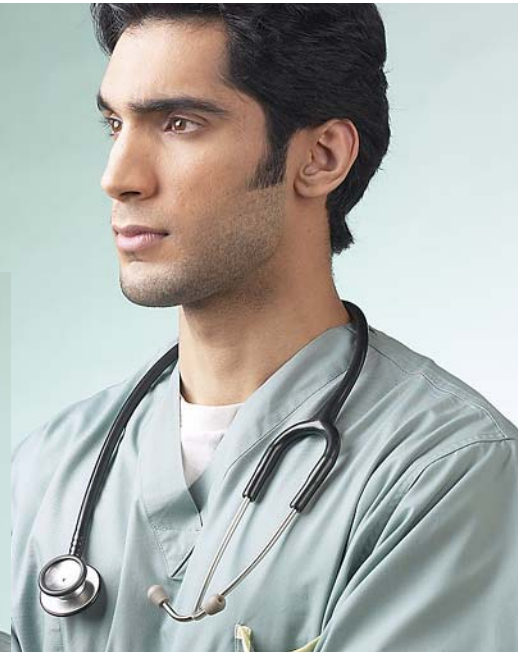




Training in Tobacco Cessation Counseling for Medical, Nursing, Dentistry and Pharmacy Students:

Environmental Scan and Recommendations



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EXECUTIVE SUMMARY

The primary aim of this report is to review the current status of curricula addressing tobacco cessation in medical education, nursing, dentistry, and pharmacy education programs and provide recommendations for action. Specific objectives are to: (1) describe the status of smoking cessation curricula in Canadian universities with degree programs in medicine, nursing, dentistry, and pharmacy, (2) provide a synopsis of internationally available smoking cessation curricula for medicine, nursing, dentistry, and pharmacy, (2) review the published and grey literature, with particular attention to evaluation studies, and (3) provide recommendations for future development of smoking cessation curricula for medicine, nursing, dentistry and pharmacy. This report is part of a project sponsored by the US Center for Disease Control to assess the training of health professions students in treating tobacco dependence. Because even brief interventions from clinicians have a positive impact on cessation rates, there is general agreement that health professionals should take a leadership role in tobacco control. It is also well accepted that widespread implementation of effective tobacco cessation training programs for current and future health care providers should be an international priority.

At least two main barriers interfere with successful implementation of tobacco cessation training by teaching faculty and practitioners: (1) receptivity from faculty members, and (2) barriers encountered in clinical settings. In a teaching setting, the lack of time and space to include more content in the program, and the relative importance given to tobacco cessation by faculty decision makers in comparison to other teaching areas have also been identified as important challenges.

To be most effective, studies demonstrate specific elements must be present in cessation counseling education. In a 1999 publication, Ferry and colleagues identified six basic science and six clinical science elements that should be included in tobacco curriculum. These criteria guided our review of programs for which there was sufficient information available through the web and published or grey literature.

Canadian Training in Medical Education

The Medical Council of Canada specifies that physicians be able to outline the management for stopping nicotine use, including advice to quit, nicotine replacement therapies, setting quit dates, behavioral counseling and identifying community resources. A Canadian survey published in 2002 by Spangler and colleagues indicated that there were no curriculum models to guide undergraduate programs in delivery of tobacco cessation training. We conducted searches through PubMed, Eric, and Google to identify tobacco cessation training programs and materials for medical education which have been developed since Spangler's survey.

In our search for curriculum information from the 16 Faculties of Medicine in Canada, only two schools listed tobacco training as a part of their curriculum. Four of the 16 schools either did not have curriculum information available online or required authorization for access. The two schools that listed tobacco content included Laval University and University of Montreal, however, there was not sufficient detail available on the Internet to review the content in detail.

A Google search was conducted to identify existing Canadian programs designed to assist practicing physicians in counseling patients. Six of the programs identified are web-based and three are workshop-based; the remaining programs provide resources and information in the form of booklets, guidelines, etc. Several of the programs are available in French.

We located published evaluations for two of the programs: (1) "Quit for Life", and (2) "Physicians Taking Action Against Smoking". Findings from these studies suggest acceptability of the program by physicians, as well as increased counseling in their practices and changes in patient smoking behaviors.

We determined “Physicians Taking Action Against Smoking” to be the most comprehensive program available. This program met 10 of the 12 criteria identified by Ferry et al., as recommended tobacco curriculum content areas. A published evaluation of this program suggests it is effective in improving physicians’ counseling behaviors.

Canadian Training in Nursing, Dentistry and Pharmacy

Smoking cessation counseling is considered to be a standard of practice for all clinical health professions. A published Cochrane Review concluded that health care professionals who received training were more likely to perform tasks of smoking cessation than untrained controls. However, there was no strong evidence that it changed smoking behavior in their patients. We conducted searches through PubMed, Eric, and Google to identify tobacco cessation training programs and materials for students in nursing, dentistry, and pharmacy.

None of the 31 university-based nursing training programs mentioned specific tobacco content in their curricular description. We conducted a Google search for existing programs to assist practicing nurses in counseling patients which could be used in undergraduate nursing education. Of the programs and resources identified, two were web-based, interactive programs, three were workshop-based, and the remainder (two) provide resources and information in the form of booklets, guidelines etc. Based on the program information available through the Internet, none of the 7 programs met all the Ferry et al. criteria for an effective tobacco cessation curriculum. We determined “Helping People Quit Smoking” by the Registered Nurses Association of Ontario to be the most comprehensive program available for nurses. This program addressed 9 of the 12 Ferry et al. recommended tobacco curriculum content areas.

In 1998, the University of Manitoba undergraduate dental program implemented the most comprehensive tobacco control curriculum in Canada. This program is currently being evaluated. Of the three programs and resources identified for practicing dentists, we determined “Tobacco or Oral Health” by World Dental Federations to be the most comprehensive program available.

In the area of pharmacy, a group of Canadian researchers, in collaboration with the Canadian Pharmacists Association, are currently developing a cessation training program for pharmacists. The will be available online and in live workshop format sometime in the near future. Currently, there are no standardized materials available for Canadian Faculties of Pharmacy.

International Training for Health Professionals

We conducted searches through PubMed, Eric, and Google to identify tobacco cessation training programs and materials in Australia, United States, Switzerland, United Kingdom, France, and New Zealand. Based on the program information available through the Internet, we rated four highly visible programs using the 12 recommended criteria outlined by Ferry et al. Although none of the programs met all the criteria for an effective tobacco cessation curriculum, “Smokescreen Education Program” addressed 7 of the 12 Ferry et al., criteria and was the most comprehensive curriculum reviewed.

At the international level, the majority of smoking cessation resources apply the WHO guidelines. Numerous national and international programs are available for health professionals through the Internet to help them improve their counseling skills in the treatment of tobacco dependence. An international resource, www.Treattobacco.net, is produced and maintained by several international groups. The University of Munich offers a training program for dental health professionals on general oral health which includes tobacco content. In Australia, an online program “Professionals Helping Others to Quit” is available for pharmacy assistants and practicing pharmacists.

“Action on Smoking and Health” (Scotland) provides resources to consumers and practitioners; the organization is involved in a wide range of activities, including “Tobacco Information Scotland”, which has been developed as a national gateway to tobacco control information. Through their training and development section, they aim to promote best practices through evidence based training, increase the quality and consistency of tobacco related training, increase the number of people trained in tobacco issues, ensure that everyone who needs tobacco related training can access it. This initiative also seeks to enhance the professional standing of smoking cessation as a specialization, through developing validation and accreditation systems.

Conclusions and Recommendations

We found that in Canada, programs for practicing health professionals are more readily available than for students in training. Relatively speaking, there have been more programs developed for practicing physicians and nurses, than for dentists and pharmacists—both in Canada and internationally. Currently, there is a particular lack of resources for pharmacists. It is recommended that “Rx for Chance” which was developed for pharmacy students (University of California, San Francisco) and a program currently under development for Canadian pharmacists, serve as foundation pieces in addressing this gap. The Australian program “Professionals Helping Others to Quit” will also be a useful resource.

The two primary challenges to expanding training in cessation counseling for students and practitioners will be a perceived lack of time and space in university curricula and clinical practice. “Action on Smoking and Health” (Scotland) provides an excellent example of a comprehensive approach that is not only providing training, but also attempting to address organizational barriers to clinical intervention. Additional work is needed to identify ways in which cessation training can be incorporated into existing university curriculum in an efficient and effective manner which is acceptable to teaching faculty.

Finally, some but not all of the programs reviewed have been evaluated. It is strongly recommended that program evaluation be incorporated into future program development. This should include the development of a program description which highlights the theory underlying the approach, and specific objectives. Additional evaluation should address implementation and outcomes such as knowledge and incorporation of cessation into clinical practice.

A limitation of this work is that we did not have access to actual curricula or program materials. We relied on published descriptions and information available through the Internet. If further research is carried out, program developers should be contacted regarding the status of their programs and availability of internal evaluation reports. Another limitation of this report is that it focuses solely on medical education, nursing, pharmacy and dentistry. Other health professions groups such as physiotherapists, occupational therapists, psychologists, and counselors should also be considered.

In summary, a number of programs and resources are available that can be used as the basis for developing program materials that are appropriate for both students and practicing health professionals in Canada and internationally. Evaluation of these programs will be essential for purposes of ongoing program improvement, assessing achievement of objectives, and social accountability, as well as building a stronger body of literature on tobacco cessation counseling in clinical settings.

1. INTRODUCTION

Tobacco remains the agent most responsible for preventable death. In Canada, smoking remains the leading preventable cause of death and disease; one third of all tobacco users will die prematurely due to smoking. Health professionals are in an ideal position to counsel patients against tobacco use and assist them in quitting smoking. The extent to which health professions education programs incorporate tobacco control into their undergraduate curricula is unknown. This information is needed by planners to identify strategies that ensure all health professionals are educated in this important health risk area.

This report reviews the current status of curricula addressing tobacco cessation in medical education, nursing, dentistry, and pharmacy education programs and provide recommendations for action. Specific objectives are: (1) describe the status of smoking cessation curricula in Canadian universities with degree programs in medicine, nursing, dentistry, and pharmacy, (2) provide a synopsis of internationally available smoking cessation curricula for medicine, nursing, dentistry, and pharmacy, (2) review the published and grey literature, with particular attention to evaluation studies, and (3) provide recommendations for future development of smoking cessation curricula for medicine, nursing, dentistry and pharmacy. This report is part of a project sponsored by the US Center for Disease Control to assess globally the training of health professions students in treating tobacco dependence.

The report is divided into four main sections. The first section provides an overview including the current state of knowledge on smoking cessation counseling for health professionals, and educational methods for smoking cessation training programs and essential elements of effective tobacco curriculum content. The second section provides a description of current Canadian programs that address tobacco dependence, including both pre and post certification programs. Thirdly, we present an overview of international tobacco cessation training curricula and programs of interest from five countries. The final section of the report presents conclusions and provides recommendations for further action. It should be noted that the term “tobacco counseling” refers to both smoking and smokeless tobacco dependence in this report.

2. CURRENT STATE OF KNOWLEDGE

2.1. Rationale

In 2001, nine Canadian health professional associations¹ developed a joint statement regarding their roles in helping Canadians stop smoking. This statement recognizes that nearly all Canadians consult a health professional at least once a year, often at “teachable moments” when they may be more motivated to change their unhealthy behaviors (Joint Statement, 2001).

Because even brief interventions from clinicians have a positive impact on cessation rates, there is general agreement that health professionals should take a leadership role in tobacco control (Lancaster et al, 2000; Silagy et al. 2001). It is also well accepted that widespread implementation of effective tobacco cessation training programs for current and future health care providers should be an international priority. In a meta-analysis of ten studies in 2000, Lancaster et al. concluded that health care providers who received smoking cessation training were significantly more likely to intervene with patients who use tobacco than those who were not formally trained. Also, a randomized trial by Cummings et al. (1989) suggests that medical school is the optimal time for training in smoking cessation interventions.

¹ Canadian Association of Occupational Therapists, Canadian Association of Social Workers, Canadian Dental Association, Canadian Medical Association, Canadian Nurses Association, Canadian Pharmacists Association, Canadian Physiotherapy Association, Canadian Psychologists Association, and Canadian Society of Respiratory Therapists

Clinical practice guidelines, practice tools, quick reference guides and other resources are available to health professionals to enable them to counsel patients on smoking cessation, yet health professionals appear to have doubts regarding their effectiveness in motivating behavior change in their patients (Joint Statement, 2001). This may be in part due to insufficient training in this area (Joint Statement, 2001). In the last decade, some studies surveyed medical schools to assess the content of their curriculum on smoking prevention and cessation interventions (Thomas R., 1997; Ferry L.H. et al., 1999; Powers C.A. et al., 2004); two of these surveys were based in the US and one in Canada.

In 1997, Roger Thomas surveyed Canadian health training programs including medicine, psychology, nursing and pharmacy. A total of 283 schools were contacted and responses were received from 165 (58% response rate). Specifically, nine schools of undergraduate medicine, 30 departments of postgraduate medicine, 93 schools of nursing, nine schools of pharmacy, and 24 departments of psychology replied. The aim of the survey was to assess smoking cessation counseling offered in Canadian health professional schools. In that study, Thomas concluded, "Many assistant deans are not able to define the number of hours of specific tobacco-counseling instruction given in their curriculum". Moreover, of the assistant deans reporting on the level of counseling practice skills among their students, nearly half (66%) of undergraduate medicine students, 30% of graduate medicine students, 55% of Anglophone nursing students, 65% of francophone nursing students) rated the skills as minimal or basic. Two more recent surveys conducted in Canadian pharmacy faculties are described in section 6.4.2 of this report.

2.2. Practice Guidelines

Major health care organizations and authorities in Canada and abroad recommend physicians and other health professionals provide their patients with routine tobacco prevention or cessation interventions. In a clinical setting, several interventions are recognized to be effective. Table 1 provides an example of a reference tool that may be used by practitioners to guide their selection of tobacco cessation interventions and prescription of various intervention types. Published guidelines include those from the US Department of Health and Human Services, the Canadian Task Force on Periodic Health Examination (the Canadian Guide to Clinical Prevention Health Care), the United Kingdom (West et al. 2000), Scotland (ASH and HEBS, 2000), Australia (Miller and Wood, 2003) and the College des Médecins du Québec. Table 2 outlines the US smoking cessation guidelines for clinicians.

Best practice guidelines (BPG) for the treatment of tobacco dependence aimed at specific health professions also exist. For example, in 2003 the Registered Nurses Association of Ontario developed the BPG, "Integrating tobacco cessation into daily practice" (Virani, 2003) and in 2005 the World Dental Federation in collaboration with the World Health Organization (WHO) published, "Tobacco or health the code of practice on tobacco control for oral health professionals" (Peterson et al., 2005). The main recommendation emanating from the guidelines is that health care providers should, at minimum, implement the 5A's (Ask, Advise, Assess, Assist, Arrange) approach in providing brief smoking cessation advice to their patients (Miller and Wood, 2003). Although these guidelines are widely disseminated and easily accessible through the World Wide Web, studies have shown they have little effect on changing physician behavior (Woolf, 1993; Hayward, 1997).

In conclusion, health professionals have the greatest potential of any societal group to promote a decrease in tobacco use; and thus, a decrease in tobacco induced mortality and morbidity (Simpson, 2000). It has been hypothesized that if a substantial number of healthcare providers implemented minimal smoking cessation interventions, there would be a significant reduction in the number of tobacco users (American Cancer Society, 2003).

Table 1: Effective Components of Clinical Tobacco Interventions: Evidence from Clinical Trials

Component	Odds ratio
Nortriptyline	3.2
Having a tobacco use identification system in place	3.1
Nicotine nasal spray*	2.7
Nicotine inhaler*	2.5
High intensity counselling (>10 minutes)	2.3
> 8 counselling sessions	2.3
Intervention by physician	2.2
Bupropion	2.1
Clonidine	2.1
4-8 counselling sessions	1.9
Nicotine patch	1.9
Intervention by non-physician clinician	1.7
Individual counselling	1.7
Low intensity counselling (3 - 10 minutes)	1.6
Nicotine gum (2mg)	1.5
2-3 counselling sessions	1.4
Physician advice to quit	1.3
Minimal counselling (<3 minutes)	1.3
Group counselling	1.3
Pro-active telephone counselling	1.2
Self-help	1.1
0-1 counselling session	1.0

*not yet available in Canada

Table 2

New US Smoking Cessation Guideline from the Agency for Healthcare Research and Quality

KEY RECOMMENDATIONS*	HOW TO APPLY THE RECOMMENDATIONS
<p>Tobacco dependence is a chronic condition that often requires repeated intervention. However, effective treatments exist that can produce long-term or even permanent abstinence.</p>	<ul style="list-style-type: none"> • Reframe smoking cessation and treat it as you do other chronic conditions. • Help your patients understand that stopping smoking is a process that may take time and that you will continue to help them – for as long as it takes.
<p>Because effective tobacco dependence treatments are available, every patient who uses tobacco should be offered at least one of these treatments:</p> <ul style="list-style-type: none"> • Patients willing to try to quit tobacco use should be provided treatments identified as effective in this guideline • Patients unwilling to try to quit tobacco use should be provided a brief intervention designed to increase their motivation to quit 	<ul style="list-style-type: none"> • Make sure your patients who smoke know that you understand that it is not easy to stop smoking but there are treatments available that can help. • Patients not ready to stop smoking need to know that you are there to support them, that there are treatments available that can help and ask them to think about why they might want to stop smoking and why they do not want to stop smoking.
<p>It is essential that clinicians and health care delivery systems (including administrators, insurers and purchasers) institutionalize the consistent identification, documentation and treatment of every tobacco user seen in a health care setting.</p>	<ul style="list-style-type: none"> • Systematically identify smoking status for every patient. • Ask patients how they are feeling about their smoking to obtain an indication of interest in stopping. • Make this information easily accessible for future reference.
<p>Brief tobacco dependence treatment is effective and every patient who uses tobacco should be offered at least brief treatment.</p>	<ul style="list-style-type: none"> • Offer smoking cessation treatments to all patients who smoke not just those heavily addicted.
<p>There is a strong dose-response relation between the intensity of tobacco dependence counseling and its effectiveness. Treatments involving person-to-person contact (via individual, group or proactive telephone counseling) are consistently effective and their effectiveness increases with treatment intensity (e.g. Minutes of contact)</p>	<ul style="list-style-type: none"> • Be clear with patients that you want to help them stop smoking and invite them to set up a specific time for this discussion. Offer follow-up. • Provide self-help booklets and encourage patients to use them. • Refer your patients to community stop smoking programs.
<p>Three types of counseling and behavioral therapies were found to be especially effective and should be used with all patients attempting tobacco cessation:</p> <ul style="list-style-type: none"> • Provision of practical counseling (problem solving/skills training) • Provision of social support as part of treatment (inter-treatment social support and • Help with securing social support outside of treatment (extra-treatment social support) 	<p>Encourage your patients who are stopping smoking to:</p> <ul style="list-style-type: none"> • Create a plan including a stop smoking date. • Use self-help booklets to consider what they need in their plan. • Ask friends and family for support. • Enroll in community programs and help lines.
<p>Numerous effective pharmacotherapies for smoking cessation now exist. Except in the presence of contraindications, these should be used with all patients attempting to quit smoking. Five first line pharmacotherapies were identified that reliably increase long-term smoking abstinence rates: ✓ Bupropion SR, ✓ Nicotine gum, ✓ Nicotine inhaler, ✓ Nicotine nasal spray, ✓ Nicotine patch</p>	<ul style="list-style-type: none"> • Consider use of pharmacotherapies with all patients who are considering stopping smoking. • Help patients understand which choice may be best for them. • Ensure patients understand how to use the products properly. • Help patients stay on pharmacotherapy for the full length of therapy.

*A Clinical Practice Guideline for Treating Tobacco Use and Dependence: A US Public Health Service Report Journal of the American Medical Association June 28, 2000 283(24):3244-3254
<http://www.surgeongeneral.gov/tobacco/default.htm>

2.3. Barriers to Implementing Tobacco Cessation Counseling in Clinical Practice

A barrier is defined as any factor limiting or restricting complete adherence to a guideline, and may be exhibited in knowledge, attitudes and behavior. Lack of knowledge may be due to a lack of familiarity or awareness. Negative attitudes may result from a lack of outcome expectancy, self-efficacy, or motivation. Clinical practice behaviors may be deterred by external barriers such as lack of time, resources, and reimbursement, and/or patients' and guidelines. Such barriers must be addressed in a consistent manner to assure the training students/practitioners receive is applied in their clinical practices.

At least two main barriers interfere with successful implementation of tobacco cessation training by teaching faculty and practitioners: (1) receptivity from faculty members, and (2) barriers encountered in clinical settings. In a teaching setting, the lack of time and space to include more content in the program, and the relative importance given to tobacco cessation by faculty decision makers in comparison to other teaching areas have also been identified as key barriers.

Figure 1, reproduced from Cabana et al., (1999) illustrates barriers to physicians' adherence to guidelines. Some programs address those barriers by providing information to practitioners on how to implement efficient tobacco interventions in daily practice. Additionally, several provincial governments have begun to more substantially reimburse prevention interventions. For example, the Government of Ontario now gives bonuses to family physicians that provide preventive care services, including colorectal screening, mammograms, smoking cessation advice, PAP test, immunization and flu shots, to their patients.

Figure 1: Barriers to Adhering to Tobacco Cessation Counseling Guidelines

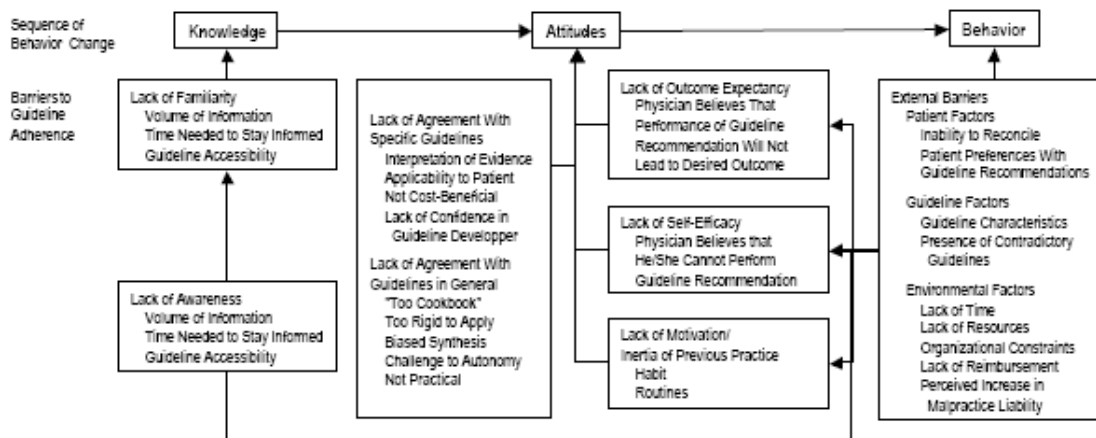


Figure 3. Barriers to Physician Adherence to Practice Guidelines in Relation to Behaviour Change (reproduced from Cabana et al., 1999).

3. TOBACCO CESSATION TRAINING FOR HEALTH PROFESSIONALS

There are two primary pedagogical approaches to tobacco cessation training education. The first is the traditional didactic approach which includes lectures or the provision of readings, and the second involves more enhanced methods of teaching that incorporate skill building. The most effective programs combine both approaches, with particular attention to enhanced methods of teaching (role-play, standardized patients, Objective Structured Clinical Exam). To be most effective, studies demonstrate specific

elements must be present in cessation counseling education. Ferry et al., in their 1999 survey, identified six basic science and six clinical science elements that should be included in tobacco curriculum (see Table 3). These elements were taken from the US Department of Health and Human Services on Smoking Cessation and from the National Cancer Institute training guide, “How to Help Your Patients Stop Smoking”. These criteria guided our review of programs for which there was sufficient information available through the web and published or grey literature.

Table 3: Recommended Tobacco Curriculum Content Areas (Ferry et al., 1999)

Basic science	Clinical science
Cancer risks from tobacco	Clinical intervention (5A's)
Health effects: Tobacco-related diseases	Relapse prevention
Effect of passive smoking	Pharmacologic agents
Smoking cigarette content	Smoking cessation techniques in artificial setting
Nicotine withdrawal symptoms	Smoking cessation techniques in clinical setting with patients
High risk group with more difficulty quitting	Smoking cessation techniques in clinical setting with patients and evaluation of performance

4. CANADIAN TRAINING IN MEDICINE

In their objectives for the qualifying licensing examination, the Medical Council of Canada specifies that future doctors be able to outline the management for stopping nicotine use, including advice to quit, nicotine replacement therapies, setting quit dates, behavioral counseling and identifying community resources. However, to date no national curricular model exists in Canada to guide schools in determining the content of tobacco dependence instruction (Spangler, 2002).

Recommendations for tobacco control training in medical education curricula specify two key topics areas that should be addressed: 1) the health risks of tobacco use, and 2) interventions for smoking prevention and cessation (Pederson, 2006). Studies have shown most programs in Canada (Thomas, 1997) and in other countries (GTTS, 2006) do not include these topics in their curricula. More specifically, there seems to be a lack of interventions incorporated into curricula.

Despite this general state of curricula in Canada and other countries, a 2004 study conducted in 12 US medical schools and funded by the US National Cancer Institute concluded that generic behavioral intervention teaching is well integrated into medical school curricula. The authors reported the difference in findings from previous studies may be due to the survey methodology, which provided course grids individualized for each school, and to the selection of the study participants, who were committed to improving tobacco teaching. It was also reported that nearly all schools surveyed taught patient communication and patient counseling uniformly across the first three years of medical school. In addition, at least three quarters (9 of the 12 schools) of the schools reported a broad range of teaching

methods, described by the authors as non-tobacco methods such as role play, lectures, standardized patients, Observed Structural Clinical Exams (OSCE) and other teaching formats (Powers, 2003). However, the authors also found a lack of tobacco content in pediatrics and Obstetrics/ Gynecology clerkships, as well as a gap in addressing patients with special needs (e.g., mentally ill, women, and Aboriginals).

4.1. Approach

PubMed and ERIC were used to conduct a literature search using the terms “tobacco cessation training”, “smoking cessation training”, “undergraduate medical education” and “undergraduate curriculum”. A total of 18 relevant articles were identified and are referenced in this report.

The World Wide Web was used to locate curriculum information for the 16 Canadian universities identified by the Association of Faculties of Medicine of Canada as having an undergraduate medical education program. For each program, we reviewed the curriculum information available online to identify tobacco cessation counseling content. A Google Internet search was also conducted to determine available resources for training medical doctors (post-certification) in smoking cessation counseling. Keywords and search terms included tobacco cessation training and “tobacco cessation training”, “smoking cessation training”, “undergraduate medical education” and “undergraduate curriculum”. Search terms were combined using the Boolean operator AND.

We identified two Canadian schools that listed tobacco content; however, there was not sufficient detail available on the Internet to review the content in detail. Training programs for practicing physicians that were located were reviewed and rated by one of the authors of this report (KB) using the Ferry et al., (1999) essential elements of a tobacco cessation curriculum (see Table 4).

4.2. Training in Canadian Faculties of Medicine

In our search for curriculum information from the 16 Faculties of Medicine in Canada, only two schools listed tobacco training as a part of their curriculum. Four of the 16 schools either did not have curriculum information available online or required authorization for access. The two schools that listed tobacco content included Laval University and University of Montreal. At Laval University, the topic is part of a module on tobacco at the end of the undergraduate curriculum. This module is based on the guidelines published by the College des Médecins du Québec. At Montreal, it is incorporated into the respiratory and oxygenation curriculum. Appendix A provides a table listing Canadian universities with undergraduate medical education programs, courses we identified as potentially containing tobacco content, and contacts for further follow up.

4.3. Programs Available for Practicing Physicians

Because we were unable to locate any examples of Canadian medical education tobacco cessation curriculum materials, we conducted a Google search for existing Canadian programs to assist practitioners in counseling their patients, which would be appropriate for undergraduate medical education. Appendix B includes a summary of the 12 programs developed for Canadian physicians identified.

At least six of these programs are web-based and three are workshop-based; the remaining programs provide resources and information in the form of booklets, guidelines, etc. Several of the programs are available in French. We located published evaluations for two of the programs: (1) “Quit for Life”, and (2) “Physicians Taking Action Against Smoking”. Findings from these studies suggest acceptability of

the program by physicians, as well as increased counseling in their practices and changes in patient smoking behaviors.

We rated the 12 programs identified against the 12 areas recommended by Ferry et al. (Table 4) for inclusion in undergraduate medical tobacco curricula. Based on information provided on the Internet, none of the 12 programs met the criteria of an effective tobacco cessation curriculum. Most were based on existing guidelines and included information on clinical interventions (11 out of 12), pharmacologic agents (9 out of 12), health effects and tobacco related diseases (6 out of 12) and withdrawal symptoms (6 out of 12). Few mentioned the effects of passive smoking (5 out of 12) and relapse prevention (5 out of 12); very few addressed cigarette content (1 out of 12), high risk groups (3 out of 12) and cancer risk (2 out of 12). Two programs offered smoking cessation techniques in artificial settings and two offered some form of evaluation by the participants (post test).

We determined “Physicians Taking Action Against Smoking” to be the most comprehensive program available. This program meets ten of the twelve Ferry’s criteria. It offers a choice of 32 - one to two hour workshops on relevant topics. Moreover, it includes scenarios featuring smokers at different stages of readiness to quit and descriptions of the appropriate counseling interventions tailored to the stage of readiness. A published evaluation suggests this program is effective in improving physicians’ counseling behaviors (Tremblay et al. 2001).

Few programs include information on counseling special populations, such as the elderly, youth, mentally ill, hospitalized and pregnant women. Thomas (1997) noted that effective counseling requires, at minimum, culture specific and gender specific intervention techniques. More recently, papers note that pediatric specific interventions (Zapka, 1999) and interventions for those with mental illness are needed. A national curricular model on tobacco cessation training should consider those populations with particular counseling needs. Table 4 summarizes special needs populations identified as priorities (Thompson, 2006).

Table 4: Populations with Special Tobacco Cessation Counseling Needs

Elderly	Physically frail, multiple medical conditions and multiple medications.
Youth	Not well studied but at risk for long term use By 17 years of age, 50% of addicted adolescents have attempted to quit and failed.
Mentally ill	Highest rate of nicotine use in schizophrenics (3 to 4 times the rate of the general population) Nicotine temporarily normalizes the impairment in auditory gating that the patient experiment (Psych Services 1999. 50:1346-50).
Hospitalized	Increasing number of hospitals are smoke-free environments. Patients admitted to hospital are not spared nicotine withdrawal symptoms. This can interfere/impair their ability to recover. If allowed to smoke, smoking has a well documented negative effect on healing rates (reduces healing from surgery by 70%)
Pregnant women	Although there is concern about the use of NRT in pregnant women, in general, the risk-benefit ration for NRT appears to be favorable if efforts to quit have failed and the patient continues to smoke

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5. CANADIAN TRAINING IN NURSING, DENTISTRY, AND PHARMACY

Smoking cessation counseling is considered to be a standard of practice for all clinical health professions (Kottke et al., 1992). Although it is still debated, there seems to be good evidence that brief interventions from health professional including medical practitioners, dental practitioners and community pharmacists can increase rates of smoking cessation (Lancaster, 2006). A Cochrane review by Lancaster et al. in 2006 concluded that health care professionals who received training were more likely to perform tasks of smoking cessation than untrained controls. However, there was no strong evidence that it changed smoking behavior in their patients.

5.1. Approach

We began by conducting a literature search through PubMed and ERIC using the terms “tobacco cessation training”, “smoking cessation training”, “health professional” and “undergraduate curriculum”, “dentist”, “pharmacists” and “nursing”. Search terms were combined using the Boolean operator AND. A total of 21 relevant articles were identified and are referenced in this report. Six referred to dentistry, five to pharmacy, six to nursing and four were general to all three professions. The Internet was then used to locate curriculum information for the Canadian health professions’ programs identified by the Canadian Health Professional Corporations’ Association (nurses, dentists and pharmacists). We also conducted a Google Internet search to determine available resources for training nurses, dentists, and pharmacists in smoking cessation counseling. Keywords and search terms included tobacco cessation training and “tobacco cessation training”, “smoking cessation training”, “and “undergraduate curriculum”. Search terms were combined using the Boolean operator AND.

We identified one Canadian School of Dentistry that incorporates smoking cessation into their undergraduate training program; however, there was not sufficient detail available on the Internet to review the content in detail. Training programs that were located for practicing nurses and dentists were reviewed and rated by one of the authors of this report (KB) using the Ferry et al., (1999) essential elements of a tobacco cessation curriculum (see Table 4). We were unable to locate any Canadian programs available for practicing pharmacists (a program currently under development is described in a later section of this report.).

5.2. Nursing

According to the Canadian Institute for Health Information, the Canadian workforce includes 251,675 registered nurses (RNs), 64,951 (20.2%) licensed practical nurses (LPNs), and 4,964 (1.5%) registered psychiatric nurses for a total of 321,590 employed nurses (CIHI, 2006). Nursing is the single largest health care profession that comes into contact with the public. The public values and trusts the specific health advice offered by nurses; the Registered Nurses Association of Ontario (RNAO) espouses that nurses have a responsibility to talk to all of their patients who smoke about quitting, regardless of the health care setting (e.g. hospitals, worksites, schools, physicians’ offices) (www.rnoa.org). A Cochrane review conducted by Rice and Stead in 2006 concluded there is acceptable evidence regarding the benefits and effectiveness of smoking cessation advice or counseling given by nurses to smokers. Results of meta-analysis support a modest positive effect for smoking cessation intervention by nurses (OR: 1.40 CI: 1.00-1.96) which is consistent with previous analysis (Rice, 1999). The review also suggests nurses have a particularly important opportunity to intervene in hospital settings. Since hospitals are now smoke-free environments, it creates an ideal situation for individuals to stop smoking, and gain necessary skills to remain smoke free.

Despite these findings, a survey conducted in Manitoba by Chalmers et al. in 2003 reported that Canadian nursing students were unsure of their roles in tobacco control and their use of health promotion

interventions. These findings suggest emphasis should be placed on the importance of the nurse's role in smoking cessation during students' formation in order to enhance self confidence regarding health promotion and smoking cessation counseling.

Smoking cessation counseling may be delivered as part of routine nursing care in less than ten minutes (RNAO, 2003). In 2003 the Registered Nurses Association of Ontario published a "Nursing Best Practice Guideline" titled, "Integrating Smoking Cessation into Daily Nursing Practice". Twelve principles underlie the nursing best practice guidelines; including nursing students' right to receive education regarding evidence-based interventions and effective strategies for smoking cessation.

The principal barriers to integrating smoking cessation intervention into daily nursing practice include the lack of time and the lack of perceived self efficacy (Joint statement, 2001). An enhanced education program in tobacco cessation counseling may address the latter barrier.

5.2.1. Training in Canadian Schools of Nursing

In Canada, several nursing qualifications and educational streams exist. Through our Google search we identified 133 undergraduate nursing programs offered either through a college or university. For the purpose of this report we selected only the programs offered at Canadian universities for more in depth analysis (course description). Appendix C presents the identified nursing programs offered across Canada. Appendix D describes the university-based programs that were reviewed for courses with tobacco content. None of the 31 university programs mentioned specific tobacco content in their curricular description.

5.2.2. Programs Available for Practicing Nurses

Since no Canadian nursing undergraduate tobacco cessation curricular examples were found on PubMed and ERIC, we conducted a Google search for existing programs to assist practicing nurses in counseling patients, and which may be applied in undergraduate nursing education. Inclusion criteria for programs were: Canadian, targeted to nurse and or nursing students. Programs were assessed using the twelve criteria described by Ferry et al. (Table 4) for tobacco education curriculum. Appendix E provides a summary of the seven programs available to Canadian nurses that were identified. Five of those programs were specific to nurses and two were general to all health professionals.

Of the programs and resources identified, two were web-based, interactive programs, three were workshop-based, and the remainder (two) provide resources and information in the form of booklets, guidelines etc.

Based on the program information available through the Internet, none of the 7 programs met all of the Ferry et. al. criteria (1999) for an effective tobacco cessation curriculum. All included information on clinical interventions (7 out of 7). Most mentioned pharmacologic agents (6 out of 7), relapse prevention (5 out of 7), high risk groups (4 out of 7). Few mentioned the health effects and tobacco related diseases (2 out of 7), withdrawal symptoms (2 out of 7), effects of passive smoking (2 out of 7). None mentioned cigarette content or cancer risk. One program offered smoking cessation techniques in artificial settings, and one offered some form of evaluation of the participants (post test). Overall, we determined "Helping People Quit Smoking" by the RNAO to be the most comprehensive program for nurses. This program meets nine of the twelve criteria, is based on nursing best practice guidelines, and presents interactive activities as well as case examples to approach different patients at different stages of readiness.

5.3. Dentistry

Tobacco use is associated with an increased risk for oral disease, including oral cancer and periodontal disease. In 2000, Dr Burton Conrod, who was at the time President of Canadian Dental Association, declared that dental professionals were uniquely positioned to help their patients quit smoking because of the trust engendered by the dentist-patient relationship. Furthermore, a recent Cochrane review by Carr and Ebbert (2006) suggests interventions conducted by oral health professionals increased tobacco abstinence rates (odds ratio [OR] 1.44; 95% confidence interval [CI]: 1.16 to 1.78) at 12 months or longer. Nevertheless these authors report that additional study of tobacco cessation within the dental office setting is important to identify effective intervention components for this profession.

The World Dental Federation (WDF), in collaboration with the WHO, published the Code of Practice on Tobacco Control for Oral Health Professionals, Tobacco or Health (Peterson et al., 2005). This guide provides tobacco facts, describes the role of dentists and other oral health professionals, and provides a set of recommendations to move the tobacco control agenda forward. This document also advises oral health professionals to become involved in smoking cessation programs, and demonstrates a model that can easily be incorporated into daily practice. Dentists are often the first to see the effects of tobacco in the mouth, and are one of the few professionals who frequently see healthy patients. Therefore, WDF urges every oral health institution and all continuing education providers to integrate tobacco related topics into their programs.

In 1999, Block et al. surveyed American Midwest health professionals including dentists, public health nurses, nurses practitioners, chiropractors, physicians, and physicians assistants; they concluded that dentists most often accurately estimated patients' tobacco use compared to other health care providers; however, they were also less consistent intervening, less likely to report having strong knowledge or skill levels regarding tobacco cessation, and more likely to perceive barriers to tobacco intervention. Barriers described included concern regarding patient resistance, lack of knowledge, time, or financial reimbursement, and poor co-ordination of care between dentistry and tobacco cessation services. Three out of five dentists surveyed agreed they would appreciate further tobacco education. The authors concluded that integration of tobacco education into dental school curricula, and provision of continuing dental education are essential to enable dentists to effectively counsel patients regarding tobacco use.

5.3.1. *Training in Canadian Schools of Dentistry*

In 1998, the University of Manitoba undergraduate dental program implemented the most comprehensive tobacco control curriculum in the country. Based on evidence that health professionals' may positively impact patients' use of tobacco product and that many health professionals report they do not provide cessation counseling because they lack the training, the Faculty of Dentistry integrated tobacco cessation into their curriculum. During their second year, dental students participate in a three hour workshop on clinical tobacco cessation interventions. The workshop addresses the prevalence of tobacco use, direct and indirect public health costs, general and oral health consequences of tobacco use, reasons why people smoke and why they quit, the physiological and behavior factors of nicotine addiction, stages of change model and the readiness to quit process, counseling (ask, advise, assist, arrange), self help material, referral concepts, pharmacological interventions, faculty clinic protocol (tobacco-use cessation program) and practical cessation program for dental practice. In addition to the incorporation of formal tobacco-use cessation training into the dental curriculum, the school established a tobacco-use cessation protocol for the teaching clinic, implemented a referral program to the Faculty's smoking cessation clinic, created a resource center which provides educational self-help cessation materials for dental practices and consultation on how to implement a tobacco cessation program in a dental office, began to deliver a continuing education course for health professionals and set up an evaluation system to assess the effectiveness and impacts of these interventions on student counseling in the clinic.

Prior to the introduction of the tobacco-use cessation interventions at the dentistry faculty, a baseline assessment was conducted to establish the level of tobacco-use cessation counseling by students and staff. Patients' charts were reviewed to determine smoking status. They afterward contacted all the patients who reported tobacco-use in a structured telephone interview to determine whether they received information on oral health consequences of smoking on the need to quit smoking while they were attending the clinic. The same structured interview was conducted in 1999-2000 to determine if tobacco-use cessation counseling activity increased as a result of the introduction of the faculty's tobacco initiatives. The authors of that evaluation study report that results of the study are currently being analyzed.

A list of Canadian university faculty of dentistry, as well as courses that could potentially offer tobacco content are included in Appendix F.

5.3.2. *Programs Available for Practicing Dentists*

Appendix G presents tobacco cessation training programs available for practicing dentists. Of the three programs and resources identified, one was a web-based interactive program, one was a guideline type document and the other one provides online resources and information in the form of booklets, guidelines etc.

Programs were assessed using the twelve criteria described by Ferry et al. (Table 4) for tobacco education curriculum. Based on the program information available through the Internet, none of the three programs met all the criteria for an effective tobacco cessation curriculum. All included information on clinical interventions as well as pharmacological agents (3 out of 3). Two mentioned relapse prevention (2 out of 3). One mentioned cancer risk, smoking cigarette content and health effects and tobacco related diseases (1 out of 3). None mentioned high risk groups, withdrawal symptoms, effects of passive smoking, offered smoking cessation techniques in artificial settings nor offered an evaluation of the participants. Overall, we determined "Tobacco or Oral Health" by WDF to be the most comprehensive program for practicing dentists. This program meets five of the twelve criteria and is based on WHO best practice guidelines for oral health professionals.

5.4. **Pharmacy**

In 1998, nicotine replacement therapy (NRT) became available for patients without prescription in Canadian pharmacies. This change in sales status ideally positioned pharmacists to directly intervene with patients considering the use of NRT for smoking cessation (OTRU, 2005).

A recent survey conducted by Brewster and Ashley (2005) at nine Canadian university faculties of pharmacy reported that since the change in NRT sales regulations, more time was devoted to teaching patient counseling techniques in their curricula. The authors also stated that prior to this change, basic science topics related to health effects of tobacco consumption were already included in the curriculum of most faculties. Furthermore, they identified primary barriers to education of smoking cessation counseling such as the lack of curriculum time, the lack of faculty expertise in tobacco cessation topics as well as in behavioral counseling, the lack of financial resources for standardized materials and the traditional roots of the profession in pharmacology rather than in patient counseling.

The authors invited the Canadian pharmacy educators who returned the survey to a one-day workshop. The aim of the workshop was to present the results of the survey, present initiatives to educate pharmacists with regard to their role in smoking cessation and give the participants an opportunity to discuss and share their views on the data and different topics. The authors reported that the participants suggested the development of a website with standardized tobacco related materials that could be used by

all faculties as well as follow-up workshop for further sharing of development and progress. These results suggest that the pharmacy educators are positive regarding education in smoking cessation counseling for future pharmacists.

In Autumn 2002, the Ontario Tobacco Research Unit surveyed community practicing pharmacists in Quebec, Ontario, Saskatchewan and Prince Edward Island on their educational background and knowledge, practice setting, attitude towards tobacco use and smoking cessation perceptions of pharmacists' related roles, practices with patients who smoke, perceived factors that facilitate counseling patients about smoking cessation and personal smoking behavior. In this survey, only 14% of the respondents reported that they ask half or more of their new patients whether they smoke. However, when pharmacists knew their patients smoked, the majority advised the patient to decrease or quit smoking, attempted to increase motivation to quit, and suggested the use of NRT. Surprisingly, the authors reported that fewer than half of respondent declared that it is important for pharmacists to ask patients if they smoke, assess patients' dependence on nicotine and assess patients' readiness to quit. In terms of knowledge, the authors reported that more than 85% of the respondents declared that their knowledge and skills were very or somewhat important in facilitating their own smoking cessation practice. Facilitators to smokers counseling were identified as patients' interest in quitting, adequate supply of smoking-related pamphlets in the pharmacy, support staff in the pharmacy as well as designated time and space to counsel patients in the pharmacy. The authors concluded that although community pharmacists did not seem to be proactive in asking patients if they smoke, when they knew their patients were smokers, they advise about the use of NRT and give brief advice for quitting. They also stated that pharmacists would appreciate more education on behavioral approaches in smoking cessation.

During the 13th World Conference on Tobacco OR Health (July, 2006) a group of Canadian researchers, led by Karen Weir, presented a project for training pharmacists in smoking cessation which is being developed in collaboration with the Canadian Pharmacists Association. The program is currently under development and will be available online and in live workshop format sometime in the near future. The authors mentioned that the pharmacists will receive training to provide the level of service they are confident to deliver and have time for. The results of the first phase of their study which consisted of an environmental scan of other Canadian tobacco cessation training for health care professionals suggested that pharmacists have good knowledge regarding counseling of nicotine replacement therapy, but felt that more knowledge on the behavioral aspects and counseling process of helping patients quit smoking was needed. We were unable to determine any plans for evaluation of this program.

Although the initiatives from the Canadian scientists Brewster, Ashley, and Weir may lead to the development of an informative website and standardized material for Canadian Faculties of Pharmacy, to date, no such curriculum for training future pharmacists have been identified. For purposes of future follow up, Appendix H lists curriculum information, as well as potential courses for tobacco content, from pharmacy programs identified by the Canadian Pharmacists Association.

6. INTERNATIONAL TRAINING FOR HEALTH PROFESSIONALS

This section presents an overview of international tobacco cessation curricula, websites and/or programs of interest regarding training of health professionals in tobacco related topics including the US, Australia, New Zealand, and the UK. Some of those programs are meant to generalize to all health professions, while others are specific to certain professions. In this section the term "health professionals" includes, nurses, pharmacists, dentists, *and* physicians.

6.1. Approach

An Internet search was conducted using Google to determine available resources at the international level for training health professionals in smoking cessation counseling. Similarly to our previous searches, the keywords and search terms included tobacco cessation training and “tobacco cessation training”, “smoking cessation training”, “health professional”, “undergraduate medical education” and “undergraduate curriculum”. Additionally, searches were targeted by country, including Australia, United States, Switzerland, UK, France, and New Zealand. Search terms were combined using the Boolean operator AND.

A total of 17 relevant articles were found and are listed in the references section. A description of the four most readily accessible and what appear to be highly recognized tobacco cessation curricula for undergraduate and practicing health professions training were located and are described below. The four training programs (three in medical education and one in pharmacy) were reviewed and rated by one of the authors of this report (KB) using the Ferry et al., (1999) essential elements of a tobacco cessation curriculum (see Table 4). Several resources for practicing health professionals were identified including websites and online course. These resources were summarized and are briefly described below.

6.2 University-based Curricula for Health Professionals

“Tobacco and Oral Health: A Survey of Dental Education and Training in Tobacco Issues” (Robinson, 2003) presents findings of a survey examining the nature and extent of training on tobacco issues and smoking cessation in British dental curricula. The survey sought to investigate the potential for introducing the Health Development Agency’s (HDA) standard for training in smoking cessation treatment. The HDA is a national authority and information resource on best practices for improving people’s health and reducing health inequalities in England (www.hda.nhs.uk). The authors surveyed all dental schools in Great Britain. The survey addressed provision, within the curricula, of information and advice on tobacco; oral health and smoking cessation; accreditation of such training; training module providers; awareness of national standards for training in smoking cessation; awareness of smoking cessation treatments and local services, and resources requirements. Information was received from a total of 18 institutions out of 31 contacted (12 schools and 6 deaneries). Sixteen respondents reported their training courses for undergraduates and postgraduates included teaching on tobacco and oral health. However, only two delivered a specific tobacco and oral health course or module. The remainder included tobacco training as part of other general courses. Periodontology and oral pathology, dental public health, human health disease, and oral surgery were the most common course headings under which tobacco and oral health were taught.

Appendix J includes four examples of tobacco curricula for students; “Smokescreen Education Program” (SEP) from Australia, “Active Learning Program” (ALP) from Switzerland, “Tobacco Intervention Basic Skills” (TIBS), and “Rx for Change” (Rx C) from the US. The first three (SEP, ALP, TIBS) were developed for medical education and Rx C was developed for pharmacy, but has been adapted for students in other health professions.

SEP was developed for medical students at University of New South Wales in Sidney, Australia. This smoking cessation program is based on, “Guidelines for teaching medical students about the health effects of tobacco: a checklist, educating medical students about tobacco: a teacher’s manual and student’s handouts”. The three-hour teaching program is based on the transtheoretical model of change and is taught in two parts. Part I has nine sections from which the teacher can choose to develop a one hour lecture, and Part II involves teaching medical students how to intervene with smokers and motivate patients to stop smoking. Part II of the program includes six sections: identify the smoker, take a smoking

history, allocate the smoker to the stage of readiness of change, motivate smoker to change, skills based strategies and preventing relapse.

SEP has been implemented in medical programs in several countries and appears to be generalizable across different cultural contexts (Richmond and Taylor, 2006). Richmond and Taylor surveyed 1353 medical faculties in 143 countries around the world and reported that 74% of medical schools who received the SEP stated that they were using it. Over 75% of the medical schools who responded had addressed tobacco and related diseases and were using the SEP as a part of their curriculum.

Moreover, Buck et al. (2000) conducted a cost-effectiveness analysis based on the SEP and concluded this program is cost-effective when compared to other smoking cessation and health promotion interventions. In this analysis, physicians were trained to assess the stage of their smoking patients regarding their desire, using the transtheoretical model of behavior change. Pre-contemplative smokers were given a “not ready” booklet and invited to return when ready to discuss cessation. Contemplative patients received an “unsure” booklet and a brief motivational interview. Prepared smokers received a “ready” booklet, a prescription of three visits of cognitive and behavioral strategies, and advice on how to use nicotine chewing tablets. Recruited, prepared smokers were contacted by telephone at 12 months post-physician training to determine their smoking status. For the 728 patients followed-up, the abstinence rate was 21%, which when adjusted for a natural abstinence rate of 8%, resulted in a net abstinence rate of 13% (a net number of 95 abstinent). Abstinence was biochemically confirmed in this study.

In 2002, Cornuz et al. conducted a randomized control trial to assess the efficacy of the Active Learning Program in changing physicians’ counseling practices and helping patients abstain from smoking. This program is based on behavioral theory, active learning methods, and practice with standardized patients. In the study, residents were randomly assigned to one of two training programs. The control intervention was a didactic session on management of dyslipidemia. In the experimental condition, a training program was administered over two half days; physicians learned to provide counseling tailored to smokers’ motivation to quit smoking and practiced these new skills with standardized patients acting as smokers at different stages of readiness (Cornuz, 2002). After the training, residents were assessed on the following educational objectives: (1) systematically identify all patients who smoke, (2) clearly advise all smokers to quit; to assess each smoker’s readiness to quit, (3) use applied counseling strategies and offer brochure that matched their readiness to quit; (4) propose an individual smoking cessation program; (5) follow smokers in short and long term, and (6) facilitate implementation of smoking cessation in routine practice.

The authors reported abstinence rates of patients of physicians in the intervention group were significantly higher than in the control group at one year follow-up (13% vs. 5%; $p=0.005$). Residents who received the training provided better counseling than those who received the control training (mean score, 4.0 vs. 2.7; $p=0.002$). The author concluded interactive learning methods, such as role-playing and practice with standardized patients are effective tools and suggest residency is a good time to train physicians in preventive care.

TIBS is a four hour training program for medical students delivered by a tobacco specialist and based on the US Department of Health and Human Services Clinical Practice Guidelines. This training prepares participants to: (1) assess a client’s readiness to quit, (2) deliver a stage-appropriate brief tobacco cessation intervention, and (3) provide further referral and follow-up as appropriate.

TIBS is also part of a required course in first year medicine on basic interviewing and physical exam skills at University of Arizona. This specific program includes a two hour lecture, reading the TIBS manual, a review of the TIBS pocket guide, and a 20-item open-book, internet-based quiz. Participants

must also attend a four hour workshop. Information on how to apply TIBS skills in clinical setting is also included in the curriculum.

Brown et al., (2004) evaluated students' experiences with the curriculum using a survey, administered prior to and at the conclusion of the TIBS workshop. Gains in students' attitudes, knowledge, and self confidence were assessed by comparing responses to pretest and posttest versions of the Learning Outcomes Questionnaire (LOQ). Students exhibited more favorable attitudes regarding physician's roles in promoting behavior change, less judgment toward non-adherent patients, and more self confidence in applying TIBS knowledge and skills after TIBS exposure.

In 1999, University of California San Francisco researchers, in collaboration with pharmacists, developed the RxC tobacco cessation counseling curriculum. The program teaches principles based on the US Department of Health and Human Services Clinical Practice Guidelines for Treating Tobacco Use and Dependence. Since 1999, the program has been implemented annually as required coursework at all four California schools of pharmacy. The program uses a train-the-trainer model to form a team from each school; trained faculty members then offer the six-to-eight-hour course to pharmacy students at their institutions. The aim of the program is to train pharmacy students to become effective counselors in tobacco cessation. It consists of didactic lecture material as well as interactive activities. The core program includes topics on the epidemiology of tobacco, pharmacology of nicotine and principles of addiction, drug interaction with smoking, assisting patients with quitting, aids for quitting, role playing and case scenarios. The program also includes an optional set of lectures including topics on forms of tobacco, pathophysiology of tobacco related diseases, genes and tobacco, history of tobacco control efforts, how to get involved, post cessation weight maintenance and tobacco use in young adults.

RxC has been evaluated in terms of change in pharmacists' confidence in cessation counseling using a twelve item scale and change in counseling competency using a five item scale. Evaluation results indicate that 73.3% (55/75) of schools receiving training implemented the program as part of their curriculum. Moreover, RxC curriculum has successfully been adapted for use in other health professions including medicine, dentistry, nursing and other allied health schools in the state of California (Hudmand et al., 2004).

Based on the program information available through the Internet, we rated the four programs identified (SEP, ALP, TIBS, RxC) using the 12 recommended criteria outlined by Ferry et al. We found none of the programs met all the criteria for an effective tobacco cessation curriculum. All included information on clinical interventions (4 out of 4) and had some sort of smoking cessation technique in artificial setting (4 out of 4). Most mentioned pharmacologic agents (3 out of 4). Few mentioned the health effects and tobacco related diseases (2 out of 4) and had some sort of smoking cessation technique in clinical setting (2 out of 4). Only one mentioned smoking cigarette content (1 out of 4), relapse prevention (1 out of 4), high risk groups (1 out of 4), effects of passive smoking (1 out of 4) and one had an evaluation of the participants. None mentioned cancer risk.

Overall, we determined SEP to be the most comprehensive curriculum among the four curricula identified. This program meets seven of the twelve criteria, emphasizes clinical interventions, and presents smoking cessation techniques in clinical settings, as well as other relevant topics on tobacco (e.g., role of medical practitioners in tobacco control, economic aspects of tobacco, and implications of the tobacco industry).

6.2. International Resources for Practicing Health Professionals

At the international level, the majority of smoking cessation resources applies the WHO guidelines. Several websites are available to facilitate health professionals in supporting their patients to quit smoking and stay smoke-free.

6.2.1. *Medicine and Other Health Professional Groups*

An excellent example of an educational resource for health professionals on treating tobacco dependence is www.Treatobacco.net. The web site presents evidence-based information under five topics: (1) efficacy, (2) safety, (3) demographics, (4) health effects, (5) health economics and policy. Treatobacco.net is produced and maintained by the Society for Research on Nicotine and Tobacco, in association with the World Bank, US Centers for Disease Control and Prevention, the Cochrane Group and a panel of international experts and is available in 11 languages. Key findings, commentaries and supporting references have been collated and reviewed by over 40 international experts and the evidence is periodically updated to incorporate new research (treatobacco.net). Each key finding is rated from A to C according to the strength of evidence supporting the recommendation. “A” findings originate from multiple well-designed randomized clinical trials yielded a consistent pattern of findings. “B” refers as some evidence from randomized clinical trials, but the scientific support was not optimal, and “C” refers as limited evidence indicative of a possible effect but not sufficient to support a recommendation. Referenced slide kits and other resources can also be downloaded from this site.

The Heart Foundation of New Zealand offers a smoking cessation training program for health professionals and community health workers in the form of workshops. Three main modules are offered: (1) Cessation Practitioner Training, (2) Introduction to Smoking Cessation, and (3) Relapse Prevention. These workshops are designed for health professionals and community health workers looking for knowledge to assist patients in cessation process. The content is based on clinical guidelines and places strong emphasis on Pacific culture values (www.pacificheart.org.nz).

In France, the group “*Tabac et liberte*” (Tobacco and Liberty) offers different training for health professionals on tobacco related topics. This includes quitting aids, tobacco cessation help in daily practice level 1, tobacco cessation help in daily practice specialization, behavioral and cognitive therapies, tobacco use prevention in the workplace, prevention day. The teaching methods vary across workshops, but typically include practical exercises, role play, clinical scenarios, and virtual cases on the Web.

The University of Sydney offers a course titled “Tobacco Control in the 21st Century” which is dedicated to tobacco control topics. However, this course is open only to graduate and international public health students. Numerous Australian websites are also devoted to either help smokers quit or help health professionals improve their knowledge on tobacco related topics. Some examples are the Australian government websites (www.health.gov.au and www.Quitnow.info.au), the Cancer Council of Australia website (www.cancer.org.au), and the Tobacco Control Super Site (www.tobacco.health.usyd.edu.au).

“Action on Smoking and Health” is the leading voluntary organization in Scotland addressing tobacco use. Their training program, implemented in partnership with Glasgow Caledonian University, is composed of three modules: (1) brief advice to quit smoking; (2) specialist cessation support in one-to-one settings, and (3) specialist cessation support in groups. The modules reflect the standards set for smoking cessation training in Scotland.

“Action on Smoking and Health” also involves a wide range of activities, including Tobacco Information Scotland, which has been developed as a national gateway to tobacco control information. Through their training and development section, they aimed to promote best practices through evidence based training,

increase the quality and consistency of tobacco related training in Scotland, broaden the range and scope of tobacco related training in order to increase the number of people trained in tobacco issues, and ensure that everyone who needs tobacco related training has equal opportunity to access to services. This initiative also seeks to enhance the professional standing of the smoking cessation as a specialization by developing validation and accreditation systems (www.ashscotland.org.uk).

To achieve these objectives, they developed standards for smoking cessation training in Scotland, developed a strategy for smoking cessation training, set up an approval scheme for training that is in line with the standards, and developed accredited training modules in smoking cessation in partnership with Glasgow Caledonian University. As part of the strategy for smoking cessation training, “Action on Smoking and Health” in Scotland is broadening the scope of cessation training which addresses ways of ensuring that all health and related professionals are trained to provide brief advice in smoking cessation. The organization is developing links with professional bodies and higher education institutions and investigating ways to integrate smoking cessation training into relevant undergraduate/pre-registration education programs, and relevant Continuing Professional Development (CPD) programs. They established links with a range of professional bodies and training providers in order to raise awareness about smoking cessation and how training to provide brief interventions can fit into their practice. They recommend that initial and updated training for smoking cessation should be included in time that has been allocated and protected for CPD. Where applicable, funding for locums should be available to allow individuals to attend all levels of initial and update smoking cessation training. On-line and/or distance learning for smoking cessation training should be investigated. Another key recommendation identified for promoting the uptake of smoking cessation training is to ensure that relevant health and related professionals have protected time to attend courses and that funding is available to provide locum cover.

6.2.2. *Dentistry*

The University of Munich offers a training program for dental health professionals on general oral health which includes tobacco content. The tobacco cessation section of the program presents the best practices for helping smokers to quit and stay off tobacco. Specifically, it shows oral health professionals how to identify tobacco users in their clinical practices and assess their readiness to change. The program also addresses how to intervene with smokers who are ready to quit and those who are not (www.oralhealth.dent.umich.edu/VODI/html/00/about.html).

6.2.3. *Pharmacy*

In 2002, the Pharmacy Guild of Australia, in association with Gold Cross Products, funded the Professionals “Helping Others to Quit” pilot project. The project was designed to improve health outcomes and enhance the pharmacist’s role in smoking cessation. The online program includes 6-8 hours of training for pharmacy assistants and a 4 hour training program for practicing pharmacists. The program employs a case based learning model. The pharmacy assistant program includes four knowledge domains: (1) smoking and health, (2) methods of quitting, (3) smoking cessation products, and (4) identification of customer needs. The pharmacists’ program includes additional reading material on pregnant women and tobacco, patients with cardiovascular disease, combination therapy, NRT and other medication. Part of the case based learning model includes different scenarios presenting smokers at various stage of readiness.

Expert facilitators provide feedback to participants, and the program is combined with an online evaluation survey. Results of the evaluation indicate that 98% of pharmacists rated case based learning with expert feedback as “quite helpful” or “very helpful” in improving their knowledge about smoking and NRT products, and 75% of participants rated the program as equivalent or better than face-to-face learning in term of effectiveness.

7. CONCLUSIONS AND RECOMMENDATIONS

The importance of health professionals' tobacco cessation advice to patients is unanimously recognized, and worldwide authorities urge educators to include tobacco content in health professionals' undergraduate curricula (Peterson, 2005). Regrettably, studies show physicians' failure to counsel their patients to stop smoking. A fundamental barrier to physician counseling is that physicians perceive themselves as ill prepared to counsel patients. Surveys worldwide indicate that most health professional training programs include some tobacco content as part of general courses, however, only a few present a specific unit on how to treat tobacco addiction.

We identified several programs for training health professions' students in cessation counseling. In Canada, two medical schools listed tobacco content as a part of their curriculum—the University of Laval and the University of Montreal. Four international programs for undergraduate training were identified, three of which were specific to medical education. A fourth program, “Rx for Change” was developed in the US for pharmacy students, but has been adapted for other undergraduate education programs (e.g., medicine, dentistry, and nursing). Evaluation findings suggest successful integration into education curricula. In general, the international programs for students tend to incorporate enhanced teaching methods, including skills based strategies, role playing, group exercises with standardized patients, assessment of student competence via observation of each student with a standardized patient, and a focus on preventing relapse.

When we rated the four international programs against the Ferry et al., (1999) recommended tobacco curriculum content areas, the “Smokescreen Education Program” (SEP) was the most comprehensive in content. SEP met 7 of the 12 Ferry et al., criteria. This Australian program emphasizes clinical intervention and presents smoking cessation techniques in clinical settings. SEP also addresses the role of medical practitioners in tobacco control, the economic aspects of tobacco and issues related to the tobacco industry.

In Canada, numerous tobacco cessation training programs for practicing physicians are available. Some have been evaluated and results suggest high levels of acceptability by physicians, increased counseling in their practices, and changes in patient smoking behaviors. Based on our assessment applying criteria suggested by Ferry et al., (1999) regarding the essential components of an effective cessation program, we conclude that the most comprehensive Canadian program is “Physicians Taking Action Against Smoking” (PTAAS). PTAAS met 10 of the 12 Ferry et al., recommended tobacco curriculum content areas. This program offers a choice of 32, one to two hour workshops on relevant topics. Moreover, it includes scenarios featuring smokers at different stages of readiness to quit, and descriptions of the appropriate counseling interventions tailored to the stage of readiness. A published evaluation of this program suggests it is effective in improving physicians' counseling behaviors.

There are several training programs for practicing nurses, and dentists in Canada. Amongst the nursing programs we rated using the Ferry et al., (1999) recommended tobacco curriculum content areas, “Helping People Quit Smoking” was the most comprehensive program. This program addressed 9 of the 12 Ferry et al. recommended content areas. Of the three dentistry programs reviewed, “Tobacco or Oral Health” was the most comprehensive and addressed 5 of the 12 recommended content areas. We were unable to locate any specialized programs focusing on cessation counseling for practicing pharmacists in Canada. However, we learned that a program is currently under development by the Canadian Pharmacists Association and other collaborators.

There are a number of international Internet resources for practicing health professionals. Some of these programs were developed to be generalizable to multiple health professions. Most are based on international guidelines such as the World Health Organization's Guidelines for Treating Tobacco

Dependence. Notably, Action on Smoking and Health (Scotland) has organized a comprehensive approach that addresses not only training, but also provides recommendations for addressing organizational barriers to effective clinical intervention. This was the only such program identified that utilizes a multi-faceted, comprehensive approach to cessation counseling by health professionals.

Overall, we found that in Canada, training programs for practicing health professionals are more readily available than for students in training. Relatively speaking, there have been more programs developed for practicing physicians and nurses, than for dentists and pharmacists—both in Canada and internationally. Currently, there is a particular lack of resources for pharmacists. It is recommended that “Rx for Chance” developed for pharmacy students at the University of California, San Francisco, and the program currently under development for Canadian pharmacists serve as foundation pieces in addressing this gap. The Australian program “Professionals Helping Others to Quit” will also be a useful resource.

The two primary challenges to training students and practitioners in cessation counseling will be a perceived lack of time and space in university curricula and clinical practice. “Action on Smoking and Health” provides an excellent example of a comprehensive approach that is not only providing training, but also attempting to address organizational barriers to clinical intervention. Additional work is needed to identify ways in which cessation training can be incorporated into existing curriculum in an efficient and effective manner which is acceptable to teaching faculty.

Finally, some but not all of the programs reviewed have been evaluated. It is strongly recommended that program evaluation be incorporated into future program development. This should include the development of a program description which highlights the theory underlying the approach, and specific objectives. Additional evaluation should address implementation and outcomes such as knowledge and incorporation of cessation into clinical practice.

A limitation of this work is that we did not have access to actual curricula or program materials. We relied on published descriptions and information available through the Internet. If further research is carried out, program developers should be contacted regarding the status of their programs and availability of internal evaluation reports. Furthermore, revised or new programs should be reviewed using the Ferry et al., (1999) recommended tobacco curriculum content areas. Another limitation of this report is that it focuses solely on medical education, nursing, pharmacy and dentistry. Other health professions groups such as physiotherapists, occupational therapists, psychologists, and counselors should also be considered.

In summary, this report presents the results of a review of the published and grey literature related to tobacco cessation programs for health professionals’ education. Programs for practicing health professionals are more readily available than for students in training. There are more programs available for physicians and nurses, than for dentists and pharmacists. A number of programs and resources are available that can be used as the basis for developing program materials that are appropriate for both students and practicing health professionals in Canada and internationally. Evaluation of these programs will be essential for purposes of ongoing program improvement, assessing achievement of objectives, and social accountability, as well as building a stronger body of literature on tobacco cessation counseling in clinical settings.

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APPENDIX A
Canadian Universities Offering an Undergraduate Medical Education Program

University	Course potentially containing tobacco content	Contact
Memorial University of Newfoundland	Community Health I and II Family Medicine Pre-clerkship Elective Integrated basic, community health and clinical science	Dr Mary Wells, Associate Dean, Curriculum 709-777-6008
Dalhousie University	Clinical Epidemiology and Critical Thinking Electives Med 1 et 2 Respiratory and Cardiovascular Unit Patient-Doctor Unit Population Health, Critical Appraisal of Community Service unit <u>Typical week:</u> 2h concentration on critical appraisal or population health	Dr Robin Whyte Dr Dan Hughes Dr Debra Morrisson Dr Christine Dipchand Dr George Kephart Dr Kim Blake, Associate Dean of Undergraduate Medical Education 902-494-1546
Laval University	Clinical Initiation I and II Applied Epidemiology Family Medicine Internship Social and Preventive Medicine internship <u>Elective</u> Health Economic Drug and Alcohol Abuse Introduction to Public Health Microprogram on tobacco	Dr J. Glenn Dr R Verrault Dr S. Gagnon Dr L. Bernard Dr G. Belanger Dr C. Rouillard Faculte des sciences infirmiere Dr Ann Royer
University of Sherbrooke	Public Health and Preventive Medicine Cardiovascular apparatus Respiratory apparatus Public health medicine internship	Dr. Paul Grand'Maison
University of Montreal	Introduction to Clinical Medicine I and II Clinical Epidemiology Respiratory System and Oxygenation Public Health Medicine internship	Dr. Christian Bourdy Chantal Lafond Dr. Brigitte Maheux
McGill University	Pathobiology, Treatment and Prevention of Disease	Program coordinator Dr. R Capek (Pharmacology) Dr. Theresa Gyorkos (Epidemiology) Dr. M. Boillat (Family medicine)

		Office of Curriculum Development Dr. J Donald Boudreau (514) 398-5613
University of Ottawa	Curriculum not available online	Admission Faculty of MD (613) 562-5409
Queen's University at Kingston	<i>Year 1</i> Neurotransmission, Drugs and Receptors Community Health and Epidemiology Communication Skills Oncology <i>Year 2</i> Community Health and Epidemiology Cardiovascular and Respiratory	Undergraduate Medical Education Mrs Denise Jones (613) 533-2542 X 77804
University of Toronto	Determinants of Community Health I and II Foundations of Medical Practice	Dr. Peter Selby
McMaster University	Population Perspective Social and Community Context of Health Care Determinants of Health Epidemiology Public and Community Health	Dr Jane Benett Curriculum coordinator 905-525-9140 X 22981
University of Western Ontario	Curriculum not available on-line	Dr Maggie Rebel Associate Dean 519-661-211 ext.86229
Northern Ontario School of Medicine	Curriculum not available on-line	Undergraduate Medical Education Dr Joel Lanphear North Bay campus 807-766-7300 Sudbury campus 705-675-4883
University of Manitoba	Community Health Science	Educational coordinator Ms Gladys Stewart 204-789-3863
University of Saskatchewan	Third medical year : Community Health and Epidemiology	Associate Dean Dr Sheila Rutledge Harding 306-966-6151
University of Alberta	Patient Centered Care Part I (Community Health Module) and Part II	Preclinical Education 780-492-6350
University of Calgary	Curriculum not available on-line	Undergraduate medical education Dr Jean Fraser 403-220-6839
University of British Columbia	Principles of Human Biology	Dr. Angela Towle

	Foundations of Medicine Doctor, Patient, and Society Family Practice Continuum	Associate Dean, Curriculum 604-875-4500
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APPENDIX B

Canadian Tobacco Cessation Counseling Training Programs & Materials for Physicians

Program	Description	Program content (assessed following the twelve areas described by Ferry et al.)	Evaluation Results
<p>BC Doctors' stop smoking program www.bcdssp.com/programs/bcdssp.html</p>	<p>The Stop Smoking Program is a web based program launched by the British Columbia Medical Association that offers a variety of support materials to health professionals including kits for clinicians and smokers, videos, resource materials other supplementary materials. Through this program, Dr. Fred Bass is also available to provide direct advice and counseling to health professionals about tobacco intervention.</p>	<p>Cancer risks from tobacco <i>Not mentioned</i></p> <p>Health effects: tobacco related diseases Conditions caused by smoking</p> <p>Effect of passive smoking <i>Not mentioned</i>, but in part covered by tobacco related diseases</p> <p>Smoking cigarette content <i>Not mentioned</i></p> <p>Nicotine withdrawal symptoms How nicotine addiction works</p> <p>High risk group with more difficulty quitting <i>Not mentioned</i></p> <p>Clinical interventions Components of Clinical Tobacco Intervention (CTI)</p> <p>Relapse prevention I've quit several times, but always go back. Why? Tips on quitting and remaining smoke-free</p> <p>Pharmacologic agents Stop-smoking medications</p> <p>Smoking cessation techniques in artificial setting <i>Not mentioned</i></p> <p>Smoking cessation techniques in clinical setting with patients <i>Not mentioned</i></p> <p>Smoking cessation techniques in clinical setting with patients and evaluation of performance</p>	<p>Contact: Dr Fred Bass 604.638.2946</p>

		<p><i>Not mentioned</i></p> <p>Offers tips on how to set up clinics for effective CTI</p> <p>Offers practical, easy to use material such as: Triage Form- How to label every chart, Smoking-Status Assessment, Stop-Smoking Checklist, Target (Quit) Date/Follow-up Contract</p>	
Quit for life program (Q4L)	<p>The Quit 4 Life smoking cessation program is a bilingual, national program designed to help smokers quit smoking. Program materials were updated in 2005, including a self-help handbook and a facilitator guide for group-based delivery. A new self-help website was also launched. This workshop is for teachers, counselors, youth workers, or health care professionals who would like to learn more about the Quit 4 Life program, and will build skills for delivering the program in small groups.</p>	<p>Cancer risks from tobacco <i>Not mentioned</i></p> <p>Health effects: tobacco related diseases Session 3. What Do You Know About Smoking? How Do You Deal with the Challenges of Quitting? Increase knowledge about health facts and smoking Know more about how smoking impacts on women and men Increase awareness about their smoking behavior Know their own reasons or roadblocks that keep them from making changes to their smoking behavior Increase their commitment to cut down smoking Conditions caused by smoking</p> <p>Effect of passive smoking <i>Not mentioned</i></p> <p>Smoking cigarette content <i>Not mentioned</i></p> <p>Nicotine withdrawal symptoms Session 4. What is Withdrawal and How Do You Deal With It? Increase awareness about routines and what it is like to change them. Report back on their successes in cutting out cigarettes that they do not need to smoke. Review and change or adjust their plan to cut out certain cigarettes. Increase knowledge about withdrawal, temptations, and cravings and how to deal with them. Increase knowledge about how to use alternative activities to decrease feeling of</p>	<p>The Facilitator's Guide has been piloted and evaluated across Canada, and the updated version provides comprehensive information on everything from recruiting and retaining participants, to adapting and evaluating your personal group. Cummings et al. in a 1989 randomized control trial came to the conclusion that on the basis of telephone interviews with patients after visiting the physician, internists who attended the Quit for Life program discussed smoking with more patients who smoked, spent more time counseling them about smoking, helped more patients set dates to quit smoking, gave out more self-help booklets, and made more follow-up appointments to discuss smoking than did internists in the control group. One year later, the rate of biochemically confirmed, long-term (greater than or equal to 9 months) abstinence from smoking was 1% higher among all patients of trained internists than among patients of controls (95% CI, -0.1% to +2.3%), and 2.2% (+0.2% to +4.3%) higher among the patients who most wanted to quit smoking.</p>

		<p>boredom</p> <p>High risk group with more difficulty quitting <i>Not mentioned</i></p> <p>Clinical interventions <i>Not mentioned</i></p> <p>Relapse prevention Session 8. How Can You Stay Smoke-free? Identify successes and acknowledge them. Know how to interrupt negative self-talk and replace it with positive messages. Experiences with quitting. Learn how to deal with slips.</p> <p>Pharmacologic agents Stop-smoking medications</p> <p>Smoking cessation techniques in artificial setting <i>Not mentioned</i></p> <p>Smoking cessation techniques in clinical setting with patients <i>Not mentioned</i></p> <p>Smoking cessation techniques in clinical setting with patients and evaluation of performance <i>Not mentioned</i></p>	<p>Moreover, the Q4L program has been tested and evaluated. It effectively reaches the intended target group of female and male 12-18 year-olds, especially heavier smokers (greater proportion of daily smokers than average).</p> <p>In a national study, Q4L participants: Increased their motivation to quit. Increased the number and the length of their quit attempts. Increased their skills and knowledge about smoking cessation. Cut down cigarette consumption in half: Immediately after the program, they were smoking fewer cigarettes daily than the Canadian average for this age group of smokers. Were able to quit to a greater extent than average: the 11% quit rate was higher than the Canadian average of 6% short term quitters. This number also should be interpreted in light of the higher number of possibly more nicotine dependent youth at program start. Were very satisfied with the program, which met or exceeded their original expectations. Almost all Q4L participants would recommend the program to their friends. (Health Canada)</p>
<p>Clinical Tobacco Intervention Recognition Program www.bccancer.bc.ca/HPI/CE/C_TIRP/default.htm</p>	<p>Web based program including a range of readings on tobacco issues and an on line quiz accredited by the College of family physicians of Canada</p>	<p>Cancer risks from tobacco Smoking Attributable Mortality</p> <p>Health effects: tobacco related diseases On a Typical Day in BC in 1998 Smoking Attributable Mortality</p> <p>Effect of passive smoking <i>Not mentioned</i></p> <p>Smoking cigarette content</p>	<p>BC Cancer Agency Research Centre 601 West 10th Avenue Vancouver, BC, V5Z 1L3 (604) 877-6010</p>

		<p><i>Not mentioned</i></p> <p>Nicotine withdrawal symptoms High risk group with more difficulty quitting <i>Not mentioned</i></p> <p>Clinical interventions Treating Tobacco Use and Dependence Effective Clinical Tobacco Intervention</p> <p>Relapse prevention</p> <p>Pharmacologic agents Rethinking Stop-Smoking Medications</p> <p>Smoking cessation techniques in artificial setting <i>Not mentioned</i></p> <p>Smoking cessation techniques in clinical setting with patients <i>Not mentioned</i></p> <p>Smoking cessation techniques in clinical setting with patients and evaluation of performance <i>Not mentioned</i></p> <p>Presence of a Quiz to evaluate practitioners' retention of information</p>	
<p>Physicians Taking Action Against Smoking</p>	<p>5 year intervention program to improve the smoking cessation counseling practices of general practitioners in Montreal. This program included a variety of interventions like training workshop, conferences, distribution of guidelines, distribution of educational materials and resources in Montreal.</p>	<p>Cancer risks from tobacco 1 to 2 hours, intensive training workshop</p> <p>Health effects: tobacco related diseases 1 to 2 hours, intensive training workshop</p> <p>Effect of passive smoking 1 to 2 hours, intensive training workshop</p> <p>Smoking cigarette content Not mentioned</p> <p>Nicotine withdrawal symptoms 1 to 2 hours, intensive training workshop</p> <p>High risk group with more difficulty quitting 1 to 2 hours, intensive training workshop</p> <p>Clinical interventions 1 to 2 hours, intensive training workshop</p> <p>Relapse prevention 1 to 2 hours, intensive training workshop</p> <p>Pharmacologic agents 1 to 2 hours, intensive training workshop</p>	<p>Data from two cross-sectional surveys conducted two years apart suggest improvement over time in some counseling behaviors and in several psychosocial precursors to behaviours particularly among female GPs.</p> <p>The proportion of male GPs devoting at least 2 minutes to cessation counseling and discussing a setting a quit date with patients in the preparation stage increased, but fewer initiated a dialogue at the precontemplation stage in 2000 than in 1998.</p>

		<p>Smoking cessation techniques in artificial setting Three to five clinical scenarios featuring smokers at different stages of readiness to quit Description of the appropriate counseling interventions tailored to the stage of readiness</p> <p>Smoking cessation techniques in clinical setting with patients <i>Not mentioned</i></p> <p>Smoking cessation techniques in clinical setting with patients and evaluation of performance <i>Not mentioned</i></p>	
<p>Guide your Patients to Smoke-Free Future program</p>	<p>This one-day workshop will describe and demonstrate minimal contact one-on-one counseling, and provide an overview of other minimal contact intervention options, including health care provider advice, telephone counseling, and self-help resources. This workshop will be of interest to individuals who work one-on-one with smokers and ex-smokers.</p>	<p>Cancer risks from tobacco <i>Not mentioned</i></p> <p>Health effects: tobacco related diseases <i>Not mentioned</i></p> <p>Effect of passive smoking <i>Not mentioned</i></p> <p>Smoking cigarette content <i>Not mentioned</i></p> <p>Nicotine withdrawal symptoms Withdrawal symptoms Irresistible urge to smoke</p> <p>High risk group with more difficulty quitting Difficulty quitting during pregnancy</p> <p>Clinical interventions Suggested clinical approach for management of smoking patients (5A's)</p> <p>Relapse prevention Potential situations for relapse</p> <p>Pharmacologic agents NRT advantages and disadvantages</p> <p>Smoking cessation techniques in artificial setting <i>Not mentioned</i></p> <p>Smoking cessation techniques in clinical setting with patients <i>Not mentioned</i></p> <p>Smoking cessation techniques in clinical setting with patients and evaluation of</p>	<p>Canadian council for tobacco control 1-800-267-5234</p>

		<p>performance <i>Not mentioned</i></p>	
<p>Physicians and Clinical Tobacco Intervention: A Guide for Evaluation and Planning</p> <p>www.hc-sc.gc.ca/hl-vs/pubs/tobac-tabac/pcti-micct/index_e.html</p>	<p>Web based document offered by health Canada for health professionals.</p>	<p>Cancer risks from tobacco <i>Not mentioned</i></p> <p>Health effects: tobacco related diseases <i>Not mentioned</i></p> <p>Effect of passive smoking <i>Not mentioned</i></p> <p>Smoking cigarette content <i>Not mentioned</i></p> <p>Nicotine withdrawal symptoms <i>Not mentioned</i></p> <p>High risk group with more difficulty quitting <i>Not mentioned</i></p> <p>Clinical interventions Four Keys to an Effective Program Ask: Ask each patient about smoking status and label chart appropriately. Advise: give strong advice and pertinent risk information. Assist: practice empathetic listening. Arrange: get those ready to stop to set a quit date/develop a plan. Use a flow chart or other method to ensure consistent use of intervention "steps" recommend behavioural self-management strategies maintain a follow-up and referral system Involve the office staff in these activities</p> <p>Relapse prevention <i>Not mentioned</i></p> <p>Pharmacologic agents Recommend nicotine replacement to addicted patients who are ready to quit.</p> <p>Smoking cessation techniques in artificial setting <i>Not mentioned</i></p> <p>Smoking cessation techniques in clinical setting with patients <i>Not mentioned</i></p> <p>Smoking cessation techniques in clinical</p>	<p>Health Canada. Telephone: (613) 954-5995</p>

		setting with patients and evaluation of performance <i>Not mentioned</i>	
Le counselling médical dans l'arrêt tabagique (Medical counseling in tobacco cessation)	Guidelines	Cancer risks from tobacco Health effects: tobacco related diseases Effect of passive smoking Smoking cigarette content Nicotine withdrawal symptoms Nicotine and withdrawal High risk group with more difficulty quitting Pertinent discussion subject for youth Tobacco and pregnant women Clinical interventions Assessment of smoking status Interventions tailored to the stage of readiness Relapse prevention <i>Not mentioned</i> Pharmacologic agents NRT Smoking cessation techniques in artificial setting NA Smoking cessation techniques in clinical setting with patients NA Smoking cessation techniques in clinical setting with patients and evaluation of performance NA	
Quit for Good Kit (for physicians)	50-page 8 by 4 self-help booklet begins with a quiz to help participants understand why they smoke and the role cigarettes play in their daily lives. This booklet is included in the Canadian Cancer Society's Quit for Good Kit for physicians who want to help patients stop smoking.	Cancer risks from tobacco <i>Not mentioned</i> Health effects: tobacco related diseases <i>Not mentioned</i> Effect of passive smoking <i>Not mentioned</i> Smoking cigarette content <i>Not mentioned</i> Nicotine withdrawal symptoms <i>Not mentioned</i>	Canadian Cancer Society Tel: (514) 255-5151

		<p>High risk group with more difficulty quitting <i>Not mentioned</i></p> <p>Clinical interventions After identifying reasons why they want to quit, participants are asked to set a firm quit date and prepare by involving a friend or family member, switching brands and cutting down the amount smoked.</p> <p>Relapse prevention A variety of strategies for successfully getting through quit day and preventing relapse are provided.</p> <p>Pharmacologic agents <i>Not mentioned</i></p> <p>Smoking cessation techniques in artificial setting NA</p> <p>Smoking cessation techniques in clinical setting with patients NA</p> <p>Smoking cessation techniques in clinical setting with patients and evaluation of performance NA</p>	
<p>J'arrete centre d'abandon tabagique (Tobacco cessation centre I Quit)</p> <p>www.santepub-mtl.qc.ca/tabagie/pratiquemedicale.html</p>	<p>Web based program including readings, training modules, guidelines, handout information material, training workshops</p>	<p>Cancer risks from tobacco <i>Not mentioned</i></p> <p>Health effects: tobacco related diseases <i>Not mentioned</i></p> <p>Effect of passive smoking Second hand smoke unpleasant and dangerous</p> <p>Smoking cigarette content <i>Not mentioned</i></p> <p>Nicotine withdrawal symptoms Withdrawal symptoms</p> <p>High risk group with more difficulty quitting Youth and smoking Tobacco counseling for pregnant women Hospitalized patients</p> <p>Clinical interventions Assessment of smoking status Assessment of patient motivation evaluation</p>	<p>Information centre on tobacco counseling (514) 528-2400 poste 3401</p>

		<p>Brief tobacco counseling Tailored intervention to stage of readiness Relapse prevention Relapse possibility mentioned Pharmacologic agents Recommendation of an appropriate NRT Smoking cessation techniques in artificial setting Examples of patients at different stage of readiness Smoking cessation techniques in clinical setting with patients Not mentioned Smoking cessation techniques in clinical setting with patients and evaluation of performance Presence of a post test evaluation Supplement information Help to the practice Algorithm for tobacco management interventions Resources material to give to patients</p>	
<p>0.5.30 Combinaison prevention (0.5.30 prevention rules)</p>	<p>Integrated Program on chronic diseases prevention. This program has been introduced in Quebec in 2002 and is based on the concept that the integration of three health targets within on mobilizing message.</p> <p>Those targets are: 0 tobacco (Consumption and exposition); 5 fruits and vegetables; 30 minutes of physical activity</p>	<p>Cancer risks from tobacco Mentioned in part in the health effects section Health effects: tobacco related diseases on associe la consommation de tabac à : Effect of passive smoking exposition à la fumée de tabac dans l'environnement (FTE) Smoking cigarette content <i>Not mentioned</i> Nicotine withdrawal symptoms Withdrawal symptoms mentioned High risk group with more difficulty quitting <i>Not mentioned</i> Clinical interventions Brief counseling Relapse prevention <i>Not mentioned</i> Pharmacologic agents <i>Not mentioned</i> Smoking cessation techniques in artificial</p>	<p>Mario Champagne Direction de santé publique de Québec (418) 666-7000 (poste 392)</p>

		setting <i>Not mentioned</i> Smoking cessation techniques in clinical setting with patients <i>Not mentioned</i> Smoking cessation techniques in clinical setting with patients and evaluation of performance <i>Not mentioned</i>	
Microprogramme de deuxième cycle en control du tabagisme (graduate microprogram in tobacco control)	Web-based graduated program offered by Laval University in Quebec, aimed at training students to become specialists able to conceive, organize and direct tobacco control programs, as well as treating tobacco users. The general objectives of this tobacco control program are: 1) To provide advance knowledge to students on the evolution of tobacco consumption in our society as well as on the responsibility that the International and Canadian tobacco industry holds in that public health burden. 2) To expose the students to the new paradigms of this disease as well as to the factors that influences the public health interventions on tobacco. 3) To develop skills in health prevention, health protection and tobacco cessation.	Cancer risks from tobacco <i>Not mentioned</i> Health effects: tobacco related diseases <i>Not mentioned</i> Effect of passive smoking Problematic of the environmental tobacco smoke Smoking cigarette content Tobacco smoke chemistry and toxicology Nicotine withdrawal symptoms <i>Not mentioned</i> High risk group with more difficulty quitting Youth and feminine tobacco consumption Clinical interventions Tobacco cessation and dependence Relapse prevention <i>Not mentioned</i> Pharmacologic agents Included in tobacco cessation Smoking cessation techniques in artificial setting <i>Not mentioned</i> Smoking cessation techniques in clinical setting with patients <i>Not mentioned</i> Smoking cessation techniques in clinical setting with patients and evaluation of performance <i>Not mentioned</i>	Dr Ann Royer Direction de Santé Publique de Québec (418) 666-7000
Des Professionnels Actifs pour Contrer le Tabagisme (Active Professionals Against	Web-based training for medical doctors	Cancer risks from tobacco Mentioned in health effects Health effects: tobacco related diseases	

Tobacco)		<p>Smoking and health Effect of passive smoking Environmental tobacco smoke Smoking cigarette content <i>Not mentioned</i> Nicotine withdrawal symptoms Withdrawal symptoms High risk group with more difficulty quitting Clinical interventions Brief smoking cessation counseling, how? Key elements for effective smoking cessation counseling Relapse prevention <i>Not mentioned</i> Pharmacologic agents Smoking cessation pharmacotherapy (NRT) Smoking cessation techniques in artificial setting <i>Not mentioned</i> Smoking cessation techniques in clinical setting with patients <i>Not mentioned</i> Smoking cessation techniques in clinical setting with patients and evaluation of performance <i>Not mentioned</i></p>	
Tobacco and Health: from Cells to Society http://tobaccocourse.otru.org/	Graduate course offered by Ontario Tobacco Research Unit (OTRU).This course provides a comprehensive overview of tobacco and tobacco-related issues from a public health perspective. This course is targeted to Community Health and Health Studies students in both professional and research degree programs, as well as students in the Collaborative Program in Addiction Studies. Qualified students from all disciplines are encouraged to register. Videoconferencing technology will be utilized so that students can take this course from participating sites around Canada. Collaborating universities include the	<i>The course focuses on :</i> Patterns, determinants and health effects of tobacco use The causes, impacts and interventions regarding nicotine addiction, and the prevention of tobacco use <i>Topics will include:</i> Epidemiology Nicotine addiction Genetic factors, determinants, health effects, social and economic impacts Treatment issues, Prevention, program and policy issues.	<i>Not mentioned</i> Contacts: Roberta Ferrence Ontario Tobacco Research Unit 33 Russell Street, Toronto 416-535-8501 ext 4482 roberta_ferrence@camh.net Joanna Cohen Ontario Tobacco Research Unit 33 Russell Street, Toronto 416-535-8501 ext. 4510 joanna_cohen@camh.net Scott Leatherdale

	University of Toronto, the University of Waterloo, McGill University, Lakehead University, the University of Alberta, and the University of British Columbia.		Cancer Care Ontario 620 University Avenue, Toronto 416-971-5100 ext. 1237 scott.leatherdale@cancercare.on.ca
<p>Advanced Tobacco Reduction and Cessation (TRaC) Project www.capitalhealth.ca</p> <p>/EspeciallyFor/HealthProfessionals/SmokingReduction</p>	<p>Two day certificate course for physician and their staff on tobacco reduction and cessation strategies <i>One day smoking cessation training opportunity offered by Capital Health</i> <i>Two day certificate:</i> Advanced guidelines and protocols for tobacco dependence treatment in treatment resistant and complicated tobacco dependence individuals A hands on experience</p>	<p>Cancer risks from tobacco <i>Not mentioned</i> Smoking cigarette content <i>Not mentioned</i> Nicotine withdrawal symptoms Clinical interventions Advanced motivational Enhancement therapy for the busy professional Protocol for conducting group cognitive behavioral therapy Pharmacologic agents Credentialing for NRT standing orders Rethinking Stop-Smoking Medications: myths and facts Relapse prevention How do people change behaviour? From lifestyle changes to tobacco dependence interventions High risk group with more difficulty quitting Advanced guidelines and protocols for TD treatment in treatment resistant and complicated TD individuals Health effects: tobacco related diseases Effect of passive smoking <i>Not mentioned</i> Smoking cessation techniques in artificial setting NA Smoking cessation techniques in clinical setting with patients NA Smoking cessation techniques in clinical setting with patients and evaluation of</p>	<p>Not mentioned</p> <p>Contact: Corporate Office Walter C. Mackenzie Health Sciences Centre 8440 – 112 Street Edmonton, Alberta T6G 2B7 Phone (780) 407-1000</p>

		<p>performance NA</p> <p><i>These workshops also provides participants information on:</i> Public health model in tobacco dependence: A new paradigm Enhancing skills for treating tobacco key to success Measuring our level of success and improving quality of care how do we know we're succeeding</p>	
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APPENDIX C

Nursing programs in Canada (by organization)

	Organization	Degree	Collaborative Partners	Prov
1.	Algonquin College	Bachelor of Science	University of Ottawa	ON
2.	Athabasca University	Bachelor of Science Post RN Baccalaureate Post LPN Baccalaureate	Mount Royal College	AB
3.	Aurora College	Bachelor of Science		NT
4.	British Columbia Institute of Technology	Bachelor of Science	College of the Rockies	BC
5.	Brock University	Bachelor of Science Post RN Baccalaureate	Loyalist College	ON
6.	Cambrian College of Applied Arts & Technology	Bachelor of Science		ON
7.	Camosun College	Bachelor of Science	Collaborative Nursing Program of British Columbia	BC
8.	Canadore College	Bachelor of Science	Nipissing University	ON
9.	Cégep Beauce-Appalaches	Diplôme Bachelier ès Sciences	Université de Sherbrooke Collège Estrie-Montérégie-Beauce	PQ
10.	Cégep Chicoutimi	Diplôme DEC-BAC	l'Université du Québec à Chicoutimi	PQ
11.	Cégep de Baie-Comeau	Diplôme Dec-Bac Baccalauréat	l'Université du Québec à Rimouski (UQAR)	PQ
12.	Cégep de Drummondville	Diplôme Dec-Bac Baccalauréat	l'Université du Québec à Trois-Rivières.	PQ
13.	Cégep de Granby Haute-Yamaska	Diplôme DEC-Bacc	l'Université de Sherbrooke	PQ
14.	Cégep de Jonquière	Diplôme DEC-BAC		PQ
15.	Cégep de la Gaspésie et des Îles	Diplôme		PQ
16.	Cégep de la Pocatière	Diplôme		PQ
17.	Cégep de l'Abitibi-Témiscamingue	Diplôme DEC-BAC	l'Université du Québec en Abitibi-Témiscamingue	PQ
18.	Cégep de Lévis-Lauzon	Diplôme DEC-BAC	l'Université Laval UQAR- Levis	PQ
19.	Cégep de Rimouski	Diplôme DEC-BAC	l'Université du Québec à Rimouski	PQ
20.	Cégep de Rivière-du-Loup	Diplôme		PQ

21.	Cégep de Sainte-Foy	Diplôme DEC-BAC	Universités Québécoises	PQ
22.	Cégep de Sainte-Hyacinthe	Diplôme		PQ
23.	Cégep de Saint-Félicien	Diplôme DEC-BAC Baccalauréat	Universités Québécoises	PQ
24.	Cégep de Saint-Laurent	Diplôme Baccalauréat	l'Université de Montréal	PQ
25.	Cégep de Sorel-Tracy	Diplôme		PQ
26.	Cégep de St. Jérôme	Diplôme		PQ
27.	Cégep de Trois-Rivières	Diplôme Dec-Bac	l'Université du Québec à Trois-Rivières.	PQ
28.	Cégep de Victoriaville	Diplôme DEC-BAC	Universités Québécoises	PQ
29.	Cégep du Vieux Montréal	Diplôme DEC-BAC	l'Université de Montréal	PQ
30.	Cégep Édouard Montpetit	Diplôme		PQ
31.	Cégep François-Xavier-Garneau	Diplôme DEC-BAC	l'Université Laval.	PQ
32.	Cégep régional de Lanaudière à Joliette	Diplôme DEC-BAC Baccalauréat	Université du Québec à Trois-Rivières	PQ
33.	Cégep Saint-Jean-sur-Richelieu	Diplôme		PQ
34.	Centennial College of Applied Arts & Technology	Bachelor of Science Post LPN Baccalaureate Post RN Baccalaureate	Ryerson University George Brown College	ON
35.	Centre for Nursing Studies	Basic Baccalaureate Post RN Baccalaureate	Memorial University Sir Wilfred Grenfell College Western Regional School of Nursing	NL
36.	Collège André-Laurendeau	Diplôme Baccalauréat	l'université de Montréal.	PQ
37.	Collège Boréal	Baccalauréat Diplôme	Université de Lauentien	ON
38.	Collège Dawson	Diplôme		PQ
39.	Collège de Bois-de-Boulogne	Diplôme DEC-BAC	l'Université de Montréal	PQ
40.	Collège de la région de l'Amiante	Diplôme		PQ
41.	Collège de Limoilou	Diplôme	Universités Québécoises	PQ

		DEC-BAC		
42.	Collège de l'Outaouais Campus Gabrielle Roy	Diplôme		PQ
43.	Collège de Maisonneuve	Diplôme DEC-BAC	l'Université de Montréal	PQ
44.	Collège de Matane	Diplôme BAC-DEC Baccalauréat	l'Université du Québec à Rimouski (UQAR)	PQ
45.	Collège de Sept-Îles	Diplôme < DEC-BAC	l'Université du Québec à Rimouski (UQAR)	PQ
46.	Collège de Shawinigan	Diplôme DEC-BAC	Universités Québécoises	PQ
47.	Collège de Sherbrooke	Diplôme		PQ
48.	Collège de Valleyfield	Diplôme DEC-BAC	Universités Québécoises	PQ
49.	Collège Montmorency	Diplôme		PQ
50.	College of New Caledonia	Basic Baccalaureate Bachelor of Science	University of British Columbia	BC
51.	Collège Universitaire de Saint Boniface	Baccalauréat Maîtrise	Université d'Ottawa	MB
52.	Collège Vanier	Diplôme		PQ
53.	Conestoga College of Applied Arts and Technology	Bachelor of Science	McMaster University	ON
54.	Confederation College of Applied Arts & Technology	Bachelor of Science	Lakehead University	ON
55.	Dalhousie University	Bachelor of Science Post-RN Baccalaureate Masters PhD Post-Baccalaureate Primary Health Care Nurse Practitioner	Nunavut Arctic College	NS
56.	Douglas College	Bachelor of Science	Collaborative Nursing Program of British Columbia	BC
57.	Durham College	Bachelor of Science	University of Ontario Institute of Technology	ON
58.	Fanshawe College of Applied Arts & Technology	Bachelor of Science	University of Western Ontario	ON
59.	George Brown College of Applied Arts & Technology	Bachelor of Science	Ryerson University	ON
60.	Georgian College of Applied Arts & Technology	Bachelor of Science	York University	ON
61.	Grande Prairie Regional College	Bachelor of Science Post RN Bachelor of Science	University of Alberta	AB

62.	Grant MacEwan Community College	Basic BaccaLaureate	University of Alberta	AB
63.	Heritage College	Diploma		PQ
64.	Humber College of Applied Arts & Technology	Basic BaccaLaureate	University of New Brunswick	ON
65.	John Abbott College	Diploma BAC-DEC	McGill University	PQ
66.	Keewatin Community College	Basic BaccaLaureate	University of Manitoba	MB
67.	Kelsey Institute, Saskatchewan Institute of Applied Arts & Technology	Basic BaccaLaureate (Distance) Nurse Practitioner	University of Saskatchewan	SK
68.	Keyano College	Bachelor of Science Post RN Degree	University of Alberta	AB
69.	Kwantlen University College	Bachelor of Science Post RN BaccaLaureate Bachelor Of Psychiatric Nursing	Collaborative Nursing Program of British Columbia	BC
70.	La Cité Collégiale	Baccalauréat Diplôme	Université d'Ottawa	ON
71.	Lakehead University	Bachelor of Science Post RN BaccaLaureate		ON
72.	Lambton College of Applied Arts & Technology	Bachelor of Science	University of Windsor and St. Clair College	ON
73.	Langara Community College	Bachelor of Science	Collaborative Nursing Program of British Columbia	BC
74.	Laurentian University	Bachelor of Science/ Baccalauréat (Distance) Post RN Bachelor of Science (Distance)		ON
75.	Lethbridge Community College	Basic BaccaLaureate	University of Lethbridge	AB
76.	Loyalist College	Basic BaccaLaureate	Brock University	ON
77.	Malaspina College	Bachelor of Science Post RN Bachelor of Science	Collaborative Nursing Program of British Columbia	BC
78.	McGill University	Bachelor of Science Post RN BaccaLaureate Masters Doctoral		PQ
79.	McMaster University	Basic BaccaLaureate (Distance) Post RN BaccaLaureate(Distance) Masters Doctoral	Conestoga College Mohawk College	ON

80.	Medicine Hat College	Basic Bacculaureate Post RN Bacculaureate	University of Calgary	AB
81.	Memorial University of Newfoundland	Basic Bacculaureate Post RN Bacculaureate Masters (Distance)	Western Regional School of Nursing	NF
82.	Mohawk College	Bachelor of Science	McMaster University Conestoga College	ON
83.	Mount Royal College	Basic Bacculaureate	Anthabasca University	AB
84.	Nippissing University	Bachelor of Science	Canadore College	ON
85.	North Island College	Bachelor of Science	Collaborative Nursing Program of British Columbia	BC
86.	Northern College of Applied Arts & Technology	Bachelor of Science	Laurentian University	ON
87.	Nunavut Arctic College	Bachelor of Science Diploma	Dalhousie University	NU
88.	Ontario Hospital Association			ON
89.	Queen's University	BaBachelor of Science Post RN Bachelor of Science Masters	St. Lawrence College	ON
90.	Red Deer College	Bachelor of Science	University of Alberta	AB
91.	Red River Community College	Basic Bacculaureate Diploma	University of Manitoba	MB
92.	Registered Nurses Professional Development Centre			NS
93.	Ryerson University	Bachelor of Science B.A. Gerontology Post RN Bachelor of Science (Distance)	George Brown College Centennial College	ON
94.	Sault College	Bachelor of Science	North Eastern Collaborative Nursing Program (Laurentian University)	ON
95.	Selkirk College	Basic Bacculaureate	Collaborative Nursing Program of British Columbia	BC
96.	Seneca College	Bachelor of Science	York University	ON
97.	Sir Sanford Fleming College of Applied Arts & Technology	Bachelor of Science	Trent University	ON
98.	Sir Wilfred Grenfell College	Basic Bacculaureate	Memorial University Centre for Nursing Studies	NL
99.	St. Clair College of Applied Arts & Technology	Bachelor of Science	University of Windsor	ON
100.	St. Clair College of Applied	Basic Bacculaureate	University of Windsor	ON

	Arts & Technology			
101.	St. Francis Xavier University	Bachelor of Science(Distance) Post RN Bachelor of Science Post LPN Bachelor of Science	Cape Breton University	NS
102.	Trent University	Bachelor of Science	Sir Sanford Flemming	ON
103.	Trinity Western University	Bachelor of Science		BC
104.	Université de Moncton	Baccalauréat (Distance) Baccalauréat en science infirmière (pour infirmière ou infirmier immatriculé) Maîtrise (Distance)		NB
105.	Université de Montréal	Baccalauréat Maîtrise (Distance) Doctorat (Distance) Nurse Practitioner (Distance) DEC-BAC		PQ
106.	Université de Sherbrooke	Baccalauréat DEC-BAC Maîtrise Doctorat		PQ
107.	Université du Québec à Chicoutimi	Baccalauréat DEC-BAC Maîtrise		PQ
108.	Université du Québec à Hull	Baccalauréat DEC-BAC Maîtrise		PQ
109.	Université du Québec à Rimouski	Diplôme Baccalauréat Maîtrise DEC-BAC		PQ
110.	Université du Québec à Trois-Rivières	Baccalauréat Maîtrise DEC-BAC		PQ
111.	Université du Québec en Abitibi-Témiscamingue	Baccalauréat DEC-BAC		PQ
112.	Université Laval	Baccalauréat DEC-BAC Maîtrise		PQ

		Doctorat Nurse Practitioner (Distance)		
113.	University College of Cape Breton	Bachelor of Science	St. Francis Xavier University	NS
114.	University College of the Cariboo	Bachelor of Science Post RN Baccalaureate Masters	Collaborative Nursing Program of British Columbia (University of British Columbia and Malaspina University College)	BC
115.	University College of the Fraser Valley	Bachelor of Science Post LPN Bachelor of Science	University of Victoria	BC
116.	University of Alberta	Bachelor of Science Post RN Bachelor of Science (Distance) Post LPN Bachelor of Science Masters (aging) Doctoral (Distance) Nurse Practitioner.		AB
117.	University of British Columbia	Bachelor of Science Basic Baccalaureate Post RN Baccalaureate Masters Doctoral.		BC
118.	University of Calgary	Bachelor of Science Post RN Baccalaureate (Distance) Masters (Distance) Doctoral (Distance) Bachelor of Kinesiology (General)/ Bachelor of Nursing (BN/BKN).	Medicine Hat College	AB
119.	University of Lethbridge	Basic Baccalaureate Post RN Baccalaureate Masters.	Lethbridge Community College	AB
120.	University of Manitoba	Basic Baccalaureate Post RN Baccalaureate (Distance) Masters (Distance) Doctoral(Distance).		MB
121.	University of New Brunswick	Basic Baccalaureate Post RN Baccalaureate Masters		NB

122.	University of Northern British Columbia	Bachelor of Science Post RN Baccalaureate Masters	College of New Caledonia	BC
123.	University of Ottawa/Université d'Ottawa	Bachelor of Science Post RN Bachelor of Science(Distance) Combined Nurse Practitioner/Masters Masters (Distance) Doctoral.	Algonquin College La Cité Collégiale	ON
124.	University of Prince Edward Island	Bachelor of Science		PE
125.	University of Saskatchewan	Bachelor of Science Post RN Baccalaureate (Distance) Masters	Saskatchewan Institute of Applied Science & Technology First Nations University of Canada	SK
126.	University of Toronto	Bachelor of Science (2 years) Masters Doctoral		ON
127.	University of Victoria	Basic Baccalaureate Post RN Baccalaureate Masters Doctoral	Collaborative Nursing Program of British Columbia	BC
128.	University of Western Ontario	Bachelor of Science Post RN Baccalaureate Masters Doctoral		ON
129.	University of Windsor	Bachelor of Science Post RN Bachelor of Science (Distance) Masters	St. Clair College Lambton College	ON
130.	Vancouver Community College			BC
131.	Vanier College	DEC-BAC	Universités Québécoises	PQ
132.	Wascana Institute, Saskatchewan Institute of Applied Science & Technology	Basic Baccalaureate (Distance)	University of Saskatchewan	SK
133.	York University, Atkinson College	Bachelor of Science Post RN Bachelor of Science	Seneca College Georgian College Durham College	ON

APPENDIX D

Canadian Faculties and Schools of Nursing

University	Potential tobacco content courses	Contact
Dalhousie University	Social and cultural determinants of health Pathophysiology and nursing Care of adults Nursing practice: Mothers and infants and childbearing families Nursing practice: Caring for Families Teaching and learning and communication process Nursing practice: Children and families Community development and advocacy Mental health nursing practice	Pamela Broome Undergraduate Planning & Development Secretary Telephone - (902) 494-2607 Fax - (902)494-3487 E-mail - pamela.broome@dal.ca
McGill University	Families and Health Behaviour Promoting Young Family Development Health and Physical Assessment Acute Stressors and Coping Processes Illness Management I Human Disease Learning and Health Education Primary Health Care Community Nursing I-II	Assistant Director (B.Sc.(N) Program) Madeleine Buck 514-398-4155, Room 211, Wilson Hall madeleine.buck@mcgill.ca
Lakehead University	Health and Primary Health Care Assessing individuals Assessing families Population Based Health Community Health Nursing Health of Client Groups Concepts of Health	Coordinator, Post RN Distance Education Program: lorne.mcdougall@lakeheadu.ca Phone: (807)343-8395
Laurentian University	Self and family health Family experience of a chronic health challenge Health promotion Nurses influencing change Nursing healthy individuals and families Nursing health assessment Community health nursing	Professional studies Office of the Associated Dean Fax: 675-4888
Memorial University of Newfoundland	Developing therapeutic relationship Nursing concepts of care for women and childbearing families	Memorial University of Newfoundland School of Nursing Health Sciences Centre, Rm 2916

	<p>Pathophysiology Nursing concept for mental health Community health and nursing practice Health promotion throughout lifespan Health assessment Introduction to psychology Community health nursing theory Community health nursing practice Community health practicum Nursing practice for children, adolescents and young adults</p>	<p>Phone: 709-777-6695 Fax: 709-777-7037</p>
McMaster University	<p>Introduction to nursing and health I and II Guided nursing practice I, II, III and IV Nursing concept in health and illness I, II, III and IV Population health Health science and society Advance nursing concepts I and II</p>	<p>Associate Dean Catherine Tompkins , R.N., Ph.D. Phone: 905-525-9140 ext. 22400</p>
Trent University	<p>Nursing Concepts & Family Centered Nursing Care Nursing Concepts & Community Health Care Community Health Nursing Care Nursing Care of Families Advanced Nursing Concepts Health Assessment of the Individual</p>	<p>Molly Westland, R.N., B.Sc.N., M.N., CCHN (c) Collaborative B.Sc.N. Program Coordinator mollywestland@trentu.ca 748-1011 ext. 7060</p>
Queen's University	<p>Professional Relationships Introduction to Promoting Decision Making for Health Health Assessment Common Health Challenges and Implications for Care I and II Family-centered Nursing Care Complex Psycho-Social and Mental Health Issues and Advanced Therapeutic Processes Community Health Promotion Theory</p>	<p>Cheryl Pulling Undergraduate program coordinator External Phone: 613 533 2668 E-mail address: cap1@post.queensu.ca Location: Room 128</p>
University of Moncton	<p>The healthy patient Human Physiology I Health alteration Physical Assessment Health and environment quality Prenatal care Child and family care Community health Theoretical basis of care</p>	<p>Nursing science UMCE 165, boulevard Hébert Edmundston, N.-B. E3V 2S8 Canada Tél. (506) 737-5138 fax. (506) 737-5373 science.infirmiere@umce.ca</p>
University of Montreal	<p>Health and person Experience of chronic disease</p>	<p>Vice-doyenne aux études de premier cycle</p>

	Health experience in perinatal care Mental health experience Family and health Health and community	Jacinthe Pepin Téléphone : 343-6178 Courrier électronique jacinthe.pepin@umontreal.ca
University of Sherbrooke	Public Health and Epidemiology Biological Science I and II Systemic family approach Community Approach Nursing care in chronic disease Children, youth and family care	Téléphone : (819) 564-5351 1-800-267-8337 Fax: (819) 820-6816 scinf.med@usherbrooke.ca
Université du Québec à Chicoutimi	Health education programs Statistic and Epidemiology Fundamental knowledge in nursing practice Nursing practice in youth health Nursing practice for family Nursing practice in perinatal care Nursing practice in mental health Experience of health-disease I Experience of health-disease in community health Chronic disease and holistic care	Direction : Danielle Poirier 545-5011, poste Local 5099
Université du Québec à Hull	Modèles conceptuels et théories Nursing practice I and II Physiopathology II Educative interventions in nursing practice Health experience: person with mental illness Health experience: family in perinatal period Health experience: chronic disease, family health and nursing practice Health experience: Child, youth and their family	
Université du Québec à Rimouski	Education for health Therapeutic interventions in nursing practice Nursing care to the family Community and nursing care Adult clinical assessment Physiopathology	Responsable : Sonia Dubé Téléphone : (418) 723-1986 ou 1 800 511-3382, poste 1571 Courriel : nursing@uqar.qc.ca
Université du Québec à Trois-Rivières	Nursing care and pathology Human Physiopathology I and II Nursing care and family health Nursing care and education principles The nurse and the clinical assessment Nursing care: the childbearing person Nursing care: The child and youth Nursing care: The person with a mental health illness nursing care: The adult Nursing practice, prevention and	Liette St-Pierre , responsable de programme, Comité de programme de premier cycle - Sciences infirmières. Renseignements: (819) 376-5011 poste 3471

	promotion	
Université du Québec en Abitibi-Témiscamingue	Not available online	
Université Laval	Socio-cultural basis of nursing care Nursing practice and family health Education for health Nursing practice in perinatal period, child and youth Nursing care and community health	Marie-France Ébacher Associates Dean Pavillon Paul-Comtois, local 4108I Laval University Québec (Québec) G1K 7P4 418-656-2131, poste 3466 Fax : 418-656-7747 marie-france.ebacher@fsi.ulaval.ca
University of Alberta	Nursing in Context A Nursing Practice I and II Transition to Professional Nursing I Transition to Professional Practice Nursing in Context B Nursing and Health Assessment Nursing in Context C Community Nursing Theory Health Assessment Assessment for Community and Population Health Family Health and Wellness	Stacy Grainger-Schatz Coordinator: Program Evaluation office: CSB 3-126 email:stacy.grainger-schatz@ualberta.ca phone:(780) 492-5928 fax:(780) 492-4844
University of British Columbia	Supportive Environments for the Health of Families Nursing Care of Individuals within the Context of Community Nursing Care of Families Fostering Population Health Promotion Population Health Promotion Nursing and the Health of Communities Health Promotion in Practice Advanced Health Assessment Across the Life Span	Marion Clauson, MSN, RN, PNC(C) Associate Director, Undergraduate Programs Phone: 604-822-7470 Email: clauson@nursing.ubc.ca
University of Calgary	Families/Research/Pathophysiology Adult Health Theory & Clinical Practice Nursing Inquiry/Clinical Practice/Health Assessment Community Health Theory & Clinical Practice Childbearing/Childrearing Families Theory & Clinical Practice	Elaine McKiel RN, BN, MEd, PhD Associate Dean (Doha Nursing Program) Phone: (403) 220-6615 Fax: (403) 284-4803 Email: mckiel@ucalgary.ca
University of Lethbridge	Health Education and Promotion Concepts of Health I and II Nursing Practice I-V Epidemiology and Disease Ecology	McArthur, Jennifer Academic Advisor (403) 317-2861
University of Manitoba	Nursing health assessment Health promotion of individuals Prevention of illness	Associate Dean, Undergraduate Programs Christine Ateah, RN, PhD

	Clinical nursing practice I and II Health promotion in families Health restoration in nursing	474-6220 Christine_Ateah@umanitoba.ca
University of New Brunswick	Professional Relationships Introduction to Nursing and Wellness ASP Health Assessment Health Assessment Mental Health Challenges Young Families: Enhancing their Health Young Families' Health Helping Relationships Community and Population Health Nursing Core Concepts and Issues in Cancer Nursing Practice Peer Education for Healthy Behaviours I Family Systems Nursing Women's Health Issues Peer Education for Healthy Behaviours II Healthful Lifestyles	Susan Hebert University of New Brunswick, Bathurst Campus Bathurst, NB Tel.: (506) 547-7477 Fax: (506) 547-7482 Email: shebert@unb.ca OR Assistant Dean, Faculty of Nursing University of New Brunswick, MacLaggan Hall (33 Dineen Dr.) P.O. Box 4400 Fredericton, N.B. E3B 5A3 Tel.: (506) 458-7670 Fax: (506) 447-3374 E-Mail: lbujold@unb.ca
University of Northern British Columbia	Communication Theory and Practice Introduction to Health Assessment Pathophysiological Concepts Health Promotion in Families Health Assessment Introduction to Epidemiology NURS Prac: Childbearing Family Health Promotion Introduction to Community Health and Nursing Maternal and Child Nursing Advanced Health Assessment Pathophysiology	Dr. Lela Zimmer Assistant Professor Nursing Undergraduate Coordinator Phone: 960-6630 Email: zimmerl@unbc.ca
University of Ottawa/Université d'Ottawa	Health of Individuals Health Assessment: Adult Nursing and Health Community Health Nursing Concepts of Child Health Nursing - Part I and II High Risk Intrapartum Nursing Therapeutics in Primary Health Care I and II	Secretary - Generic Baccalaureate Program Sylvie Bhookun Office: RGN-3051 Phone: (613) 562-5473 E-mail: sbhookun@uottawa.ca
University of Prince Edward Island	Health assessment Nursing of young families Nursing of individuals and families in wellness and illness Health teaching Nursing of childbearing families Nursing and population health	Mary-Lou Austin, Administrative Assistant Email: mlaustin@upei.ca Phone: (902)566-0768 Fax: (902)566-0777

University of Saskatchewan	<p>Introduction to Health Concepts Counseling in Nursing Practice Healthy Growth and Development Individual Assessment Education for Health Nursing in Communities</p>	<p>M.B. MacDonald Assistant Dean, Academic Affairs Telephone (306) 966-6250 Fax (306) 966-6621 mary.macdonald@usask.ca</p>
University of Toronto	<p>Nursing perspectives in health and wellness through lifespan: Lifespan 1: Families in the childbearing years Lifespan Pathophysiology and pharmacotherapeutics: Nursing assessment and interventions Introduction to community health Introduction to nursing care in children and families Primary health care: Nursing perspective child and family health Complexity: Issues in cardiovascular nursing</p>	<p>Judy Watt-Watson, Professor, Associate Dean, Academic Programs Faculty of Nursing, University of Toronto Phone: (416) 978-2850 j.watt.watson@utoronto.ca</p>
University of Victoria	<p>Health IV: Health Promotion and Community Empowerment</p>	<p>Administrative Assistant, Undergraduate Program Delivery Shelley Lietaer (250) 721-6333 slietaer@uvic.ca</p>
University of Western Ontario	<p>Health and Chronic Health Challenges Promoting the Health of Families and Communities for Registered Nurses Promoting the Health of Families and Communities Advanced Health Assessment and Diagnosis</p>	<p>Ferguson, Karen, Acting Chair, Undergraduate Programs Nursing Telephone: (519) 661- 2111, Ext. 86590 Fax: (519) 850-2514</p>
University of Windsor	<p>Health Assessment Health Issues and Care of Diverse Populations Family Health Family Health: Child Bearing and Child Rearing Families Family Nursing Nurse as counselor and Educator Community Nursing</p>	<p>Linda Patrick, RN, MA, MSc, PhD Undergraduate Program Coordinator Phone: 519-253-3000 EXT: 2403 Fax: 519-973-7084 E-mail: lpatric@uwindsor.ca</p>

APPENDIX E

Tobacco Cessation Counseling Training Programs for Nursing Professionals

Program	Description	Program content	Evaluation results
<p>Integrating tobacco cessation into daily practice</p> <p>http://www.rnao.org/bestpractices/PDF/BPG_smoking_cessation.pdf</p>	<p>Guideline type document available online published by the</p>	<p>Cancer risks from tobacco <i>Not mentioned</i></p> <p>Smoking cigarette content <i>Not mentioned</i></p> <p>Nicotine withdrawal symptoms Understanding tobacco addiction</p> <p>Clinical interventions How to help people stop smoking 4A's Non-pharmacological intervention Self help booklet Individual interventions Group interventions Mutual aid and self help support group Algorithm for the 4A's protocol Intensive nursing intervention</p> <p>Pharmacologic agents Pharmacotherapy Zyban and NRT</p> <p>Relapse prevention Strategies to prevent relapse Information on community resources</p> <p>High risk group with more difficulty quitting High risk population and targeted interventions (Ex... Pregnant woman, ethnicity)</p> <p>Health effects: tobacco related diseases Health risk of smoking</p> <p>Effect of passive smoking Second hand smoking</p> <p>Smoking cessation techniques in artificial setting</p>	<p>Not mentioned</p>

		<p>NA</p> <p>Smoking cessation techniques in clinical setting with patients <i>Not mentioned</i></p> <p>Smoking cessation techniques in clinical setting with patients and evaluation of performance <i>Not mentioned</i></p> <p>Benefits of quitting smoking Quick sheet to help nurse help their patients stop smoking Promotes nurses to get involve in advocating for smoke free environments, to health insurance to cover NRT Tips for implementation</p>	
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<p>Canadian council for tobacco control (advice for health professionals) http://www.cctc.ca/cctc/EN/advicehealthprofessionals</p>	<p>Didactic documents available online provides selected links to policy and resources for nurses to help their patients and themselves. Cessation information, policy and research Better practices for health professionals promoting cessation and treating tobacco dependence. Resources for use in smoking interventions. Evidence-based studies and literature reviews regarding the effectiveness of health professional intervention.</p>	<p>Cancer risks from tobacco <i>Not mentioned</i> Smoking cigarette content <i>Not mentioned</i> Nicotine withdrawal symptoms <i>Not mentioned</i> Clinical interventions Cessation information Better practices for treating tobacco dependence Pharmacologic agents Resources for use in smoking interventions Relapse prevention Resources for use in smoking interventions High risk group with more difficulty quitting <i>Not mentioned</i> Health effects: tobacco related diseases <i>Not mentioned</i> Effect of passive smoking <i>Not mentioned</i> Smoking cessation techniques in artificial setting NA Smoking cessation techniques in clinical setting with patients NA</p>	<p>Not mentioned</p>
<p>PTCC www.ptcc-cfc.on.ca/workshops/workshops.cfm</p>	<p>Workshops available for health professionals and educators that are Ontario residents only.</p>	<p>Cancer risks from tobacco <i>Not mentioned</i> Smoking cigarette content <i>Not mentioned</i> Nicotine withdrawal symptoms <i>Not mentioned</i> Clinical interventions Minimal contact interventions for smoking cessation Quit 4 life: smoking cessation for youth</p>	<p>Not mentioned Contact: <i>Program Training & Consultation Centre</i> c/o City of Ottawa Public Health and Long-Term Care Branch 192 Bank St. Ottawa, Ontario K2P 1W8 Tel: (613) 482-7822 ext. 201</p>

		<p>Pharmacologic agents <i>Not mentioned</i></p> <p>Relapse prevention <i>Not mentioned</i></p> <p>High risk group with more difficulty quitting Smoking cessation and mental health</p> <p>Health effects: tobacco related diseases <i>Not mentioned</i></p> <p>Effect of passive smoking <i>Not mentioned</i></p> <p>Smoking cessation techniques in artificial setting NA</p> <p>Smoking cessation techniques in clinical setting with patients NA</p> <p>Smoking cessation techniques in clinical setting with patients and evaluation of performance NA</p>	<p>or 1-800-363-7822 Fax: (613) 567-2730 Email: cmcdonald@ptcc-cfc.on.ca</p>
<p>Advanced Tobacco Reduction and Cessation Project www.capitalhealth.ca /EspeciallyFor/HealthProfessionals /SmokingReduction</p>	<p>Workshops: <i>One day smoking cessation training opportunity offered by Capital Health</i> <i>Two day certificate: Advanced TRaC project</i> <i>The website also offers resources and material for health professionals</i> Smoking Cessation Product Reference (PDF) Smoking Cessation Product Guide Capital Health smoke-free materials</p>	<p>Cancer risks from tobacco <i>Not mentioned</i></p> <p>Smoking cigarette content <i>Not mentioned</i></p> <p>Nicotine withdrawal symptoms</p> <p>Clinical interventions Advanced motivational Enhancement therapy for the busy professional Protocol for conducting group cognitive behavioral therapy</p> <p>Pharmacologic agents Credentialing for NRT standing orders Rethinking Stop-Smoking Medications: myths and facts</p> <p>Relapse prevention How do people change behaviour? From lifestyle changes to tobacco dependence</p>	<p>Not mentioned</p>

		<p>interventions</p> <p>High risk group with more difficulty quitting</p> <p>Advanced guidelines and protocols for TD treatment in treatment resistant and complicated TD individuals</p> <p>Health effects: tobacco related diseases</p> <p>Effect of passive smoking</p> <p><i>Not mentioned</i></p> <p>Smoking cessation techniques in artificial setting</p> <p>NA</p> <p>Smoking cessation techniques in clinical setting with patients</p> <p>NA</p> <p>Smoking cessation techniques in clinical setting with patients and evaluation of performance</p> <p>NA</p> <p><i>These workshops also provides participants information on:</i></p> <p>Public health model in tobacco dependence: A new paradigm</p> <p>Enhancing skills for treating tobacco key to success</p> <p>Measuring our level of success and improving quality of care how do we know we're succeeding</p>	
<p>Champlain hospital based smoking cessation network</p> <p>www.changefoundation.com</p>	<p>Hospital based smoking cessation program built on the model of the University of Ottawa heart institute. This program has been developed for the Champlain district hospitals and provides training to physicians and nurses on how to intervene with smokers to help them quit in a hospital</p>	<p>Clinical interventions</p> <p>Identify smokers on admission</p> <p>Provide cessation advice to smokers tailored to their stage of change as well as</p> <p>Pharmacologic agents</p> <p>Pharmacotherapy</p> <p>Relapse prevention</p> <p>Provide follow-up support</p>	<p>In the last year the University of Ottawa heart institute's in-patient smoking cessation program identify 1300 smokers and provided advice to 1065. With this approach, the smoking cessation rates can increase from 35% to 50%. This mean 582 person who quit smoking each year.</p>

<p>Helping people quit smoking (RNAO)</p> <p>www.rnao.org/smokingCessation/</p>	<p>setting.</p> <p>Web based program comprised of a Mini-Course and four Modules designed to allow health professionals to learn simple but effective techniques to use everyday to talk to their patients about smoking. By participating in this program they will become competent in applying an evidence-based protocol consistent with the RNAO Nursing Best Practice Smoking Cessation Guidelines.</p>	<p>Cancer risks from tobacco <i>Not mentioned</i></p> <p>Smoking cigarette content <i>Not mentioned</i></p> <p>Nicotine withdrawal symptoms Information about nicotine addiction</p> <p>Clinical interventions Brief Intervention: Ask, Advice, Assist The five Stages of Change Stage and matched intervention Build a plan</p> <p>Pharmacologic agents pharmacological aids to quitting</p> <p>Relapse prevention Avoiding and planning for high risk situations Ensuring social support outside</p> <p>High risk group with more difficulty quitting specialist treatments</p> <p>Health effects: tobacco related diseases Why it is important to quit no matter how long you have been</p> <p>Effect of passive smoking A brief review of the health effects of smoking and second hand smoke.</p> <p>Smoking cessation techniques in artificial setting Activities with case examples to learn how to approach different scenarios.</p> <p>Smoking cessation techniques in clinical setting with patients</p> <p>Smoking cessation techniques in clinical setting with patients and evaluation of performance An interactive quiz addressing these main points.</p>	<p>Meagan Cameira, Nurse Education Initiative Project Co-ordinator (416) 907-7954</p>
<p>Tobacco and public health from</p>	<p>Online Course offered by the</p>	<p>Cancer risks from tobacco <i>Not mentioned</i></p>	<p>Not mentioned</p>

<p>theory to practice (cessation module is coming soon)</p> <p>tobaccocourse.otru.org/</p>	<p>OTRU. Composed of three modules on prevention, protection and cessation. This course is geared to people working in public health units, government, non-governmental organizations, universities and research setting. Developed by leading tobacco experts</p>	<p>Smoking cigarette content <i>Not mentioned</i></p> <p>Nicotine withdrawal symptoms <i>Not mentioned</i></p> <p>Clinical interventions Population approaches that influence quitting Individual approaches to help smokers quit</p> <p>Pharmacologic agents Pharmaceutical individual approaches</p> <p>Relapse prevention <i>Not mentioned</i></p> <p>High risk group with more difficulty quitting <i>Not mentioned</i></p> <p>Health effects: tobacco related diseases <i>Not mentioned</i></p> <p>Effect of passive smoking <i>Not mentioned</i></p> <p>Smoking cessation techniques in artificial setting Interactive quizzes and videos</p> <p>Smoking cessation techniques in clinical setting with patients NA</p> <p>Smoking cessation techniques in clinical setting with patients and evaluation of performance NA</p>	<p>Contact: tobaccocourse@otru.org.</p>
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APPENDIX F

Canadian Faculties and Schools of Dentistry

University	Potential classes offering tobacco content	Contact
Dalhousie University Faculty of Dentistry	Basic Mechanisms of Disease Patient Care I Clinical Patient Care II Patient Care II General Medicine and Patient Health Assessment Patient Care III Oral Pathology, Medicine and Radiology Patient Care IV Seminars Clinical Oral Diagnosis and Treatment Planning Clinical Epidemiology Oral Pathology, Medicine and Radiology	Associate Dean for Academic Affairs Ryding, H.A. Telephone: (902) 494-2274 Fax: (902) 494-2527
University Laval Faculty of Dentistry	Dental prevention and nutrition General and systemic pathology General and systemic pathology II Diagnostic buccal I Pathology buccale Communication and the dentist Community dentistry and epidemiology I Diagnostic buccal IV Global approach and treatment planning	Sylvie Morin Director of the dentistry program (418) 656-2120 Sylvie.morin@fmd.ulaval.ca
University of Montreal Faculty of Dentistry	Preclinica and preventive medicine Community and preventive medicine Primary preventive cares	Duquette Pierre, Associated Dean (Academic) 343-6111 ext. 5761 Pierre.Duquette@UMontreal.CA
McGill University Faculty of Dentistry	Intro: Practice of Dentistry Oral Health Oral Disease Dental Public Health 1 Dental Public Health 2 Oral Pathology and Medicine	Associate Dean (Academic) Dr. Marie E. Dagenais (514) 934-1934
University of Toronto Faculty of Dentistry	Community dentistry I and II Intro to clinical and preventive dentistry Biological basis of oral health disease Oral medicine and pathology Oral diagnosis and oral medicine Preventive dentistry Biological basis of oral health and disease-Practical applications I	Lori Mockler, Graduate Program Officer Faculty of Dentistry, University of Toronto 124 Edward Street Toronto, Ontario, Canada M5G 1G6 Tel: (416) 979-4901, ext. 4482 Fax: (416) 979-4944 E-mail: lori.mockler@utoronto.c
University of Western Ontario Faculty of Dentistry	Oral pathology Oral medicine General pathology Oral diagnosis Special topics Oral medicine seminars	Associate director, Academic 661-3327 Richard.bohay@schulich.uwo.ca

University of Manitoba Faculty of Dentistry	Dental public health Oral pathology Dental Public health/Preventive Dental Science Oral diagnosis and radiology I	Kathy Mastrobuono Program Coordinator, Continuing Dental Education 789.3331 mastrobu@cc.umanitoba.ca
University of Saskatchewan College of Dentistry	Preventive Dentistry Health Sciences Interdisciplinary Relationships	Dr. David Tyler Acting Associate Dean (306) 966-5135
University Alberta Faculty of Dentistry	Not available online	Faculty of dentistry Telephone (780) 492-1319 Facsimile (780) 492-1624 admissions@dentistry.ualberta.ca
University of British Columbia Faculty of Dentistry	Not available online	Dean's Office Tel: (604) 822-0738 Fax: (604) 822-4532 E-mail: fodrecp@interchange.ubc.ca

APPENDIX G

Canadian Tobacco Cessation Counseling Training Programs and Materials for Dentists

Program	Description	Content	Evaluation
<p>Clinical Tobacco Intervention Recognition Program</p> <p>www.bccancer.bc.ca/HPI/CE/CTIRP/default.htm</p>	<p>Web based program including a range of readings on tobacco issues and an online quiz</p>	<p>Cancer risks from tobacco <i>Not mentioned</i></p> <p>Smoking cigarette content <i>Not mentioned</i></p> <p>Nicotine withdrawal symptoms Nicotine Addiction Clinical interventions 5A's Interventions by Stage Counseling Developing a Quit Plan</p> <p>Pharmacologic agents Medications for Tobacco Cessation</p> <p>Relapse prevention <i>Not mentioned</i></p> <p>High risk group with more difficulty quitting <i>Not mentioned</i></p> <p>Health effects: tobacco related diseases Tobacco-Related Dental Conditions Benefits of Quitting</p> <p>Effect of passive smoking <i>Not mentioned</i></p> <p>Smoking cessation techniques in artificial setting NA</p> <p>Smoking cessation techniques in clinical setting with patients NA</p> <p>Smoking cessation techniques in clinical setting with patients and evaluation of performance NA</p> <p>Tobacco Cessation in the Dental Office</p>	<p><i>Not mentioned</i></p> <p>Contact: BC Cancer Agency Research Centre 601 West 10th Avenue Vancouver, BC, V5Z 1L3 (604) 877-6010</p>

Program	Description	Content	Evaluation
<p>Tobacco or oral health www.fdiworldental.org/public_health/5_5advocacy.html</p>	<p>Advocacy guide for oral health professionals co-published by the FDI and the WHO</p>	<p>Cancer risks from tobacco Included in the oral health tobacco related conditions Smoking cigarette content Basic facts about tobacco Nicotine withdrawal symptoms <i>Not mentioned</i> Clinical interventions 4A's model Pharmacologic agents NRT Relapse prevention <i>Not mentioned</i> High risk group with more difficulty quitting Not mentioned Health effects: tobacco related diseases Oral health tobacco related conditions Effect of passive smoking <i>Not mentioned</i> Smoking cessation techniques in artificial setting NA Smoking cessation techniques in clinical setting with patients NA Smoking cessation techniques in clinical setting with patients and evaluation of performance NA Address ways to overcome perceived barriers to smoking cessation counseling Guide on how to set up dental practice for clinical tobacco interventions</p>	<p>Not mentioned</p>

Program	Description	Content	Evaluation
<p>Canadian council for tobacco control (advice for health professionals) http://www.cctc.ca/cctc/EN/advicehealthprofessionals</p>	<p>Didactic documents available online providing Information for dentists and dental hygienists.</p>	<p>Cancer risks from tobacco <i>Not mentioned</i> Smoking cigarette content <i>Not mentioned</i> Nicotine withdrawal symptoms <i>Not mentioned</i> Clinical interventions Cessation information Better practices for treating tobacco dependence Pharmacologic agents Resources for use in smoking interventions Relapse prevention Resources for use in smoking interventions High risk group with more difficulty quitting <i>Not mentioned</i> Health effects: tobacco related diseases <i>Not mentioned</i> Effect of passive smoking <i>Not mentioned</i> Smoking cessation techniques in artificial setting NA Smoking cessation techniques in clinical setting with patients NA</p>	<p>Not mentioned</p>

APPENDIX H

Canadian Faculties and Schools of Pharmacy

University	Potential classes offering tobacco content	Contact
Dalhousie University College of Pharmacy	Patient care Pharmacy skills	Tel: 902-494-2378 Fax: 902-494-1396 E-mail: pharmacy@dal.ca
University Laval Faculty of pharmacy	Pharmacist and communication Pharmaceutical consultation Over the counter medication	Tel: 418-656-3211 Fax: 418-656-2305 E-mail: pha@pha.ulaval.ca
University of Montreal Faculty of pharmacy	Over the counter medication Pharmaceutical process 1 Pharmaceutical process 2 Communication Pharmaceutical process 3	Tel: 514-343-6422 Fax: 514-343-2102 www.pharm.umontreal.ca Information on the curriculum: Marie-Claude Binette (514) 343-7709
University of Toronto Leslie Dan Faculty of Pharmacy	Professional Communication Skills in Pharmacy Practice Professional Practice I Professional Practice II Pharmaceutical Care Ib Pharmaceutical Care II Professional Practice III Pharmaceutical Care III Pharmacy Practice Seminar	Tel: 416-978-2880 Fax: 416-978-8511 www.utoronto.ca/pharmacy
University Waterloo School of Pharmacy	Information not available on-line	Dr. Jake J. Thiessen Director of health science Tel: (519) 888-4848 E-mail: pharmacy@uwaterloo.ca
University of Manitoba Faculty of Pharmacy	Clinical Pharmacy 1 Clinical Pharmacy 2 Clinical Pharmacy 3	Tel: 204-474-9306 Fax: 204-474-7617 E-mail: pharmacy@umanitoba.ca
University of Saskatchewan College of Pharmacy and Nutrition	Pharmacy Skills I Pharmacy Skills II Patient Care I Pharmacy Skills III Patient Care II Pharmacy Skills IV Patient Care III	Tel: 306-966-6328 Fax: 306-966-6377 URL: www.usask.ca/pharmacy-nutrition
University Alberta Faculty of Pharmacy & Pharmaceutical Sciences	Introduction of Core Skills Required of a Health Prof-Communications-Part I Introduction to Drug Use Control Process and Patient Care Intro to Institutional Practice and Patient Counselling with the Emphasis on Nonprescription Drugs Monitoring Drug Therapy Based on Patient Interviews, Patient Counselling and Drug Information	Tel: 780-492-3362 Fax: 780-492-1217 E-mail: dean@pharmacy.ualberta.ca

University	Potential classes offering tobacco content	Contact
University of British Columbia Faculty of Pharmaceutical	Pharmacist, Patient and Society Pharmacy Skills I Professional Practice III Self-Medication Products Pharmaceutical Care Pharmacy Skills II Therapeutics I Therapeutics II Non-Prescription Drugs and Natural Health Products I Non-Prescription Drugs and Natural Health Products II Pharmacy Skills III Drug Information Skills Non-Prescription Drugs and Natural Health Products III Non-Prescription Drugs and Natural Health Products IV	Tel: 604-822-2343 Fax: 604-822-3035 www.pharmacy.ubc.ca
Memorial University of Newfoundland School of Pharmacy	Pharmacy practice I Pharmacy skills Patient care II Communication and patient counseling	Tel: 709-777-7211 Fax: 709-737-7044 E-mail: pharminfo@pharm.mun.ca

Appendix I

Tobacco cessation Counseling Training Programs for Pharmacists

Program	Description	Content	Evaluation
<p>Clinical Tobacco Intervention Recognition Program</p> <p>www.bccancer.bc.ca/HPI/CE/CTIRP/default.htm</p>	<p>Web based program including a range of readings on tobacco issues and an online quiz</p>	<p>Cancer risks from tobacco <i>Not mentioned</i></p> <p>Smoking cigarette content <i>Not mentioned</i></p> <p>Nicotine withdrawal symptoms Nicotine Addiction Nicotine Withdrawal and Toxicity</p> <p>Clinical interventions Overview - Clinical Tobacco Intervention for Pharmacists 5A's</p> <p>Pharmacologic agents Stop-Smoking Medications What to take--patch, gum, inhaler, bupropion or some combination of them?</p> <p>Relapse prevention <i>Not mentioned</i></p> <p>High risk group with more difficulty quitting Special Populations</p> <p>Health effects: tobacco related diseases Tobacco Use in British Columbia Benefits of Quitting Tobacco Use</p> <p>Effect of passive smoking <i>Not mentioned</i></p> <p>Smoking cessation techniques in artificial setting NA</p> <p>Smoking cessation techniques in clinical setting with patients NA</p> <p>Smoking cessation techniques in clinical setting with patients and evaluation of performance NA</p>	<p><i>Not mentioned</i></p> <p>Contact: BC Cancer Agency</p> <p>Research Centre 601 West 10th Avenue Vancouver, BC, V5Z 1L3 (604) 877-6010</p>

APPENDIX J

Selected International Undergraduate Medical Education Tobacco Cessation Curricula

Program	Description	Program content	Evaluation Results
<p>Smokescreen Education Program (Australia)</p>	<p>Smoking cessation program based on the transtheoretical model or the “Stage of Readiness to Change Model”.</p> <p>Three hours teaching program in two parts: <i>Part I</i> has nine sections from which the teacher can choose to develop a one hour lecture <i>Part II</i> Teach medical students how to motivate patients to stop smoking</p>	<p>Cancer risks from tobacco- <i>Not mentioned</i></p> <p>Smoking cigarette content Harmful components of tobacco products</p> <p>Nicotine withdrawal symptoms Nicotine dependence</p> <p>Clinical interventions Identify the smokers Take a smoking history Allocate smoker to stage of readiness to change Motivate smokers to quit intervene with smokers</p> <p>Pharmacologic agents – <i>Not mentioned</i></p> <p>Relapse prevention – Preventing relapse</p> <p>High risk group with more difficulty quitting <i>Not mentioned</i></p> <p>Health effects: tobacco related diseases Health effects of tobacco use and benefits of quitting smoking</p> <p>Effect of passive smoking Health effect of passive smoking</p> <p>Smoking cessation techniques in artificial setting Focuses on increasing the student’s ability to Skills based strategies</p> <p>Smoking cessation techniques in clinical setting with patients -<i>Not mentioned</i></p> <p>Smoking cessation techniques in clinical setting with patients and evaluation of performance <i>Not mentioned</i></p> <p>Smoking prevalence Type of tobacco products Role of medical practitioners in tobacco control including effect of doctors advising patients to quit Economic aspect of tobacco and tobacco industry</p>	<p><i>Cost-Effectiveness Analysis</i> Physicians were trained to assess the stage of their smoking patients regarding their desire to quit into precotemplation, contemplation, or preparation stages. -Precontemplative smokers were given a “note ready” booklet and invited to return when ready to discuss cessation. –Contemplative patients received an “unsure” booklet and a brief motivational interview. -Prepared smokers received a “ready” booklet and a program of three visits of cognitive and behavioral strategies and advice on how to use nicotine chewing tablets.</p> <p><i>Prepared smokers</i> Recruited prepared smokers were contacted by telephone at 12 months post-physician training to determine their smoking status. For the 728 patients followed-up, the abstinence rate was 21%, which when adjusted for a natural abstinence rate of 8%, results in a net abstinence rate of 13% (a net number of 95 abstinent). Abstinent were biochemically confirmed.</p> <p><i>Nonprepared smokers</i> Authors assumed small additional effect due to smokescreen’s—one-quarter that of smokescreen’s net effect w/ prepared smokers (3,25%, an additional 86 abstinent). (Buck D.J., 2000)</p>

Program	Description	Program content	Evaluation Results
<p>Active Learning Program (Switzerland)</p>	<p><u>Two half day sessions</u> An interactive workshop with theoretical input linked to clinical cases with a particular attention to facilitation of implementation of smoking cessation in routine practice</p>	<p>Cancer risks from tobacco <i>Not mentioned</i></p> <p>Smoking cigarette content <i>Not mentioned</i></p> <p>Nicotine withdrawal symptoms <i>Not mentioned</i></p> <p>Clinical interventions Identify all patients who smoke Clearly advise all smokers to quit Assess each smoker's readiness to quit (stages: pre-contemplation, contemplation, ready to quit) Propose an individual smoking cessation program Follow the smoker in short and long term Record sheet for smoking patients Stages-matched brochures</p> <p>Pharmacologic agents Reference document that include algorithms for counseling and pharmacotherapy</p> <p>Relapse prevention <i>Not mentioned</i></p> <p>High risk group with more difficulty quitting <i>Not mentioned</i></p> <p>Health effects: tobacco related disease <i>Not mentioned</i></p> <p>Effect of passive smoking <i>Not mentioned</i></p> <p>Smoking cessation techniques in artificial setting Analysis of three videotaped encounters with a smoking patient at successive stages of motivation Role playing between participants that are based on scenarios of smokers at various stages</p> <p>Smoking cessation techniques in clinical setting with patients Encounters with four standardized patients that portrayed smokers at different stages and some with smoking-related diseases</p> <p>Smoking cessation techniques in clinical setting with patients and evaluation of performance <i>Not mentioned</i></p> <p><u>Two half day sessions</u> Analysis of three videotaped encounters with a smoking patient at successive stages of motivation An interactive workshop with theoretical input linked to clinical cases Role playing between participants that are based on scenarios of smokers at various stages Encounters with four standardized patients that portrayed smokers at different stages and some</p>	<p>According to smokers' self report, trained residents used all counseling strategies more often than did control residents. In particular they used the following strategies significantly more often: assessing motivation to quit (29% vs 19%), offering help to quit (23% vs 7%), discussing benefits of (16% vs 6%) and obstacles to cessation (16% vs 6%), giving a brochure (14% vs 1%), discussing strategies to prevent relapse (15% vs 6%), setting a quitting date (8% vs 2%).</p> <p>Improvement of the overall quality of smoking cessation counseling (higher mean score 4.0 vs 2.7; p=0,002)</p> <p>Trained residents expressed higher self-confidence (7.7 vs 5.2; p=0,002) and self perceived effectiveness in smoking cessation counseling (6.8 vs 5.4; p=0,09) 3 months after training.</p> <p>Smoking cessation behaviour among smokers at 1 year follow-up, 1-week smoking abstinence was significantly higher in the intervention group than in the control group (15 of 115 patients; [13%, 95% CI: 7% to 21%] vs 7 of 136 patients [5%, 95% CI: 1% to 9%]). (Cornuz J, 2002)</p>

Program	Description	Program content	Evaluation Results
Tobacco intervention basic skills curriculum (TIBS)	Required course on basic interviewing and physical exam skills at University of Arizona. This program includes a 2-hour lecture, Read the TIBS manual, Review the TIBS pocket guide, take a 20 item open-book, internet-based quiz, attend a 4-hour workshop, Apply TIBS skills in clinical setting.	Cancer risks from tobacco <i>Not mentioned</i> Smoking cigarette content <i>Not mentioned</i> Nicotine withdrawal symptoms The nature of tobacco addiction Clinical interventions Introduction to stages of readiness to change and principles of motivational interviewing Stages of readiness to change and principles of motivational interviewing The Ask, Assess, and Assist steps Options for building change plans, local referral resources, Pharmacologic agents information on pharmacotherapy Relapse prevention <i>Not mentioned</i> High risk group with more difficulty quitting Health effects: tobacco related diseases Effect of passive smoking Smoking cessation techniques in artificial setting Role play exercises among pairs of students Smoking cessation techniques in clinical setting with patients Demonstration of TIBS skills with standardized patients Group exercise with standardized patients Implement TIBS with actual patients Smoking cessation techniques in clinical setting with patients and evaluation of performance Faculty assessment of student competence via observation of each student with standardized patient <i>Read the TIBS manual</i> Introspective exercises on behaviour change Importance of tobacco use in public health	Student endorsement of the curriculum and its components was gauged by a confidential evaluation questionnaire, which was administered at the conclusion of their TIBS workshop. Gain in students' attitudes, knowledge, and self confidence were assessed by comparing responses to pretest and posttest versions of the Learning Outcomes Questionnaire (LOQ). Students manifested more favorable attitudes regarding physician's roles in promoting behavior change, less judgment toward non-adherent patients, and more self confidence in applying TIBS knowledge and skills after TIBS exposure (Brown et al., 2004)

Program	Description	Program content	Evaluation Results
Rx for change curriculum (US)	6-12 hour program including didactic lecture material, interactive workshops, videotaped counseling lessons, clinical practice guidelines, outreach tools and Rx for change website's access. Previously built for faculties of pharmacy but have been adapted for other professions like nursing and medicine.	Cancer risks from tobacco <i>Not mentioned</i> Smoking cigarette content Nicotine withdrawal symptoms Pharmacology of nicotine and principles of addiction Clinical interventions Assisting patient with quitting Aids for quitting Pharmacologic agents Aids for quitting Relapse prevention <i>Not mentioned</i> High risk group with more difficulty quitting Tobacco use and young adults Health effects: tobacco related diseases Epidemiology of tobacco use Pathophysiology of tobacco related disease Effect of passive smoking <i>Not mentioned</i> Smoking cessation techniques in artificial setting Role playing case scenarios Smoking cessation techniques in clinical setting with patients Drug interaction with smoking Forms of tobacco Genes and tobacco A history of tobacco control efforts How to get involved Post cessation weight maintenance	99.2% of students who attended the program believed that students from other US schools would benefit from receiving the same training.