage winding down before going to bed, by reading, listening to relaxing music, having a warm bath (can use some calming essential oils), or using relaxation techniques.
- Encourage eating only light meals at night—their bodies need to use energy to rejuvenate themselves, rather than spend the night digesting the food they have eaten. Especially limit starchy foods after 5 p.m. if possible.
- Encourage the avoidance of ingesting caffeine (e.g., drinking coffee) after 2 p.m.
- Encourage the avoidance of drinking carbonated drinks.
- Encourage some kind of physical activity during the day to promote tiredness at night; however, avoid exercising too late at night.
- Encourage the avoidance of TV and stimulating video/computer games before bed.
- Encourage the avoidance of naps late in the afternoon.

- Advise no smoking 2 hours before bed.
- Create a sleep-promoting environment that is dark, quiet, cool, and comfortable. The optimum temperature for quality sleep is 19º C.
- Encourage drinking chamomile tea or warm milk before going to bed, or if they wake during the night. The use of magnesium supplements prior to bed can assist with relaxation.

If medications are going to be used, good choices are: Trazadone 25–100mg QHS, Zopiclone 2.5–7.5mg QHS, Quetiapine 25–50mg QHS, Amitriptyline 10–50mg QHS

Generally benzodiaepines can be used for sleep and do help in the short term after starting them, but carry significant risk of the development of tolerance and dependence.

Appendices

Appendix I: Modified Fagerström Tolerance Questionnaire

1. How many cigarettes a day do you smoke?	
over 26 cigarettes a day	2
about 16–25 cigarettes a day	1
about 1–15 cigarettes a day	0
less than 1 a day	0
2. Do you inhale?	
always	2
quite often	1
seldom	1
never	0
3. How soon after you wake up do you smoke your first cigarette?	
within the first 30 minutes	1
more than 30 minutes after waking but before noon	0
in the afternoon	0
in the evening	0
4. Which cigarette would you hate to give up?	
first cigarette in the morning	1
any other cigarette before noon	0
any other cigarette in the afternoon	0
any other cigarette in the evening	0
5. Do you find it difficult to refrain from smoking in places where it is forbidden (e.g. church, library, movies)?	
yes, very difficult	1
yes, somewhat difficult	1
no, not usually difficult	0
no, not at all difficult	0
6. Do you smoke even if you are so ill that you are in bed most of the day?	
yes, always	1
yes, quite often	1
no, not usually	0
no, never	0
7. Do you smoke more during the first 2 hours than during the rest of the day?	
yes	1
no	0
Total score:	

Level of dependence on nicotine:

Score	Level
0–2	no dependence
3–5	moderate dependence
6–9	substantial dependence

Source: "The Fagerström Test for Nicotine Dependence: a revision of the Fagerström Tolerance Questionnaire." Heatherton et al., 1991.

Prokhorov, A. V., Pallonen, U. E., Fava, J. L., Ding, L., & Niaura, R. (1996). Measuring nicotine dependence among high-risk adolescent smokers. Addict Behav, 21(1), 117–127. doi:10.1016/0306-4603(96)00048-2

Prokhorov, A. V., Koehly, L. M., Pallonen, U. E., & Hudmon, K. S. (1998). Adolescent nicotine dependence measuring by the modified Fagerström questionnaire at two time points. J Child Adolesc Subst Abuse, 7(4), 35–47.

Protocol has been developed by modifying the Addiction Service's Nicotine Withdrawal Protocol to meet the needs of the adolescent population.

Appendix II: Clinical Institute Withdrawal Assessment for Alcohol (CIWA-A)

Source: Addiction Research Foundation

Nausea & vomiting: Ask "Do you feel sick to your stomach? Have you vomited?" Observation.	
no nausea/vomiting	0
	1
	2
	3
intermittent nausea with dry heaves	4
	5
	6
constant nausea, frequent dry heaves, and vomiting	7
Tactile disturbances: Ask "Have you any itching, pins-and-needles sensations, burning, or numbness? Do you feel bugs crawling on or under your skin?" Observation.	
none	0
very mild itching, pins-and-needles, burning, or numbness	1
mild itching, pins-and-needles, burning, or numbness	2
moderate pins-and-needles, burning, or numbness	3
moderately severe hallucinations	4
severe hallucinations	5
extremely severe hallucinations	6
continuous hallucinations	7
Tremor: Observation (arms extended and fingers spread apart).	
no tremor	0
not visible, but can be felt fingertip to fingertip	1
	2
	3
moderate, with patient's arms extendedv	4
	5
	6
severe, even with arms not extended	7

Auditory disturbances: Ask "Are you more aware of sounds around you? Are they harsh? Do they frighten you? Are you hearing anything that is disturbing you? Are you hearing things you know are not there?" Observation.	
not present	0
very mild harshness or ability to frighten	**1**
mild harshness or ability to frighten	2
moderate harshness or ability to frighten	3
moderately severe hallucinations	4
severe hallucinations	5
extremely severe hallucinations	6
continuous hallucinations	7
Paroxysmal sweats:	
no sweat visible	0
barely perceptible sweating, palms moist	1
	2
	3
beads of sweat obvious on forehead	4
	5
	6
drenching sweats	7
Visual disturbances: Ask "Does the light appear to be too bright? Is its colour different? Does it hurt your eyes? Are you seeing anything that is disturbing to you? Are you seeing things you know are not there?" Observation.	
not present	0
very mild sensitivity	1
mild sensitivity	2
moderate sensitivity	3
moderately severe hallucinations	4
severe hallucinations	5
extremely severe hallucinations	6
continuous hallucinations	7

Anxiety: Ask: "Do you feel nervous?" Observation.	
no anxiety, at ease	0
mildly anxious	1
	2
	3
moderately anxious, or guarded, so anxiety is inferred	4
	5
	6
equivalent to acute panic as seen in severe delirium or acute schizophrenic reactions	7
Headache, fullness in head: Ask "Does your head feel different? Does it feel like there is a band around your head?" Do not rate for dizziness or lightheadedness. Otherwise, rate severity.	
not present	0
very mild	1
mild	2
moderate	3
moderately severe	4
severe	5
very severe	6
extremely severe	7
Agitation: Observation.	
normal activity	0
somewhat more than normal activit	1
	2
	3
moderately fidgety and restless	4
	5
	6
paces back and forth during most of interview, or constantly thrashes about	7

Orientation and Clouding of Sensorium: Ask: "What day is this? Where are you? Who am I?"	
oriented and can do serial additions	0
cannot do serial additions or is uncertain about date	1
disoriented for date by no more than 2 calendar days	2
disoriented for date by more than 2 calendar days	3
disoriented for place and/or person	4

Score

Time:	**Total Score (max 67):**	**(Temp) :**	**B/P:**	**Apex rate:**	**Reaps:**	**Initials:**

Appendix III: Clinical Opiate Withdrawal Scale

For each item, circle the number that best describes the patient's signs or symptoms. Rate on just the apparent relationship to opiate withdrawal. For example, if heart rate is increased because the patient was jogging just prior to assessment, the increase in pulse rate would not add to the score.

Patient's Name

Client Number

Date and Time

Addiction Services
Shared Service of the
Cape Breton District Health Authority and the
Guysborough/Antigonish Strait Health Authority

Resting Pulse Rate: beats/minute (measured after patient is sitting or lying for one minute)	
pulse rate 80 or below	0
pulse rate 81–100	1
pulse rate 101–120	2
pulse rate greater than 120	4
GI Upset: (over last 1/2 hour)	
stomach cramps	1
nausea or loose stool	2
vomiting or diarrhea	3
multiple episodes of diarrhea or vomiting	5
Sweating: (over last 1/2 hour, not accounted for by room temperature or patient activity)	
no report of chills or flushing	0
subjective report of chills or flushing	1
flushed or observable moistness on face beads of sweat on brow or face	2
sweat streaming off face	4
Tremor: (observation of outstretched hands)	
no tremor	0
tremor can be felt, but not observed	1
slight tremor observable	2
gross tremor or muscle twitching	4

Restlessness: (observation during assessment)	
able to sit still	0
reports difficulty sitting still, but is able to do so	1
frequent shifting or extraneous movements of legs/arms	3
unable to sit still for more than a few seconds	5
Yawning (observation during assessment)	
no yawning	0
yawning once or twice during assessment	1
yawning three or more times during assessment	2
yawning several times/minute	4
Pupil size	
pupils pinned or normal size for room light	0
pupils possibly larger than normal for room light	1
pupils moderately dilated	2
pupils so dilated that only the rim of the iris is visible	5
Anxiety or Irritability	
none	0
patient reports increasing irritability or anxiousness	1
patient obviously irritable or anxious	2
patient so irritable or anxious that participation in the assessment is difficult	4
Bone or Joint Aches (if patient was having pain previously, only the additional component attributed to opiates withdrawal is scored)	
not present	0
mild diffuse discomfort	1
patient reports severe diffuse aching of joints/muscles	2
patient is rubbing joints or muscles and is unable to sit still because of discomfort	4
Gooseflesh skin	
skin is smooth	0
piloerection of skin can be felt or hairs standing up on arms	3
prominent piloerection	5

Runny nose or tearing (not accounted for by cold symptoms or allergies)	
not present	0
nasal stuffiness or unusually moist eyes	1
nose running or tearing	2
nose constantly running or tears streaming down cheeks	4
Total Score	

Initials of person completing assessment _____

Score:	**Level:**
5–12	mild
13–14	moderate
25–36	moderately severe
more than 36	severe withdrawal

Appendix IV: Adolescent Bio-Psycho-Social-Spiritual Assessment Form

Adolescent information:

Provincial Assistance # _____

Name (Last) _____ (First) _____ (Middle) _____

Health Card _____ Expiry Date _____

Address _____

City/Town _____ Postal Code _____

Phone _____ Date of Birth (MM/DD/YYYY) _____

Age _____ Gender _____

Mother's name _____

Home phone _____ Work phone _____

Cell phone _____

Father's name _____

Home phone _____ Work phone _____

Cell phone _____

Language(s) spoken at home _____

Step-parents (if applicable) _____

Who is the young person currently residing with? _____

Indicate any private health insurance coverage:

Plan name _____ Group #_____

Contract # _____

List any other supports available to the young person (e.g., teacher, minister, coach, Big Brother/Sister, outreach worker, or family):

_____

Other agency involvement

Indicate other practitioners/agencies currently involved (e.g., Mental Health, Psychologists, Psychiatrists, Child Welfare

Name _____ Position _____

Agency _____ Phone _____

Address _____ Fax _____

Name _____ Position _____

Agency _____ Phone _____

Address _____ Fax _____

Describe the history of involvement you've had with this client (first contact, family, work, individual/ group counselling).

_____

Has this client had a previous referral or involvement with the CHOICES Program or other Addictions Services?

_____

Family

Briefly describe family/living situations—indicate biological family/blended family, etc.

_____

What is the quality of the relationships in this client's family?

_____

Has the client ever lived away from home? If yes, please elaborate.

_____

What is the family's means of financial support?

_____

Has the client had any pregnancies or does he/she have any children?

_____

If so, who has custody of the child(ren)? _____

Drug use/ history

Please describe the pattern of substance use (including abuse) in the client's family:

_____

Nicotine/tobacco

Does the client use nicotine/tobacco? Yes No

If yes, how long has he/she been using and how often per day?

_____

Drugs used by client	Age of first use	Age of regular use	Date of last use	Frequency of use	Average quantity used	Method of use	Do you have a problem with this drug?
Wine							
Beer							
Spirits							
Other							
Hash							
Marijuana							
Hash/Weed Oil							
Other							
LSD							
Magic Mushrooms							
Mescaline							
Other							
Valium							
Ativan							
Rivotril							
Percocet							
Other							
Ritalin							
Dexedrine							
Cocaine							
Methamphetamine							
Morphine							
Demerol							
Tylenol 3							
Oxycodone							
Dilaudid							
Other							
MDMA/Ecstasy							
PCP							
Solvents							
Over-the-counter (e.g. Gravol, Nytol, cough syrup)							

Does this client feel that he/she has a problem with alcohol? Yes No
Does this client feel that he/she has a problem with other drugs? Yes No
How has the client's drug/alcohol use impacted the following areas of his/her life?

_____

Family relationships

Physical health _____
Emotional/mental health _____
School and/or employment _____
Recreation interests/involvement _____
Legal involvement _____
Peer relationships _____

Gambling behavior

Has this client demonstrated any high-risk gambling behavior (including betting on sports games or pool, buying lottery tickets, wagering their possessions, playing internet games, or internet gambling)?

_____

Education

When did client last attend school? (Date)
Name of last school attended _____
Contact person _____
Location of school (community) _____
Last grade attended _____ Was this grade completed? _____
Does client plan to return to school after leaving this program? _____

If client is planning to return to school…

What school will he/she be returning to? _____
What grade will he/she be returning to? _____
Is the client registered at the school of their choice? _____
Is the client currently involved in any extracurricular sports or activities?

_____

Legal history

Has the client had past legal charges? If so, please provide details, including dates and any periods of incarceration.

_____

List any pending court dates or outstanding charges.

_____

Does the client have a Probation Officer or Restorative Justice Worker? Yes No

Name _____ Title _____

Phone _____ Fax _____

Does the client have a lawyer? Yes No

Name _____ Phone _____

*Please attach any legal conditions/court orders associated with this client.

Health and well-being

Does this client have any physical limitations, medical problems, or allergies?

_____

Is this client currently taking any prescribed medications? If so, please list the medication, dose, how long the client has been taking it, and who prescribed it.

_____

Who is the client's family physician?

Full name _____ Phone _____

Address _____

Has the client ever been referred to or seen by a mental health worker, psychiatrist, or psychologist? If yes, provide details including reason for referral, dates, name, and phone number of the professional involved.

_____

Are there other mental health issues affecting this client (e.g., ADD or ADHD, depression, anxiety, etc.)? If so, provide details.

_____

Are there mental health issues affecting the client's immediate or extended family?
If yes, please explain.

_____

Is there a history of abuse, either as a victim or a perpetrator? Please provide details.

_____

If yes, has it been reported and to whom? Has there been any counseling for same?

_____

Does this client have difficulty managing anger? If so, provide details, including any history of aggression, interventions, etc.

_____

Is there any history of suicidal ideation or attempts? If so, include details (dates, method and plan, and circumstances leading to ideations or attempts).

_____

Is there any history of self-harm ideation or behaviors? If so, include details (dates, method, and circumstances).

_____

How does this client define his/her sexual orientation?

_____

Peers

Please describe the pattern of substance use/criminal activity among the client's peer group.

_____

Spirituality

Explain any spiritual or religious practices that the client has participated in, or continues to participate in.

_____

Interests & hobbies

Please describe.

_____

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Project Leaders

Wanda McDonald, *Manager*, Addiction Services Department of Health and Wellness

Yvonne daSilva, *Knowledge Exchange Facilitator*, South Shore Health, Annapolis Valley Health, and South West Health

Nova Scotia Adolescent Withdrawal Management Working Group

Maureen Brennan, *Manager*, IWK CHOICES Program

Kaylin Comeau, *Community Outreach Worker—Adolescent*, Pictou County Health Authority

Kevin Fraser, *Manager*, Addiction Services, Annapolis Valley Health

Dana Pulsifer, *Manager*, Child & Youth, Mental Health & Addictions Programs, Annapolis Valley Health

Myrtle Young, *Nurse Manager*, Withdrawal Management Unit, Guysborough Antigonish Strait Health Authority

Consultations/Reviewers

Shaun Black, *Manager*, Pharmacological, Research & Quality Services, Addiction Prevention and Treatment Services, Capital Health

Dr. P. R. Butt, MD, CCFP, FCFP, *Associate Professor*, Dept. of Family Medicine, University of Saskatchewan

Dr. James Collins, *Physician Consultant*, Withdrawal Management Unit, Guysborough Antigonish Strait Health Authority

Sharon Davis - Murdoch, *Special Advisor on Diversity and Social Inclusion*, Department of Health and Wellness

Dr. Selene Etches, *Psychiatrist*, IWK Health Centre

Dr. Zachary Fraser, Addiction Prevention and Treatment Services , Capital Health

Wenche Gausdal, *Manager*, Immigrant Settlement & Integration Services

Jane Gavin-Hebert, *Student*, MSW program, Dalhousie University

Dr. Ramm Hering, *North End Community Clinic Direction* 180 Opioid Replacement Treatment

Dr. David March, MD CCSAM, *Associate Dean*, Community Engagement, Senior Associate Dean, East Campus, Northern Ontario School of Medicine

David Maxwell, *First Nations Community Outreach Worker*, IWK CHOICES Program

Daneila Meier, Addiction Services, Department of Health & Wellness

Brian Parris, *Clinical Therapist*, IWK CHOICES Program

Dawn Peters, *Community Outreach Worker*, Pictou County Health Authority

Patrick Russell, *Research Associate*, Resilience Research Centre, Dalhouse University

Tiroyamodimo (Tyro) Setlhong, *Diversity & Inclusion Coordinator—Primary Health*, IWK Health Centre

Leighann Wichman, *Executive Director*, Youth Project, Halifax

Dr. Sharon Cirone, *Addiction Consultant*, Child and Adolescent Mental Health team, St. Joseph's Health Centre, GP psychotherapy and addictions medicine

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