

## **Specific Populations: Youth (Children and Adolescents)**

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### *Overview of Evidence*

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The following recommendations, and supporting evidence, have been extracted from existing clinical practice guidelines to inform the development of the CAN-ADAPTT Summary Statements.

CAN-ADAPTT worked with the Guidelines Advisory Committee (GAC) to conduct a literature search (years: 2002-2009) to identify existing clinical practice guidelines (CPGs). Five existing clinical practice guidelines were identified as meeting the high quality criteria set out in the [AGREE Instrument](#). The recommendations contained in these high quality CPGs have been used as the evidence base for the CAN-ADAPTT guideline development process. Visit [www.can-adaptt.net](http://www.can-adaptt.net) to view CAN-ADAPTT's [guideline development methodology](#).

**U.S. Department of Health and Human Services Public Health Service (2008)<sup>1</sup>**

Clinicians should ask pediatric and adolescent patients about tobacco use and provide a strong message regarding the importance of totally abstaining from tobacco use. (*Strength of Evidence = C*)

Counselling has been shown to be effective in treatment of adolescent smokers. Therefore, adolescent smokers should be provided with counselling interventions to aid them in quitting smoking. (*Strength of Evidence = B*)

Secondhand smoke is harmful to children. Cessation counselling delivered in pediatric settings has been shown to be effective in increasing abstinence among parents who smoke. Therefore, to protect children from secondhand smoke, clinicians should ask parents about tobacco use and offer them cessation advice and assistance. (*Strength of Evidence = B*)

**Institute for Clinical Systems Improvement (2004)<sup>2</sup>**

(*Birth to 10 years*): Smoke exposure (in home, at day care, etc.) should be established at nearly every visit. Tobacco use status of all patients (and in the case of infants and children, the use status of everyone in the home) should be established. (*Class of Evidence = D, M, R, X*)

(*10 years and above*): Patient's tobacco use and second hand smoke exposure should be established at nearly every visit. (*Class of Evidence = D, M, R, X*)  
Adolescents should have usage re-assessed at nearly every visit, regardless of whether there is a chart notation of non-use. (*Class of Evidence = A, C, D, M, R*)

(*10 years and above*): "Pre-contemplators" benefit from non-confrontational messages about the importance of quitting and the awareness that provider help is available when ready. (*Class of Evidence = R*)

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<sup>1</sup>U.S. Department of Health and Human Services Public Health Service. (2008, May). Clinical practice guideline: Treating tobacco use and dependence: 2008 update.

<sup>2</sup> Institute for Clinical Systems Improvement (ICSI). (2004, June). Tobacco use prevention and cessation for infants, children and adolescents. Retrieved October 24, 2007 from:  
[http://www.icsi.org/tobacco\\_use\\_prevention\\_and\\_cessation\\_for\\_children/tobacco\\_use\\_prevention\\_and\\_cessation\\_for\\_infants\\_\\_children\\_and\\_adolescentsn\\_and\\_adolescents\\_\\_full\\_version\\_.html](http://www.icsi.org/tobacco_use_prevention_and_cessation_for_children/tobacco_use_prevention_and_cessation_for_infants__children_and_adolescentsn_and_adolescents__full_version_.html)

(10 years and above): “Contemplators” should receive support and respectful urging to quit. A patient in “preparation” should set a quit date, receive self-help information and be encouraged to accept follow-up after the quit date. (Class of Evidence = A, M, R)

(10 years and above): If a patient’s parent, sibling or friend uses tobacco, patients should be assisted in developing refusal skills and given educational materials. (Class of Evidence = A)

### **New Zealand Ministry of Health (2007)<sup>3</sup>**

Offer smoking cessation interventions that incorporate known effective components (such as those identified in the previous sections) to young people who smoke. (Grade = √)

NRT can be used by young people (12-18 year olds) who are dependent on nicotine (that is, NRT is not recommended for use by occasional smokers) if it is believed that NRT may aid the quit attempt. (Grade = C)

## ***Background***

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Youth have their own social network of individuals whom they trust and who exert influence over them. Healthcare practitioners may or may not be part of these networks. Cooperative efforts to provide non-smoking messages between adults other than healthcare practitioners might increase effectiveness. Community mobilization in tobacco use prevention provides a model for shared efforts between parties.

Tobacco use habits among youth evolve during adolescence and the timing and trajectory of smoking and addiction differ between youth depending on factors such as access to tobacco, genetic predisposition, family and peer influence etc. There are no guidelines as to what constitutes “smoking” in youth so consensus is needed as to when a youth is considered to be a smoker (the recommendation is that first puff be viewed as a risk factor for continued smoking).

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<sup>3</sup> Ministry of Health. (2007, August). New Zealand smoking cessation guidelines. Wellington: Ministry of Health.

There is as yet, no widely accepted, standardized youth-specific definition of nicotine dependence for use by clinicians. Similarly there are no validated screening tools, which would help practitioners identify when a youth is dependent. What is needed is a tool that helps clinicians identify youth at risk of sustained smoking and nicotine dependence before these outcomes are established (i.e., before it is too late), since successful intervention among dependent youth is challenging. Research is needed to better understand what clinicians should ask about in identifying youth at risk for sustained smoking. Work is ongoing to develop a prognostic tool for identifying adolescents at risk of becoming daily smokers, who may benefit from counselling aimed at preventing sustained smoking<sup>4</sup>.

Regarding the effectiveness of treatments for youth, more research needs to be done. There are few RCTs testing cessation interventions for youth. Among 16 trials reviewed recently<sup>5</sup>, 3 school-based programs and one in a clinic setting provided evidence of effectiveness. An intervention that combined NRT and behavioural counselling also showed promise.

There is little evidence to date on whether or not to recommend NRT to youth and this issue requires further research. As indicated in the UK and New Zealand guidelines, however, measures for treating smoking cessation in adults may be suitable for youth.

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## *CAN-ADAPTT Summary Statements*      *[Comment on the discussion board](#)*

CAN-ADAPTT's development process reflects a dynamic opportunity to ensure that its guideline is practice informed and addresses issues of applicability in the Canadian context. It has built from the evidence and recommendations contained in existing guidelines. It did not review the primary literature to inform the development of its Summary Statements unless emerging evidence was identified by the Guideline Development Group. The CAN-ADAPTT Guideline Development Group has provided the below Summary Statements for Youth (Children and Adolescents).

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<sup>4</sup> Karp I, Paradis G, Lambert M, Dugas E, O'Loughlin J. A prognostic tool to identify adolescents at high risk of becoming daily smokers. *BMC Pediatr*. 2011 Aug 11;11:70.

<sup>5</sup> Gervais A, O'Loughlin J, Dugas E, Eisenberg MJ, Wellman RJ, DiFranza JR: "A systematic review of randomized controlled trials of youth smoking cessation interventions". *Drogues, sante et societe* 2007, 6 (Supplement II): ii1-ii26

**Summary Statement #1 –**

**Health care providers, who work with youth (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 youth (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<sup>6</sup>**

\*GRADE: See below or click [here](#) for Grade of Recommendation and Level of Evidence Summary Table.

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<sup>6</sup> Priest N, Roseby R, Waters E, Polnay A, Campbell R, Spencer N, Webster P, Ferguson-Thorne G. Family and carer smoking control programmes for reducing children's exposure to environmental tobacco smoke. Cochrane Database of Systematic Reviews 2008, Issue 4. Art. No.: CD001746. DOI: 10.1002/14651858.CD001746.pub2

## *Clinical Considerations*

## *Comment on the discussion board*

- Youth, unlike adults who are usually established in their pattern of tobacco use, are more likely to be in the process of acquiring the smoking habit with its concomitant nicotine dependence. In addition to not beginning to smoke, prevention of transition from intermittent to regular smoking may be key in helping youth stop smoking. The following recommendations are relevant to inquiry about youth smoking.
  - Ask questions to ascertain use of tobacco products in multiple ways; use language and terminology that youth are familiar with.
  - Be aware of the natural history of tobacco use onset since there are important milestones from “first puff” to nicotine dependence that may signal transition to regular or daily smoking. Smoking onset trajectories should be closely monitored, since intermittent smoking can quickly become regular smoking. Ask, for example about “puffing” or “trying” in addition to regular or daily use (which indicate sustained smoking).
  - Use direct inquiry or a validated prognostic or screening tool to identify those at high risk of sustained smoking. Identify those with additional health risks (eg. Asthma).
  - Any child or adolescent who consumes tobacco products should be advised to stop. The effectiveness of the 5 As has not been established in youth. However, asking and advising “are generally considered to be the entry points for providing effective individual intervention”<sup>7</sup>.
  
- Types of Smoking Cessation Treatments.
  - Community-based (i.e., non-clinical) tobacco control programs for youth may be an important resource for referral purposes
  - There are few studies that evaluate if brief counselling by health professionals is effective in youth.
  - Motivational interviewing techniques can be adapted for youth<sup>8</sup>.
  - To date, there is little empirical evidence that either NRT<sup>9</sup> or bupropion SR use<sup>10</sup> are effective in young smokers. However they have been shown to be safe.

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<sup>7</sup> U.S. Department of Health and Human Services Public Health Service. (2008, May). Clinical practice guideline: Treating tobacco use and dependence: 2008 update.

<sup>8</sup> U.S. Department of Health and Human Services Public Health Service. (2008, May). Clinical practice guideline: Treating tobacco use and dependence: 2008 update.

- The New Zealand guidelines recommend interventions for youth that are effective in adults (i.e., interventions that incorporate multi-session support)<sup>11</sup>.
- To date, there is little empirical evidence that advising parents about the potential harmful effects of their smoking or of secondhand smoke on their child(ren), is effective. However, counselling parents in pediatric settings or “...during child hospitalizations may increase parents’ interest in stopping smoking, parents’ quit attempts and parents’ quit rates...”<sup>12</sup>.

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<sup>9</sup> Ministry of Health. (2007, August). New Zealand smoking cessation guidelines. Wellington: Ministry of Health.

<sup>10</sup> U.S. Department of Health and Human Services Public Health Service. (2008, May). Clinical practice guideline: Treating tobacco use and dependence: 2008 update.

<sup>11</sup> Ministry of Health. (2007, August). New Zealand smoking cessation guidelines. Wellington: Ministry of Health.

<sup>12</sup> U.S. Department of Health and Human Services Public Health Service. (2008, May). Clinical practice guideline: Treating tobacco use and dependence: 2008 update.



*Tools/Resources*

*Contribute a Tool/Resource*

Title	Description	Resource
<a href="#"><u>BLAST program</u></a>	<ul style="list-style-type: none"> <li>• BLAST (Building Leadership for Action in Schools Today) is a youth leadership tobacco prevention program developed by the Lung Association of Alberta &amp; NWT. It challenges youth to think critically about the tobacco industry and its products, and the social and health effects from tobacco.</li> </ul>	Program to empower youth to become leaders and advocates in their schools and communities
<a href="#"><u>Leave the Pack Behind</u></a>	<ul style="list-style-type: none"> <li>• LTPB delivers smoking cessation and prevention support to post-secondary students who smoke or are at risk of starting to smoke.</li> </ul>	Resources for smokers, friends of smokers and health professionals.
<a href="#"><u>MyLastDip.com</u></a>	<ul style="list-style-type: none"> <li>• A free, best-practices Web-based treatment program designed to help young smokeless tobacco users quit.</li> </ul>	Web-based treatment program
<a href="#"><u>Quit4Life</u></a>	<ul style="list-style-type: none"> <li>• Health-Canada sponsored website with profiles and activities to support youth in smoking cessation.</li> </ul>	Interactive and personalized 4 week web program.
<a href="#"><u>Stupid.ca</u></a>	<ul style="list-style-type: none"> <li>• An anti-tobacco movement created for youth, by youth, funded by Ontario's Ministry of Health Promotion.</li> </ul>	Educational resource for Youth.
<a href="#"><u>Talk with your children about smoking</u></a>	<ul style="list-style-type: none"> <li>• A pamphlet suggesting how to approach the discussion about smoking with children</li> </ul>	Educational pamphlet



## *Research Gaps*

## *Contribute a Research Gap*

- Evaluate the effectiveness of using the 5A's in paediatric clinics to treat both adolescents and parents. With youth, at what points should clinicians intervene and how often?
- Explore the safety and effectiveness of medications in adolescents, including bupropion SR, NRT, Varenicline, and a nicotine vaccine
- Investigate the effectiveness of counselling interventions to motivate youth to stop using tobacco
- Investigate the effectiveness of child-focused versus family-focused or peer-focused interventions as well as interventions accessed via the Internet, quitlines, and school-based programs
- Research strategies for increasing the efficacy, appeal, and reach of counselling treatments for adolescent smokers
- Evaluate interventions that prevent sustained smoking in youth
- What should clinicians ask about in identifying youth at risk for sustained smoking?
- To what extent should other addictions be addressed?
- How to develop best practices that acknowledge the range of specific situations encountered by youth

## *Overview of CAN-ADAPTT's Practice-Informed Guideline*

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The full text guideline is available online at [www.can-adaptt.net](http://www.can-adaptt.net). The Guideline includes the following sections:

- Counselling and Psychosocial Approaches
- Pharmacotherapy (*in development*)
- Aboriginal Peoples
- Hospital-Based Populations
- Mental Health and/or Other Addiction(s)
- Pregnant and Breastfeeding Women
- Youth (Children and Adolescents)

**We invite you to comment on the applicability and usability of this section, suggest additional tools and resources, and help to identify any gaps in knowledge.**

**Table 1. Grade of Recommendation & Level of Evidence Summary Table\*\***

<b>GR/LOE*</b>	<b>Clarity of risk/benefit</b>	<b>Quality of supporting evidence</b>	<b>Implications</b>
<b>1A.</b> Strong recommendation. High quality evidence.	Benefits clearly outweigh risk and burdens, or vice versa	Consistent evidence from well performed randomized, controlled trials or overwhelming evidence of some other form. Further research is unlikely to change our confidence in the estimate of benefit and risk.	Strong recommendations, can apply to most patients in most circumstances without reservation. Clinicians should follow a strong recommendation unless a clear and compelling rationale for an alternative approach is present.
<b>1B.</b> Strong recommendation. Moderate quality evidence.	Benefits clearly outweigh risk and burdens, or vice versa	Evidence from randomized, controlled trials with important limitations (inconsistent results, methodologic flaws, indirect or imprecise), or very strong evidence of some other research design. Further research (if performed) is likely to have an impact on our confidence in the estimate of benefit and risk and may change the estimate.	Strong recommendation and applies to most patients. Clinicians should follow a strong recommendation unless a clear and compelling rationale for an alternative approach is present.
<b>1C.</b> Strong recommendation. Low quality evidence.	Benefits appear to outweigh risk and burdens, or vice versa	Evidence from observational studies, unsystematic clinical experience, or from randomized, controlled trials with serious flaws. Any estimate of effect is uncertain.	Strong recommendation, and applies to most patients. Some of the evidence base supporting the recommendation is, however, of low quality.
<b>2A.</b> Weak recommendation. High quality evidence.	Benefits closely balanced with risks and burdens	Consistent evidence from well performed randomized, controlled trials or overwhelming evidence of some other form. Further research is unlikely to change our confidence in the estimate of benefit and risk.	Weak recommendation, best action may differ depending on circumstances or patients or societal values
<b>2B.</b> Weak recommendation. Moderate quality evidence.	Benefits closely balanced with risks and burdens, some uncertainty in the estimates of benefits, risks and burdens	Evidence from randomized, controlled trials with important limitations (inconsistent results, methodologic flaws, indirect or imprecise), or very strong evidence of some other research design. Further research (if performed) is likely to have an impact on our confidence in the estimate of benefit and risk and may change the estimate.	Weak recommendation, alternative approaches likely to be better for some patients under some circumstances
<b>2C.</b> Weak recommendation. Low quality evidence.	Uncertainty in the estimates of benefits, risks, and burdens; benefits may be closely balanced with risks and burdens	Evidence from observational studies, unsystematic clinical experience, or from randomized, controlled trials with serious flaws. Any estimate of effect is uncertain.	Very weak recommendation; other alternatives may be equally reasonable.

\*GR- Grade of Recommendation, LOE – Level of Evidence

\*\*Adapted from: UpToDate. Grading guide. No date. Available from: <http://www.uptodate.com/home/about/policies/grade.html>; and Guyatt G, Gutterman D, Baumann MH, Addrizzo-Harris D, Hylek EM, Phillips B, Raskob G, Lewis SZ, Schünemann H. Grading strength of recommendations and quality of evidence in clinical guidelines: Report from an American College of Chest Physicians task force. *Chest*. 2006 Jan;129(1):174-81, originally adapted from the GRADE Working Group.