



TOBACCO FREE FUTURES

guidelines

Disclaimer

Every effort has been made to ensure the links in this document are up to date; however, we cannot guarantee they will work. Some links will give error messages because of the security settings on the source files. These files are accessible to AHS staff only. AHS staff can access the documents by copying and pasting the link into their browsers.

Copyright

Copyright ©2014. Alberta Health Services. All rights reserved. Alberta Health Services cannot guarantee the validity of the information contained in these guidelines. No part of this document may be reproduced, modified or redistributed in any form without the prior written permission of Alberta Health Services.



CHAPTER 21

Specific Populations: Youth and Family



INTRODUCTION

This chapter is intended to assist healthcare providers to support youths (age 10 – 17) to stop using tobacco. It also includes considerations for supporting parents and caregivers who smoke to limit their children’s exposure to second-hand smoke. The information is divided into the following sections:

- Youths; and
- Parents and caregivers.

Each section includes information on prevalence of tobacco use / exposure among the sub-population, impacts of tobacco use / exposure, and information on providing behavioural support and pharmacotherapy. A summary of the recommendations around behavioural support and pharmacotherapy made in each section is included at the start of each section. Please note that the information presented in this chapter focuses primarily on cessation support, and is not intended to support prevention efforts.

Evidence-informed practice

The information included in this chapter is guided by evidence-informed practices as described in the following resources:

1. CAN-ADAPTT’s guideline for smoking cessation

The Canadian Action Network for the Advancement, Dissemination and Adoption of Practice-Informed Tobacco Treatment (CAN-ADAPTT) is a practice-based research network facilitating research and knowledge exchange among practitioners, researchers and policy makers in the area of smoking cessation. CAN-ADAPTT’s Guideline for Smoking Cessation is intended to guide practice and is not intended to serve as a comprehensive overview of smoking cessation management.¹ The CAN-ADAPTT Guideline Development Group provides the following summary statements for youth:

- Summary Statement #1: Health care providers, who work with youths (children and adolescents) should obtain information about tobacco use (cigarettes, cigarillos, waterpipe, etc.) on a regular basis. GRADE: 1A
- Summary Statement #2: Health care providers are encouraged to provide counselling that supports abstinence from tobacco and/or cessation to youths (children and adolescents) that use tobacco. GRADE: 2C
- Summary Statement #3: Health care providers in pediatric health care settings should counsel parents/guardians about the potential harmful effects of second-hand smoke on the health of their children. GRADE: 2C

For more information, visit the CAN-ADAPTT website: www.can-adaptt.net.



2. Centers for Disease Control and Prevention’s Youth Tobacco Cessation: A Guide for Making Informed Decisions

This US-based evidence-based guide is intended to help organizations decide whether to undertake youth tobacco-use cessation as a specific tobacco control activity. The publication covers topics such as the quality of the evidence base for youth intervention, the importance of conducting a needs assessment for the population served, and the need to evaluate any chosen intervention.

3. Canadian Pediatric Society has issued several reports related to tobacco use among young people, including:

- *Are We Doing Enough? A Status Report on Canadian Public Policy and Child and Youth Health* – Assesses the success of measures to prevent and reduce adolescent smoking rates on a province-by-province basis.

Non-traditional vs. traditional tobacco use

Please note that throughout this chapter, reference is made to “tobacco use”. This refers to the commercial use or misuse of tobacco products in the context of nicotine dependence or pre-dependence. This application of the term does not refer to the traditional use of tobacco for ritual, sacred or medicinal purposes as practiced by Indigenous cultures.

Environmental exposure to tobacco smoke

Tobacco smoke is classified into three categories:

1. *First-hand smoke*, which is inhaled by the someone who smokes;
2. *Second-hand smoke*, which is either exhaled by a person who smokes or is released from the end of a burning cigarette; and
3. *Third-hand smoke*, which refers to the tobacco smoke residue and gases that are left behind on surfaces, upholstery, clothing, draperies, carpets, and in vehicles after a cigarette has been smoked.

Second-hand and third-hand smoke together is sometimes refers to as environmental tobacco smoke (ETS). Refer to Chapter 2 for more information on these types of tobacco smoke.

YOUTHS

The information in this section provides information on providing tobacco cessation support to youths (age 10 – 17).

Use the Following 5A’s approach, adapted for youths. This approach is described in detail on pages 21.12 – 21.17 of this chapter.

Figure 21.1: Tobacco Free Futures: Supporting Youths to Stop Using Tobacco.

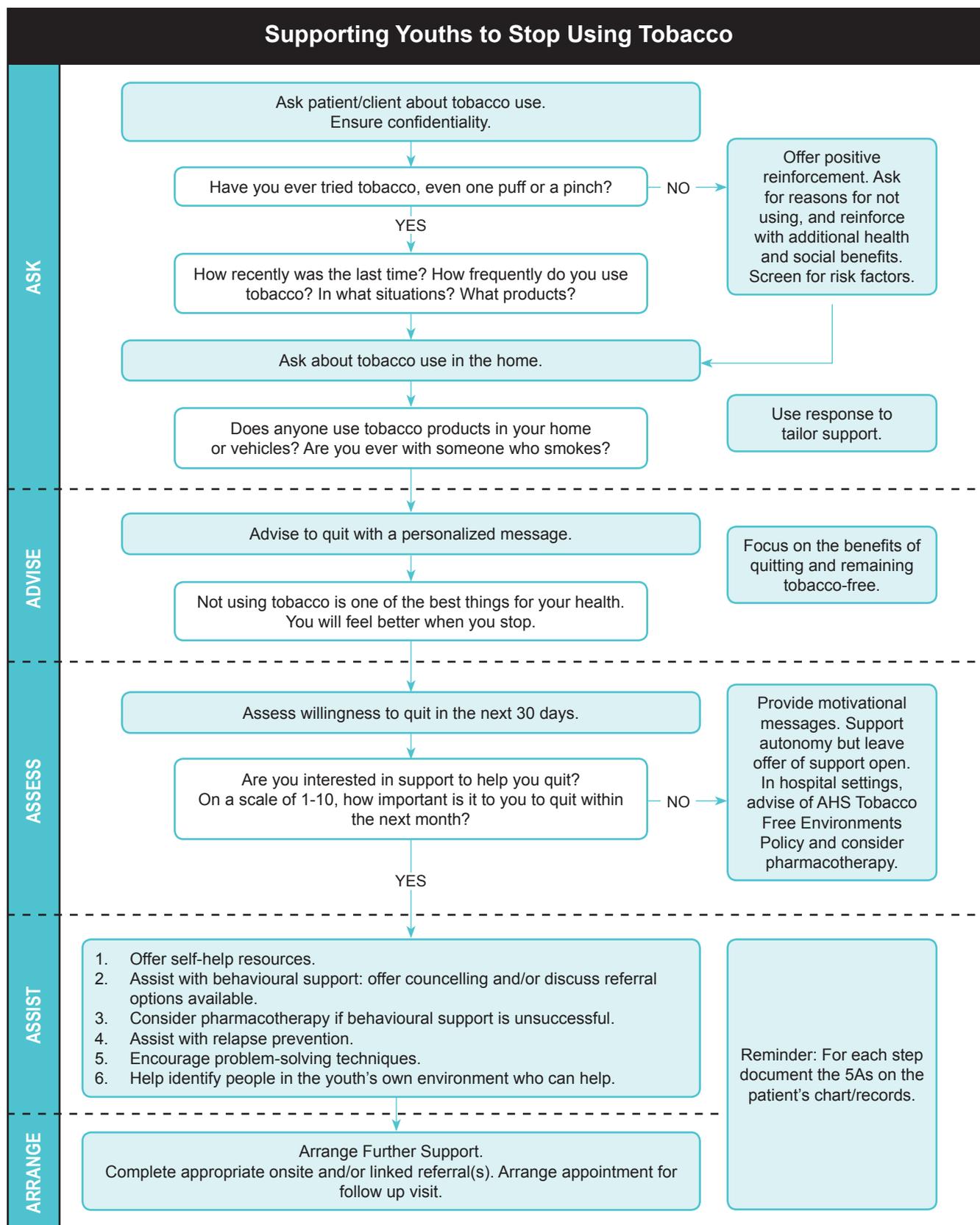




Table 21.1: Tobacco Free Futures Supporting Youths to Stop Using Tobacco

- Behavioural cessation support (e.g., multiple counseling sessions, motivational interviewing, cognitive behavioral therapy) is recommended as first line treatment for youths, before pharmacotherapy.
- Nicotine replacement therapy (NRT) should be offered to young people when behavioural counselling has failed and after an informed discussion with the patient regarding the risks and benefits of using tobacco and NRT.
- Bupropion and varenicline should only be considered with young people after behavioural interventions and NRT have failed.
- Prior to initiating any pharmacologic treatment, advise the patient (and their parent / caregiver, if applicable) that current research does not conclusively demonstrate the efficacy and safety of these medications among young people, and discuss the risks and benefits of using them vs. using tobacco.
- Provide on-going assessment and follow-up throughout the duration of any pharmacologic treatment.

Prevalence

Initiation of tobacco use almost always begins in youth or young adulthood. Among adults who start smoking daily, nearly all first used cigarettes by 18 years of age (88%), with 99% first using them by 26 years of age.² Almost no one starts smoking after age 26.

PREVALENCE OF TOBACCO USE AMONG CANADIAN YOUTHS

The prevalence of tobacco use among Canadian youths is measured by two surveys:

- The Canadian Tobacco, Alcohol and Drugs Survey (CTADS) surveys Canadians aged 15 years and older, focusing on those between the ages of 15 and 19.
- The Canadian Student Tobacco, Alcohol and Drugs Survey (CSTADS) surveys students in grades 6-12, primarily between the ages of 11 and 17.

Smoking Prevalence in Canada

Age Group	Prevalence
11-14 ⁷	2%
15-19 ⁶	10%

While the prevalence of tobacco use among Canadian youths is declining – 23% of students in grades 6-12 had tried any form of tobacco product in 2014-2015³, down from 28% in 2012-2013⁴ – tobacco dependence is still a serious pediatric chronic disease.^{2,5,6,7,8}

Among younger adolescents (students in grades 6 to 9, typically age 11 to 14), 11% had tried some form of tobacco product at least once.⁴ According to the Youth Smoking Survey, 2% of youths in this age group currently smoked daily or occasionally. Those smoking daily in this age group smoke an average of 10 cigarettes a day. Boys were more likely to have tried a tobacco product than girls (17% compared to 13%). The average age for smoking a whole cigarette for the first time was 13.6 years. However, approximately 3% of students in Grade 6 (typically age 11) had already tried smoking.⁴

Among older adolescents (youths aged 15 to 19 years), the prevalence is significantly higher. According to the Canadian Tobacco, Alcohol and Drug Survey, 10% self-identified as currently smoking in 2015.⁹ 4% of youths in this age category reported smoking daily, while 5% of youths reported smoking occasionally. Those who smoke daily in this age group smoked an average of 12 cigarettes per day. A higher percentage of male than female youths reported

currently smoking (11% and 8%, respectively).⁹

USE OF SPECIFIC TOBACCO PRODUCTS

While the use of tobacco in general is higher among young adults than other age groups, some products and delivery methods are especially appealing to young people, including the following:

- *Flavoured tobacco* – Flavours can be added to most tobacco products, including cigarettes, cigars and cigarillos, water-pipe tobacco, and smokeless tobacco. Flavour additives such as menthol, cherry, peach and berry are used to make tobacco products more palatable, encouraging youths to experiment with these products. They are considered “gateway” products from which novice users “graduate” to using unflavoured products. 15% of Canadian youths in grades 6 to 12 reported using at least one flavoured tobacco product in their lifetime; 7% reported use in the past 30 days³.
- *Smokeless tobacco* – In 2014-2015, 5% of youths in grades 6 to 12 reported having ever tried smokeless tobacco, also known as spit tobacco or chew.³ There is a significantly higher prevalence of use among boys than girls in this age group: 7% of boys reported having tried it, compared to 3% of girls. Youth use of smokeless tobacco is especially problematic in Alberta. 17% of Alberta males aged 15 to 19 use smokeless tobacco, which is almost double the national average for that age range.¹⁰ Alberta sales of smokeless tobacco are 39% of overall national sales.¹⁰
- *Water-pipe* – Tobacco and herbal products can be smoked with a water-pipe, also known as shisha, hookah, or narguile. Overall, the prevalence of use of water-pipe is increasing among Canadian youths. In 2014-2015, 10% of youths in grades 6 to 12 reported having ever tried a water-pipe to smoke tobacco, and 4% reported such use during the last 30 days, representing an increase from 2012-2013 (3%).^{3,4}
- *Electronic cigarettes* – Electronic cigarettes, also known as e-cigarettes, are battery-operated devices that have cartridges with liquid chemicals in them. A recent study of Canadian youths and young adults between the ages of 16 and 30 found that 16% had tried electronic cigarettes, or e-cigarettes.¹¹ 5% of non-smokers, 19% those who formerly smoked, and 35% of people who currently smoke had ever tried them. 6% of all those surveyed reported using an e-cigarette in the last 30 days. Young adults who smoke were interested in trying e-cigarettes to help them stop smoking, as a long-term replacement for cigarettes, or to use in places where they cannot smoke.

Products and delivery methods especially appealing to young people include:

- Flavoured tobacco
- Smokeless tobacco
- Water-pipe
- Electronic cigarettes

PREVALENCE OF SMOKING AMONG ALBERTA YOUNG PEOPLE

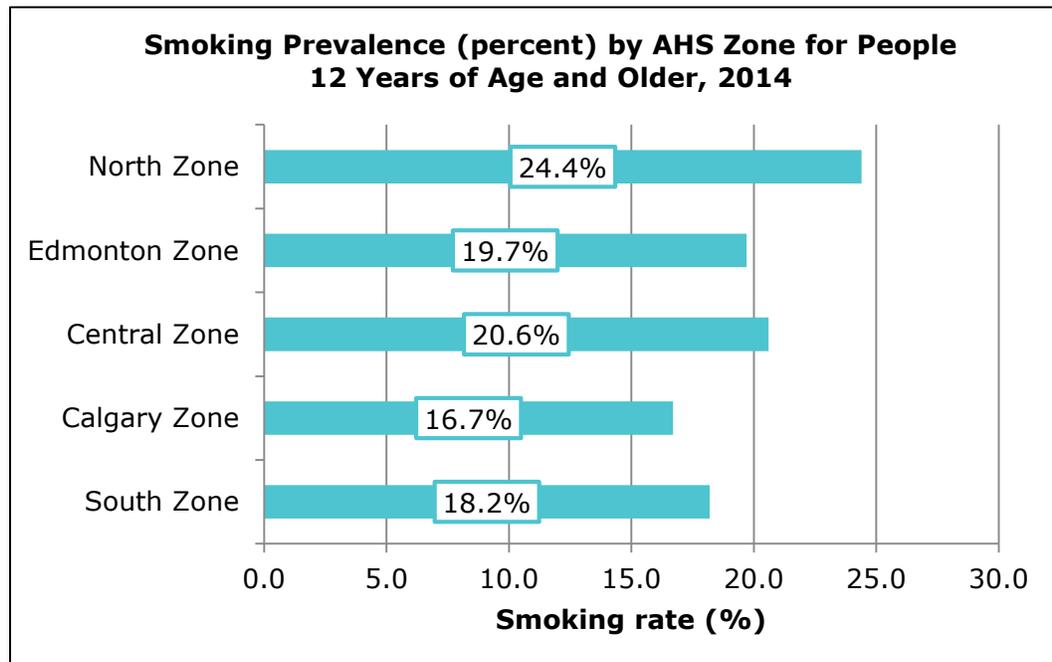
In Alberta, 15.5% of students in grades 6 to 12 had tried smoking in 2014-2015.³ This compares to a smoking rate of 19% among Albertans over the age of 25 who identify themselves as currently or occasionally smoking.⁹

According to the Canadian Community Health Survey, 2014, there is a wide variation between regions within Alberta in the smoking prevalence of those over the age of 12. The highest prevalence rate was in North Zone (24%) and the lowest in Calgary Zone (17%).¹²

There are also higher prevalence rates among some groups of youths, including:

- Teenage boys and young men who play sports such as hockey, baseball, rodeo, football and soccer;
- Teenage girls and young women who are pregnant;
- Indigenous young people;
- Young people of low socio-economic status and street-involved youths;
- Young people with mental health issues;
- Young people who have experienced trauma; and
- Young people who use other substances.

Figure 21.2: Zones within Alberta: 2014 Smoking Prevalence (Percentage) Age 12+



Source: Canadian Community Health Survey, Statistics Canada

Socio-cultural influences

Adolescence is a time when young people experiment with new ideas and behaviours, many of which are introduced through their friends and the media. Some of the socio-cultural factors that influence tobacco use include:

- *Peer tobacco use* – Youths who start using tobacco often do so to establish a position within a social group. Some studies have found that friends are an even greater influence than parents when it comes to adolescent smoking, but that parent use predicted friend use.¹³ Numerous social theories can be applied to explain the causes and effects of “peer pressure”, both toward tobacco use behaviour and away from it.
- *Parental tobacco use* – Children whose parent or parents use tobacco are more likely to establish tobacco use behaviour during adolescence than those whose parents do not use tobacco.¹⁴ Some studies have found that parental smoking may be one of the factors that shape children’s cognitive maps regarding the acceptability of smoking. As such, it is plausible that family members’ smoking shapes youths’ attitudes towards smoking before smoking initiation.
- *Tobacco industry* – In 2008, tobacco companies spent \$9.94 billion on the marketing of cigarettes and \$547 million on the marketing of smokeless tobacco.¹⁵ Although tobacco companies deny marketing to youths under the age of 18, many of their promotional efforts are clearly directed at young people. A substantial portion of tobacco advertising consists of imagery that conveys little factual information about the characteristics of the product. Rather, it fulfills many of the aspirations of young people by effectively using themes of independence, liberation, attractiveness, adventurousness, sophistication, glamour, athleticism, social acceptability and inclusion, sexual attractiveness, thinness, popularity, rebelliousness, and being “cool”.
- *Film industry* – Despite efforts to reduce the depiction of smoking in movies, leading actors and actresses are still commonly seen smoking, especially in blockbuster films. About 25% of contemporary movie characters depict smoking in major films, which is about twice as often as smoking was portrayed in the 1970s and 1980s, despite the fact that smoking in the real world has declined significantly since the 1970s.¹⁶ Film directors and script writers portray movie stars lighting up to imply a variety of traits desirable to youths, such as being rebellious and cool. Cigarette placement in movies creates a desired association between the sex appeal and charisma of the star and his or her smoking.

Young people are susceptible to socio-cultural influences including:

- Peer tobacco use
- Parental tobacco use
- Tobacco industry
- Film industry



Impact of Tobacco Use

The United States Surgeon General has found that smoking has the following impacts on the health of young people:²

- There is a causal relationship between smoking and addiction to nicotine, beginning in adolescence and young adulthood;
- Smoking contributes to future use of marijuana and other illicit drugs;
- Smoking by adolescents and young adults is not associated with significant weight loss, contrary to young people's beliefs;
- Active smoking causes both reduced lung function and impaired lung growth during childhood and adolescence;
- Active smoking causes wheezing severe enough to be diagnosed as asthma in susceptible child and adolescent populations;
- Active smoking in adolescence and young adulthood causes early abdominal aortic atherosclerosis in young adults;
- Active smoking in adolescence and young adulthood causes coronary artery atherosclerosis in adulthood.

SMOKELESS TOBACCO

The use of smokeless tobacco has been linked to both localized oral health consequences at the site of tobacco placement and systemic effects.¹⁵ Smokeless tobacco contains at least 28 carcinogens, and there is strong evidence to show that users have an increased risk of developing leukoplakia, a precancerous lesion on oral soft tissue, as well as oral cancers. Other undesirable oral health outcomes that have been linked to smokeless tobacco use include gingival recession, periodontal disease, and tooth decay.

Nicotine and the Adolescent Brain

A large number of brain changes occur during adolescence as the central nervous system (CNS) matures.¹⁷ Risk-taking, novelty-seeking, high play and increased social interactions are said to be some of the defining characteristics of the adolescent maturational period along with the development of executive functions such as decision-making and impulse control.¹⁸ Studies reviewing adolescent nicotine effects suggest that adolescent nicotine use results in late brain development and therefore produces consequent effects on behavior regulation.¹⁷ Furthermore, youths have been shown to be more sensitive to the rewarding properties of nicotine and aversive effects are also reduced.

Nicotine dependence and withdrawal

Nicotine dependence is characterised by tolerance, cravings, withdrawal symptoms during periods of abstinence, and loss of control over the amount or duration of use.⁷ Symptoms of nicotine withdrawal include cravings, depressed mood, irritability, frustration, anger, anxiety, difficulty concentrating, restlessness, and insomnia.

Young people who smoke can inhale and absorb as much nicotine and carbon monoxide per cigarette as adults do, and tolerance can begin with the first dose of nicotine.⁷ Since tolerance can begin immediately, it may not be long before other symptoms of dependence follow. While there is a lack of clarity on how quickly nicotine dependence develops, it is known to develop very rapidly in youth who smoke, making stopping difficult.¹⁹

As described earlier, studies show that adolescents are uniquely susceptible to social and environmental influences to use tobacco, given the high degree to which they rely on their social context and peer groups at this developmental stage.² There is a greater likelihood of tobacco use initiation among young people who:

- Have parents or other close family members who use tobacco;¹⁴
- Have peers who use tobacco;
- Are anti-social;
- Have lower academic achievement.²

Once having initiated tobacco use, factors identified as risks for nicotine dependence among adolescents include the following:

- History and extensiveness of tobacco use;
- Other substance use;
- Exposure to tobacco users in the proximate social environment, i.e., parents and peers;
- Socio-demographic characteristics;
- Individual characteristics such as psychiatric disorders, delinquency, and novelty seeking; and
- Biological factors such as initial sensitivity to nicotine, exposure to prenatal smoking, nicotine metabolism, in addition to genetic vulnerability.²⁰

There is also evidence that youths are more vulnerable to addiction than adults because the neurocircuitry associated with motivation, impulsivity and addiction is still under development during adolescence.²¹ This research indicates that the same neurological changes associated with novelty-seeking, risk-taking and reduced inhibitions during adolescence also make teens more vulnerable to addiction than adults or children.

Tobacco use may be a particular problem in young people with mental health or behavioural problems. Prevalence rates among youths are significantly higher among those with conduct disorder (30%), emotional disorders (19%), and attention deficit hyperactivity disorder (ADHD – 15%), compared to those without such disorders (5%). Both depression and ADHD are considered risk factors for tobacco use.¹⁹

Readiness to quit

The desire and attempts of youths who smoke to stop start soon after tobacco use onset.²² About 60% of adolescents who smoke report having tried to stop in the past six months, but more than 90% of those who initially stop relapse within a six-month period.^{19,23,24} It is important to address the risk of relapse (i.e., identify triggers and situations when the urge to use tobacco is especially strong, and develop coping strategies to avoid relapse) throughout a young person's quit attempt.

There is evidence that youths may be more receptive to discussing tobacco with health care providers than their peers.²⁵ Although pediatric healthcare clinicians are in a unique position to prevent and treat young tobacco users, the level of intervention being conducted often remains low.^{8,26,27} One study found that although physicians screened 91% of adolescents for smoking, only 34% helped those who used tobacco to set quit dates and 28% scheduled follow-up visits.²⁸ It is notable that these practices are reported among family physicians who work with youths aged 17–18; the rate of screening children age 9–10 for tobacco use drops to 19%, although physicians report that 40% of their smoking patients began before they turned 11. Furthermore, screening for tobacco use often focuses on smoking as opposed to tobacco use, meaning that young people who use smokeless tobacco are not being screened.

About 60% of adolescents who smoke report having tried to stop in the past six months, but more than 90% of those who initially stop relapse within a six-month period.

Treatment considerations

TOBACCO INTERVENTION

The following section outlines a 5A's approach targeted especially for youths (age 10 to 17). It is based on the standard 5A's approach outlined in Chapter 7, but has been modified to address the unique needs of this population.

It is important to note that the 5A's are not intended to be used strictly in order, as young people's needs change over time; rather, practitioners should be prepared to move forward and backward through the steps as required by the young person they are supporting.

Many healthcare providers have the opportunity to provide tobacco intervention support to young people, including but not limited to:

- Family physicians and pediatricians;
- Nurses;
- Pharmacists; and
- Social workers, counsellors and other allied professionals

A summary version of this approach is presented on page 21.4. It is important to note that due to lack of evidence around efficacy of cessation efforts with youths, prevention efforts should be the primary focus of all youth work. Resources such as the Help4Me.ca website can also be provided as a tool to help young people recognize and understand early signs and symptoms of addiction and mental health difficulties which present a risk for initiation of tobacco use.

Table 21.2: 5A's for Youths (age 10–17)

A summarized version of this approach is presented on page 21.4

	MODEL COMPONENT	CONSIDERATIONS
ASK	<p>ASK all patients age 10 and older if they have used tobacco or tobacco-like products.</p> <p>ASK about exposure to second-hand smoke.</p>	<ul style="list-style-type: none"> • Ensure they understand that this includes cigarettes, e-cigarettes, cigarillos, cigars, pipes, smokeless tobacco, water pipes, etc. <ul style="list-style-type: none"> ◦ “Do you use tobacco or tobacco-like products? Have you ever tried, even one puff or a pinch?” Yes/no? Past year? Past month? How much? Other forms? ◦ “Does anyone use tobacco or tobacco-like products in your home or vehicles?” Yes/no? • Keep in mind that young people often use tobacco without their parents or others knowing about it, so it is important to ensure confidentiality with youths in tobacco treatment. One study found that most adolescents assumed that the health care provider would tell their parents about their tobacco use and viewed this as a barrier for discussing smoking.²⁸ They also reported concerns about receiving a lecture from their physician. Despite this, many stated that if they were to be asked confidentially about tobacco use, they would respond openly and honestly. • Even within an environment in which confidentiality is assured, youths may be reluctant to disclose personal information and engage in constructive conversations about improving their health. Healthcare providers need to establish rapport with the individual, which can often take some time. When asking about tobacco use, providers should consider whether the individual has come into their care of their own will, or because of someone else’s insistence. This will help frame the most effective approach to take in establishing the care relationship. • Screen for additional risk factors among all patients, including those who indicate that they do not currently use tobacco. An adolescent is susceptible to smoking if he or she has at least one of the following identified risk factors:³⁰ <ul style="list-style-type: none"> ◦ Age 10-25 ◦ Male gender ◦ Exposure to second-hand smoke ◦ Parents or siblings who use tobacco ◦ Peers who use tobacco ◦ Availability ◦ Youth sees social benefits in tobacco use ◦ Youth overestimates prevalence of tobacco use ◦ Exposure to tobacco use in movies and on TV ◦ Poor academic achievement ◦ Other behavioural problems ◦ Risk taking and rebelliousness ◦ Tobacco experimentation ◦ Attention Deficit Disorder (ADD) or Attention Deficit Hyperactivity Disorder (ADHD) ◦ Depression <p>Suggested questions to use when screening for these risk factors is included in Appendix 21(a).</p>



Table 21.2 (continued)		
	MODEL COMPONENT	CONSIDERATIONS
ASK		<ul style="list-style-type: none"> • Document tobacco use status using one of the following indicators: <ul style="list-style-type: none"> ◦ Never: Report having never used tobacco products ◦ At Risk: Those with at least one identified risk factor of youth tobacco initiation ◦ Current: Those who report tobacco use in the past 30 days, even one puff or a pinch. ◦ Former: Those who had smoked in the past year, even 1 or 2 puffs or a pinch, but not in the past 30 days. • Every tobacco use discussion should be documented, either in the progress notes or in a separate flow-sheet or card. Documentation is necessary to facilitate follow-up, to enhance coordination between various providers and their support staff, to permit follow-up and referral arrangements, and to allow subsequent visits to build on discussions started earlier.
ADVISE	<p>ADVISE the patient to stop using tobacco or tobacco-like products using a personalized message.</p>	<ul style="list-style-type: none"> • For former tobacco users and youths who have never used, including youths at risk of using: <ul style="list-style-type: none"> ◦ “That is great! We don’t know the long term dangers that vaping can have on your health but we already know it can lead to cigarette smoking which is addictive and bad for health so the best thing you can do is not use these products.” ◦ Reinforce reasons for not using; add health and social effects that relate to their personal interests. “That’s great! Not using tobacco is important for you to keep up your stamina when playing hockey.” Personalize message based on risk factors. “If you ever find you need some help coping with stressful situations, there are some great tips on Help4Me.ca.” • For current tobacco users: <ul style="list-style-type: none"> ◦ “One of the best things you can do for your health including your skin, your teeth, your heart and lungs, is to stop using tobacco.” ◦ Include a personalized message based on the individual’s health and personal situation. Focus on the benefits of stopping as opposed to the risks of continued use. Refer to Appendix 21(b) for a list of benefits applicable to youths. ◦ In inpatient settings, advise patient of tobacco-free policy.

Table 21.2 (continued)

	MODEL COMPONENT	CONSIDERATIONS
ADVISE		<ul style="list-style-type: none"> • All adolescent patients who are current tobacco users should be advised to stop. One study found that youth who smoke who are advised to stop by their doctor are 90% more likely to make a stop attempt than those not advised.³¹ • All former, never and at risk patients should be complimented and advised to continue to abstain. Providing brief advice consists of a very brief personalized motivational messaging that is based on the youth’s own concerns, as well as potential teachable moments that may be cued by their illness and/or risk factors. • In inpatient settings, advice should also be given on the smoke-free environments policy of the site.
ASSESS	<p>ASSESS readiness to quit or reduce tobacco use.</p>	<ul style="list-style-type: none"> • Current youth tobacco users should be assessed for their willingness to make a quit attempt. At each interaction, indicate which of the following stages of change the individual is currently at: <ol style="list-style-type: none"> 1. Pre-contemplation of change 2. Contemplation of change 3. Preparation for change 4. Acting out change 5. Maintaining change 6. Relapse • For more information about the stages of change, refer to Chapter 8, Intensive Cessation Counselling. • To help determine which stage of change the individual is at, they can be asked what they like and dislike about using tobacco. Using motivational interviewing techniques, summarize the youth’s ambivalence and ask them to rate their confidence in their ability to stop using tobacco. Other motivational techniques such as expressing empathy and exploring past quit attempts to promote self efficacy should also be considered. Refer to Chapter 8 for further motivational interviewing techniques. • Consider using the following discussion questions: <ul style="list-style-type: none"> ◦ “Are you interested in support to help you quit? On a scale of 1–10, how important is it to you to quit within the next month?” ◦ “What do you like about smoking? What don’t you like about it?” ◦ Summarize ambivalence: “On the one hand (like)... on the other hand... (don’t like).” ◦ “Your concerns about smoking are good ones (add addiction, health and social effects). Not smoking is one of the best things you can do to protect your health.” ◦ “Have you ever tried to stop smoking? Have you thought about stopping?” • In inpatient settings, assess the patient’s willingness to get help managing withdrawal during their stay.



Table 21.2 (continued)		
	MODEL COMPONENT	CONSIDERATIONS
ASSESS		<ul style="list-style-type: none"> • It is important to note that according to AHS Legal Services, youths under the age of 18 years old do not have the capacity to consent to medical care and treatment. However, this presumption can be rebutted by an assessment of intelligence and maturity to provide consent without the input of parents/legal guardians. Where the client is determined to fully appreciate the nature, risks and consequences of medical care and treatment including its ethical, emotional and physical aspects, they can be deemed a “mature minor” (generally ages of 14–18). Further information on assessing for mature minor status can be found on the AHS Insite Mature Minor page and the AHS Mature Minor FAQs document. • Where the client cannot be deemed a mature minor but is expressing a desire to stop tobacco-use, the client should be advised that support is available and further discussions will need to involve their parent(s)/obtain their consent for intervention. <ul style="list-style-type: none"> ◦ “To help you stop smoking, we will need to first talk to your parents about your decision to stop so that they can help you too. We can tell them together if that’s something you want?”
ASSIST	<p>ASSIST the patient who is not interested and offer brief information.</p> <p>ASSIST the patient who is interested and offer pharmacotherapy support and/or behavioural support.</p>	<ul style="list-style-type: none"> • Effective tobacco cessation assistance can be divided into two main components: counselling support and pharmacotherapy medications. The support and medications offered will depend on whether the patient is willing to stop now or accept support for withdrawal. • <i>For patients not ready to stop now:</i> <ul style="list-style-type: none"> ◦ “Many teens find it helpful to think about how they might stop if they decide to in the future.” ◦ Provide messages about the importance of stopping and emphasize that help is available when ready. Motivational messages for adolescent tobacco users are included in Appendix 21(b). ◦ Consider assessing the patient’s degree of dependence. Common assessment tools include the modified Fagerstrom Tolerance Questionnaire (mFTQ) and the Hooked on Nicotine Checklist (HONC). A third tool, which combines aspects of the mFTQ and the HONC, has been developed and tested with youths with positive results. All three tools are included in Appendix 21(c). These assessment tools can be used to help an individual reflect on changes in their nicotine dependence over time. They can also be used to help determine the type of assistance offered.

Table 21.2 (continued)

	MODEL COMPONENT	CONSIDERATIONS
ASSIST		<ul style="list-style-type: none"> • <i>For patients ready to stop now:</i> <ul style="list-style-type: none"> ◦ “That’s great that you’re thinking about stopping/getting support for withdrawal. I can help you with that. What do you think will be the hardest thing about stopping?” ◦ Provide brief counselling including help in developing a strategy to overcome the patient’s personal concerns. The intervention can include specialized print materials (e.g. quit plans) that are stage-of-change-specific, address stated concerns, and include factors predictive of youth abstinence. Refer to the Tobacco Cessation Toolkit on AlbertaQuits.ca. ◦ Refer to the section on Intensive Cessation Support below for further information on assisting patients willing to stop. • Although like adults, the majority of youths will make a quit attempt unassisted, there is consensus that adolescents are likely to benefit from many of the same behavioral interventions found useful in adults. With this in mind, developing skills and tools to use in motivational interviewing and brief interventions may be the most effective means to enhance youth quit rates. • Assistance to youths ready to quit includes the following: <ul style="list-style-type: none"> ◦ Providing youth-specific self-help materials and other smoking cessation supports: <ul style="list-style-type: none"> - Youth-targeted self-help materials (e.g. Quit4Life). - Refer patients to the Alberta Quits helpline (referral form included in Chapter 7, Appendix 7(b) and on the Alberta Quits website). ◦ Assisting with behavioural support. Offer counselling to set a quit date / tobacco reduction plan. Discuss referral options available; ◦ Offering pharmacotherapy if behavioural support is unsuccessful; ◦ Being prepared to answer questions related to the use of e-cigarettes as a cessation aid; there is currently insufficient evidence to support the recommendation of e-cigarettes or smokeless tobacco in tobacco cessation due to lack of evidence of their safety, quality or efficacy¹⁴. ◦ Assisting with relapse prevention (i.e., helping the individual identify triggers and situations when the urge to use tobacco is especially strong, and develop coping strategies to avoid relapse); ◦ Encouraging problem-solving techniques to help the individual cope with cravings, withdrawal symptoms, or social situations; ◦ Providing a positive, supportive social environment in the clinic; and ◦ Helping the individual identify people in their own environment who can help and encourage them to quit.



Table 21.2: (continued)

	MODEL COMPONENT	CONSIDERATIONS
ARRANGE	Arrange follow-up visits that include repeat assessments of tobacco use status.	<ul style="list-style-type: none"> Whenever possible, arrange follow-up visits that include repeat assessments of tobacco use status. Visits should allow time to monitor their progress, reinforce the steps they are taking to stop, and promote problem-solving skills. Provide encouragement and positive reinforcement to patients who have recently stopped. Advise patients who are still using tobacco to stop at each opportunity. Heavy users and those who have relapsed may require intensive cessation support. Arrange referrals to targeted supports (e.g., Alberta Quits helpline) as required.

INTENSIVE CESSATION SUPPORT

Numerous studies and reviews have been conducted to determine which types of psychosocial interventions are most effective in assisting youths to stop smoking.^{19,33} Unfortunately, none have been able to identify which interventions are most consistently effective across this population group. The common conclusion is that there is not yet sufficient evidence to recommend widespread implementation of any one model. There continues to be a need for well-designed adequately powered randomized controlled trials of interventions for this population.

The available data indicates that complex approaches, combining components from various theoretical backgrounds, have been found to show promise, especially those incorporating elements sensitive to stage of change and using motivational enhancement and cognitive behavioural therapy. However, given the episodic nature of adolescent smoking, more data is needed on sustained stopping.

Given this lack of conclusive evidence, existing clinical practice guidelines are based on expert opinion rather than clinical trial data. Those from Canada, the United States, New Zealand and Australia all encourage the use of counselling to support youths to stop using tobacco, but are unable to recommend which approaches (e.g., motivational interviewing, cognitive behaviour therapy, etc.) or techniques to use.^{1,34,35,36}

Healthcare providers who treat adolescents should keep in mind that:

- Adolescent tobacco users are usually interested in stopping.
- Occasional tobacco users can already be hooked.
- Most adolescent tobacco users do not understand very much about nicotine dependence or the nature of nicotine withdrawal.
- Most adolescent tobacco users do not know how to formulate a smoking cessation strategy
- Tobacco cessation can be as difficult for youths who are light users as it is for adult heavy users.

The Tobacco Consortium of the American Academy of Pediatrics Center for Child Health Research confirms that “evidence-based practice guidelines for treating nicotine dependence in youths are not yet available.”³⁷ In the absence of clear evidence of what interventions are most successful, Sargent and DiFranza provide the following information for healthcare providers to keep in mind when treating adolescents³⁰:

- Adolescent tobacco users are usually interested in stopping. Data from six surveys show that 71–83% of adolescents who smoke had already experienced an unsuccessful attempt at cessation. This indicates that an interest in stopping is quite common.
- Occasional tobacco users can already be hooked. Reflecting the early onset of dependence, Stone and Kristeller found that 80% of adolescent who smoke occasionally wanted to stop. Many youths who are not yet using daily are hooked and find stopping to be a challenge.
- Most adolescent tobacco users do not understand very much about nicotine dependence or the nature of nicotine withdrawal. It may be helpful to counsel them as to the nature of nicotine withdrawal and how they can cope with symptoms such as craving.
- Most adolescent tobacco users do not know how to formulate a smoking cessation strategy; they need your help.
- Tobacco cessation can be as difficult for youths who are light users as it is for adult heavy users. There is no evidence that it is easier to quit if you are younger or not using heavily. Although cessation efforts often begin before the onset of daily use, it takes the average adolescent user 18 years to successfully complete cessation. The neuro-physiological changes brought on by tobacco use are more pronounced and prolonged in adolescent testing animals than among adult testing animals.

The most commonly used psychosocial intervention types used with youths and their demonstrated effectiveness with youths³⁰ are summarized below. Please refer to the Alberta Quits website for Alberta-specific resources for each type of intervention.



Table 21.3: Psychosocial Interventions and Their Effectiveness

INTERVENTION TYPES	EFFECTIVENESS
<p>Motivational interventions are clinical strategies designed to enhance client motivation for change, and may include motivational interviewing, counselling, client assessment, multiple sessions, brief interventions (3–5 minutes) or intensive interventions (30 minutes).</p>	<p>When results were reported on a study-by-study basis, review authors consistently found that there was no significant evidence of effectiveness. However, in the four reviews in which pooled analyses were conducted on the results of motivational intervention trials, reviewers consistently found evidence of effectiveness. This indicates that sample sizes used in past studies may be too small. Further studies, with larger sample sizes, are needed to confirm these findings of effectiveness.</p>
<p>Cognitive Behavioral Therapy (CBT) is a form of psychotherapy which emphasizes the role of thought in influencing our emotions and behaviours. While CBT may take on different forms, it has a number of consistent characteristics including a time-limited format and an educational model which promotes the “unlearning” of behaviours.</p>	<p>Three reviews discretely grouped youth and adolescent CBT studies and reported their findings. The overall findings are inconsistent, with one review reporting a significant treatment effect and the others finding mixed or no evidence of a significant treatment effect.</p> <p>Given the variations in both the findings and the quality of these reviews, it can be concluded that the evidence for the effectiveness of CBT interventions in youths supports the effectiveness of this intervention type, but is not conclusive.</p>
<p>Trans-theoretical model of change (TTM) is a model for health behaviour change which has six stages: pre-contemplation, contemplation, preparation, action, maintenance, and termination. TTM interventions are designed to correspond with specific stages in the model.</p>	<p>Findings on the effectiveness of TTM interventions were mixed. The two reviews of studies involving TTM interventions did not include a large number of studies, and some overlap was present between the two reviews. Findings of effectiveness are consistent between the two reviews, suggesting that there is evidence for the effectiveness of TTM within the limited body of studies available. Further studies are required to draw confident conclusions.</p>
<p>Contingency management (CM) is a strategy used in substance abuse treatment which involves the rewarding or reinforcement of desired behaviors and punishment or non-reinforcement of undesirable behaviours.</p>	<p>In the one review that grouped and compared CM interventions for youths and adolescents, consistently positive results were reported from all studies. In the three pilot studies of CM interventions in youths or adolescent populations reviewed, significant differences between the intervention and comparison groups were biochemically validated and maintained over short periods of time. It was concluded that there were “indications” of short-term effectiveness; however, the review authors also noted a major criticism of CM was the possible undermining of motivation to stop as the patient’s incentives were externalized.</p>

Table 21.3 (continued)

INTERVENTION TYPES	EFFECTIVENESS
<p>Complex interventions cannot be classified as one type or another, but rather consist of multiple types of intervention combined.</p>	<p>Effectiveness cannot be ascertained, because reviewers typically categorized these studies under one intervention type or another, rather than approaching them as a separate “complex” intervention type.</p>
<p>Internet and computer-based interventions include supports such as online motivational interviewing, online activities in tailored modules, tailored monthly emails, online chat forums, virtual reality programs, etc.</p>	<p>In the limited body of scholarship on this intervention and population sub-group, there is promise that web and computer-based interventions can be effective for promoting smoking cessation in youth and adolescent populations. Web and computer-based interventions that have demonstrated effectiveness are those which are paired with one or more other interventions, such as phone calls or group sessions. Ultimately, more research is needed to determine if these types of interventions can be effective for smoking cessation in adolescents and youths, and under what circumstances.</p>
<p>Phone-based interventions include telephone cessation counselling and mobile phone and texting interventions.</p>	<p>Evidence from a limited number of studies indicates that phone-based interventions are ineffective. However, given the extremely small numbers of studies pertaining to phone-based interventions for youth and adolescent smoking cessation, and the rapid escalation of these media in the years since these reports were published, these findings are not substantiated. More research is required in this population sub-group in order to reach conclusions regarding the effectiveness of phone-based interventions.</p>

PHARMACOLOGICAL INTERVENTIONS

Numerous studies have been conducted to determine the safety and efficacy of pharmacological treatments for youths. Similar to the current state of research on psychosocial interventions, there is little conclusive evidence of effectiveness of pharmacological interventions when used with youths. While there is some evidence that NRT is safe for use with youths, the safety of bupropion and varenicline has not been confirmed.

Clinical practice guidelines from Canada, the United States, New Zealand and Australia concur that there is little clinical evidence that NRT, bupropion and varenicline are effective among youths, and defer to expert opinion on the use of these medications with youths.^{1,34,35,36}

All of these guidelines point to evidence of the safety of NRT, or the relative safety of NRT compared to tobacco use, and suggest it can be used with youths who are motivated to stop. CAN-ADAPTT considers bupropion to be safe for youths, while the others either indicate that there is not enough evidence of safety or do not comment on its application with this group. None of these guidelines indicate that varenicline is safe for youths, and the United States guideline identifies this as an area requiring more research.

Despite the age restrictions placed on NRT, another important consideration in the recommendation of NRT as an adjunct to treatment for tobacco-dependent youths is that tobacco itself bears an age limit.

Given the differences in effects of nicotine on the adolescent brain compared with adults, recommendations for the use of prescribed nicotine as a therapeutic intervention for tobacco-use cessation have not been agreed upon, despite the safety observed in short-term trials.³⁸ Concerns have been voiced about the high susceptibility to nicotine dependence and the strong influence of early and limited exposure on later development of nicotine addiction and cigarette smoking.³⁹ These studies suggest that on the basis of limited support for NRT efficacy and potential for increased addiction, NRT should not be loosely recommended in this population. Other authors recognize that nicotine dependent youths are already being exposed to nicotine in a more dangerous way through cigarette smoking and the best available therapies (including NRT) should be considered to overcome their addiction.⁴⁰ Studies on the use of NRT as a comfort measure for youths who are not ready to quit are not widely available, therefore, clinical decision-making in this area should include the considerations of the available current evidence (see page 21.22 for a synthesis).

In the absence of strong evidence to support the use of medication to assist youths to stop using tobacco, behavioural cessation support (e.g., multiple counselling sessions, motivational interviewing, cognitive behavioral therapy) is recommended as first line treatment, before pharmacotherapy. Where pharmacotherapy is being considered, the following table provides a synthesis of the current research and/or guidelines surrounding the considerations and/or recommendation of NRT use with youths.

Behavioural cessation support is recommended as first line treatment, before pharmacotherapy.

Table 21.4: Recommendations for Pharmacotherapy and Behavioural Interventions for Youth

	INTERVENTION TYPES	EFFECTIVENESS
Use in Combination	Merely offering NRT is not advisable for adolescents. Additional therapeutic conditions should be fulfilled in combination with NRT to establish significant long-term effects of smoking cessation.	C. S. Scherphof et. al. (2014) Long-Term efficacy of nicotine replacement therapy for smoking cessation in adolescents: A randomized control trial. <i>Drug and Alcohol Dependence</i> . Vol. 140; pp 217-220.
	The decision to use pharmacotherapy should be individualized and should be administered in addition to cognitive-behavioral counseling and support.	Karpinski et. al. (2010) Smoking Cessation Treatment for Adolescents. <i>Journal of Pediatric Pharmacology</i> . Vol. 59; pp. 249-263.
Provide education on NRT	Data suggest that NRT advertisements might be influencing the belief among adolescents that if they were to start smoking they could quit anytime they wanted. This suggests that the limitations of NRT in relation to smoking addiction need to be addressed with young teenagers.	Al-Delaimy et al (2006) Adolescents' perceptions about quitting and nicotine replacement therapy: findings from the California Tobacco Survey. <i>Journal of Adolescent Health</i> . Vol. 38: pp465-468.
	Efforts are needed to encourage appropriate use of NRT in youth who smoke to maximize its potential for successful cessation.	Klesges et. al (2003) Use of Nicotine Replacement Therapy in Adolescent Smokers and Nonsmokers. <i>Arch Pediatr Adolesc Med</i> . Vol. 157(6); 517-522. Retrieved from http://archpedi.jamanetwork.com/article.aspx?articleid=481346
Safety of Recommending NRT	Findings from the limited number of studies suggest that that NRT is safe to implement in youth populations as an adjunct to a smoking cessation program.	Gabble et al (2015) Smoking Cessation Interventions for Youth: A review of the literature. <i>The Ontario Tobacco Research Unit (OTRU)</i> . Retrieved from http://otru.org/wp-content/uploads/2015/02/special_youth_cessation.pdf
	Short-term use of NRT and bupropion did not show major safety issues in the samples studied.	Karpinski et. al. (2010) Smoking Cessation Treatment for Adolescents. <i>Journal of Pediatric Pharmacology</i> . Vol. 59; pp. 249-263.
	Due to the development of early nicotine dependence NRT is recommended amongst adolescents with symptoms of dependence.	S. Towns et al. (2015) Smoking Cessation in Adolescents: targeted approaches that work. <i>Paediatric Respiratory Reviews</i> . Article in Press.
	There was no evidence that adverse events were directly related to pharmacologic therapy. NRT appeared to be safe and well tolerated by adolescents despite various minor adverse events reported in studies.	Yeol Kim et al. (2011) Effectiveness of Pharmacologic Therapy for Smoking Cessation in Adolescent Smokers: Meta-analysis of randomized control trials. <i>American Journal of Health-System Pharmacy</i> . Vol 68(3); 219-226.
	Safety concerns should not be a barrier to NRT use as there is no evidence of specific safety issues arising from the use of NRT in adolescents.	Best Practice Advocacy Centre New Zealand (2013) Smoking Prevention and Cessation in Adolescents: Changing futures, saving lives. <i>Best Practice Journal</i> . Vol 53; 32-39.



Table 21.4 (continued)		
	INTERVENTION TYPES	EFFECTIVENESS
Explore Intentions	Before considering pharmacotherapy as an intervention for youths, establish confidence of each person's tobacco dependence and intention to quit.	U.S. Centers for Disease Control (2004) Youth Tobacco Cessation: A guide for making informed decisions. Retrieved from www.cdc.gov/tobacco
	NRT can be used by young people (12–18 year of age) who are dependent on nicotine (that is, it is not recommended in those who smoke occasionally, such as only on weekends) if it is believed that the NRT may help them stop smoking.	Ministry of Health (2007) New Zealand Smoking Cessation Guidelines. Retrieved from http://www.moh.govt.nz
	When planning treatment plans for adolescents who smoke, health care personnel should pay particular attention to adolescents' primary reasons and motives for using NRT before suggesting its use.	Raisamo et. al. (2011) Adolescents' self-reported reasons for using nicotine replacement therapy products: A population based study. <i>Addictive Behaviours</i> . Vol. 36; pp. 945-947

Considering the current state of evidence regarding the safety and efficacy of pharmacotherapy options for youths, Tobacco Free Futures recommends the following:

Table 21.5: Tobacco Free Futures Recommendations Pharmacotherapy for Youths
<ul style="list-style-type: none"> • Behavioural cessation support (e.g., multiple counseling sessions, motivational interviewing, cognitive behavioral therapy) is recommended as first line treatment for youths, before pharmacotherapy. • NRT should be offered to young people when behavioural counselling has failed and after an informed discussion with the patient regarding the risks and benefits of using tobacco and NRT. • Bupropion and varenicline should only be considered with young people after behavioural interventions and NRT have failed. • Prior to initiating any pharmacologic treatment, advise the patient (and their parent / caregiver, if applicable) that current research does not conclusively demonstrate the efficacy and safety of these medications among young people, and discuss the risks and benefits of using them vs. using tobacco. • Provide on-going assessment and follow-up throughout the duration of any pharmacologic treatment.

DOSING GUIDELINES

The New Zealand Best Practice Journal provides a useful summary of NRT dosing considerations in youths. The article accurately acknowledges that no specific guideline exists for dosing NRT in youths, therefore, adult dosing guidelines should be followed (see Chapter 9 – Pharmacotherapy). A shorter or lower dose of NRT however, may be appropriate in individual clients as youths may experience less severe nicotine withdrawal symptoms than adults⁴¹. bpacnz recommends the following when selecting the type of NRT:

DEPENDENCE	RECOMMENDATION
First cigarette within 30mins of waking or Smoke >10 cigarettes per day	More likely to benefit from use of nicotine patches
Smoke <10 cigarettes per day	Trans-buccal NRT more appropriate
Smoke only in social situations	NRT not recommended

PARENTS AND CAREGIVERS

This section addresses situations in which children and youths (age birth to 17 years) are identified as being exposed to environmental tobacco smoke in their home, as a result of their parent or primary caregiver smoking. Environmental tobacco smoke refers to both second-hand and third-hand smoke, as defined in the introduction to this chapter.

Use the following Five As approach, adapted for parents and caregivers. This approach is described in detail on pages 21.29–21.34 of this chapter.

Figure 21.3: Tobacco Free Futures: Supporting Parents and Caregivers to Stop Smoking

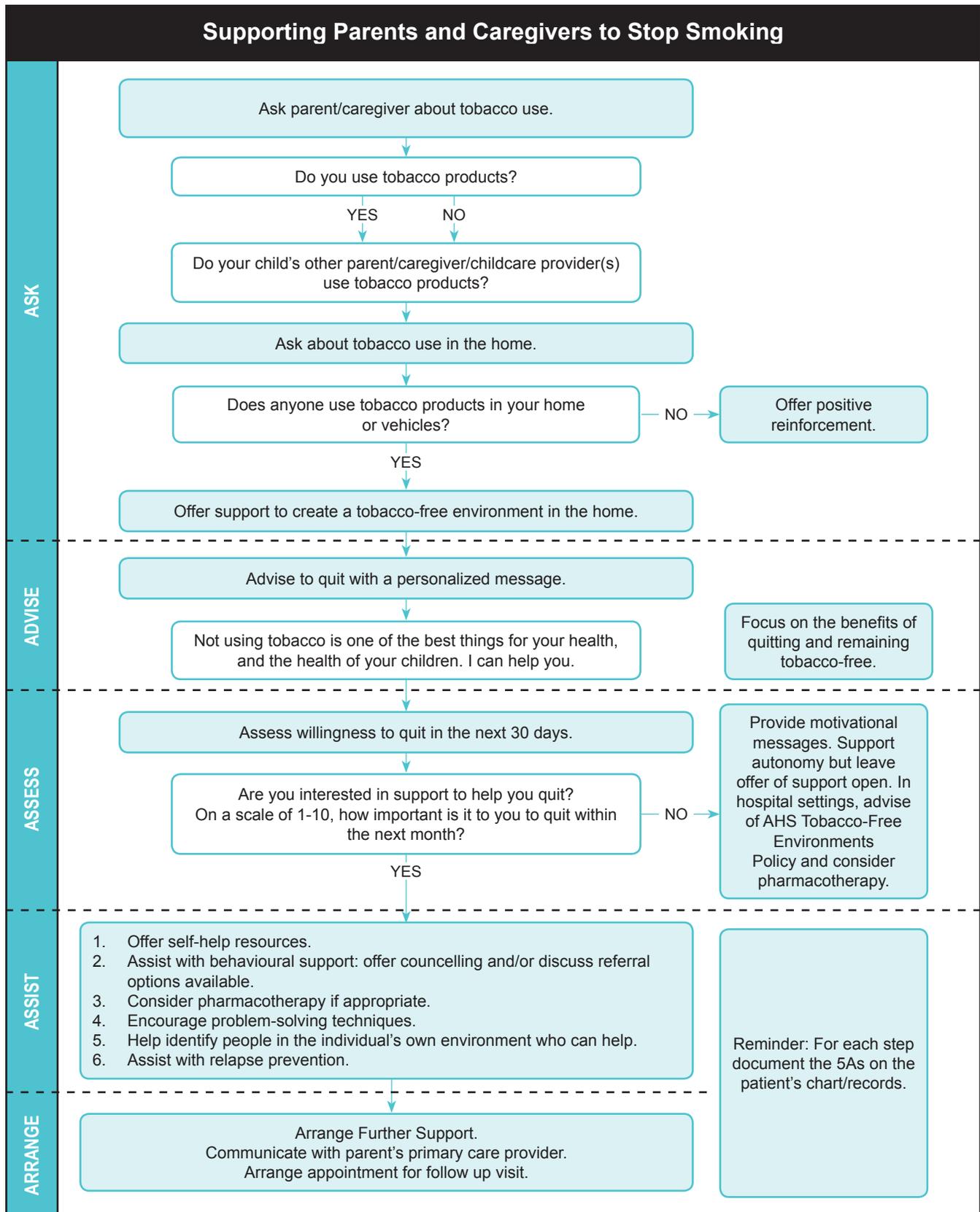


Table 21.7: Supporting Parents and Caregivers to Stop Smoking

- To provide behavioural support to parents who smoke, refer to Chapter 8 – Intensive Cessation Counselling.
- To provide pharmacological support to parents who are ready to stop using tobacco, refer to Chapter 9 – Pharmacotherapy.

The role that parental smoking plays in predicting adolescent smoking is somewhat controversial, with some researchers viewing it as relatively unimportant and others finding it a robust predictor.⁴² This inconsistency may stem from differing definitions of parent smoking (i.e., current vs. lifetime smoking) and child smoking (e.g., experimental smoking vs. persistent smoking), and differing demographics (e.g., parental smoking may be more influential for people of some ethnicities than for others).⁴²

However, despite these inconsistencies, there are several reasons to consider parents' smoking status when treating pediatric patients, whether or not the child smokes. First, parent smoking is related to the persistence of adolescent smoking and to smoking trajectories that are particularly problematic because they show early onset, rapid escalation, and long-term persistence. Second, because tobacco dependence shows significant heritability, parental smoking may reflect important genetic influence.⁴²

While the association between parental smoking and their children's regular tobacco use is not well understood, there is evidence that children of parents who smoke are twice as likely to smoke themselves, compared to children whose parents do not smoke⁴³. They are also more likely to initiate smoking early, and smoke heavily. Maternal smoking is more closely associated with youth smoking than paternal smoking.

Prevalence

According to the Canadian Community Health Survey, 12.6% of Canadian youths age 12 to 19 reported being exposed to second-hand smoke at home in 2011.¹² This is down from 23.4% in 2003. However, people in this age group were more likely to report this type of exposure than all age groups of adults over the age of 19. According to the Canadian Tobacco Use Monitoring Survey, 3.9% of Canadian children age birth to 11 years were exposed to environmental tobacco smoke at home in 2011, down from 26.1% in 1999.⁴⁴

In Alberta, the rates of second-hand smoke exposure among young people is slightly higher than the national average. In 2011, 13.2% of Alberta adolescents aged 12 to 19 reported being exposed to second-hand smoke at home. Further, 32.6% of Albertans in this age category indicated being exposed to second-hand smoke in the past month in vehicles and/or public places.⁴⁴ Canadian Tobacco Use Monitoring Survey data reports that 3.3% of Alberta children age birth to 11 years were exposed to environmental tobacco smoke at home in 2011, down from 25.4% in 1999.⁴⁵



Impact of environmental tobacco smoke exposure on children and youths

SECOND-HAND SMOKE

The United States Surgeon General has found that exposure to second-hand smoke (i.e., smoke that is either exhaled by someone who smokes or is released from the end of a burning cigarette) has the following impacts on the health of young people⁴⁶:

- Second-hand smoke causes premature death and disease in children.
- Evidence indicates that exposure to second-hand smoke can cause the following developmental effects on children:
 - Sudden unknown death of an infant (SUDI);
 - Lower respiratory tract illnesses (especially when exposure is from smoking by the mother);
 - Middle ear disease, including acute and recurrent otitis media and chronic middle ear effusion;
 - Cough, phlegm, wheeze, breathlessness, and asthma;
 - Respiratory symptoms, slowed lung growth, and decreased lung function during childhood.
- There is no risk-free level of exposure to second-hand smoke.
- Maternal exposure to second-hand smoke during pregnancy causes a small reduction in birth weight.
- Evidence suggests that prenatal and postnatal exposure to second-hand smoke may cause childhood cancer.

In addition, as mentioned earlier, there is evidence that children of parents who smoke are twice as likely to smoke themselves, compared to children whose parents do not smoke.⁴³

Smoking during pregnancy exposes the fetus to significant risks that have potentially long-term effects. Refer to Chapter 20 for more information on the effects of maternal exposure to tobacco during pregnancy.

THIRD-HAND SMOKE

Smoking in the home creates persistently high levels of tobacco toxins well beyond the period of active smoking. These toxins take the form of particulate matter deposited in a layer onto every surface within the home; in loose household dust; and as volatile toxic compounds that “off gas” into the air over days, weeks, and months.⁴⁷ This residual tobacco smoke contamination, known as third-hand smoke, remains after the cigarette is extinguished and has similar health impacts as second-hand smoke. There is evidence that third-hand smoke increases the risk of cancer among non-smokers, especially young children.⁴⁸

Infants and toddlers are especially susceptible to the harms of third-hand smoke because they spend most of their time in the home, usually in close proximity to floors and other contaminated surfaces. They touch contaminated surfaces and put contaminated objects in their mouths. They also ingest much more dust than grown-ups do, because they breathe faster and are in closer proximity to dusty surfaces.

Being in a room or vehicle that was smoked in hours or days earlier can present risks to children that are similar to being in a room with a lit cigarette. Instituting a smoke-free rule in the home reduces these risks significantly.

Treatment Considerations

Pediatric healthcare providers are in a unique and important position to address parental/caregiver smoking because of the regular, multiple contacts with parents and the harmful health consequences to their patients. Second-hand smoke exposure needs to be assessed regularly over the course of a pediatric patient’s care.

Research suggests that tobacco use interventions provided to parents in pediatric clinics or during child hospitalizations increase parents’ interest in stopping smoking, parents’ quit attempts, and parents’ quit rates.⁴⁶ Studies also show that giving parents information on the harms of second-hand smoke reduces childhood exposure to such smoke and may reduce parental smoking rates.⁴⁶

Some pediatric healthcare providers are unclear of their role in assessing the smoking status of their patient’s parents, and in providing support to help them stop. Others may anticipate resistance to their support and are reluctant to offer it. In fact, parents are often open to advice and support to stop smoking from their child’s healthcare provider. Parents who smoke, like anyone else who smokes, quit most successfully when they receive advice and support to stop from multiple sources, multiple times. Pediatric health-care providers are recommended to screen for their patient’s exposure to second-hand smoke in the home, and offer support to parents and caregivers to stop smoking.

Pediatric healthcare providers are recommended to screen for their patient’s exposure to second-hand smoke in the home, and offer support to parents and caregivers to stop smoking.

Pediatric healthcare providers who can support parents to stop smoking include:

- Family physicians and pediatricians;
- Neonatal intensive care unit nurses;
- Public health nurses;
- Pharmacists;
- Respiratory specialists;
- Social Workers, counsellors and other allied professionals.

TOBACCO INTERVENTION

The following section outlines a 5A's approach targeted especially for parents of pediatric patients. It is based on the standard 5A's approach outlined in Chapter 7, but has been modified to address the unique needs of this population. A summary version of this approach is presented on page 21.25.

It is important to note that the 5A's are not intended to be used strictly in order, as many people's needs change over time; rather, practitioners should be prepared to move forward and backward through the steps as required by the person they are supporting.

Many healthcare providers have the opportunity to provide tobacco intervention support to parents of pediatric patients, including but not limited to:

- Family physicians and pediatricians;
- Acute care nurses;
- Public health nurses;
- Respiratory specialists;
- Social Workers, Counsellors and other allied professionals.

In order to effectively implement the 5A's approach, a system must be established in the clinical setting to document and track all conversations about the smoking status of caregivers and second-hand smoke exposure of patients.

Table 21.8: 5A's for Parents and Caregivers of Pediatric Patients

A summarized version of this approach is presented on page 21.25

	MODEL COMPONENT	CONSIDERATIONS
ASK	<p>ASK about tobacco use in the home.</p> <p>ASK about the smoking status of each individual.</p>	<ul style="list-style-type: none"> • Asking family members and caregivers of patients from birth to 17 years of age about tobacco use in the home provides an opportunity for risk factor screening, prevention of initiation of tobacco use, and education of the harmful effects of exposure to second-hand and third-hand smoke. • Ask about the smoking status of each of the child's parents or caregivers, including childcare providers. Indicate current/former/never smoking for each individual. • Establish whether tobacco use bans are in effect in the home and vehicles: <p>“Do you use tobacco products?” Current__ Former__ Never __</p> <p>“Do your child's other parent/caregivers/childcare provider(s) use tobacco products?” Current__ Former__ Never __</p> <p>“Does anyone use tobacco products in your home or vehicles?”</p> • For someone who smoked and has quit, reinforce continued abstinence, especially for postpartum mothers who stopped during pregnancy. • Provide all parents/caregivers, regardless of their smoking status, with information on how to talk to their children about tobacco use. In Alberta, information can be found on AlbertaQuits.ca under the 'Helping Others Quit – Friends and Family' section. A 'Youth Talk' brochure to provide to parents/caregivers is also available to order online for free under 'Helping OthersQuit – Healthcare Providers' on AlbertaQuits.ca.

Table 21.8 (continued)

	MODEL COMPONENT	CONSIDERATIONS
ADVISE	<p>ADVISE all parents / caregivers to stop smoking and to establish smoke-free homes and cars</p>	<ul style="list-style-type: none"> • Advise all parents/caregivers to stop smoking and to establish smoke-free homes and cars. • Brief advice to stop using tobacco consists of motivational messaging that is based on the parents' own concerns, and may be provided during teachable moments such as the child's illness. Examples of motivational messages for parents/caregivers include: <ul style="list-style-type: none"> • Not using tobacco is one of the best things for your health, and the health of your children. I can help you. <ul style="list-style-type: none"> ◦ You can be a strong model for your child. Children whose parents have stopped smoking are no more likely to smoke than children of parents who have never smoked.^{42,49} ◦ Because of your child's illness, it is particularly important for you to stop smoking. I can help you. ◦ Your child's exposure to second-hand smoke puts him/her at a greater risk of: <ul style="list-style-type: none"> - Sudden unknown death of an infant (SUDI); - Acute respiratory infections; - Ear problems; - More severe asthma; - Slowed lung growth, and decreased lung function during childhood.⁴⁶ ◦ People who smoke one pack per day spend approximately \$4827 per year on cigarettes. ◦ Stopping smoking will benefit your health as well as your child's. (Refer to Appendix 21(b) for a list of the benefits of quitting.)



Table 21.8 (continued)		
	MODEL COMPONENT	CONSIDERATIONS
ADVISE		<ul style="list-style-type: none"> • Offer support to create a tobacco-free environment in the home: <ul style="list-style-type: none"> ◦ “Are you interested in information to help make your home and car tobacco free?” ◦ Creating a tobacco-free environment in the home can be achieved by: <ul style="list-style-type: none"> - Making the home and vehicle smoke-free. - Moving all smoking outside. Cracking a window open does not prevent harm. - Using a smoking jacket when going outside to smoke. - Removing the smoking jacket and washing hands to remove smoking residue before holding babies and children. - Putting up signs to remind others not to smoke in the home. - Washing clothes, bedding and toys that have been exposed to smoke. - Painting walls, washing fabrics and surfaces, and replacing belongings if necessary. - Provide resources like Health Canada’s ‘Make Your Home and Car Smoke-Free’ guide • Advise the parent/caregiver of the smoke-free environments policy of the hospital, and offer nicotine replacement therapy if appropriate.

Table 21.8 (continued)

	MODEL COMPONENT	CONSIDERATIONS
ASSESS	<p>ASSESS if parents / caregivers who smoke are willing to make a quit attempt.</p>	<ul style="list-style-type: none"> • At every visit, ask parents/caregivers who smoke if they are willing to make a quit attempt. At each interaction, indicate which of the following stages of change the individual is currently at: <ol style="list-style-type: none"> 1. Pre-contemplation of change 2. Contemplation of change 3. Preparation for change 4. Acting out change 5. Maintaining change 6. Relapse • For more information about the stages of change, refer to Chapter 8, Intensive Cessation Counselling. • Consider using the following discussion questions: <ul style="list-style-type: none"> ◦ “Are you interested in support to help you quit? On a scale of 1-10, how important is it to you to quit within the next month?” ◦ “What do you like about smoking? What don’t you like about it?” ◦ Summarize ambivalence: “On the one hand (like)... on the other hand... (don’t like).” ◦ “Your concerns about smoking are good ones (add addiction, health and social effects). Not smoking is one of the best things you can do to protect your health and the health of your children.” ◦ “Have you ever tried to stop smoking? Have you thought about stopping?” • Support the autonomy of those not willing to stop, but continue to offer support. In inpatient settings, advise parents of the AHS tobacco-free environments policy, and assess their willingness to get pharmacological help managing withdrawal during their hospital stay. • Encourage parents to maintain a smoke-free household and vehicle. Document all discussions on the child’s record.



Table 21.8 (continued)

	MODEL COMPONENT	CONSIDERATIONS
ASSIST	<p>ASSIST the patient who is not interested and offer brief information.</p> <p>ASSIST the patient who is interested and offer pharmacotherapy support and/or behavioural support.</p>	<ul style="list-style-type: none"> • Assistance to parents who are ready to quit includes the following: <ul style="list-style-type: none"> ◦ Providing self-help materials and other smoking cessation supports: <ul style="list-style-type: none"> - In Alberta, healthcare providers can provide the ‘Flip into Action’ booklet to parents/caregivers; available to order online for free under ‘Helping Others Quit – Healthcare Providers’ on AlbetaQuits.ca. - If the child’s father smokes, offer <i>The Right Time, The Right Reasons: Dads Talk about Reducing and Quitting Smoking</i> resource. - Refer parents to the Alberta Quits helpline (referral form included in Chapter 7, Appendix 7(b) and on the Alberta Quits website). ◦ Assisting with behavioural support. Offer counselling to set a quit date/ tobacco reduction plan. Discuss referral options available; ◦ Ensuring that the parent/caregiver sees the benefit of stopping to their own health, not just that of their child. (Refer to Appendix 21(b) for a list of the benefits of quitting.) ◦ Targeting messages to address the parent / caregiver’s unique concerns and identified barriers to stopping; ◦ Being prepared to answer questions related to the use of e-cigarettes as a cessation aid; there is currently insufficient evidence to support the recommendation of e-cigarettes or smokeless tobacco in tobacco cessation due to lack of evidence of their safety, quality or efficacy.³² ◦ Assisting with relapse prevention; ◦ Encouraging problem-solving techniques to help cope with cravings, withdrawal symptoms, or social situations; ◦ Providing a positive, supportive social environment in the clinic; ◦ Helping to identify people in the individual’s environment who can help and encourage them to quit; and ◦ Offering pharmacotherapy if appropriate. Half of parents who smoke say they would consider using a medication to help them stop, and 85% of those would accept that medication from their child’s doctor.⁵⁰ <ul style="list-style-type: none"> - For more information on providing pharmacological support to parents who are ready to stop using tobacco, please refer to Chapter 9 – Pharmacotherapy.

Table 21.8 (continued)

	MODEL COMPONENT	CONSIDERATIONS
ARRANGE	<p>ARRANGE to follow-up on the parent's progress at the next visit if feasible.</p>	<ul style="list-style-type: none"> • Arrange to follow-up on the parent's progress at the next visit if feasible. Engaging follow up support can be done by sending a note to the parent's primary care physician that includes the following information: <ul style="list-style-type: none"> - Description of the parent's interest in support, including stage of readiness to change his or her smoking behaviour; - Request to schedule an appointment with the parent to discuss his or her smoking; - Indication of need to discuss pharmacotherapy, if applicable; - Suggestion to refer to targeted supports (e.g., Alberta Quits helpline) as required. • Parents who lack a primary care physician can be assigned as an unattached patient to a primary care network. • The parent should receive a copy of the information sent to the primary care physician.

CESSATION SUPPORT

Current research on interventions that assist parents and caregivers to reduce children's exposure to second hand smoke has not identified any specific type of intervention as particularly effective with this group.⁵¹ Common types of interventions include health promotion, social-behavioural therapies, technology, education, and clinical interventions, delivered either in healthcare contexts (i.e., both well-child and ill-child settings) or community settings.

Among studies that demonstrate effectiveness in reducing children's exposure to second-hand smoke, the following types of interventions commonly appear. However, the evidence of their effectiveness in all settings is mixed.

- Intensive counselling or motivational interviewing;
- Telephone counselling;
- School-based strategies;
- Picture books;
- Educational home visits; and
- Brief intervention.⁵¹

For tips and guidelines on providing cessation support to parents, refer to Chapter 8: Intensive Cessation Support.

In the absence of clinical evidence of the effectiveness of any one type of intervention specifically for parents and caregivers, please refer to the recommendations outlined in Chapter 8 – Intensive Cessation Counselling. This chapter includes guidelines for supporting both people who are willing to stop using tobacco and those who are not yet ready.

PHARMACOLOGICAL INTERVENTIONS

To provide pharmacological support to parents who are ready to stop using tobacco, please refer to Chapter 9 – Pharmacotherapy.

For guidelines on providing pharmacological support to parents, refer to Chapter 9: Pharmacotherapy.

REFERENCES

1. CAN-ADAPTT. (2011). *Canadian Smoking Cessation Clinical Practice Guideline*. Toronto, Canada: Canadian Action Network for the Advancement, Dissemination and Adoption of Practice-informed Tobacco Treatment, Centre for Addiction and Mental Health.
2. National Center for Chronic Disease Prevention and Health Promotion (US) Office on Smoking and Health. (2012). *Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General*. Available from <https://www.ncbi.nlm.nih.gov/books/NBK99237/>
3. Government of Canada. (2016). *Canadian Student Tobacco, Alcohol and Drug Use Survey (CSTADS) 2014-2015*. Retrieved from <https://www.canada.ca/en/health-canada/services/canadian-student-tobacco-alcohol-drugs-survey.html>
4. Government of Canada (2014) *Youth Smoking Survey 2012-2013*. Retrieved from <https://www.canada.ca/en/health-canada/services/publications/healthy-living/summary-results-youth-smoking-survey-2012-2013.html>
5. Dalum, P., Schaalma, H., & Kok, G. (2012). The development of an adolescent smoking cessation intervention—an Intervention Mapping approach to planning. *Health Education Research*, 27(1), 172–181.
6. ACCESS. (2010). *Access Strategies for Teen Smoking Cessation: Guiding Principles, Strategies and Activities*. Retrieved from <http://nvozdravje.si/arhiv/datoteke/projekti/access/ACCESS%20report%20-%20final%20version%20290710.pdf>
7. DiFranza, J. R. (2000). Initial symptoms of nicotine dependence in adolescents. *Tobacco Control*, 9(3), 313–319.
8. Stein, R. J., Haddock, C. K., O’Byrne, K. K., Hymowitz, N., & Schwab, J. (2000). The pediatrician’s role in reducing tobacco exposure in children. *Pediatrics*, 106(5), e66–e66.
9. Government of Canada. (2016). *Canadian Tobacco, Alcohol and Drugs Survey (CTADS) 2015*. Retrieved from <https://www.canada.ca/en/health-canada/services/canadian-tobacco-alcohol-drugs-survey.html>
10. Alberta Health Services (2010). *Cherry is like kindergarten for Copenhagen: Why Canada Needs to Ban the Use of Flavour Additives in Spit Tobacco* [Strategic Brief]. Retrieved from https://www.albertaquits.ca/files/AB/files/library/cherryiskindergarten_forcopenhagen_July_16_2010.pdf
11. Czoli, C. D., Hammond, D., & White, C. M. (2014). Electronic cigarettes in Canada: Prevalence of use and perceptions among youth and young adults. *Can J Public Health*, 105(2), 97.
12. Statistics Canada (2011). *Canadian Community Health Survey*. Retrieved from <http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=3226>
13. Hoffman, B. R., Sussman, S., Unger, J. B., & Valente, T. W. (2006). Peer influences on adolescent cigarette smoking: A theoretical review of the literature. *Substance Use & Misuse*, 41(1), 103–155.
14. Schultz, A., Nowatzki, J., Dunn, D., & Griffith, E. (2010). Effects of socialization in the household on youth susceptibility to smoking: A secondary analysis of the 2004/05 Canadian Youth Smoking Survey. *Chronic Diseases in Canada*, 30(3), 71–77.
15. Tobacco Control Legal Consortium (2012). *Cause and Effect: Tobacco Marketing Increases Youth Tobacco Use: Findings of the 2012 Surgeon General’s Report*. Retrieved from <http://www.publichealthlawcenter.org/sites/default/files/resources/tclc-guide-SGReport-Findings-Youth-Marketing-2012.pdf>

- 
16. Non-Smokers'Rights Association (2010). Smoking in the Movies: A Look at One of the Tobacco Industry's Most Successful Youth Marketing Strategies and What People are Doing to Fight Back [Fact Sheet]. Retrieved from https://www.nsra-adnf.ca/cms/file/files/pdf/Smoke-free_Movies_factsheet.pdf
 17. Smith, R. F., McDonald, C. G., Bergstrom, H. C., Ehlinger, D. G., & Brielmaier, J. M. (2015). Adolescent nicotine induces persisting changes in development of neural connectivity. *Neuroscience & Biobehavioral Reviews*, *55*, 432–443.
 18. Dwyer, J. B., McQuown, S. C., & Leslie, F. M. (2009). The dynamic effects of nicotine on the developing brain. *Pharmacology & Therapeutics*, *122*(2), 125–139.
 19. Stanton, A., & Grimshaw, G. (2013). Tobacco cessation interventions for young people. *Cochrane Database of Systematic Reviews*.
 20. Kandel, D. B., Hu, M.-C., Griesler, P. C., & Schaffran, C. (2007). On the development of nicotine dependence in adolescence. *Drug and Alcohol Dependence*, *91*(1), 26–39.
 21. Chambers, R. A., Taylor, J. R., & Potenza, M. N. (2003). Developmental neurocircuitry of motivation in adolescence: A critical period of addiction vulnerability. *American Journal of Psychiatry*, *160*(6), 1041–1052.
 22. O'Loughlin, J., Gervais, A., Dugas, E., & Meshefedjian, G. (2009). Milestones in the process of cessation among novice adolescent smokers. *American Journal of Public Health*, *99*(3), 499–504.
 23. Bancej, C., O'Loughlin, J., Platt, R. W., Paradis, G., & Gervais, A. (2007). Smoking cessation attempts among adolescent smokers: A systematic review of prevalence studies. *Tobacco Control*, *16*(6), e8.
 24. Pierce, J. P., & Gilpin, E. (1996). How long will today's new adolescent smoker be addicted to cigarettes? *American Journal of Public Health*, *86*(2), 253–256.
 25. Robinson, L. A., Emmons, K. M., Moolchan, E. T., & Ostroff, J. S. (2007). Developing smoking cessation programs for chronically ill teens: Lessons learned from research with healthy adolescent smokers. *Journal of Pediatric Psychology*, *33*(2), 133–144.
 26. Tanski, S. E., Klein, J. D., Winickoff, J. P., Auinger, P., & Weitzman, M. (2003). Tobacco counseling at well-child and tobacco-influenced illness visits: Opportunities for improvement. *Pediatrics*, *111*(2), e162–e167.
 27. Siqueira, L. M., Rolnitzky, L. M., & Rickert, V. I. (2001). Smoking cessation in adolescents. *Archives of Pediatrics & Adolescent Medicine*, *155*(4), 489.
 28. Alfano, C. M., Zbikowski, S. M., Robinson, L. A., Klesges, R. C., & Scarinci, I. C. (2002). Adolescent reports of physician counseling for smoking. *PEDIATRICS*, *109*(3), e47–e47.
 29. Balch, G. I. (1998). Exploring perceptions of smoking cessation among high school smokers: Input and feedback from focus groups. *Preventive Medicine*, *27*(5), A55–A63.
 30. Sargent, J. D., & DiFranza, J. R. (2003). Tobacco control for Clinicians who treat adolescents. *CA: A Cancer Journal for Clinicians*, *53*(2), 102–123.
 31. Shelley, D. (2005). Physician and dentist tobacco use counseling and adolescent smoking behavior: Results from the 2000 national youth tobacco survey. *Pediatrics*, *115*(3), 719–725.
 32. Hanna, N., Mulshine, J., Wollins, D. S., Tyne, C., & Dresler, C. (2013). Tobacco cessation and control a decade later: American society of clinical oncology policy statement update. *Journal of Clinical Oncology*, *31*(25), 3147–3157.
 33. Alberta Health Services (2012). Literature Review on Effective Smoking and Tobacco Reduction and Cessation Pharmacological and Psychological Treatments Specific to Blue Collar Workers and to Youth aged 9 – 17 Years. Unpublished.

34. US Department of Health and Human Services. (2008). Treating Tobacco Use and Dependence: 2008 Update. Available from <https://www.ncbi.nlm.nih.gov/books/NBK63952/>
35. New Zealand Ministry of Health (2007). *New Zealand Smoking Cessation Guidelines*. Wellington: Ministry of Health.
36. Royal Australian College of General Practitioners. (2011). Supporting Smoking Cessation: A Guide for Health Professionals. Retrieved from <http://www.racgp.org.au/your-practice/guidelines/smoking-cessation/>
37. Pbert, L., Moolchan, E. T., Muramoto, M., Winickoff, J. P., Curry, S., Lando, H., Ossip-Klein, D., Prokhorov, A.V., DiFranza, J., & Klein, J.D. (2003). The state of office-based interventions for youth tobacco use. *PEDIATRICS*, *111*(6), e650–e660.
38. Karpinski, J., Timpe, E., & Lubsch, L. (2010). Smoking Cessation Treatment for Adolescents. *Journal of Pediatric Pharmacology and Therapeutics*, *15*(4), 249–263.
39. Ginzel, K. H., Maritz, G. S., Marks, D. F., Neuberger, M., Pauly, J. R., Polito, J. R., Schulte-Hermann, R., & Slotkin, T. A. (2007). Critical Review: Nicotine for the fetus, the infant, and the adolescent? *Journal of Health Psychology*, *12*(2), 215–224.
40. McNeill, A., Foulds, J., & Bates, C. (2001). Regulation of nicotine replacement therapies (NRT): A critique of current practice. *Addiction*, *96*(12), 1757–1768.
41. bpacnz (2013) Smoking Prevention and Cessation in Adolescents: Changing futures, saving lives. *Best Practice Journal*. *53*, 32-39.
42. Chassin, L. (2002). Parental smoking cessation and adolescent smoking. *Journal of Pediatric Psychology*, *27*(6), 485–496.
43. Melchior, M., Chastang, J. F., Mackinnon, D., Galéra, C., & Fombonne, E. (2010). The intergenerational transmission of tobacco smoking—The role of parents' long-term smoking trajectories. *Drug and Alcohol Dependence*, *107*(2-3), 257–260.
44. Government of Canada. (2013). *Canadian Tobacco Use Monitoring Survey (CTUMS) 2012*. Retrieved from <https://www.canada.ca/en/health-canada/services/publications/healthy-living/canadian-tobacco-use-monitoring-survey-ctums-2012.html>
45. Government of Canada. (2013). *Canadian Tobacco Use Monitoring Survey (CTUMS): overview of historical data 1999 to 2012*. Retrieved from <https://www.canada.ca/en/health-canada/services/publications/healthy-living/overview-historical-data-1999-2012.html>
46. Office on Smoking and Health (US) (2006). *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*. Atlanta (GA): Centers for Disease Control and Prevention (US).
47. Winickoff, J. P., Friebely, J., Tanski, S. E., Sherrod, C., Matt, G. E., Hovell, M. F., & McMillen, R. C. (2009). Beliefs about the health effects of “Thirdhand” smoke and home smoking bans. *PEDIATRICS*, *123*(1), e74–e79.
48. Ramírez, N., Özel, M. Z., Lewis, A. C., Marcé, R. M., Borrull, F., & Hamilton, J. F. (2014). Exposure to nitrosamines in thirdhand tobacco smoke increases cancer risk in non-smokers. *Environment International*, *71*, 139–147.
49. Gilman, S. E., Rende, R., Boergers, J., Abrams, D. B., Buka, S. L., Clark, M. A., Colby, S.M., Hitsman, B., Kazura, A.N., Lipsitt, L.P., Lloyd-Richardson, E.E., Rogers, M.L., Stanton, C.A., Stroud, L.R., & Niaura, R. S. (2009). Parental smoking and adolescent smoking initiation: An intergenerational perspective on tobacco control. *PEDIATRICS*, *123*(2), e274–e281.

- 
50. Winickoff, J. P., Tanski, S. E., McMillen, R. C., Klein, J. D., Rigotti, N. A., & Weitzman, M. (2005). Child health care Clinicians' use of medications to help parents quit smoking: A national parent survey. *PEDIATRICS*, *115*(4), 1013–1017.
 51. Baxi, R., Sharma, M., Roseby, R., Polnay, A., Priest, N., Waters, E., Spencer, N., & Webster, P. (2014) Family and carer smoking control programmes for reducing children's exposure to environmental tobacco smoke. *Cochrane Database of Systematic Reviews*, (3).
 52. AADAC. (2007). *Tobacco Basics Handbook*. Edmonton: Alberta Alcohol and Drug Abuse Commission.
 53. Prokhorov, A. V., Pallonen, U. E., Fava, J. L., Ding, L., & Niaura, R. (1996). Measuring nicotine dependence among high-risk adolescent smokers. *Addictive Behaviors*, *21*(1), 117–127.
 54. DiFranza, J. R., Savageau, J. A., Fletcher, K., Ockene, J. K., Rigotti, N. A., McNeill, A. D., Coleman, M., & Wood, C. (2002). Measuring the loss of autonomy over nicotine use in adolescents. *Archives of Pediatrics & Adolescent Medicine*, *156*(4), 397.
 55. Kleinjan, M., Eijnden, R. J. J. M. van den, van Leeuwe, J., Otten, R., Brug, J., & Engels, R. (2007). Factorial and convergent validity of nicotine dependence measures in adolescents: Toward a multidimensional approach. *Nicotine & Tobacco Research*, *9*(11), 1109–1118.

APPENDICES

Appendix 21(a) Suggested Questions for Risk Factor Screening in Youths (age 10 to 17)

Appendix 21(b) Benefits of Stopping Tobacco Use

Appendix 21(c) Tobacco Dependence Assessment Tools

Appendix 21(d) Brief Tobacco Intervention - Youth Form

Appendix 21(a) Suggested Questions for Risk Factor Screening in Youths (age 10 to 17)

RISK FACTORS	QUESTIONS
Demographic	
<ul style="list-style-type: none"> • Age (10-17 years of age) • Male gender 	<p>Ask all patients 10 years and older about tobacco use.</p>
Environmental	
<ul style="list-style-type: none"> • Second-hand smoke • Parent(s) who use tobacco • Peers (sibling/friend) who use • Availability 	<ul style="list-style-type: none"> • Is smoking allowed in your home? Vehicles? (yes/no) • Do your parents use tobacco? (yes/no) • Do you have friends who use tobacco? (yes/no) • If your friend offered you a cigarette, would you smoke it? (Definitely not/ Probably not/Probably/Definitely)
Normative Views of Smoking	
<ul style="list-style-type: none"> • Belief of social benefits • Overestimate prevalence • Media Influence 	<ul style="list-style-type: none"> • Would using tobacco help you make friends? (yes/no) • Does it seem like everyone around you uses tobacco? (yes/no) • Are you allowed to watch R-rated movies? (yes/no)
Behavioural	
<ul style="list-style-type: none"> • Poor academic achievement • Other behavioural problems • Risk taking and rebelliousness • Tobacco experimentation 	<ul style="list-style-type: none"> • How are your grades in school? (excellent/average/below average) • Are you having any problems at school or home? (yes/no) • Have you ever tried tobacco, even just one puff or a pinch? (yes/no) • Do you think you might smoke in the next year? (definitely not/probably not/probably/definitely)
Mental Health	
<ul style="list-style-type: none"> • Attention Deficit Disorder (ADD) or Attention Deficit Hyperactivity Disorder (ADHD) • Depression 	<ul style="list-style-type: none"> • SNAP Rating Scale • Children's Depression inventory (CDI)-Short-Form self-report measure

Appendix 21(b) Benefits of Stopping Tobacco Use

Within minutes of the last tobacco use, the body will start a process of healing that will continue over the following weeks, months and years.⁵² Within:

- 20 minutes – blood pressure drops to a person’s normal level
- 8 hours – blood carbon monoxide levels drop to normal
- 24 hours – chances of having a heart attack decrease
- 2 weeks to 3 months – circulation improves
- 9 months – lung function improves with less coughing, congestion, fatigue and shortness of breath
- 1 year – risk of coronary heart disease reduces by half
- 5 years – risk of stroke significantly reduced
- 10 years – risk of lung cancer death reduced by half
- 15 years – risk of coronary heart disease is same as a non-smoker

Some other benefits of stopping tobacco use include:

- You will have more energy and won’t feel as tired.
- You will cough less and breathe more easily.
- Your blood pressure will drop and your circulation will improve, making your performance in sports and your stamina while working out easier.
- Your clothes, hair, home and car will smell better.
- Your breath will smell better.
- Your senses of taste and smell will improve.
- Your teeth and fingers won’t be yellowed.
- Your skin will not wrinkle as quickly.
- You will have more money that you can spend on other things.
- You will be a positive role model for younger siblings and friends.
- You will feel good about yourself and your freedom from addiction.
- You will have no worries about exposing family and friends to second-hand smoke.

For people who smoke:

- You will be less likely to develop heart disease, stroke, lung cancer, chronic lung disease, and other smoking-related diseases.
- You will have fewer sinus congestion and colds.

For people who use smokeless tobacco:

- You will be less likely to develop cancer of the cheeks, gums, and inner surface of the lips.
- You will be less likely to suffer from cracked or bleeding lips and gums, and receding gums which can lead to teeth falling out.

Appendix 21(c) Tobacco Dependence Assessment Tools (Part 1)

1. Modified Fagerstrom Tolerance Questionnaire (mFTQ) ⁵³		Score
1. How many cigarettes a day do you smoke?	1. Over 26 a day 2. About 16–25 a day 3. About 1–15 a day 4. Less than 1 a day	2 1 0 0
2. Do you inhale?	1. Never 2. Seldom 3. Quite Often 4. Always	0 1 1 2
3. How soon after you wake up do you smoke your first cigarette?	1. Within the first 30 mins 2. More than 30 mins after waking but before noon 3. In the afternoon 4. In the evening	1 0 0 0
4. Which cigarette would you hate to give up?	1. First cigarette in the morning 2. Any other cigarette before noon 3. Any other cigarette afternoon 4. Any other cigarette in the evening	1 0 0 0
5. Do you find it difficult to refrain from smoking in places where it is forbidden?	1. No, not at all difficult 2. No, not usually difficult 3. Yes, somewhat difficult 4. Yes, very difficult	0 0 1 1
6. Do you smoke if you are so ill that you are in bed most of the day?	1. Yes, always 2. Yes, quite often 3. No, not usually 4. No, never	1 1 0 0
7. Do you smoke more during the first 2 hours than during the rest of the day?	1. Yes 2. No	1 0
Scoring: 7 to 10 points = highly dependent; 4 to 6 points = moderately dependent; less than 4 points = minimally dependent		
<i>Source: Prokhorov et al., 1996.</i>		

Appendix 21(c) Tobacco Dependence Assessment Tools (Part 2)

2. Hooked on Nicotine Checklist (HONC) ⁵⁴	
1. Have you ever tried to quit but couldn't?	1. Yes 2. No
3. Do you smoke <u>now</u> because it's really hard to quit?	1. Yes 2. No
3. Have you ever felt like you were addicted to tobacco?	1. Yes 2. No
3. Do you ever have strong cravings to smoke?	1. Yes 2. No
3. Have you ever felt like you really needed a cigarette?	1. Yes 2. No
3. Is it hard to keep from smoking in places where you are not supposed to, like school?	1. Yes 2. No
When you tried to stop smoking (OR, when you haven't used tobacco in a while)	
3. Did you find it hard to concentrate because you couldn't smoke?	1. Yes 2. No
3. Did you feel more irritable because you couldn't smoke?	1. Yes 2. No
3. Did you feel a strong need or urge to smoke?	1. Yes 2. No
3. Did you feel nervous, restless or anxious because you couldn't smoke?	1. Yes 2. No
The HONC is scored by counting the number of YES responses. Those who smoke and have scores above zero can be told that they are already hooked. Many youths become hooked without realizing it. This is because the loss of autonomy can start after the first few cigarettes.	
Source: DiFranza et al., 2002.	

Appendix 21(c) Tobacco Dependence Assessment Tools (Part 3)

3. Youth Multidimensional Dependence Assessment Tool ⁵⁵	
1. How soon after you wake up do you smoke your first cigarette?	Yes No
2. Which cigarette would you hate to give up?	Yes No
3. How many cigarettes a day do you smoke?	Yes No
4. Do you smoke if you are so ill that you are in bed most of the day?	Yes No
5. Have you ever felt like you were addicted to tobacco?	Yes No
6. Do you ever have strong cravings to smoke?	Yes No
7. Have you ever felt like you really needed a cigarette?	Yes No
8. Do you smoke because it is really hard to quit?	Yes No
At times that you tried to stop or weren't able to smoke, did you experience the following:	
9. Finding it hard to concentrate?	Yes No
10. Feeling more irritable or angry?	Yes No
11. Feeling more nervous, restless, or anxious?	
Source: Kleinjan et al., 2007.	

Appendix 21(d) Brief Tobacco Intervention (Youth) Form (Page 1)

Brief Tobacco Intervention (Youth) Form

Inpatient/Residential

Outpatient/Ambulatory

ASK		
Have you ever tried tobacco, even one puff or a pinch? <input type="checkbox"/> No <input type="checkbox"/> Yes →	Last use	How often?
Type of tobacco/tobacco-like product (<i>check all that apply</i>) <input type="checkbox"/> Cigarettes <input type="checkbox"/> Cigar/cigarillo <input type="checkbox"/> Waterpipe (e.g. Hookah) <input type="checkbox"/> Pipe <input type="checkbox"/> Smokeless Tobacco (Chew/spit) <input type="checkbox"/> E-cigarettes/Vapes <input type="checkbox"/> Other (specify) _____		
In what situations do you use tobacco?	Does anyone use tobacco products in your home/vehicles? <input type="checkbox"/> No <input type="checkbox"/> Yes →	

ADVISE
<input type="checkbox"/> Advised patient of AHS Tobacco and Smoke-free Environment Policy <input type="checkbox"/> Former, never or at risk of use: provided positive reinforcement <input type="checkbox"/> Current tobacco user: advised to quit with personalized message

ASSESS
On a scale of 1-10 how important is it for you to change your tobacco/tobacco-like product use now? (<i>1=not important, 10=very important</i>) <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10
Summarize ambivalence: <i>Like:</i> _____ <i>Dislike:</i> _____
Have you ever tried to or thought about stopping? <input type="checkbox"/> No <input type="checkbox"/> Yes
Is this client a mature minor? <input type="checkbox"/> No* <input type="checkbox"/> Yes

* If no, parent/guardian consent is needed to proceed with intervention

ASSIST
<input type="checkbox"/> youth self-help materials provided <input type="checkbox"/> helped identify support in own environment <input type="checkbox"/> facilitated behavioural counselling <input type="checkbox"/> other (<i>specify</i>) _____

ARRANGE			
Referral for ongoing support: <input type="checkbox"/> Refused <input type="checkbox"/> Accepted <input type="checkbox"/> provided information for self-referral (<i>specify</i>) _____ <input type="checkbox"/> referral to AlbertaQuits Services <input type="checkbox"/> fax referral form sent (form #09973) <input type="checkbox"/> referral to CCA Tobacco Treatment and Support Clinic (CancerControl) <input type="checkbox"/> other, specify (e.g. <i>Primary Care Network</i>) _____			
Provider Name (print)	Signature	Date (yyyy-Mon-dd)	Time (hh:mm)

Appendix 21(d) Brief Tobacco Intervention (Youth) Form (Page 2)

Brief Tobacco Intervention (Youth) Form (back page) Suggested script to guide the brief intervention	
Note: Below is a script to help guide the brief tobacco intervention. Modification to fit a specific context may be necessary. Be sure to personalize the advice to the patient/client whenever possible.	
Ask	<ul style="list-style-type: none"> • Have you tried even one puff or a pinch of tobacco products like cigarettes or chew? • Have you ever tried vaping?
Advise	<p>Current tobacco use</p> <ul style="list-style-type: none"> • I do have to tell you that any tobacco products including cigarettes and chew can't be used anywhere on these grounds. • One of the best things you can do for your health including your skin, your teeth, your heart and lungs, is to stop using tobacco. <p>Current E-Cigarette/Vaping Use</p> <ul style="list-style-type: none"> • Vapes have not been studied to show that they're safe to use and the best thing you can do is not to use these products. <p>Currently not using tobacco/tobacco-like products</p> <ul style="list-style-type: none"> • That is great! We don't know the long term dangers that vaping can have on your health but we already know it can lead to cigarette smoking which is addictive and bad for health. So the best thing you can do is not to use these products.
Assess	<p>Readiness to quit</p> <ul style="list-style-type: none"> • Have you ever tried to stop smoking/vaping/chewing? • On a scale of 1-10 how important is it for you to stop using tobacco right now? • What do you like about smoking? What don't you like about it? <p>Deemed not a mature minor</p> <ul style="list-style-type: none"> • I can help you make the changes you want to but we'll need to talk to your parents about your decision first, so that they can help you too.
Arrange	<ul style="list-style-type: none"> • You can come back to speak with me here or I can arrange for someone to call you from the helpline and make a plan with you over the phone and give you information you need. Would you like me to set this up for you?

