

**The Next Stage:
Delivering Tobacco Prevention and Cessation
Knowledge through Public Health Networks**

**An examination of the academic literature, grey literature and internet
sources for effective interventions for vulnerable populations**

Prepared for the Canadian Public Health Association

Prepared by Julie Wong, MPH

October 29, 2010

Production of this report has been made possible through a financial contribution from Health Canada. The views expressed herein do not necessarily represent the views of Health Canada.

Table of Contents

EXECUTIVE SUMMARY	5
Aboriginal	5
Youth (13-19) and Young Adults (19-24)	6
Women (Pregnant and Post-Partum)	7
Mental Health and Addictions	7
Low Socio-economic Status	7
INTRODUCTION	9
SCOPE AND METHODOLOGY	10
Scope	10
Methodology	10
GENERAL FINDINGS	12
DISPARITY, SOCIAL EQUITY AND TOBACCO	12
Equity and Tobacco Use	13
Population and targeted approaches	13
ABORIGINAL (FIRST NATION, INUIT AND MÉTIS)	15
Prevention	15
Protection	16
Cessation	17
Special Considerations	18
Features, Characteristics of Promising Interventions/Practices	18
Based on the information gathered, many of the interventions mentioned share characteristics and features that may be promising and useful to incorporate into future tobacco control programs, policies and interventions. These include*:	18
Guidelines/Best Practices	19
Challenges/gaps	19
Future Directions	20
YOUTH AND YOUNG ADULTS	22
Prevention	22
Protection	23
Cessation	23
Features/Characteristics of promising or successful interventions for youth	24
Based on the information gathered, many of the interventions mentioned share characteristics and features that may be promising and useful to incorporate into future tobacco control programs, policies and interventions. These include*:	24
Best Practices/Guidelines	25
Special Considerations:	25
Youth Engagement and Tobacco	26
Challenges/Gaps	26
Future Directions	27
WOMEN (PREGNANT AND POST-PARTUM)	29
Cessation	29
Special Considerations	31
Best Practices/Guidelines	32

Challenges/gaps	33
Future Directions	34
MENTAL HEALTH, TOBACCO AND ADDICTIONS	35
Protection	35
Cessation	36
Characteristics, Features and Components of Promising Practices	37
*Sources: (Fiore et al., 2008; Johnson et al., 2006; Piper et al., 2010).....	37
Best Practices/Guidelines	38
Special Considerations	38
Challenge/Gaps	38
Future Directions	39
LOW SOCIOECONOMIC STATUS AND SOCIAL DETERMINANTS OF HEALTH	40
Cessation	40
Best Practices/Guidelines	41
Challenges/Gaps	41
Future Directions	41
REDUCING INEQUITIES: CESSATION SERVICES	42
REFERENCES	45
APPENDICES	53
Appendix A: Interventions targeted at vulnerable populations	54
Appendix B: Promising practices for Aboriginal Communities identified by the ITN	60
Appendix C: Promising initiatives in capacity building for tobacco control	63
Appendix D: Template of the Australian Database for Aboriginal Tobacco Control Programs	64

EXECUTIVE SUMMARY

In Canada, tobacco control is a responsibility of all levels of government with the literature clearly stating that coordination among national, state/provincial and local governments is key to comprehensive tobacco control. Local/regional efforts play an important role in supporting tobacco control such as addressing vulnerable populations and tobacco use. This report provides a review of the grey literature regarding the effectiveness of protection, protection and cessation activities with vulnerable populations that may provide useful insights to the public health communities.

Key Findings

Similar to the academic literature review completed previously for *The Next Stage Project*, this review found that there is very little published or unpublished literature found on best or promising practices for prevention, protection and cessation for vulnerable populations at a local/regional level. Articles, studies and documents that do speak about interventions for vulnerable populations are often not detailed in what the components of the intervention or tailoring entail, or may not provide outcome evaluations. Furthermore, program information was not always available online (information is in print only or website is no longer available). However, what was found in the grey literature appears in agreement with the academic literature of potential approaches or program components that are useful for addressing tobacco use among vulnerable populations.

The information gathered to date has indicated that evidence-based mainstream approaches in tobacco prevention, protection and cessation can also be applied to vulnerable populations. Taxation policies have also been noted in the literature as an approach that can reduce the tobacco-related disparity in vulnerable populations provided that there are adequate supports available that are accessible and acceptable to these groups. However, tailoring mainstream approaches or inviting innovative approaches are also necessary. This tailoring may be in the form of content (what are the important mechanisms/information needs that need to be targeted for change), modality (how will the intervention be delivered), intensity (frequency and duration of contact), and delivery (by whom). Furthermore, there is discourse in the public health community of the need to address the socioeconomic contexts and structures that face these populations in order to truly reduce the tobacco-related disparity.

Aboriginal

Despite knowing that tobacco use prevalence rates are alarmingly high among Aboriginal populations, information is still extremely lacking for this group. Very little Canadian information exists, however, the literature does point to the need for capacity building (i.e. cessation training) of Aboriginal health workers (AHWs) or Community Health Representatives (CHRs) and strong involvement of Aboriginal community members to address tobacco control in their own communities (smoke-free policies and programs).

Many Aboriginal communities do not have smoke-free policies which may be a reason for less demand of prevention and cessation services. While there are some interventions

identified that promote smoke-free homes, this review did not identify any strategies that have been used and could serve as a model for other communities.

There is some evidence to suggest that NRT in combination with counselling in settings outside of physician services and the use of quitlines may be potential cessation approaches for Aboriginal populations. A holistic approach, incorporation of cultural themes and provision of client supports to remove barriers to participation in cessation programs also appears to have some positive outcomes on cessation and tobacco use reduction. Presently, there is little information to determine the uptake and effectiveness of prevention education information or self-help guides in reducing tobacco use.

Aboriginal specific data are limited including the intention and motivation factors to cessation and more research is needed in this area. Specific sub-groups in the Aboriginal population are particularly vulnerable (i.e. youth and women) and more information is needed to inform effective strategies for these groups.

Youth (13-19) and Young Adults (19-24)

There is limited grey literature that examines what interventions are effective for prevention and cessation in youth and young adults. However, the evidence does suggest that multi-modal interventions (mass media, school based and community based programs) are more likely to reduce tobacco use than any of these interventions on their own, although it is difficult to determine the effectiveness of each individual component. School based programs have been cited to be good practice; however, effectiveness may be limited by the rate of adoption by schools and communities, and by the level and quality of implementation or delivery. Nonetheless, incorporation of skill building opportunities, social influences training and motivational enhancements have been recommended for youth. The literature on the effectiveness of school programs into high school and young adult years has suggested that earlier efforts are not sustained. More research is needed to understand the key factors that influence adolescents and young adults in tobacco initiation as they transition on in their lives.

The literature has also mentioned the use of new technologies such as web-based interventions, emails and text messaging. As this is a fairly new area, there is insufficient evidence to conclude whether these are effective interventions – however, this new area warrants further research.

Furthermore, research has neglected young adults as a whole and has primarily focused on interventions in university/college settings. Research that examines youth who are employed or are out of the school system is needed in order to identify effective interventions for these groups. The literature has suggested that young adults may share perceptions that are more similar to adolescents than adults and will require different interventions to support them to be smoke free. There is some evidence to suggest that young adults prefer to quit on their own but that provision of free NRT or incentives may facilitate greater use of cessation services such as quitlines. More research is needed to inform what young adults would find relevant to quit tobacco use and what factors could

be used to motivate young adults to utilize cessation services and programs in the community.

Women (Pregnant and Post-Partum)

While it would be most ideal to prevent of tobacco use among women in the first place, promoting cessation throughout pregnancy is encouraged – particularly in maintaining smoke-free status post-partum.

The literature speaks to shifting to a women’s health centred approach as a promising practice for cessation. The literature also speaks to using tailored interventions and cessation information to the pregnant woman’s specific needs, addressing partner and social support, harm reduction and reducing the stigma associated with pregnancy and tobacco use. There are also recommendations that support psychosocial interventions and intensive support throughout pregnancy and after to prevent relapse. While addressing partner and social support interventions were noted to be important, effective interventions are lacking and only focus on the partner. As women do not exist within a vacuum, interventions in these areas are also needed.

Furthermore, guidelines of the National Institute for Health and Clinical Excellence (NICE) in the UK have also noted that all health providers who come into contact with pregnant women have a role in supporting women in being smoke-free. This could include routine assessment, referring to or provision of cessation support as appropriate for their roles.

Mental Health and Addictions

Similar to the academic literature, the grey literature also supports a combination of psychological and pharmacological interventions to support cessation in mental health and addictions populations. The evidence suggests that these interventions do not exacerbate mental health instability nor result in worsening of their conditions, although interventions of longer intensity and duration may be needed in comparison to the general population. The evidence is just emerging in this area and more research is needed for mental health populations. Integration of tobacco dependence treatment in mental health and addictions settings as well as implementing smoke-free policies were also highlighted as important components of smoking cessation strategies for this population. Research is still needed to identify effective or promising interventions for dual or multiple diagnoses and tobacco use as most of the studies have focused on one specific mental health disorder or addiction.

Low Socio-economic Status

While not always explicitly expressed, low socioeconomic status is a factor that creates greater vulnerability for many of the populations mentioned above. Tobacco use in low SES populations is often used as a stress relief from the social and economic pressures of their realities. Evidence is lacking in terms of interventions that work for these populations. It is not clear what the effectiveness of prevention initiatives such as mass media campaigns and public education are; however, low SES populations are reported to have greater difficulty in accessing cessation or other services. The discourse is that

structural changes are needed to address the underlying causes of the disadvantage in order to reduce tobacco use. There is a lack of information on whether prevention interventions used at population levels are as effective for low SES populations. Strategies that may support smoking cessation include bringing services to where the people are, such as dental health clinics, pharmacies or community centres, ensuring that services are accessible (including time and format), providing client support (meals, transportation or childcare) to help address some of the socioeconomic pressures and subsidized or free pharmacotherapy.

INTRODUCTION

In Canada, tobacco control is a responsibility of all levels of government with the literature clearly stating that coordination among national, state/provincial and local governments is key to comprehensive tobacco control. Tobacco control activities primarily consist of three key areas: prevention of tobacco use initiation, protection from second-hand and environmental smoke and cessation of tobacco use.

With comprehensive tobacco control, overall smoking prevalence in the general population has reduced. The overall smoking prevalence of vulnerable populations have also been reduced. However, tobacco use still remains high among vulnerable populations. In Canada and many developed countries, smoking has been associated with disadvantage and inequity with those most disadvantaged bearing the burden of tobacco use. These groups include Aboriginal populations, populations with mental health and addiction disorders, blue collar workers and individuals with low incomes and lower educational attainment (Smith, Frank & Mustard, 2009; Greaves et al., 2006; Health Canada, 1996). Women are also considered a priority population. Tobacco use is considered a major contributor to inequalities in health (Marmot, 2006; Jha et al., 2006)

Local/regional efforts play an important role in tobacco control by supporting communities through education campaigns, cessation services and programs targeted to specific groups. To reduce tobacco use prevalence in vulnerable populations, it is necessary that public health practitioners, leaders and policy-makers are informed of the effectiveness of interventions that impact and target vulnerable populations. This report provides a complement to the academic review completed previously and is a review of the grey literature regarding the effectiveness of prevention, protection and cessation activities with vulnerable populations. It is hoped that this work may provide useful insights to public health practitioners who work with vulnerable populations. The interventions presented here may or may not have been evaluated. The sources are specified and caution should be taken when drawing conclusions. This document concludes with a discussion of the successes, knowledge gaps and challenges in Canadian tobacco control as relevant to the local/regional public health community.

SCOPE AND METHODOLOGY

Scope

While the list of vulnerable populations with respect to tobacco use is long, given the timelines of this project, it is not possible to discuss each of them and promising practices/interventions in detail. For the purposes of this report, the following vulnerable populations will be discussed: Aboriginals (First Nations, Inuit and Métis), youth and young adults, women (pregnant and post-partum), and populations with mental health and/or addiction issues. Low SES is also a concern and is an important factor which applies to many of the populations listed above but will not be discussed separately. In addition, social inequity and tobacco use will also be examined as well as any information regarding the effectiveness of a population versus a targeted approach. The findings from the grey literature search are meant to complement the literature review previously completed for the project.

While there are different forms of tobacco that may pose varying health risks to those who consume them, cigarettes are the primary form of tobacco consumed in Canada. Most of the information that is currently available also pertains to smoking of tobacco. The goal of this report is to attempt to provide some insight on what works for vulnerable populations, what has been done so far, and areas of challenge or gaps. Therefore, tobacco use will most often refer to smoking tobacco unless otherwise stated.

In Canada, tobacco control practices, programs and policies are usually divided into three categories: prevention, protection and cessation. This report will discuss the three pillars as relevant to a specific population as well as any guidelines for working with these populations. Finally this report will attempt to focus on local/regional information but may include national or provincial information as relevant.

Methodology

The following components comprised the search for effective, evidence-based tobacco control programs and practices:

1. A review of the academic literature from 2010 related to pregnancy and smoking cessation. Based on feedback from the researchers who completed the literature review, it was suggested that there may have been new information on pregnancy and smoking cessation since the review. Therefore, the academic literature only focused on articles published in 2010 to complement the literature review.
2. A review of the academic literature related to tobacco use and tobacco related disparities.
3. A scan of grey literature through internet searches including government websites, health organizations and sites of other organizations that engage in work with vulnerable populations.

4. A review of previous project documents including the OTRU Web 2.0 knowledge exchange scan to identify additional information sources to complement and build on existing knowledge.
5. A review of any guidelines for working with specific vulnerable populations.
6. Initiatives of Britain's National Health Service (The Stop Smoking Services).
7. Framework Convention on Tobacco Control (FCTC) – Canada's reports and the World Health Organization reports related to vulnerable populations.

Academic and Grey Literature

Literature searches included academic databases such as Pub Med and Scholar's Portal, web-based information from government health sites, academic centres specializing in health promotion, addictions and tobacco control, and Aboriginal organizations and communities associated with tobacco control and/or vulnerable populations. Information sources included grey literature as well as published and unpublished reports, documents and studies. The following key words were used:

- Tobacco control (prevention, protection (SHS or ETS) and cessation)
- Public Health or public health or advocacy
- Best Practice, promising practice, emerging practice
- Special populations, vulnerable populations, high risk or at risk populations: Aboriginal people, pregnant and post-partum women, people with mental health issues and addictions, young people (youth and young adults)
- Targeted approach and population-based interventions, strategies
- Pregnancy, tobacco and review
- Tobacco (cigarette, smokeless, cig*)
- Equity, equity lens, disparity, social determinants of health
- Tobacco-related disparity.

Since OTRU previously examined better/best practices sources such as PTCC and the Public Health Agency of Canada's Best Practices Portal, these sources were not visited but best and better practices that emerged from these sources were examined.

Furthermore, a previous project report surveying public health authorities and units may have yielded interventions with promising components. These innovations may warrant more examination but will not be examined here. For the purposes of this report, effectiveness of an intervention will refer to either one or a combination of the following outcomes:

- Increased awareness and knowledge
- Changes in initiation rate (this must be compared to a control group or have a follow-up component)
- Increase in quit attempts or cessation rates.

GENERAL FINDINGS

Agency websites such as the Ontario Tobacco Research Unit (OTRU), the Centres for Disease Control and Prevention (CDC), the Public Health Agency of Canada (PHAC) and other organizations who work with vulnerable populations (CAMH, CMHA, NAHO and PREGNETS) were all searched for published and unpublished literature for relevant publications. Very few publications were found on these sites.

Specific searches were conducted in Google. Due to the paucity of academic literature as identified previously, this was the focus of online searching. Similarly, the Google search did not yield many more programs than what was found in the published literature – many were reviews or summary documents. Where interventions were named, it was not always possible to locate information on those programs online, either due to it being available in print or the information was no longer available. Furthermore, any interventions that have been located seldom comment on evaluation or do not provide an indication of the outcome, leading to difficulty in commenting on effectiveness. Sample sizes may also be small which may create difficulty in interpreting the greater applicability of the intervention.

Overall, similar to the academic literature review, the grey literature revealed a paucity of information on effective interventions for vulnerable populations.

DISPARITY, SOCIAL EQUITY AND TOBACCO

Similar to findings from other countries, tobacco use in Canada is associated with disparity and social disadvantage where tobacco use is concentrated in populations characterized by poverty and limited economic and social development opportunities. Even as smoking prevalence has decreased in many countries, the decline has been consistently slower in disadvantaged populations.

Tobacco-related disparities as described in the CDC's *Best Practices for Comprehensive Tobacco Control* document (2007) and originally cited from a Fagan et al article are:

“differences in patterns, prevention, and treatment of tobacco use; differences in the risk, incidence, morbidity, mortality, and burden of tobacco-related illness that exist among specific population groups...; and related differences in capacity and infrastructure, access to resources, and environmental tobacco smoke exposure.”

There is concern that population strategies may unintentionally widen the disparity. For example, despite increased prices, heavy smokers may continue to purchase tobacco products at the expense of other necessities of life such as food and result in food insecurity. Another example is that higher socioeconomic groups are better able to access and utilize tobacco interventions (Graham et al, 2006). The authors argue that tobacco control needs to look beyond changing smoking behaviour (individual) to moderating the social conditions that shape it (i.e., the broader social environment).

Equity and Tobacco Use

The decline in tobacco use prevalence has not occurred uniformly over the whole population and as a result, those in disadvantaged situations (i.e. vulnerable populations) make up an increasing proportion of the shrinking population of smokers (Graham et al., 2006). While interventions that increase awareness, motivation and efficacy to quit and utilize nicotine replacement therapy are effective, it is not likely that they can break the link between tobacco use and disadvantage (Graham et al., 2006).

The literature is limited in terms of examining the relationship between equity and tobacco use. More recently, there have been calls from the public health community to reposition tobacco use as a social justice issue and incorporate an equity lens into policies and programs to address the causes within which tobacco use is entrenched.

In a research article by Main and colleagues (2008), the goal was to determine what could be inferred from existing reviews about the effects of tobacco control interventions on social inequalities in smoking. The authors arrived at the conclusion that there is some evidence that supports population approaches such as increasing the price of tobacco which may reduce smoking related health inequalities. This is a conclusion also supported in the World Health Organization document *Equity, Social Determinants and Public Health Programmes* (David et al, 2010). In assessing the effects of population tobacco control interventions, a need was also expressed for equity effects to be explicitly evaluated in future primary research and systematic reviews.

Population and targeted approaches

There is currently a public health discourse on whether tobacco control efforts need to shift from a population to a targeted approach. A very well known article by epidemiologist Geoffrey Rose, *Sick individuals and Sick Populations*, explained that there are generally more low-risk individuals in the population than high-risk individuals. A large number of low-risk individuals can contribute to more problem cases than a small number of high-risk individuals (Rose, 2001). As such, population efforts will have the greatest health impact.

On the other hand, preliminary findings by Cohen et al. (2010) suggest that tension arises from the belief that vulnerable populations make up much of the remaining smokers. In this respect, there is the belief that more work is needed to continue to reduce tobacco use prevalence in vulnerable populations. The full report should be available in the coming months and the findings may be extremely useful in engaging vulnerable populations. A document by the National Drug and Alcohol Research Centre (NDARC) at the University of New South Wales suggests that population approaches are valid for vulnerable populations provided that they are accessible, the approach is appropriate and the social environment overall is improved. The document also states that there is a place for targeted approaches since without interventions that address the root causes, disadvantage will continue. Similar to Cohen et al., the document argues that when groups are disproportionately experiencing a range of negative outcomes as the result of structural disadvantage, it is a matter of social justice and targeted efforts are needed to address those inequities. The WHO document cited above also points out that targeted

approaches will be necessary in addition to population approaches in order for parties to fulfill the articles of the Framework Convention on Tobacco Control (David et al., 2010).

Furthermore, without consideration of unique needs of and contextual factors relating to vulnerable populations, this could lead to lower participation and access to interventions, failed change attempts, and disengagement from future change attempts, especially among underserved populations who already have lower cessation rates (Hawkins et al., 2008).

The Centers for Disease Control and Prevention (CDC) recommends that in order to identify and eliminate tobacco-related disparities, the following actions need to be taken (2007):

- Population assessments need to be undertaken
- Consultation with the populations of interest and organizations that work with these populations
- Ensure that disparity issues are an integral part of regional and local tobacco control strategic plans
- Provide adequate funding to organizations that can effectively reach, involve, and mobilize identified specific populations
- Provide culturally competent technical assistance and training to projects fundees
- Provide health communications to address tobacco-related disparities in appropriate languages that support community-level interventions
- Ensure that quitline services are culturally competent and have adequate reach and intensity to meet the required needs of population subgroups.

There is a paucity of information on the effects of current tobacco policies and programs on vulnerable populations. Additionally, limited information exists on effective interventions that prevent and reduce tobacco use while reducing disparities. Graham and colleagues (2006) suggest that tobacco policies are social policies, and that policies which seek to improve living standards (housing, employment, economic policies etc) will ultimately reduce the smoking gradient that is seen. While universal tobacco control policies and programs are still important, creating additional tailored supports to ensure that vulnerable populations are not placed at an even greater disadvantage by such policies will likely reduce tobacco use prevalence (Cohen et al, 2010).

In the next generation of tobacco control, it will be vital for practitioners as well as decision makers to ensure that tobacco control interventions, policies and programs be implemented with a gender, social justice and equity lens (Greaves et al., 2006; Greaves et al., 2006; Graham et al., 2006; Pearce et al., 2008). As an example in action, addressing the needs of vulnerable populations, inequity and smoking is high on the UK agenda and prevalence targets have been set for vulnerable groups such as manual workers (Main et al., 2008).

ABORIGINAL (FIRST NATION, INUIT AND MÉTIS)

Aboriginal peoples in Canada include First Nations, Métis and Inuit who may be living in Aboriginal communities or in urban areas. Each of these groups has unique heritages, languages, cultural practices, and spiritual beliefs. For many Aboriginal communities, tobacco is a sacred plant that is used in ceremony, prayer and healing. Region to region and province to province, Aboriginal communities have varied widely in their traditional use of tobacco and its cultural significance; First Nations and Métis communities have cultural and spiritual links to tobacco while Inuit communities do not at all. In fact, tobacco use by the Inuit did not occur until its introduction by Europeans. Tobacco use by Aboriginals is a significant public health concern as the prevalence rates are double or even triple the national average (PSC, 2007).

Currently, there is no federal tobacco strategy for Aboriginals as the First Nations and Inuit Tobacco Control Strategy (FNITCS) is currently suspended due to ineffectiveness (PSC, 2007). It is expected to be revisited and revised in the near future; some provinces such as British Columbia and Alberta have provincial level Aboriginal tobacco use strategies. Alberta implemented its Aboriginal Tobacco Strategy (ATUS) in 2003/2004) and British Columbia evaluated its Aboriginal Tobacco Strategy in 2003 (AADAC, 2004; Mactier and Van der Woerd, 2003). Please refer to Appendix A for interventions that have been undertaken and target Aboriginal populations.

Prevention

While there are some examples of smoking prevention messages and prevention strategies and programs being used for Aboriginal sub-groups (such as youth), there is little information about their efficacy and impact in terms of reducing the uptake and prevalence of smoking amongst this target group (Zappelli & Braganza, 2008). Given the cultural importance of tobacco among some Aboriginal groups, prevention messages that focus on the “evil” or “badness” of tobacco would be ineffective and a source of tension; the literature supports using an approach that respects the traditional usage of tobacco (AADAC, 2002).

Much of the prevention interventions and messages identified in this report for Aboriginal youth used the internet and new media such as YouTube videos. Websites such as *Tobacchowise.com*, which is hosted by the Aboriginal Tobacco Program of Cancer Care Ontario, and the tobacco section on the First Nations Centre website engage in prevention messaging that helps distinguish sacred and commercial tobacco. Story telling through YouTube videos, website posts through the Inuit Tobacco-Free Network (ITN) and cultural teachings by elders and community leaders are components or features that may be part of promising interventions to prevent Aboriginal youth from engaging in smoking (Alberta Alcohol and Drug Abuse Commission (AADAC, 2002). While these resources are available, it is not clear whether they are effective as there is no publicly available evaluation information relating to these websites. Furthermore, detailed Aboriginal specific youth information such as tobacco usage, motivation to use or quit that can aid in program planning is lacking.

The searches yielded one prevention initiative adapted from Alberta Health Service's *Teaming up for Tobacco Free Kids (Butt Out)*. While this initiative was developed for elementary children, this program may serve as insight on developing culturally appropriate school-based programs for older school aged children. The program was adapted by a variety of Aboriginal community members including students, youth and Elders and encompasses tobacco misuse prevention that is consistent with traditional teachings and practices. The preliminary outcomes are promising with outcomes such as higher self esteem and smoking reduction. As this program is fairly new, further evaluation would be needed to determine its effectiveness and applicability (University of Alberta, 2010; McKennitt et al., 2009, McKennitt, 2007). Please refer to Appendix B for more promising prevention initiatives/components that may work among Aboriginal people as identified by the ITN.

Protection

Banning smoking in public places and workplaces are among the most effective public health policy measures that can be enacted to reduce cigarette consumption and second hand smoke. Smoke-free policies are also likely to work in Aboriginal communities if there is the political will; however more often than not, there are jurisdictional issues (PSC, 2007; Haché, 2009). While smoke-free legislation has been passed in many provinces such as Ontario and Saskatchewan, many reserves are exempt from these laws; Nunavut, on the other hand, with a large Inuit population has put smoke-free policies in effect (Haché, 2009). Some formal or informal smoke-free policies may exist within Aboriginal communities; however, these may vary from community to community and aside from strong Aboriginal leadership, it is not clear to what extent there are other driving and impeding forces towards the development of such policies (Pearce et al., 2008). It has been suggested that federal legislation for smoke-free places should be enacted if politicians in First Nations territories do not take action to pass smoke-free bylaws or policies in their communities; however, the success of such action and the repercussions are unclear (Haché, 2009).

Two examples of tobacco control initiatives aimed at protection have been carried out by the Inuit Tapiriit Kanatami. In the *Blue Light Campaign*, families are given a blue light bulb to install on their porch to signal that their home is smoke free – smokers would be smoking outside. Another campaign, *Born Smoke-Free* is directed at women for a smoke-free pregnancy through education during pre-natal appointments. The programs have been successfully implemented in several Nunatsiavut and Nunavik communities, and will now be extended to communities in Nunavut and the Inuvialuit Settlement Region of the Northwest Territories, and one additional Nunavik community (Inuit Tapiriit Kanatami, 2010).

Despite successful implementation, there is information lacking with respect to the success in promoting smoke-free places in public places in Aboriginal communities or initiation or cessation rates. Appendix B contains other promising protection initiatives as identified by the ITN. Overall, little information exists on Aboriginal communities that have developed and implemented smoking policies and by-laws which could serve as models for others.

Cessation

The literature on effective cessation interventions targeted at Aboriginal populations is very limited; most of what exists is related to the Australian indigenous population which may not be applicable to the Canadian context. One Australian report highlighted interventions in their database that had been evaluated between 1994 -2008; the most successful interventions targeted at Aboriginal populations appeared to be advice from health professionals, counselling and support groups, creativity and personal expression, and the use of role models to promote tobacco cessation (Zappelli & Branganza, 2008). However, the report also acknowledged that even these interventions did not result in significant cessation rates nor was it possible to ascertain whether cessation was maintained over time (Zappelli & Branganza, 2008). While NRT is known to be effective, little is known about whether such interventions are appropriate and effective for Aboriginal populations in Canada.

In the grey literature, Currie (2010) and Wardman et al. (2007) reported that there is low utilization of physician services by Aboriginal people, which may explain the lower willingness to use drug therapies. As many Aboriginal smokers are attempting to quit, providing education about drug therapies, providing NRT at free or subsidized cost through other means such as group counselling or other programs may be appropriate and a promising way of supporting Aboriginal smokers quit (Zappelli and Branganza, 2008; ITN, 2010). Quit lines and contests may also be useful means to encourage smoking cessation. An exploratory analysis by Hayward and colleagues (2007) indicated that even without targeting, Aboriginals, particularly Aboriginal men, did make use of quitlines and a large number remained smoke-free at follow up; a targeted approach is likely to encourage Aboriginal people to make use of this service. The Northwest Territories smoking cessation quitline services now include the Inuit language; evaluation will be needed to assess the impact of cultural adaptation on Aboriginal cessation rates or quit attempts.

The literature states that in order for cessation interventions to be effective, it is important to ensure smoke-free environments are offered in combination with smoking cessation programming. Given that smoke-free environments are not very prevalent in Aboriginal communities, moving people towards cessation may be more difficult and perhaps the first step may be building capacity to support smoke-free environments.

Cessation self-help resources and information for Aboriginal people were identified in the internet search. Similar to prevention resources, it is not clear what the uptake and effectiveness of these cessation self-help resources are. Beyond self-help, the grey literature also revealed a lack of cessation programs targeted at Aboriginal people, particularly in the Canadian context; only one case study from Cancer Care Ontario was identified. In the case study, two Aboriginal cessation programs (*Sacred Smoke* and *Sema Kenjigewin Aboriginal Tobacco Misuse Program*) were examined that may shed some light on promising practices in working with Aboriginals (Cancer Care Ontario, 2008). While the sample sizes are small for these interventions, evaluation findings demonstrated positive outcomes both in reduction of tobacco use or complete cessation.

Both programs consisted of counselling and education components and weaved cultural content and cultural identity into programs targeted at Aboriginal people in a holistic approach (referral to other supports and services). Significant client supports were provided to address the barriers in participation such as NRT, transport, and childcare. Information about these two initiatives can be retrieved from the Cancer Care Case Study document available online. Please refer to Appendix B for more promising cessation initiatives that may work among Aboriginal people as identified by the ITN.

Special Considerations

The Aboriginal population is not a homogenous group; variations exist between First Nations, Métis and Inuit and even more variation exists within these groups. Among Aboriginal populations, there are sub-groups that may be particularly vulnerable. Gender roles (caregiving) and their life situation (poverty, abuse, and isolation) in society place women and girls in a vulnerable position. Aboriginal youth, particularly youth living on reserves, and faced with a lack of resources are also particularly vulnerable (Pearce et al., 2008; Cancer Care Ontario 2008; De Finney et al., 2009) and warrant further investigation. Furthermore, the effectiveness of tobacco control targeted at Aboriginal populations may differ for on reserve versus off reserve groups and there exists limited information in this area. It is unclear whether urban interventions can be appropriately adapted for reserve use. As a large number of Aboriginal people live in urban centres (approximately 1.2 million) there is a need to understand how disparity, culture and tobacco control intersect, and effective strategies to prevent and reduce tobacco use (Environics Institute, 2010).

Features, Characteristics of Promising Interventions/Practices

Based on the information gathered, many of the interventions mentioned share characteristics and features that may be promising and useful to incorporate into future tobacco control programs, policies and interventions. These include*:

- Positive messages that reflect the strengths and values of culture and communities while maintaining social relevance
- Responsive to the emotional, physical, social, and mental needs of Aboriginal smokers – use a holistic approach that is consistent with Aboriginal teachings
- Provision of client supports to eliminate barriers to participation and mitigate some of the social and economic pressures
- Interventions that approach tobacco with a community rather than an individual orientation (as this tends to be the case in mainstream interventions)
- Materials and approaches that have a high degree of relevance to the community.
- Continuity of projects and sustained funding and delivery to build capacity and long term change
- High involvement of Aboriginal people in research, development of tobacco control strategies and the solution
 - Involvement of vulnerable populations is in fact one of the principles of Article 4 of the Framework Convention for Tobacco Control.

*Sources: (Pearce et al, 2008; Cancer Care Ontario, 2008; Schwartz, 2005; Haché, 2009; AADAC, 2002).

Guidelines/Best Practices

No guidelines were identified for addressing tobacco use in Aboriginal populations. The Canadian Action Network for the Advancement, Dissemination and Adoption of Practice-informed Tobacco Treatment (CAN-ADAPTT) does not have any guidelines related to cessation for Aboriginal populations. However, CAN-ADAPTT is currently engaging in developing a summary statement to ensure appropriate engagement of Aboriginal populations – the guidelines are expected to be released later this year.

Challenges/gaps

Tobacco use is often addressed in isolation with other substance use and problem behaviours leading to tobacco control programs having to compete for funding. Issues such as alcoholism, drug use, domestic violence, crime, child abuse, sexual abuse, and petrol sniffing have a greater impact on Aboriginal communities and are quicker to negatively impact health, leaving tobacco often to take a backseat to more pressing community needs (Harvey et al., 2002; Zappelli & Braganza, 2008). Interventions may be more effective if they take on a whole of life approach and present opportunities to gain life skills and facilitate community development.

The ethic of non-interference presents a challenge to prevention and protection interventions, as it is taught in Aboriginal culture that issues must be addressed by Aboriginal people themselves. Mainstream programs typically go against this ethic and there is often resistance to mainstream healthcare providers who go into Aboriginal communities and deliver programs. Developing capacity within communities will be important (McKennitt et al., 2009). Sufficient and sustained funding is frequently cited as a barrier to creating long-term change in tobacco use in Aboriginal communities. Interventions require the use of trained and dedicated staff, easy access to updated and consistent tobacco cessation information, physical space and financing. Alternative methods such as crafts, cultural feasts and foods also play an important role in tobacco programs in Aboriginal communities; however, insufficient funding often does not allow for inclusion of culturally sensitive ideas or full implementation of interventions (Cancer Care Ontario, 2008; Assembly of First Nations, 2007). In order to find out what works and build evidence-based practice for Aboriginal communities, it is important to enable innovation and facilitate open dialogue between Aboriginal people and researchers.

Furthermore, a recurring theme in the literature was the lack of and need for training of frontline practitioners engaging in tobacco control work. The Training Enhancement in Applied Cessation Counselling and Health Project (TEACH) developed in 2006 by the Centre for Addictions and Mental Health in Toronto may be a possible means to build capacity. Capacity building in tobacco control will need to provide practitioners with the knowledge of the challenges and complexities of tobacco use in Aboriginal societies. The ITN is also offering distance courses to help Aboriginal health workers design and implement tobacco controls that are suitable for their community. The Nechi Institute also offers educational opportunities for learning about tobacco and Aboriginal people. Please refer to Appendix C for other capacity building interventions that can be used in Aboriginal populations.

Many Aboriginal programs and interventions were developed originally for the mainstream or non-Aboriginal population and modified to target the Aboriginal population such as the American Indian Not on Tobacco (AI NOT) initiative (OTRU, 2010) which may or may not be successful. While there are an increasing number of initiatives developed specifically for indigenous people, there has been little primary research conducted into the reasons why Aboriginal people smoke, and also their intentions to quit to enable understanding of exactly what is needed in order to consider quitting. Even though material may be adapted to be culturally relevant and involve Aboriginal input in the development, irrelevant delivery or delivery by a non-Aboriginal may still render an intervention ineffective. In fact, Aboriginal health workers may not have the skills, knowledge or confidence to effectively deliver tobacco control interventions (Pearce et al., 2008; Patten et al., 2010).

Future Directions

Although attitudes are slowly beginning to shift, smoking is still the norm in many Aboriginal communities. In addition, Aboriginal communities face many disparities and smoking is often viewed as an affordable pleasure or stress reliever (Schwartz, 2005; Pearce et al., 2008). In the public health domain, although there is knowledge about the factors that contribute to both the high rates of tobacco use and low rates of cessation in the Aboriginal population, including cultural, environmental, social and personal issues (Zappelli and Braganza, 2008), little is known about what interventions work.

Australia has a large Aboriginal population, particularly in New South Wales. The Aboriginal Health and Medical Research Council (AHMRC) in Australia is engaging in a project called BREATHE (Building Research Evidence to Address Aboriginal Tobacco Habits). This project seeks to address tobacco use in Aboriginal populations. The intervention will be multi-faceted, community-based, and led by the Aboriginal Community Controlled Health Services (ACCHS), and includes recruiting, training and supporting an Aboriginal Health Workers (AHW) to work in the role of a specialist dedicated Tobacco Control Worker within ACCHS. Comprehensive process and impact evaluation of local tobacco control activities, health promotion initiatives, and quit groups, as well as evaluation of the intervention as a whole will be undertaken (CEITC, 2008, ARC, n.d). While the findings from this Australian work may not be applicable to the Canadian context, the findings may provide some insight on the best way to support tobacco cessation among Aboriginal peoples and the report may be of interest.

Increased research into the design and implementation of interventions and better evaluation of tobacco control programs is needed to help determine best practice for tobacco control in Aboriginal communities. The current lack of best practice evidence means that even if communities are ready to act, they have little guidance to help increase the chance of implementing successful programs.

Research needs include:

- Having reliable Aboriginal specific data including intention to quit smoking
- Building meaningful partnerships with Aboriginal community workers and community members and leaders to determine research areas and program planning

- Exploring whether initiatives such as the *Butt Out* adaptation would be replicable in other Aboriginal communities
- Exploring whether mainstream providers would be able to replicate interventions that have been culturally adapted for Aboriginal people i.e. importance of facilitator characteristics
- Understanding how tobacco control strategies affect Aboriginal people and the relationship between disparity and tobacco control policy.

YOUTH AND YOUNG ADULTS

Despite what is known about smoking and the harms associated with tobacco use, youth and young adults continue to engage in tobacco use. While different documents define these age groups differently, for the purposes of this report, youth will refer to those 13-18 years of age and young adults as 19-24 years of age.

Evidence suggests that young people get addicted to nicotine faster and are not able to quit smoking as easily. The process of becoming a regular smoker is not always constant – children and young people may stop and start the habit a number of times before they come to identify themselves as someone who smokes (NICE, 2010). According to Muller (2007), initiation of smoking before the age of 16 increases the likelihood of continual and heavier smoking as opposed to those who start later in life. Please refer to Appendix A for interventions that have targeted youth and young adults.

Prevention

While youth may be sensitive to increased prices, costs may not be sufficient to deter youth from tobacco use; youth may turn to their social sources for tobacco products. The research did not identify any effective prevention interventions that address social sources of tobacco. In addition to youth access laws and mass media campaigns that have been noted to be effective, school-based prevention programs have traditionally been used since these provide an optimal setting to reach as many children and adolescents as possible. However, the evidence for the effectiveness of school-based programs alone has been inconclusive (Muller, 2007; O’Loughlin et al., 2004; Campaign for Tobacco-Free Kids, 2007). However, the literature does suggest that school-based programs be part of a comprehensive tobacco prevention campaign. While some school programs have been demonstrated to have positive outcomes in terms of increased knowledge and awareness and delayed tobacco use initiation, the long term effectiveness of school programs is still largely unknown and has seemed to dissipate over time (Dobbins et al., 2008; Uthman et al., 2009). It is uncertain whether school based programs are preventing or only delaying tobacco use initiation. Prevention initiatives in the literature mainly examine those for young children and youth; prevention programming for young adults (19-24) is seemingly lacking.

Lungs are for Life is a curriculum based prevention program that is free to Ontario teachers and students and meets the curriculum requirements and Mandatory Programs and Service Guidelines. The program extends from kindergarten up to Grade 10 and contains a Community Involvement and Teacher Advisor Program to help secondary students meet their community involvement criteria. Registration is required to access the materials. The program has been cited to be a better provincial practice for prevention, however evaluation results are not available from the Lung Association website. There are also other curriculum school based programs; similar to Lungs are for Life, their effectiveness is unclear [See Appendix A].

In the evaluation of a mass media campaign *Don’t Be a Butthead – Be Smoke Free* prepared for the Government of Northwest Territories, key findings indicated that while

there were positive outcomes (recall, distribution of materials and youth pledging to remain smoke free, there were also some unintended negative results from the campaign (i.e. smokers were framed as buttheads and felt stigmatized, and young people reported losing respect for adult smokers). Furthermore, it will be difficult to assess whether the campaign was effective in preventing youth from tobacco use over the long term. As the literature states, mass media along with a comprehensive multi-component intervention will be more likely to achieve success (Malatest and Associates Ltd and Genesis Group Limited, 2005).

According to guidance documents by NICE, school based programs should include accurate information about smoking, including its prevalence and its consequences, and tobacco use by adults and peers should be discussed and challenged. In addition, booster sessions are recommended throughout student's school years to maintain or increase the effectiveness of school based programs (Uthman et al., 2009, NICE 2010). Furthermore school-based programs should help students develop decision-making skills and include strategies for enhancing self-esteem and resisting pressure from their social environment to smoke (NICE, 2010). The review by Uthman et al., (2009) also indicated that there was no conceptual model (social influence, social competence, information giving and combined interventions) that proved to be more effective than the other.

With reference to whether peer led, teacher lead or external trainer led interventions were more effective, a literature review by Uthman et al. (2009) found the literature to be conflicting. Factors influencing the effectiveness of peer-led programs may include how the peers were selected (whether other students could relate to the peers), how the group for the program was formed and whether it was tied into the school curriculum. Credibility and quality of delivery were also factors. The National Institute for Health and Clinical Excellence (2010) also suggested that peer leaders may be more effective if they are nominated by their fellow students, receive support from these experts during the course of the program and have the skills and confidence to challenge peer and family norms on smoking; including discussing the risks associated with it and the benefits of not smoking (NICE, 2010)

Protection

Many provinces already have smoke-free policies and are continuing to define new places that are smoke-free in order to protect non-smokers. Furthermore, in eight provinces/territories, current to winter of 2010, there are also smoke-free laws in place to protect children and youth who are travelling in private motor vehicles. The home environment is also very important and according to CAN-ADAPTT, providing cessation counselling delivered in pediatric settings has been shown to be effective in increasing abstinence among parents who smoke (CAN-ADAPTT, 2010).

Cessation

To date, many of the tobacco control programs for adolescents and young adults are based on prevention of uptake of tobacco. While there is some indication from the literature that school-based programs for prevention may be effective, there is weak evidence for the effectiveness of school-based programs for cessation (O'Loughlin et al.,

2004). There is little research being done in this age group and a paucity of effective cessation and protection interventions.

The literature suggests that youth are interested in quitting smoking but that they choose to quit on their own (Filsinger and McGrath, 2009). A youth aimed website (*Quittersunite.com*) is managed by Heart and Stroke Foundation of British Columbia and Yukon. It was originally created to address higher smoking rates among young adults age 19-29 in British Columbia. The website features use of social media such as Twitter, Facebook and blogging; and resources, information and contests to help young adults quit when they are ready (youth directed) (Quitter Unite, 2010). While the website is fairly innovative in usage of new technologies, it is unclear what the extent of utilization or impact of the website is.

For adults, pharmacotherapy such as NRT, counselling, and use of quit lines are initiatives commonly used for cessation. The same may not be true for young adults and youth. While there has been some evidence regarding pharmacotherapy, the evidence has not shown its effectiveness for adolescents and young adults (NICE, 2010); only that it is safe. Interventions that enhance motivation or use cognitive behaviour techniques may be more useful (Grimshaw and Stanton). CAN-ADAPTT's guidelines indicate that smoking cessation treatments that may be useful to youth include referral to non-clinical smoking cessation programs, and motivational interventions. The effectiveness of brief counselling is unknown at this time (CAN-ADAPTT, 2010). Filsinger and McGrath (2009) in their review found that offering free NRT to students when using quitlines increased both the utilization of cessation services and cessation rates. This evidence further suggests that costs may be a factor that youth and young adults consider when looking at cessation options. Innovative practices such as text messaging, emails and web based messaging are also promising but warrant more investigations – while outcomes have been positive, the response to use of these technologies has been mixed (Filsinger & McGrath, 2009).

Features/Characteristics of promising or successful interventions for youth

Based on the information gathered, many of the interventions mentioned share characteristics and features that may be promising and useful to incorporate into future tobacco control programs, policies and interventions. These include*:

- Multi-component
- Mass media messages
 - Should be informed by research that identifies and understands the target audience
 - Contain graphic images portraying smoking's detrimental effect on health as well as appearance
 - Are presented by credible role models or people to whom children and young people can relate
 - Campaigns should be sustained and run for 3-5 years. Further lessons learned from youth for prevention mass media campaigns are available at CDC: <http://www.cdc.gov/tobacco/youth/report/pdfs/youthMedia.pdf>

- Tobacco education is integrated into a variety of subjects in the curriculum for school-based programs
 - Boosters are provided to maintain effectiveness of prevention interventions
- Be entertaining, factual and interactive
- Be delivered by teachers and higher-level teaching assistants who are both credible and competent in the subject.

* Sources: (NICE, 2008; NICE, 2010; CDC, 2007; Campaign for Tobacco-Free Kids, 2007; CAN-ADAPTT, 2010)

Best Practices/Guidelines

For youth and young adults, CAN-ADAPTT has the following guidelines:

- Practitioners who counsel youth should try to obtain information about all tobacco use and try to identify those at risk for sustained smoking
- Counselling or referral to effective community programs should be encouraged for young smokers
- Young smokers should be advised to stop
- With respect to cessation, CAN-ADAPTT has indicated while the evidence is not strong, youth 12-18 who are dependant on nicotine can use NRT if it is believed that it will help the quit attempt.

NICE also has a number of guidelines related to youth. With respect to mass media for prevention, NICE recommends campaigns be informed by and developed in multi-level and multi-sectoral partnerships. In their school-based intervention guidelines, NICE recommends that tobacco information be incorporated into the curriculum; that schools develop a smoke-free policy within a wider policy for healthy schools that applies to everyone and all school property and people; the policy should be accessible and everyone should be made aware of the policy and its content; and, there should be information provided about smoking cessation services (NICE, 2010).

The CDC's Best Practices (2007) also suggested that prevention efforts should include:

- Mass media education campaigns when combined with other community interventions
- Implementing school-based interventions in combination with mass media campaigns and additional community efforts.

Special Considerations:

Youth and young adults are a very diverse and heterogeneous group affected by a number of factors and shaped by their experiences and social environments. Some youth are more vulnerable than others and may warrant more attention in identifying what is effective. As mentioned previously, Aboriginal youth may be especially vulnerable, particularly those living on reserves with access to few resources. Gender differences may place girls at greater vulnerability and require different interventions to meet their needs.

The research to date for young adults primarily focuses on those in college and universities. Information on those who are in the workforce, trade schools and those who are of low SES are often neglected in the research. Furthermore, youth and young adults who are no longer in school or do not pursue higher education may also be vulnerable since they may not have access to prevention or cessation interventions. Much of the literature is related to students in school (elementary, secondary and college) and there is little to inform the effectiveness of interventions outside of the school system (Green et al., 2007).

Youth Engagement and Tobacco

Youth engagement is a new area that may be promising to study with respect to tobacco control, and currently there are relatively few studies in this area. In the review by O'Loughlin et al., 2004, one study showed that youth in grades 11-12 who were regular smokers and participated in community advocacy activities addressing environmental influences of cigarette smoking were more likely to reduce or quit smoking than those in the control group. Other initiatives such as forming youth advisory committees or the development of campaigns and other materials may be helpful. At this moment, it is unclear whether participation in youth advocacy activities prevent initiation, lead to tobacco use reduction or cessation. The optimal age to engage youth in tobacco control advocacy activities is also unclear (O'Loughlin et al., 2004).

Challenges/Gaps

Youth and young adult tobacco use tends to be episodic and these age groups are often not yet established in their tobacco use. Furthermore, there are a number of social and environmental factors that may play a role in youth and young adult smoking behaviours. At present, there is no widely accepted, standardized youth-specific definition of nicotine dependence for use by clinicians, and as such, finding a validated screening tool for tobacco dependence is also difficult (CAN-ADAPTT, 2010). Practitioners must use a variety of ways to ascertain youth and young adult tobacco use.

Furthermore, substance use rarely occurs in isolation, which raises the issue of whether interventions targeting youth and young adults would be best served by addressing tobacco and other substances concurrently, and if so, to what extent? Additionally, youth and young adults encounter a number of different situations that they are learning to navigate through. Given this reality, it is extremely challenging to develop best practices that account for these difficult situations (CAN-ADAPTT, 2010).

Much of the literature that exists examines programs that are outdated or evaluated quite a few years ago. While they may continue to hold valuable and insightful information, the social and legal context for tobacco use, sale and promotion may have changed and particular elements may not be relevant. Furthermore, youth may be engaging in use of other forms of tobacco that may not be perceived as being harmful. For example, in a media release of the results from the Youth Smoking Survey, it was reported that youth considered cigarillos as less harmful compared to cigarettes. The use of waterpipes or hookahs has also increased in popularity among young people. It will be a great challenge to future tobacco control programs to actively update their programming and

evaluations; use of the Internet and similar technologies may assist with this process (Sherman & Primack, 2009).

In general, there is a lack of research and availability of quality studies that inform about the effectiveness and promising tobacco strategies for youth and young adults. The literature is limited with reference to the effectiveness of child-focused versus family-focused or peer-focused interventions as well as interventions accessed via the Internet, quitlines, and school-based programs. The literature pertaining to youth, adolescents and young adults and effective tobacco controls primarily focus on school-based programming. Some interventions targeted at youth may use a combination of school and community based initiatives as well as mass media campaigns. While these interventions demonstrate effectiveness in the short term, more research is needed on the long-term effects and effective strategies that sustain smoke/tobacco-free behaviour among youth. Little evidence of the long-term effects of school-based smoking prevention programs exists because young people are seldom followed-up after leaving school.

Most recently, an OTRU report indicated that there are less Ontario schools delivering the Lungs are for Life program (OTRU, 2009). Rate of adoption by schools and communities and level and quality of implementation or delivery are also important considerations that could reduce the effects of even the best programs in real-world implementations (Richard et al., 2007).

There is also a significant gap in the existing literature on effective strategies for youth outside of the school system since youth may not be exposed to prevention messages and cessation services that are appropriate to them. Research is emerging regarding trade schools and tobacco interventions (Filsinger & McGrath, 2009). More research is definitely needed in this area as there is insufficient evidence for what works outside of a school environment.

Future Directions

Prevention of tobacco use by youth and young adults is a significant concern. The tobacco industry is continually attracting youth smokers and the popularity of cigarillos among youth suggests that tobacco use trends are changing – proactive responses will be needed to protect youth.

Research needs and questions include:

- Safety and effectiveness of pharmacotherapy for cessation in youth and young adults
- How do the determinants of health (gender, socioeconomic status, education) influence the uptake of mass media, school based programs and other interventions
- What contexts are suited for delivering tobacco cessation interventions to youth
 - What interventions are effective for subgroups of youth and young adults and what factors will increase the efficacy, appeal and reach of treatments for this group

- Effectiveness of child-focused versus family-focused or peer-focused interventions as well as interventions accessed via the Internet, quitlines, and school-based programs
- Continue to monitor youth usage of tobacco and develop tools to help practitioners ascertain tobacco use and nicotine dependency
- Effectiveness of other interventions including the use of new media such as web-based programs and text messaging
 - Response has been mixed
- Evaluate interventions that promote sustained cessation and prevent initiation in youth
- Effectiveness of new media and what elements of new media are effective in helping prevent tobacco use or encourage smoking cessation in youth?
- Are targeted, intensive smoking prevention interventions aimed at high-risk groups of school-aged children more effective than universal provision (to all school-aged children)?
- Mechanisms that underlie siblings and familial influences on smoking behaviour.

WOMEN (PREGNANT AND POST-PARTUM)

Rates of tobacco use during pregnancy vary by women's age, ethnicity, socioeconomic status (SES), and region of residence. There is some evidence that smoking and tobacco use affects women differently (i.e. nicotine dependence and adverse health outcomes). In addition, women of child bearing age and tobacco use is of particular concern because of potential harms from exposure to tobacco to both the mother and child (implications for birth outcomes and health of the child). While prevention of smoking/tobacco use is desirable, with pregnant and post-partum women, cessation is the focus of tobacco control efforts.

One underlying assumption is that women will be willing and have the motivation to quit smoking for the sake of their unborn child if they are aware of the health risks. In some cases, some women are able to quit spontaneously upon learning of their pregnancy but may resume smoking upon delivery. For other women, cessation may be extremely difficult due to a number of pressures and despite knowing the harms, will continue to smoke into pregnancy. It is less socially acceptable for women to be smoking in pregnancy and women may be more pressured or motivated to quit (Koshy et al., 2010). Many women may quit smoking at some point during their pregnancy, with most cessation attempts occurring upon first learning about their pregnancy status. Cessation efforts may be permanent, limited to the duration of their pregnancy, or sporadic during pregnancy, while other women simply reduce their amount of smoking (Richard et al., 2007). In a qualitative systematic study by Ingall and Cropley (2010), it was found that while women were aware of the health risks posed to the fetus, it was not necessarily sufficient motivation to quit smoking. It may also be the case that women do not have the confidence or ability to quit. Women face a number of challenges and issues when quitting including willpower, the role of smoking in their lives, issues with cessation provision, changes in smell and taste, stigmatization, the influence of family and friends, as well as issues such as poverty and housing (PREGNETS, 2003, 2004). Cessation service provision by health professionals may also be viewed negatively by women (Ingall & Cropley, 2010). As women face many issues in their pregnancy which may influence their smoking behaviour, interventions must take these issues into account. According to PREGNETS, a website devoted to helping pregnant and post-partum women as well as healthcare practitioners, women receive mixed messages related to smoking and pregnancy and there is a need for the use of effective and clear interventions during this period (PREGNETS, 2004). Please see Appendix A for interventions targeted at pregnant and post-partum women.

Cessation

There are limited interventions in the grey literature aimed at getting pregnant women to stop smoking. Most of what are mentioned are brief, office-based interventions incorporated into prenatal care visits or provision of information, which have been shown to have minimal effect (Richard et al., 2007; Greaves et al., 2003). The interventions that have shown effectiveness at least in the UK context include cognitive behaviour therapy. Multi-component interventions are most effective and typically include provider advisement, print self-help materials, and telephone counseling (McBride, 2003).The

National Institute for Health and Clinical Excellence (NICE) has also indicated that incentives (monetary, vouchers or others) may be a useful means to encourage women, particularly women of low SES, to stop smoking (NICE, 2010). Currently, there exist some self-help resources for women; some of which are provided by CPHA. However, there is no indication of the effectiveness of these resources.

Treatments that are recommended for pregnant women smokers include offering psychosocial interventions that exceed minimal advice to quit and that include the provision of pregnancy-specific self-help materials that continue throughout the pregnancy. According to Melvin (2003), the 5 A counselling approach for pregnant smokers has been developed and works well, with the exclusion of pregnant women who are heavy smokers.

Even if women are successful in smoking cessation during their pregnancy, many women may relapse post-partum. Among women who quit smoking during pregnancy, over 60% start smoking again by 6 months postpartum (Richard et al, 2007; PREGNETS, 2004). To date, there have not been any interventions that have shown effectiveness in preventing relapse in post-partum women. In a randomized control intervention called *Quit Together* as highlighted by Richard et al.'s (2007) book, while there was success in cessation during pregnancy and through delivery, post-partum cessation rates were the same as those under regular care. Cessation programs and services must be sustained even after delivery so as to reduce the likelihood of postpartum relapse and focus on creating a smoke free family.

Kick Butt for Two is an 8 week program being run in Ottawa by St. Mary's house for young pregnant women and providing smoking cessation support. Participants receive tobacco information and receive support for their cessation goals. The program has resulted in positive changes in both smoking behaviours and attitudes of clients and staff. The program has reduced the number of pregnant and parenting adolescents who smoke as well as the number of children exposed to ETS. Pre-registration is required for this program.

A grey literature report by the British Columbia Centre of Excellence for Women's Health was identified that looked at best practices of smoking cessation interventions for pregnant and postpartum girls and women. Twelve recommendations for practice arose, many which are also supported by DiClemente and colleagues (2000):

- Frame public health messages in a sensitive, non-judgemental way that is relevant to the social and economic circumstances of women's daily lives
- Encourage harm reduction among pregnant smokers by recommending a decrease in the number of cigarettes smoked, brief periods of cessation at any point in pregnancy and around delivery, encouraging health promoting behaviours such as exercising, and addressing partner smoking
- As motivation to quit is a dynamic factor, incorporate increased support in interventions for women throughout the post-partum period

- Integrate tailored treatment of nicotine addiction for pregnant smokers into substance abuse treatment programs
- Encourage women to use behavioural methods before pharmacotherapy, in order to avoid potential birth defects
- Offer nicotine replacement therapies to women who are unable to quit smoking during pregnancy after 12 weeks gestation to reduce damage caused by inhaled smoke to both the mother and the fetus
- Encourage women to continue breastfeeding even if they smoke or are using NRTs to aid their cessation
- Use individualized information on smoking patterns to construct highly tailored cessation strategies
- Emphasize cessation and the importance of the woman's own health, rather than the health of her fetus, to foster motivation to remain smoke-free pre-and post-partum
- Create specific interventions for the post-partum period that address motivational and stress related issues for post-partum women
- Create specific interventions for women who quit spontaneously during pregnancy and post-partum
- Screen all women and girls of childbearing age for tobacco use.

Special Considerations

Pregnant women are not a homogenous group; pregnant women living in deprived areas or facing disparity are more likely to smoke and less likely to quit. Among pregnant women, Aboriginal women and women of low socioeconomic status are particularly vulnerable. There is not much data available on the most effective ways to help Aboriginal women quit smoking, but it is essential to weave sessions about cultural usage of tobacco into tobacco cessation programs. Even with cultural tailoring of material, consideration of the delivery is important as demonstrated by Patten et al. (2010). In the study, Alaskan women were offered face-to-face counselling at the first visit, four telephone calls, video highlighting personal stories, and a cessation guide. While all materials used were culturally adapted, retention and recruitment rates were low suggesting that tailoring encompasses more than changing the material (Patten et al., 2010).

Catching Our Breath is a smoking cessation program with a facilitator guide that practitioners can use to run their own support groups for Aboriginal women who smoke. It was developed by Deborah Swartz who is currently managing the Aboriginal Tobacco Strategy in British Columbia. In addition to socioeconomic status, cultural and amount of nicotine use also differs between pregnant women and may warrant different interventions.

As seen previously in the adolescent and young adult section, there are few cessation programs that exist and the majority of interventions are school-based initiatives to prevent initiation. It is unlikely that cessation strategies for pregnant women can be

applied directly to pregnant adolescents and young women, given their life circumstances and the context of their environment. *Kick Butt for Two* may provide some insight on addressing cessation with young pregnant women.

Best Practices/Guidelines

Currently, there are some guidelines to assist front-line practitioners in addressing tobacco cessation with pregnant women. While the NICE guidelines pertain primarily to the National Health Services Stop Smoking services, the guidelines are still relevant. It is important to note also that the NICE guidelines recommend that healthcare practitioners as a whole can play a role in addressing smoking cessation. CAN-ADAPTT and NICE recommend the following:

- Encourage smoking cessation for all women of childbearing age
 - This recommendation seeks to make it routine practice for providers who see women to ask women about their smoking status in a non-judgmental way to identify smokers and open a dialogue for referral to appropriate information, resources and services and supported by others (Lumley et al., 2009)
- Behavioural and cognitive therapies are recommended as a first line of treatment; NRT may be used intermittently if behavioural and cognitive therapies are ineffective.
 - It should be noted that the evidence is not clear for the effectiveness of NRT and that healthcare take caution when recommending NRT.
- Partners, friends and family should be involved to build a more supportive environment for the woman
 - This will include addressing smoking cessation with members of the women's social network who smoke and offering supports to assist partners
 - A broad involvement with those in a woman's life may offer a buffer for her to sustain cessation efforts
- Encourage a smoke-free environment for the woman.
 - Removing visible cues may help a woman sustain her cessation efforts.
 - Similarly, this would involve the woman and her family, partner and friends.

Source: CAN-ADAPTT Canadian Smoking Cessation Guideline for pregnant and Breastfeeding women (2010); NICE public health guidance document for *How to stop smoking in pregnancy and following childbirth (2010)*

Woman centred care and targeted care as well as focus on improvement of the overall home environment was also recommended as a better way to engage pregnant women in smoking cessation (Richard et al, 2007). NICE recommends that cessation services take into consideration the circumstances of women as well as social determinants of health and ensure that services are provided in a relevant and culturally appropriate manner and are flexible and accessible. As the study by Patten and colleagues (2010) with Native Alaskan women illustrates, even with culturally appropriate material, delivery and recruitment methods also need to be appropriate.

PREGNETS recommends the follow smoking cessation strategies:

- Address misperceptions smokers have
- Tailor programs to specific populations
- Address the post-partum period in the prenatal intervention
- Build in partner support
- Offer a variety of cessation approaches and intensities
- Encourage smoking reduction as an alternative to smoking cessation for those unable to quit.

Challenges/gaps

As mentioned by Richard et al. (2007) in the book *Ending the Tobacco Problem: A Blueprint for the Nation*, a barrier to addressing tobacco use in pregnant women is that many practitioners do not actively engage in repeated screening, counselling, and treatment; guidelines and inquiries are generally limited to the first visit, with follow-up inquiries and advisement rarely occurring. Furthermore, pregnant women may also not disclose their smoking status at risk of stigmatization. While some women are able to quit spontaneously, other women face difficulties in quitting and may continue into their pregnancy – research is needed to identify effective interventions for each and support women in reducing harm, and becoming and staying smoke free (DiClemente et al., 2000). Finally the authors concluded that there was more need to understand the specific difficulties that women face and key factors to motivate women in quitting.

An area that is also seldom investigated is effective partner interventions to encourage smoking cessation in pregnant women. The role of the family is important since the attitude of the family, including the woman's partner, towards smoking can have an effect on her smoking behaviour during and after her pregnancy. An initiative called *PANDA* aimed to address both the pregnant woman and her partner's smoking. Findings indicate that while the project did impact women greatly, the materials may have influenced their smoking to some degree (DiClemente, 2000). Evidence suggests that women's cessation success improves when the partner is a non-smoker or one that is trying to quit (Koshy et al., 2010). Positive reinforcement has also been reported to be helpful to women. A systematic literature review by Hemsing et al (2009) also indicated that there is a paucity of studies examining cessation interventions that involve the partner or partner smoking. The authors also reported that cessation efforts by partners are often not sustained and relapses occur post-partum. Some components that may be helpful in addressing partner tobacco use include multiple points of contact and follow up, where interventions are delivered in appropriate settings by one other than the pregnant woman. Furthermore, while the literature indicates that family and friends play an important role in women's attempts to stop smoking during pregnancy, the interactions of the social network for women is very complex and warrants more research to understand how key relationships facilitate or impede smoking cessation.

PREGNETS will be evaluating a training program to disseminate best practices to clinicians on smoking cessation with this population. It will be a report to look forward to for learning what works with this population and whether there have been changes in practice and cessation rates.

As women may face stigma about their smoking behaviour while pregnant, women should not be blamed or shamed; instead, they should know that if they cannot quit, reducing the amount they smoke or making their home smoke-free will make quite a difference (Schwartz, 2005)

Future Directions

To date, there is little known about what are effective interventions to increase smoking cessation among pregnant and post-partum women. Richard et al, suggest that the primary focus should be on preventing smoking among young women and that female smokers should be the target of cessation intervention efforts before, at the beginning of, and throughout pregnancy, as well as post-partum.

There is also a paucity of information on the interactions between disparity, pregnancy and smoking cessation. There are several areas in which research could investigate in moving forward. Given that women may face a great number of challenges and issues, answering these questions will provide useful information to enable tailored interventions that effectively motivate pregnant women towards cessation and staying smoke-free post-partum.

Research needs and questions include:

- Effectiveness of psychosocial treatment provided via non face-to-face modalities, such as quitlines or Web-based programs
- Effectiveness of relapse prevention programs for spontaneous quitters
- Effectiveness of different types of counseling, behavioral therapies, and motivational interventions for pregnant women in general and in high-prevalence populations
- Effectiveness of economic incentives to promote quitting and sustained abstinence
- Effective ways to engage a woman's partner and family in cessation
- Effective interventions to prevent relapse
- Factors that will facilitate and motivate a woman to quit smoking and uptake smoking cessation services.

MENTAL HEALTH, TOBACCO AND ADDICTIONS

Tobacco control has received little attention in community mental health despite the fact that many individuals with mental illness are heavy smokers and experience a large burden of tobacco-related health consequences. The smoking prevalence in mental health populations is also much higher than the average and has been reported to exceed 70% (Johnson et al., 2006). Even though smoking cessation rates are lower for those with mental health issues, there is evidence that many individuals living with mental illness want to reduce or stop smoking altogether for similar reasons as those without mental health or addiction issues. With adequate supports in place, cessation is possible. Please refer to Appendix A for interventions targeted at mental health/addictions populations.

Protection

Smoke-free policies have been used to protect the general public and such policies are also effective in mental health and addiction settings. Furthermore, smoke-free policies are important in offering protection to staff and non-smokers. A report by Johnson et al., stated that it is common for individuals to enter mental health settings as non-smokers and exit as smokers, demonstrating further the importance of smoke-free policies in mental health and addiction settings. In the past, mental health settings have allowed smoking as it was embedded into cultural norms. However, more and more mental health settings are implementing smoke-free policies. Countries such as England and Scotland have implemented smoke-free policies in their mental health and addiction settings. A review of international studies by Lawn and Pols (2005) on the effectiveness of smoking bans in in-patient psychiatric settings found that simple smoking policies applied in a consistent way to all patients were more effective than selective or gradually introduced bans. While there has been concern among mental health practitioners on the potential for increased aggressive behaviours and conflict of mental health and addiction clients, a review by El-Guebaly and colleagues (2002) found that total and partial bans had no long-term impact on unrest or compliance by patients.

In Canada, the Centre for Addiction and Mental Health (CAMH) has put a smoke-free policy in effect to protect clients and staff from second hand smoke. In addition, CAMH has trained its staff in smoking cessation techniques to enable staff such as nurses to implement nicotine replacement.

Success factors for implementing smoke-free policies in mental health settings include (Cormac & McNally, 2008):

- Effective management
- Consultation with users, staff, visitors and families to gain support, suggest improvements, and reduce resistance
- Recruitment of experienced staff, or provision of tools and training to help their staff
- Extensive training of staff in smoking cessation support and offer NRT
- Effective communication including the reason for the policy
- Identify problem areas and provide clear strategies for managing them
- Provide smoking cessation programs tailored to the population

- Assess the smoking status of new patients and offer health education
- Provide social and recreational activities to replace smoke breaks
- Make all the environmental changes first, so that by the time you announce a date for implementation of the ban, there is already an atmosphere of wellness and health.

Cessation

Smoking has long been considered an integral part of the mental health culture. It is also a belief that populations with mental illness are not able or willing to quit. There is evidence that many individuals living with mental illness want to reduce or stop smoking altogether.

Much of the grey literature that addresses smoking cessation treatment for this population is reviews or discussion papers. There is limited information on interventions that are effective in addressing mental health and addictions and tobacco use. The grey literature does suggest that smoking cessation is efficacious among mental health populations (Mc Nally, n.d). Interventions such as pharmacotherapy (NRT) and psychological support (either individual or group) can also be effectively applied provided that there is careful monitoring of adverse medication interactions and antipsychotic medication as cigarette consumption reduces (Piper et al., 2010; Campion et al., 2008; el-Guebaly et al, 2002; Patkar *et al*, 2003). El-Guebaly and colleagues have also indicated that across different mental health and addictions disorders, use of cessation approaches such as pharmacotherapy and some cognitive or behavioural therapy resulted in positive outcomes such as reductions or cessation rates and for those with addictive disorders may enable long-term abstinence from addictions. The duration of the intervention is likely to be longer and the health provider-client interaction is likely to be more frequent than for the general population.

The integration of smoking cessation into mental health treatment is relatively understudied; however a publication from British Columbia (Johnson et al., 2006) has indicated that based on what is known to date about tobacco use, the integration of tobacco cessation treatment with mental health and addiction services is strongly recommended. There is little evidence that tobacco dependence interventions interfere with recovery from nontobacco chemical dependencies among patients who are in treatment for such dependencies (Fiore et al., 2008).

In the U.S, there are examples of two states that are addressing tobacco use in mental health/addiction populations. New York is using strategies that include integrating tobacco dependence treatment into treatment protocols for mental illness or chemical dependency, promoting tobacco-free spaces for substance abuse and mental health facilities, and partnering with agencies representing these groups. Similarly, Vermont is creating and enhancing partnerships with those agencies working with the mental health and or addiction populations and implementing strategies in these agencies to generate more referrals to existing services (CDC, 2007).

A community mental health cessation study by Currie et al. (2008) using *the Freedom from Smoking* manual with adapted mental health topics and optional NRT had several

findings. Successful quitters used some form of NRT, and community programs targeted at mental health population suggest that 4-6 sessions is ideal and that quitting smoking has no problematic effects on symptoms of mental illness. The *Butt Out* program in Vancouver consisted of three components: NRT, education and behavioural techniques. The program has reported positive outcomes in reduction and cessation of tobacco use. Based on current information available, the cessation groups in the *Butt Out* program are still active (Heah, 2007).

In the U.S, a peer-to-peer program called CHOICES may also present opportunities to support mental health populations towards smoking cessation. Findings from the program indicate that working with a peer is acceptable to mental health consumers, may reduce educational and cultural barriers, build greater partnerships and facilitate entry into appropriate cessation services or tobacco use reduction (Medical News Today, 2009).

There has been limited information with respect to programs or initiatives targeted at mental health populations in the grey literature. *Breathing Easy*, a program developed by the Canadian Mental Health Association's Simon Fraser Branch is one example that has indicated positive outcomes both in reduction and cessation and includes cognitive behavioural and psychosocial approaches alongside with NRT.

The University of Colorado at Denver and Health Sciences Center developed a Tobacco Cessation Toolkit for Mental Health Providers. In this toolkit, providers were recommended to use the 5As method to assess readiness to quit and the 5Rs method to encourage smokers with mental health issues to quit. Cessation treatments recommended in this resource also align with that found in the academic literature review of NRT combined with cognitive behavioural therapy. The resource suggests that a group of 8-10 individuals that meet once a week for 7-10 weeks appears to lead to the best results.

Characteristics, Features and Components of Promising Practices

Through the various studies examined through the academic and grey literature, some features have emerged towards better being able to support mental health and addiction populations in smoking cessation, including:

- Tailored approaches that are appropriate for the mental disorder and acceptable to the client (frequency, intensity and program format)
- Offering of NRT for those who wish to quit
- Providing cessation training and support to providers working with mental health and addictions populations
- Providing cessation training and support to all health care providers so that they can assess and refer to cessation services
- Monitoring of medication dosage for adverse interactions
- Implementing smoke-free-spaces
- Integrating tobacco treatment into mental health and addiction services.

*Sources: (Fiore et al., 2008; Johnson et al., 2006; Piper et al., 2010)

Best Practices/Guidelines

The CAN-ADAPTT cessation guidelines as per 2008 recommend that smokers who utilize mental health services should be offered counselling and NRT should be offered. While using NRT, the patients' psychiatric conditions and medication dosages should be monitored and adjusted as needed. The guidelines also recommend that smokers who have addictions or drug dependencies be offered cessation counselling; there is no mention of pharmacotherapy as a cessation aid. New guidelines are expected to be released in 2010 with the evaluation of any new evidence.

An assessment of the Stop Smoking Services in England revealed that a minority of services routinely check the mental health status or mental health service use of their clients. There is a need for local protocols to be implemented that include routine screening for mental health issues and liaison with mental health care providers. The department of health is working with mental health service providers to offer consistent and clear information on tobacco use as well as piloting and evaluate innovative programs within mental health services to find acceptable and accessible service pathways (McNally & Ratschen, 2010).

Special Considerations

Mental health and tobacco is still an area that needs more research. Like all other vulnerable populations, young people with mental health difficulties may be a particularly vulnerable subgroup and require specialized interventions to support them to be smoke-free (Brown, 2004).

Challenge/Gaps

Mental health issues encompass a range and severity of disorders. The degree to which an individual experiences their mental health issues may have an impact on what the frequency, intensity and approach to cessation interventions are and the outcome. The studies that are currently available have not been similar enough to enable comparison of outcomes or interventions. There is very little known about efficacious treatments for persons with co-occurring mental-health or substance use disorders - the studies that have been conducted so far only examine singular diagnoses; individuals with dual diagnoses might experience particular barriers to cessation (Johnson et al., 2006).

A barrier or challenge to effectively addressing tobacco dependence in mental health/addiction populations lies in social factors that continue to reinforce tobacco use among people with mental illness or addictions. In the past, tobacco has been used as an acceptable substitute for other drugs or used as a reward for desired behaviour (Johnson et al, 2006) The perceptions and beliefs held by staff in mental health settings can also be a barrier. In a qualitative study by Johnson et al., (2010) that took place while a new policy was being introduced restricting tobacco smoking inside community-based mental health facilities and their grounds, the authors reported a number of observations. First, they found that staff felt obligated to manage and enforce a smoke-free environment. Second, they found that staff believed that smoking was helpful to clients and that cessation was harmful, viewed smoking as an individual choice, and thought that cessation should be another professional's role. These beliefs had an impact on support

provided to mental health clients in tobacco cessation. Brown (2004) reached similar findings.

Smoke-free policies in mental health settings are important interventions on their own. However, the lack of a managed change process can unintentionally reinforce negative attitudes about tobacco control initiatives and create resistance (Johnson et al., 2010).

Future Directions

There has been a limited amount of information on mental health populations produced, and there is emerging evidence that mental health and addictions populations would benefit from population interventions such as smoke-free policies and cessation interventions – although these may require more intensive and tailored treatments. The culture in which tobacco use and these populations is viewed is in need of a shift to support mental health and addictions populations towards supporting overall well-being. Cessation products and services should be made more readily available and affordable. Staff training and technical assistance should be part of all programs to treat tobacco dependence, and should follow accepted cessation guidelines.

According to Johnson et al (2010), Canada has not yet fully integrated care. A recent survey of Canadian addictions-treatment programs indicated that most facilities stated their program placed “little emphasis” on smoking (Johnson et al., 2010).

Additional research and information needs include the following:

- Relative effectiveness and reach of different tobacco dependence medications and counselling strategies in patients with psychiatric co-morbidity, including depression
- Effectiveness of treatments for populations with dual or multiple diagnoses
- Most appropriate interventions in the community setting for mental health and addictions populations
- Importance and effectiveness of specialized assessment and tailored interventions in these populations
- Impact of stopping tobacco use on psychiatric disorders and their management
- Effectiveness and impact of tobacco dependence treatments within the context of nontobacco chemical dependency treatments.

LOW SOCIOECONOMIC STATUS AND SOCIAL DETERMINANTS OF HEALTH

While low socio-economic status was an important factor to consider in many of the population groups examined above, it is worthwhile to go into a brief discussion about tobacco control with low SES populations. These patients are more likely to smoke, have limited access to effective treatment, can be misinformed about smoking cessation medications, not have health insurance and be exposed to environmental and workplace smoking policies. They are also less likely to receive cessation assistance (Fiore et al., 2008).

Cessation

As mentioned previously, there is a paucity of information on the effects of tobacco control policies and programs on low SES populations. The literature suggests that low SES populations face challenges in that smoking cessation services tend to be more accessible and available to more affluent groups (Murray, 2009). There is also limited information on effective interventions, however counselling (telephone, group and individual) that incorporates a skills component and a support component has been found to be effective in low-income smokers (Fiore et al, 2008). One recent intervention study found that for the most at-risk population of low income pregnant and postpartum women, a relatively low level of social support from a counsellor, friend or acquaintance identified by the women and modest financial incentives donated by local health care organizations were effective in smoking cessation (Richard et al., 2007). Providing subsidized NRT and client support may be means to help those with low income address some of their financial pressures.

Furthermore, it has been suggested that there are opportunities to address tobacco cessation in other settings such as dental clinics, community centres and community pharmacies. A study by Gordon et al. (2010), examined the use of public health dental clinics as a means to reach low-income smokers where dentists offered advice, assistance and NRT. Findings indicated that those who received the intervention had higher abstinence than the control group at follow up, and suggest the feasibility and effectiveness of tobacco cessation services delivered to low-income smokers through dental health practitioners.

Currently in the U.S, M.D. Anderson Cancer Center and the National Cancer Institute are engaging in a research project to examine smoking cessation for low-income adults and examine the effectiveness of three interventions: standard care (brief advice to quit smoking, NRT, and self-help written materials), enhanced care (standard care plus a single motivational interviewing counselling session and a cell phone-delivered text/graphical messaging component) and intensive care (standard care, enhanced care and a series of 11 cell phone-delivered proactive counselling sessions and a cell phone-delivered text/graphical messaging component). The results from this research will provide insight on what works for low income individuals while incorporating new technology (Clinical Trials.gov, 2010).

Best Practices/Guidelines

The only guidelines related to low income populations that were identified are documented in the CAN-ADAPTT guidelines. While the CAN-ADAPTT guidelines consolidate the evidence and knowledge from a number of countries, the guidelines in this case are from the UK only. The recommendations include increasing the availability of NRT to low income smokers by providing partial or complete subsidization. It should be noted this recommendation is based on expert opinion only.

Challenges/Gaps

There is limited knowledge of how factors such as low SES influences uptake of prevention and cessation interventions but the evidence suggests that media campaigns are rarely more effective among low SES populations. In a systematic review by Niederdeppe et al. (2008), differences in the effectiveness of media campaigns between SES groups may occur by any of three ways: differences in meaningful exposure, differences in motivational response, or differences in opportunity to sustain long-term cessation. There remains a need to conduct research that examines the effectiveness of media campaigns by SES.

Future Directions

To date, there has been a paucity of studies that examine tobacco use from an equity perspective and how the determinants of health influence the effectiveness of tobacco control interventions. There is a need to conduct research that examines the effectiveness in prevention and cessation interventions to inform targeted approaches and reduce the tobacco-related disparities that low SES populations face.

Additional research and information needs include the following:

- Effectiveness of and compliance with medications shown to be effective with general populations of smokers
- Effectiveness and utilization of other treatment delivery settings (e.g., pharmacy-based, community-based, worksite)
- Effectiveness of quitlines, including ability of this population to access services using this modality
- Strategies for addressing misconceptions about effective cessation treatment that may be more common in these populations
- Cost-effectiveness of cessation interventions delivered as part of chronic disease management programs
- Factors that increase uptake and effectiveness of prevention and cessation interventions.

REDUCING INEQUITIES: CESSATION SERVICES

Canada is embarking on determining what the next generation of tobacco control may look like; England has recently released its strategy with a special focus on reducing inequalities in disadvantaged groups. It may be useful to examine England's strategy for insight (2010).

The government in England is taking several steps to reduce the inequalities so as not to perpetuate further disadvantage. In England, smoking cessation services are coordinated nationally through the National Stop Smoking Services which are then delivered locally by providing counselling and support to smokers wanting to quit. In order to reduce the inequalities, these steps include:

- Providing targeted cessation interventions in areas of high health inequalities called integrated healthcare packages. The packages are individual specific and provide needed supports outside of cessation (i.e. referral to exercise programs for concerns about weight gains) that are acceptable and accessible
- Improving local data to gather information about specific regions to enable targeted interventions
 - Collecting more detailed information on the users of their services to determine whether vulnerable populations are being reached
 - Incorporation of other indicators in addition to cessation rates
- Basing the smoking cessation work for vulnerable populations using the NICE's review of the evidence.

Furthermore, the Department of Health has committed to conducting equality impact assessments since by assessing potential effects of a policy on particular populations in a rigorous way, it is more likely that policy will promote equity of outcomes. The document outlines some of the issues faced by specific populations and potential policies and the impact they will have on these populations (Department of Health, 2009)

The World Health Organization has cited that cessation services have the potential to reduce health inequities if they are targeted to disadvantaged groups and are acceptable and appropriate. Ways of doing so could include subsidizing and deregulating nicotine replacement therapy and other cessation aids, bringing cessation services to where disadvantaged communities and populations are and incorporating brief interventions for cessation as part of essential health services (WHO, 2010).

DISCUSSION

This report summarized the grey literature and attempted to identify evidence-based and promising tobacco control practices and programs for vulnerable populations in order to inform the work of the local/regional public health community and build on the findings from the academic literature review. This was achieved by primarily searching the grey literature from public health, tobacco control websites and websites of organizations that work with the vulnerable populations of interest. This section will identify limitations and then briefly discuss key challenges and gaps in the knowledge.

There are several limitations to this report. All of the searches in the grey literature and internet searches were conducted by one person. While this person has some background knowledge on tobacco control and solicited input from the project coordinator during the process, the results are subject to one person's interpretation and may have missed other important information sources. Consistency could be improved with the inclusion of other reviewers or researchers. Furthermore, the research was limited to English language documents only and therefore knowledge from French-speaking public health and other organizations may have been missed. Additionally, in the examination of grey literature using internet searches, there may be some overlap from the sources cited by OTRU in their literature review.

Since much of the work conducted revolved around internet searches, in many cases websites were under construction or some links were no longer active or accessible. Furthermore, while the searches yielded names of programs targeted at vulnerable populations, information on these interventions was not always available. Furthermore, while the consultant attempted to contact several health related organizations and organizations that engaged the vulnerable populations of interest through electronic mail or telephone to identify any activities or programs being undertaken with vulnerable populations, it was not always possible to establish such contact given the timelines.

The literature has provided us with some valuable information on what are effective tobacco control initiatives. It indicates that population strategies can be effective and that targeted interventions may be effective to address the gaps of population strategies. At the same time, we are still lacking information both in the academic and grey literature on what works in terms of tobacco control for vulnerable populations such as what works for which population, in what way and under which circumstances. From the CPHA centenary conference, there was a poster on repositioning tobacco as a social justice issue by Cohen et al., for which a report is anticipated to be released. This report should be reviewed upon its release for additional insights on tobacco control and vulnerable populations.

Some of the challenges that exist in terms of identifying effective and promising practices/interventions for vulnerable populations lie in the fact that there is no central registry of programs and evaluations that have been attempted or in progress. Canada may wish to apply a database method similar to Australia. While the Australian database only applied to Aboriginal interventions, it may be a useful model for Canada to use as it

tracks interventions that are in development, in implementation and completed. For the database format, please see Appendix D.

Another challenge was that many of the tobacco control initiatives identified in Appendix A did not include evaluation data or only contained process or formative evaluations. While this information is useful, it does not provide information on the outcomes or lessons learned for other practitioners to glean from. There is a need to focus on evaluation of the impact and outcome as many programs tend to focus on outputs and throughputs which create challenges in making informed decisions about the success or failure of particular programs.

Significant health gains are likely to be achieved by reducing the proportion of current smokers, and drawing more of these smokers from disadvantaged groups could make a significant contribution to reducing inequalities in health.

The Framework Convention on Tobacco Control (FCTC), to which Canada is a party, offers a commitment to highlighting issues of gender, poverty, and youth in particular, as well tobacco use and indigenous populations. It will be necessary to develop meaningful partnerships with both the target populations as well as those who work intimately with and advocate for these vulnerable groups. The best ideas, evidence, and interventions will emerge only from developing authentic relationships and mutually supportive networks between tobacco control advocates and groups supporting these vulnerable populations.

REFERENCES

- Alberta Alcohol and Drug Abuse Commission (AADAC). (2002). *Aboriginal Tobacco Use Strategy*, Alberta Health Services. [online]
<http://www.albertahealthservices.ca/AddictionsSubstanceAbuse/if-res-2004-atrs-highlights.pdf>
- Assembly of First Nations. (2007). *First Generation, Second Generation: An Enhanced First Nations Tobacco Strategy*. Assembly of First Nations. [online]
<http://www.afn.ca/cmslib/general/Proposal%20for%20a%20new%20First%20Nations%20Tobacco%20Cessation%20Strategy.pdf>
- Australian Respiratory Council – Prevention and Cure of Respiratory Illness. (no date). *NSW Aboriginal tobacco control project 2007* Available at <http://www.thearc.org.au/projects.htm> .
- Author unknown. (n.d). *Chapter 6: Universal or targeted approaches*. Retrieved from the National Drug and Alcohol Research Centre – University of New South Wales website. [online]
[http://www.med.unsw.edu.au/NDARCWeb.nsf/resources/TR_40/\\$file/TR+228+CHAPTER+6.pdf](http://www.med.unsw.edu.au/NDARCWeb.nsf/resources/TR_40/$file/TR+228+CHAPTER+6.pdf).
- Campaign for Tobacco-Free Kids. (2007). *Public Education Campaigns are effective*. Available at http://tobaccofreecentre.org/files/pdfs/en/PEC_effective_en.pdf.
- CAN-ADAPTT. (September 2010). *Canadian Practice-Informed Smoking Cessation Guideline*. Toronto, Canada: Canadian Action Network for the Advancement, Dissemination and Adoption of Practice-informed Tobacco Treatment, Centre for Addiction and Mental Health.
- CAN-ADAPTT (2010). *Canadian Smoking Cessation Guideline Specific Populations: Youth*. [online] Accessed from the CAN-ADAPPT website http://www.can-adaptt.net/File/Youth_v2.0_final.pdf
- CAN-ADAPTT (2010). *Canadian Smoking Cessation Guideline Specific Populations: Pregnant and Breastfeeding Women*. [online] Accessed from the CAN-ADAPPT website www.can-adaptt.net/File/Pregnancy_v2.0_final.pdf
- Campion J, Checinski K, Nurse J. (2008). Review of smoking cessation treatments for people with mental illness. *Advances in Psychiatric Treatment*, 14:208-216.
- Cancer Care Ontario: *Aboriginal Tobacco Strategy*, Aboriginal Cancer Care Unit. (2008). *Lessons Learned in Ontario- Aboriginal Tobacco Cessation*. Ontario (Canada)
- Centers for Disease Control and Prevention. *Best Practices for Comprehensive Tobacco Control Programs—2007*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; October 2007.

- Centre for Excellence in Indigenous Tobacco Control. (2008). BREATHE (Building Research Evidence to Address Aboriginal Tobacco Habits). Available at: <http://www.ceitc.org.au/projects/285>
- Clinical Trials.gov – A service of the U.S National Institutes of Health. (2010). *Smoking Cessation for Low-Income Adults*. Available at: <http://clinicaltrials.gov/ct2/show/NCT00948129>
- Cohen, B., Schultz A., Walsh, R., and Fuga, L.A. (2010). *Reposition Tobacco Use as a Social Justice Issue*. [Poster presentation presented at the CPHA 2010 Centenary].
- Cormac, I. and McNally, L. (2008). How to Implement a Smoke Free-Policy. *Advances in Psychiatric Treatment* (2008) 14: 198-207. doi: 10.1192/apt.bp.107.004069.
- Currie, C. (2010). *Tobacco misuse among Aboriginal youth: A literature review*. University of Alberta.
- Currie, S.R., Karltyyn, J. Lussier, D., De Denus, E., Brown, D., and El-Guebaly, N. (2008). Outcome from a Community-based Smoking Cessation Program for Persons with Serious Mental Illness, *Community Mental Health Journal*, 44:187–194.
- David, A., Esson, K., Perucic, A.M. and Frizpatrick, C., (2010) *Equity, Social Determinants, and Public Health Programmes*. Accessed from the World Health Organization website http://whqlibdoc.who.int/publications/2010/9789241563970_eng.pdf
- De Finney, S., Janyst, P., and Greaves, L. (2009). *Aboriginal Adolescent Girls and Smoking: A Qualitative Study*. Vancouver: British Columbia Centre of Excellence for Women’s Health.
- DiClemente, C.C., Dolan-Mullen, P., and Windsor, R.A. (2000) The process of pregnancy smoking cessation: implications for interventions. *Tobacco Control*, 9(Suppl III):iii16–iii21.
- Dobbins, M., DeCorby, K., Manske, S., and Goldblatt, E. (2008). Effective practices for school-based tobacco use prevention, *Preventive Medicine*, 46: 289-297.
- El-Guebaly, N., Cathcart, J., Currie, S. et al. (2002). Public health and therapeutic aspects of smoking bans in mental health and addiction settings. *Psychiatric Services*, 53, 1617 –1622.
- EnviroNics Institute. (2010). Findings from the Urban Aboriginal Peoples Study – Background and Summary of Main Findings. [online] http://uaps.ca/wp-content/uploads/2010/02/UAPS-Main-Report_June.pdf
- Filsinger, S. and McGrath, H. (2009). *Literature Review for Youth Adult Cessation/Protection Interventions*. University of Waterloo, Population Health Research Group. [Prepared for the LEARN project] <http://www.ptcc-cfc.on.ca/english/Resources/Resource-Search/Resource/?rid=12368>

- Fiore et al., (2008). *Treating Tobacco Use and Dependence Clinical Practice Guidelines: 2008 Update*. Rockville (MD): US Department of Health and Human Services, Public Health Service; 2008. Available at http://www.surgeongeneral.gov/tobacco/treating_tobacco_use08.pdf
- Gordon, J.S., Andrews, J.A., Albert, D.A. Crews, K.M, Payne, T.J. and Severson, H.H. (2010). Tobacco Cessation via Public Dental Clinics: Results of a Randomized Trial. *American Journal of Public Health*, 100(7):1307-1312.
- Graham, H., Inskip, H.M., Francis, B., and Harman, J. (2006). Pathways of disadvantage and smoking careers: evidence and policy implications, *Journal of Epidemiology and Community Health*: 60(Suppl II):ii7–ii12.
- Greaves, L., Cormier, R., Devries, K., Botorff, J., Johnson, J., Kirkland, S. & Aboussafy, D. (2003) *A Best Practices Review of Smoking Cessation Interventions for Pregnant and Postpartum Girls and Women*. Vancouver: British Columbia Centre of Excellence for Women's Health
- Greaves, L., Vallone, D., and Velicer, W. (2006). Special effects: tobacco policies and low socioeconomic status girls and women. *Journal of Epidemiology Community Health*, 60(S2):ii1–ii2.
- Greaves, L., Jategaonkar, N., Johnson, J., McGowan, M., Botorff, J., McCullough, L. (2006). What are the effects of tobacco policies on vulnerable population? A better practices review. *Canadian Journal of Public Health*, 97(4): 310-314.
- Green, M.P. McCausland, K.L., Haijun, X., Duke, J.C., Vallone, D.M. and Healton, C.G. (2007). A Closer Look at Smoking Among Young Adults: Where Tobacco Control Should Focus Its Attention, *American Journal of Public Health*, 97:1427–1433.
- Grimshaw, G.M., and Stanton. (2006). Tobacco cessation interventions for young people. *Cochrane Database of Systematic Reviews*. Issue 4. Article No.: CD003289.
- Haché, T. (2009). *Commercial Tobacco in First Nation and Inuit Communities*. Non-Smokers' Rights Association/ Smoking and Health Action Foundation [online] http://www.nsra-adnf.ca/cms/file/pdf/Commercial_Tobacco_in_First_Nations_and_Inuit_Communities.pdf
- Harvey, D., Tsey, K., Cadet-James, Y., Minniecon, D., Ivers, R., McCalman, J., Lloyd, J., and Young, D. (2002). An evaluation of tobacco brief intervention training in three Indigenous health care settings in north Queensland. *Australian and New Zealand Journal of Public Health*, 26, 426.
- Hawkins, R. P., Kreuter, M., Resnicow, K., Fishbein, M., & Dijkstra, A. (2008). Understanding tailoring in communicating about health. *Health Education Research*, 23, 454–466.

- Hayward, L., Campbell, S., and Sutherland-Brown, C. (2007). Aboriginal users of Canadian quitlines: an exploratory analysis, *Tobacco Control*, 16, 60-64. [online]
http://tobaccocontrol.bmj.com/content/16/Suppl_1/i60.full.pdf.
- Heah, T. (2007). Vancouver's Butt Out Stop Smoking Program. *Visions: BC's Mental Health and Addictions Journal*, 3(4): 34-35. Available at :
<http://www.heretohelp.bc.ca/publications/visions/tobacco>
- Hemsing, N, O'Leary, R., Chan, K., Okoli, C., Greaves L. (2009). *NICE Rapid Review: Interventions to Improve Partner Support and Partner Cessation During Pregnancy*. Available at: <http://www.nice.org.uk/nicemedia/live/11754/45540/45540.pdf>
- HM Government: Department of Health. (2010). Smokefree Future A Comprehensive Tobacco Control Strategy for England [online]
http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/@ps/documents/digitalasset/dh_111789.pdf.
- HM Government: Department of Health. (2009). 'A smokefree future' A comprehensive Tobacco Control Strategy for England 2010-2020 Equality Impact Assessment [online]
http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/@ps/documents/digitalasset/dh_111747.pdf
- Inuit Tapiriit Kanatami. (2010). *President's Speech for World Tobacco Day*. Delivered by National Inuit Leader Mary Simon on May 10, 2010, <http://www.itk.ca/media-centre/speeches/world-no-tobacco-day>.
- Inuit Tobacco Free Network. (2009). Reports and Research.
http://www.naho.ca/inuit/itn/rsc_reports.php
- Ingall, G and Cropley, M. (2010). Exploring the barriers of quitting smoking during pregnancy: A systematic review of qualitative studies. *Women and Birth*, 23:45-52.
- Koshy, P., Mackenzie, M., Tappin, C., and Bauld, L. (2010). Smoking cessation during pregnancy: the influence of partners, family and friends on quitters and non-quitters, *Health and Social Care in the Community*: 18(5), 500–510.
- Lawn, S. & Pols, R. (2005). Smoking bans in psychiatric inpatient settings? A review of the research. *Australian and New Zealand Journal of Psychiatry*, 39, 866 –885.
- Malatest and Associates Ltd and Genesis Group Ltd. (2005). *Mass Media Tobacco Strategy Evaluation*. Prepared for the Government of Northwest Territories Department of Health and Social Services 2005. Available online at: <http://pubs.aina.ucalgary.ca/health/62252.pdf>
- Main, C., Thomas, S., Ogilvie, D., Stirk, L., Petticrew, M., Whitehead, M., and Sowden, A. (2008). Population tobacco control interventions and their effects on social

inequalities in smoking: placing an equity lens on existing systematic reviews
BMC Public Health 2008, 8:178 [online] <http://www.biomedcentral.com/content/pdf/1471-2458-8-178.pdf>

Medical News Today Article from Oct 10, 2009. *Smoking Cessation Program For Mental Health Patients Honored By American Psychiatric Association* Sources from the Robert Wood Johnson Medical School <http://www.medicalnewstoday.com/articles/166981.php>

McBride C. Tobacco cessation programs for pregnant women and mothers of young children. In: Tremblay RE, Barr RG, Peters RDeV, eds. *Encyclopedia on Early Childhood Development* [online]. Montreal, Quebec: Centre of Excellence for Early Childhood Development; 2003:1-8. Available at: <http://www.child-encyclopedia.com/documents/McBrideANGxp.pdf>. Accessed [October 17, 2010].

McKennitt, D. Hewton-Backfat, L., Lennie, D., Gray, D., Pahara, J. and rinkworth D. *A culturally approach tobacco use program for Aboriginal youth*. Aboriginal Health Group, University of Alberta: Oct 2009. <http://aboriginalhealthgroup.org/admin/uploads/october-09-Booklet.pdf>

McKennitt, D (2007). A Smoking Prevention Program for Aboriginal Youth *First Peoples Child and Family Review*, Volume 3, Number 2, 2007, *Special Issue*. 52-55

McNally, L. and Ratschen, E. (2010). The Delivery of Stop Smoking Support to People with Mental Health Conditions: A Survey of NHS Stop Smoking Services
BMC Health Services Research 2010, 10:179

Melvin CL. Treating tobacco use among pregnant and parenting smokers. In: Tremblay RE, Barr RG, Peters RDeV, eds. *Encyclopedia on Early Childhood Development* [online]. Montreal, Quebec: Centre of Excellence for Early Childhood Development; 2003:1-8. Available at: <http://www.child-encyclopedia.com/documents/MelvinANGxp.pdf> . Accessed October 18, 2010.

Muller T (2007) *Breaking the cycle of children's exposure to tobacco smoke*. London: British Medical Association

Murray, R.L. Bauld, L., Hackshaw, L.E., and Mcneill A. (2009) Improving access to smoking cessation services for disadvantaged groups: a systematic review. *Journal of Public Health*, 31(2): 258-277.

National Institute for Health and Clinical Excellence (2010). *NICE public health guidance 26 How to stop smoking in pregnancy and following childbirth*. Accessed on October 12, 2010 from the National Institute for Health and Clinical Excellence website: <http://guidance.nice.org.uk/PH26>

National Institute for Health and Clinical Excellence. (2008) *Smoking cessation services in primary care, pharmacies, local authorities and workplaces, particularly for manual*

working groups, pregnant women and hard to reach communities, Accessed on October 14, 2010 from the National Institute for Health and Clinical Excellence website:
<http://guidance.nice.org.uk/PH10/Guidance/pdf/English>

National Institute for Health and Clinical Excellence (2010). *NICE public health guidance 23. School-based interventions to prevent the uptake of smoking among children and young people*, Accessed on October 14, 2010 from the National Institute for Health and Clinical Excellence website: <http://guidance.nice.org.uk/PH23>

National Institute for Health and Clinical Excellence (2008). *NICE public health guidance 14 Mass-media and point-of-sales measures to prevent the uptake of smoking by children and young people*, Accessed on October 15, 2010 from the National Institute for Health and Clinical Excellence website: <http://guidance.nice.org.uk/PH14>

Niederdeppe J, Kuang X, Crock B, and Skelton A. (2008). Media campaigns to promote smoking cessation among socioeconomically disadvantaged populations: what do we know, what do we need to learn, and what should we do now? *Social Science and Medicine*, 67(9):1343-55.

Niederdeppe, J. Fiore, M.C., Baker, T.B., and Smith, S.S. (2008). Smoking-Cessation Media Campaigns and Their Effectiveness Among Socioeconomically Advantaged and Disadvantaged Populations, *American Journal of Public Health*, 98(5): 916–924.

O’Loughlin, Kischuk, N and Tremblay, M., (2004). Tobacco Control Research on Youth Issues: Scan Overview and Recommendations. Available at: <http://www.cctc.ca/cctc/EN/youth-engagement/research-youth-issues>

Ontario Tobacco Research Unit. *Toward a Smoke-Free Ontario: Progress and Implications for Future Developments* [Special Reports: Monitoring and Evaluation Series (Volume 13, No. 3)]. Toronto, ON: Ontario Tobacco Research Unit, February 2009.

Patkar A., Gopalakrishnan R., Lundy A., Leone F., Certa K. and Weinstein S. (2002). ‘Relationship between tobacco smoking and positive and negative symptoms in schizophrenia’ *Journal of Nervous and Mental Disease*, Vol. 190, pp604-610

Patten, C.A., Windsor, R.A., Renner, C.C., Enoch, C., Hochreiter, A., Nevak, C., Smith, C.A., Decker, P.A., Bonnema, S.Hughes C.A. and Brockman T. (2010). Feasibility of a tobacco cessation intervention for pregnant Alaska Native women, *Nicotine and Tobacco Research*, 12 (2): 79-87.

Pearce, D., Schwartz, D., and Greaves, L. (2008). *No Gift: Tobacco Policy and Aboriginal People in Canada*. Vancouver: British Columbia Centre of Excellence for Women’s Health.

Physicians for a Smoke-Free Canada. (2007) *Towards effective tobacco control in*

First Nations and Inuit communities. Physicians for a Smoke-Free Canada [online]
http://www.smoke-free.ca/pdf_1/Effective%20tobacco%20control%203.pdf.

Piper, M. E., Smith, S. S., Schlam, T. R., Flemin, M. F., Bittrich, A. A., Brown, J. L., & Baker, T. B. (2010). Psychiatric disorders in smokers seeking treatment for tobacco dependence: Relations with tobacco dependence and cessation. *Journal of Consulting and Clinical Psychology*, 78, 13–23.

PREGNETS. (2003). Smoking Cessation for Pregnant and Post-partum women: A Toolkit for Health Professionals. Available at:
<http://www.pregnets.org/providers/toolkit/Pregnets%20Toolkit%20version%201.0.pdf>

Ranney L, Melvin C, Lux L, McClain E, Morgan L, Lohr K. *Tobacco Use: Prevention, Cessation, and Control. Evidence Report/Technology Assessment No. 140*. (Prepared by the RTI International–University of North Carolina Evidence-Based Practice Center under Contract No. 290-02-0016). AHRQ Publication No. 06-E015. Rockville, MD: Agency for Healthcare Research and Quality. June 2006.

Richard J. Bonnie, Kathleen Stratton, and Robert B. Wallace, *Editors*, Committee on Reducing Tobacco Use: Strategies, Barriers, and Consequences, Institute of Medicine. (2007). *Ending the Tobacco Problem: A Blueprint for the Nation* [readable online version]
http://books.nap.edu/openbook.php?record_id=11795&page=1

Rose, G. (2001). Sick Individuals and Sick Populations. *International Journal of Epidemiology*, 30: 427-243.

Sherman, E.J. and Primack, B.A. (2009). What Works to Prevent Adolescent Smoking? A Systematic Review of the National Cancer Institute’s Research-Tested Intervention Programs, *Journal of School Health*, 79: 391-399.

Schwartz D. Voices from the field – Aboriginal women and tobacco. In: Tremblay RE, Barr RG, Peters RdeV, eds. *Encyclopedia on Early Childhood Development* [online]. Montreal, Quebec: Centre of Excellence for Early Childhood Development; 2005:1-5. Available at:
<http://www.child-encyclopedia.com/documents/SchwartzANGps.pdf>. Accessed Oct 17, 2010

Uthman, O., Yahaya, I., Pennant, M., Bayliss, S., Aveyard, P., Jit, M., Barton, P., Meads, C., and Chen, Y.F. (2009). *School-based interventions to prevent the uptake of smoking among children and young people: effectiveness review*. West Midlands Health Technology Assessment Collaboration Public Health, Epidemiology and Biostatistics University of Birmingham. [online]
www.nice.org.uk/nicemedia/live/11976/44026/44026.pdf

University of Alberta, School of Public Health. (2010) *Finding balance in tobacco prevention for Aboriginal youth –News Article*,
<http://www.publichealth.ualberta.ca/en/research/Public%20Health%20Research%20News/2010/02/Findingbalanceintobaccoprevent.aspx>

Wardman AE, Quantz D, Tootoosis J, Khan NA. Tobacco cessation drug therapy among Canada's Aboriginal people. *Nicotine and Tobacco Research* 2007; 9(5):607-611.

Zappelli, R., Braganza, L., Prepared for the Department of Health. (2008). Environmental Scan of Tobacco Control Interventions in Aboriginal Populations: What works? What doesn't? [online]. Available at: http://www.health.wa.gov.au/smokefree/docs/Report_of_Audit_Aboriginal_Smoking_Prevention_Cessation_Services.pdf Accessed Oct 14, 2010

APPENDICES

Appendix A: Interventions that target vulnerable populations

Appendix B: Promising practices for Aboriginal Communities

Appendix C: Promising initiatives in capacity building for tobacco control

Appendix D: Template of the Australian Database for Aboriginal Tobacco Control Programs

Appendix A: Interventions targeted at vulnerable populations

Intervention/ Initiative Name	Tobacco Area	Target Audience	Description	Evaluation
Aboriginals				
Blue Light Campaign	Prevention	Aboriginal Communities	Families were provided with a blue light to place on their front porch to signify a smoke free home	Successfully implemented in Nunavut No indication of effects on tobacco use/policy changes
Born Smoke Free	Prevention	Aboriginal pregnant women	Information campaign to provide educational material to women Aim to help expectant and new mothers quit smoking using community health workers to deliver the program and engage	Has been successfully implemented in some Aboriginal communities and will have more rolling out this year No indication of effects on tobacco use/policy changes
Teaming up for Tobacco-free kids (Butt Out) – Aboriginal Adaption	Prevention	Aboriginal Elementary children	Facilitated by university volunteers, focus is on appropriate use of tobacco, holistic health focus	Evaluation indicates increased self-esteem and reduced tobacco use Greater implementation and outcome evaluation will be needed.
Second wind tobacco cessation program	Cessation	Native Americans	Weekly classes and individual counselling if needed, classes forming regularly Facilitator guide is also available	No indication of outcomes for this group based therapy
Sacred Smoke	Cessation	Aboriginal (urban setting)	Refer to literature review	Refer to literature review
Anishnawbe Mushkiki-Sema Kenjigewin Aboriginal Tobacco Misuse Program	Cessation	Aboriginal (urban setting)	Refer to literature review	Refer to literature review

Women (Pregnant and Post-Partum)				
A Pregnant Women's Guide to Quit Smoking (US based)	Cessation	Pregnant Women	Self-help skills based guide	Used in combination with other interventions such as counseling indicated some positive results (Gielen, A.C., Windsor, R. Faden, R.R. O'Campo, P., Repke, J., and Davis, M. (1997). <i>Health Education Research</i> , 12(2): 247-254)
Asking to Listen: Helping Pregnant and Postpartum Women and Their Families to Quit or Reduce Smoking	Cessation	Pregnant Women and their families	Resource for perinatal care providers to help their clients quit smoking. Includes a training video, booklet of information and strategies and handouts	Effectiveness is unknown
Start Quit, Stay Quit	Cessation	Pregnant women	Self-help guide for pregnant women Preventing Smoking Relapse, is a companion support guide for partners of pregnant women.	Effectiveness is unknown
Baby's Coming, Baby's Home <i>Community Health, St. John's Region, Newfoundland</i>	Protection/Cessation	Women and their families	Addressed gaps in resources surrounding ETS for the prenatal and postnatal periods Materials were developed and disseminated	Effectiveness is unknown but there will be continuing promotion of the materials, distribution of the resources, and provision of training regarding use of the resources.
Project PANDA	Cessation	Pregnant women and their partners	Videos and newsletters were mailed to women and their partners at intervals during the final weeks of pregnancy and the first six weeks post-partum to prevent transition back to smoking	Outcomes included significant greater abstinence over the entire follow up period and at the 12 month follow up for the intervention group participants. Men appeared to use and read the materials and it appeared that the materials may have influenced their smoking to some degree

				(DiClemente et al., 2000).
Quit Together	Cessation	RCT aimed at low-income pregnant women	Health care providers were trained to implement national clinical preventive service guidelines; Services included routine screening; reminders to providers to provide services; distribution of materials to the patients; follow-ups; and coordination among providers in women's and children's services and program	Participants did have successful quits during pregnancy and delivery but were no more likely than patients receiving usual care to maintain smoking abstinence post-partum according to Ma et al, 2005 One thought is that there was a lack of continued intervention as well as limited focus on post-partum support to continue smoking cessation. Citation: Ma Y, Goins KV, Pbert L, Ockene JK. 2005. Predictors of smoking cessation in pregnancy and maintenance postpartum in low-income women. <i>Maternal and Child Health Journal</i> 9:1-10.)
Kick Butt for Two Developed in 1995	Protection/Protection	Young Pregnant women	8 week program with 5 Core sessions Facilitator guide provided	Young/Single Parent Support Network of Ottawa reported positive changes in both smoking behaviours and attitudes of clients and staff. The program has reduced the number of pregnant and parenting adolescents who smoke as well as the number of children exposed to ETS. Pre-registration is required for this program. http://ottawayoungparents.com/BFprogKickButt.htm

Mental Health/Addictions				
<p>CHOICES (Consumers Helping Others Improve Their Condition by Ending Smoking)</p> <p>New Jersey</p>	Cessation	Smokers with Mental health issues	<p>Peer to peer mentoring to promote smoking cessation to those with mental health issues by linking them to treatment, referrals, advocacy and support for smoking cessation</p> <p>Peers receive 30 hours of intensive training and may be former smokers or non-smokers</p>	<p>Outcome study of the program showed reduction in the number of cigarettes smoked daily and an increase in the number of quit attempts following individualized intervention. Program participants reported that within six months after meeting with a peer counsellor, they had talked to their mental health provider about getting help with quitting smoking.</p> <p>http://www.medicalnewstoday.com/articles/166981.php</p>
Breathing Easy	Cessation	Mental Health populations	<p>12 week facilitated program with non-smokers; NRT with psychosocial and cognitive-behavioural approaches</p>	<p>Short term quit rates and tobacco use reduction noted.</p> <p>Evaluation by Wilkman and Baker in 2007</p>
<p>Butt Out Implemented in Vancouver in 2005</p> <p>http://www.heretohelp.bc.ca/publications/visions/tobacco/prog/4</p>	Cessation	Mental Health population	<p>Co-facilitated by an interdisciplinary team that includes mental health consumers, occupational therapists and a psychiatrist.</p> <p>3 components: NRT with doctor monitoring, education (topics include benefits and harms of smoking, tobacco addiction, strategies for quitting and staying quit), and behavioural techniques (mindfulness and relaxation)</p>	<p>8 groups were being run</p> <p>Outcomes include 40% of attendees with serious mental illness have stopped smoking and significant number of other people who haven't quit smoking have greatly reduced their cigarette consumption.</p> <p>In one of the most recent groups, with 18 attendees, 10 people attended more than 75% of sessions, and of these, four people have quit for more than five months each. A further two people, who attended fewer than three sessions, quit for more than six months each. In addition, five other people reduced their smoking from an average of one and a half packs a day to an</p>

				average of half a pack or less a day.
Adolescents and Young Adults				
Project towards no tobacco use (TNT) US developed 2007	Prevention	Middle School / Junior High students Grades 5-10	Ten core lessons and two booster lessons, each 40 to 50 minutes. The two-lesson booster was developed to be taught one year after the core lessons in a two-day sequence. A Teacher's facilitator guide and other support material is provided	Rated effective by: <ul style="list-style-type: none"> Center for Disease Control and Prevention Department of Education Substance Abuse and Mental Health Services Administration (SAMHSA) Outcomes included: Students in the project reduced initiation of cigarettes and smokeless cigarettes, weekly and more frequent cigarette was reduced and smokeless tobacco use eliminated.
Lungs are for Life The Lung Association	Prevention	Students from kindergarten to high school Parents are secondary targets	7-8 modules include lesson plans, assessment and evaluation tools, and teachers' notes that meet Education curriculum There are also 6 activities that can be completed in Community Involvement and Teacher Advisor Program (TAP) to help secondary students meet the community involvement requirements	Evaluation was completed in 2006 by (Filsinger, Ahmed et al. 2006). Compared to control school, Grade 7 students who received the curriculum were less likely to become susceptible to smoking. Overall results of the evaluation found that there were no significant differences in smoking rates between Grade 7 and 8 students in schools who received the intervention and students in schools who did not receive the program. Outcomes results for other grade levels are not known (process and outcome evaluations to be completed by teachers.
Quit for Life Health Canada	Cessation		Self-help resource for youth Q4L is organized around 4 central steps: Get Psyched, Get Smart, Get Support, Get On With It. It is an interactive website where	Resources have been tested on 14-19 year olds

			youth can create a profile.	
Leave the Pack Behind	Cessation	University students	Deliver effective smoking cessation and prevention support to post-secondary students. This includes using contests, providing web and book based resources, campus toolkits, referrals, CO monitoring, peer support	<p>Goal is to promote smoke-free post-secondary campuses</p> <p>LTPB has acquired official standing as a provincial 'best practice' for tobacco control in the young adult population.</p> <p>Some outcomes as quoted on the Leave the Pack Behind website include:</p> <ul style="list-style-type: none"> • 12%-15% of smokers using quit smoking* • Significant reductions in smoking occur among continuing smokers • Quit rates (14%) exceeded One Step At A Time quit rates (6%)
Youth Advocacy Training Institute (YATI)	Prevention	Youth	Uses Youth Development principles	<p>No indication of tobacco use outcomes</p> <p>Formative evaluation only increased awareness of campaigns and positive attitudes; youth may gain skills as well (Fiissel, Schwartz et al. 2008)</p> <p>(See OTRU literature review)</p>
Quitters Unite Managed by the Heart and Stroke Foundation of BC & Yukon	Cessation	Youth	<p>Originally created for 19-29 year olds</p> <p>Utilizes new media and social media, provides resources and information related to smoking cessation and utilization of contests and photos to engage youth</p>	Evaluation and uptake unknown

Appendix B: Promising practices for Aboriginal Communities identified by the ITN

Initiative or description of initiative	Targets/Audience	Aboriginal Example? Application in Aboriginal communities/populations
Prevention		
Gathering of cessation, tobacco related illness stories	Done by youth and can be targeted to general community	Yes – carried out by Pauktuutit Inuit Women of Canada in Nunavik and in the Inuvialuit Settlement Region in the Northwest Territories (NWT), stories can be found on the website both as a personal story or community story.
Smoke-free Challenges	Can be segmented or targeted such as adult and youth challenges, community and school challenges	Implemented in all regions of the North.
Contest to produce prevention/awareness materials or mass media materials	Can be segmented or targeted such as adult and youth challenges, community and school challenges.	The First Nations Centre has a tobacco fact sheet that was created by Aboriginal youth.
Education kits	Kits are used by Community Health Representatives (CHRs) to give presentations in the community with given materials	Started in late 1990s by Pauktuutit Inuit Women of Canada. Materials are still used but presentations have been discontinued.
Peer Training (Train the Trainer)	Can be youth to youth, youth-led adult guided, women specific participants learn to give workshops with some guide	Pauktuutit Inuit Women of Canada, Nunavik and Nunavut Department of Health and Social Services and in the NWT.
Active and Free – Take 5 Action Primer focus on Healthy Lifestyles and physical activity as an alternative to smoking	For Adolescent women and can be facilitated by parents, teachers and coaches	Canadian Association for the Advancement of Women and Sport.

Initiative or description of initiative	Targets/Audience	Aboriginal Example? Application in Aboriginal communities/populations
Protection		
Development of facilitator guides and resources	Can be sub-population specific and developed by targets of interest	Unknown
Smoke Free Homes - Can give out some token to indicate homes are smoke free or households can sign up to declare that they are smoke free.	Households	Implemented in NWT and Nunavik. Blue Light campaign to signify a smoke free home Undertaken in Nunavik, Nunatsiavut (coastal Labrador) and Nunavut.
STARSS program (Start Thinking about Reducing Second-hand Smoke)	Women with children or pregnant women to be used in prenatal nutrition programs	Unknown
Born Smoke Free	Pregnant and expectant mothers	Modified to fit an Inuit audience To be implemented in Inuvialuit Settlement Region, Nunavik and Nunavut in the coming year. ¹
Development of facilitator guides and resources	Can be sub-population specific and developed by targets of interest	Unknown
Smoke Free Homes - Can give out some token to indicate homes are smoke free or households can sign up to declare that they are smoke free.	Households	Implemented in NWT and Nunavik. Blue Light campaign to signify a smoke free home Undertaken in Nunavik, Nunatsiavut (coastal Labrador) and Nunavut.

¹ National Aboriginal Health Organization, Activity Highlights from the National Inuit Tobacco Task Group (NITTG) Meeting in Inuvik Jan 2010 <http://www.naho.ca/inuit/itn/documents/FinalBornSmokeFree.pdf>

Initiative or description of initiative	Targets/Audience	Aboriginal Example? Application in Aboriginal communities/populations
Cessation		
Smoke-free Challenges	Can be segmented or targeted such as adult and youth challenges, community and school challenges Quit to Win was open to smokers aged 8 and upwards	Implemented in all regions of the North. <i>Quit to Win</i> has been running since 2003 in Nunavik, Quebec
Contest to produce cessation materials	Can be segmented or targeted such as adult and youth challenges, community and school challenges	
Support for groups and individuals (can be peer led)		Aboriginal example from Australia
Development of facilitator guides and resources	Can be sub-population specific	Unknown
Sacred Smoke: eight-week group smoking cessation harm reduction program.		Wabano Centre for Aboriginal Health, Ottawa, Ontario.
Helping Women Quit – A Guide for Non- Cessation Workers.	A guide for health workers who do not work in cessation but have link to health i.e. Prenatal Nutrition Programs	Unknown

Appendix C: Promising initiatives in capacity building for tobacco control

Initiative or description of initiative	Targets	Implications for use for Aboriginal peoples
Education kits	Kits are used by Community Health Representatives (CHRs) to give presentations in the community with given materials	Builds capacity to enable health workers to engage in some tobacco control work
Development of facilitator guides and resources	Can be sub-population specific i	
Helping Women Quit – A Guide for Non-Cessation Workers.	A guide for health workers who do not work in cessation but have link to health i.e. Prenatal Nutrition Programs to help women	
Tobacco education by distance education	Front line workers	<p>Can be useful for hard-to-reach communities. Learning is reinforced by doing and reflecting on action. Incorporates theory and practice in a cultural context</p> <p>Eliminates barriers such as travel costs. Requires a great deal of support from employers. Resources include Taking the Lead for Change kit with flip chart, quick facts and learning activities and Healing from Smoking books.</p>
By distance smoking cessation counselor training	Smoking cessation counselors	Implemented in Nunavik, Nunavut and Nunatsiavut by Pauktutit Inuit Women of Canada, National Indian and Inuit Community Health Representatives Organization (NIICHO) and regional health authorities.
<p>Websites where access to information does not require membership</p> <p>An example would be the Inuit Tobacco Free Network or information provided through Health Canada or other governmental websites</p>	<p>Front-line workers</p> <p>General public</p>	Aboriginal led website will have appropriate information on what works for Aboriginal people and can be a relevant source of information and resources

Appendix D: Template of the Australian Database for Aboriginal Tobacco Control Programs

■ Category:	The medium of the documentation used to gather information about the program/project
■ Format/Type:	The type of documentation used
■ Title of material:	The title of the document
■ Date of material:	The date the document was created or written
■ Producer/Author:	The creator of the document
■ Description of material:	An overview the document and the information it provides
■ Source of material:	The initial source of the document
■ Program/Project title:	The title of the program/project
■ Agency (manager):	The person/s responsible for the program/project
■ Contacts:	The person/s to contact regarding the program/project
■ Program/Study location:	The state in which the program/project took place
■ Date of delivery:	The time period in which the program/project occurred
■ Date of completion:	The date the program/project ended
■ Reason for program cessation:	The reason/s the program/project ended
■ Funding information:	Information regarding the funding of the program/project
■ Objectives of program:	The aim/s of the program/project
■ Description of program:	An overview of the program/project
■ Strategies used:	The specific approaches used within the program/project
■ Description of strategies:	An explanation of each approach used within the program/project
■ Target audience:	The specific groups targeted by each approach used within the program/project
■ Key findings:	The outcomes of each approach used within the program/project
■ Recommendations & best practice suggestions:	Suggestions for future program/project