The Importance of Smoking Cessation in Tobacco Control

Tobacco use is the leading cause of preventable death in the world, and is estimated to kill more than 5 million people each year worldwide. It is expected that by 2030, this number will increase to 8 million, with 80% of these premature deaths occurring in low- and middle-income countries.\(^1\) Tobacco use kills or disables many people in their most productive years, which denies families their primary wage-earners, consumes family budgets, raises the cost of health care, and hinders economic development.\(^2\)

There are more than 1.3 billion tobacco users in the world today. The World Bank has estimated that more than 180 million lives could be saved in the first half of this century if the prevalence of current tobacco users were cut in half by 2020.\(^3\)

Simply stated, there are two basic approaches to reducing the public health burden of tobacco – prevent people from starting to use tobacco and encourage and help tobacco users to quit.\(^4\) While both strategies are important, the window of time to successfully prevent smokers from starting is short and it is difficult to counter the influence of the tobacco industry who target their promotion and advertising efforts towards increasing the youth market. On the other hand, very few adult smokers manage to quit before age 35, providing a window of decades to deliver programs and treatment to assist with cessation. Figure 1 illustrates that strategies focusing on prevention would provide only minimal reductions in tobacco deaths over the next 20 years.\(^5\) To make a significant global reduction in tobacco-related deaths, current smokers must quit. Data on quitting activity among smokers in various countries around the world illustrate the potential to save lives through more effective quit methods. Findings from the International Tobacco Control (ITC) Policy Evaluation Project show that the percentage of smokers who have ever tried to quit varies from around 60% in New Zealand (NZ), Mexico, and China to over 80% in Ireland, UK, USA, Canada, Australia, Thailand, and South Korea.\(^6\) Thus, the global demand for cessation is high even in low- and middle-income countries such as China where the knowledge of the harms of smoking is comparatively lower and tobacco control policies are currently weak.

FCTC Article 14: Reducing Tobacco Dependence and Promoting Smoking Cessation

The World Health Organization (WHO) has recognized that increasing smokers’ access to effective and comprehensive treatment for tobacco dependence is a proven policy strategy to reverse the tobacco epidemic.\(^7, 8\) Article 14 of the WHO Framework Convention on Tobacco Control (FCTC) states that governments shall take effective measures to promote cessation of tobacco use and adequate treatment for tobacco dependence.\(^9\) Draft Guidelines for Article 14 have been circulated for discussion at the fourth session of the Conference of the Parties to be held in Punta del Este, Uruguay, November 15-20, 2010.\(^10\) The Guidelines are intended to assist Parties in meeting their obligations under Article 14 to create or strengthen a sustainable infrastructure which motivates quit attempts, ensures wide access to support for tobacco users who want to quit, and provides sustainable resources to ensure that such support is available. The Guidelines recognize the important synergistic effect that population level interventions covered by other articles of the WHO FCTC (such as price and taxation (Article 6), smokefree environments (Article 8), warning labels (Article 11), education and communication (Article 12), and tobacco advertising and promotion (Article 13)) will have on promoting cessation and treatment. Recognizing that low- and middle-income countries will not have the resources to implement a comprehensive cessation strategy, the Guidelines outline a “stepwise approach” to building infrastructure for cessation and treatment for tobacco dependence. The Guidelines specify the following population-level and more intensive individual-level approaches in a system to help tobacco users quit:

**Population-level approaches** include 1. **Mass communication and education** programs to encourage cessation and promote awareness and use of tobacco dependence treatment services; 2. Integration of **brief advice** to quit into all health-care systems; 3. Establishment of **quitlines** in which callers can receive advice from trained cessation specialists.

**Individual-level approaches** include 1. **Specialized tobacco dependence treatment services**, which offer behavioural support and, where appropriate, medications or advice on the provision of medications; and 2. **Accessible and affordable medications** to help smokers quit.

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2. Ibid.
The ITC Project and Evaluation of Policy Measures to Support Cessation

About the ITC Project

The International Tobacco Control (ITC) Policy Evaluation Project is the first-ever international cohort study of the effectiveness of national-level tobacco control policies. Launched in 2002 first in Canada, United States (US), United Kingdom (UK), and Australia (the ITC Four Country Survey), the ITC Project is carrying out approximately annual parallel surveys of nationally representative samples of smokers, ex-smokers, and also non-smokers in some countries in 20 countries – Canada, United States, United Kingdom, Australia, Ireland, Thailand, Malaysia, South Korea, China, Mexico, Uruguay, New Zealand, France, Germany, the Netherlands, Brazil, Bangladesh, Mauritius, Bhutan, and India to measure how the introduction of tobacco control policies of the FCTC and other tobacco control initiatives affects use of tobacco, and attitudes and beliefs related to tobacco use.

ITC Survey Methods

The ITC Project is unique in its longitudinal design using nationally representative samples of smokers and in its use of a common set of survey questions across multiple countries. Smokers (and non-smokers in some countries) are asked more than 200 questions to evaluate the pathways by which policies impact smoking and quitting behaviour including SES factors (age, sex, employment, ethnic background), policy-specific variables (warning label salience, perceived costs of cigarettes), and psychosocial mediators (beliefs and attitudes, perceived risks, quit intentions) associated with policy domains including warning labels, smokefree, product regulation, and tax and price. A central goal of the ITC Project is to understand the mediational pathways by which policies impact on cessation behaviour (see Figure 2).

ITC surveys include a broad set of questions to assess cognitive, motivational, and behavioural factors known to be related to quitting:

- **Intentions to quit**: Are you planning to quit smoking within the next month, within the next 6 months, sometime in the future beyond 6 months, or are you not planning to quit?
- **Self-efficacy of quitting**: If you decided to give up smoking completely in the next 6 months, how sure are you that you would succeed?
- **Outcome expectancy of quitting**: How much do you think you would benefit from health and other gains if you were to quit smoking permanently in the next 6 months?
- **Past quitting history**: quit attempts in the last year and ever; duration of quit attempt
- **Use of assistance for quitting**: visits to health professionals, use of medications, quitlines, and other cessation services

**Figure 2. The ITC Project: Understanding how and why policies lead to quitting (if they do)**

4 It should be noted that reducing exposure to toxins is an important third approach, including reducing exposure to second-hand smoke and reducing the toxicity of tobacco products.


ITC and Article 14

Article 14 of the World Health Organization Framework Convention on Tobacco Control (WHO FCTC) requires Parties to take effective measures to promote cessation of tobacco use and adequate treatment for tobacco dependence. This Report summarizes the evidence from ITC Project findings to provide guidance to policymakers in implementing Article 14. The ITC Project has published more than 30 academic papers examining various aspects of smoking cessation including (1) studies examining individual predictors of cessation behaviour and relapse; (2) studies evaluating the policy influence of population-level policies/programs on quitting behaviour, including those that prompt smokers to quit and those that support smokers in quitting; and (3) cross-country comparisons of quitting behaviour and use of various forms of cessation support. With 7 waves of data, the majority of the published ITC study findings on cessation are based on results from the ITC Four Country Project conducted in Canada, the US, the UK, and Australia. These results may not be generalizable to low- and middle-income countries, however there are findings that provide evidence-based guidance in the construction of reasonable approaches to cessation across different countries. The ITC Project is currently analyzing findings from ITC surveys conducted in low- and middle-income countries and focusing on identifying the potential of cessation policies and interventions to reduce the higher smoking prevalence among lower socioeconomic groups.


FCTC Article 14

Tobacco Dependence and Cessation
The ITC Project: Global Surveillance of Quitting Activity and Use of Cessation Support

Guidelines for Article 14 recommend a broad range of cessation interventions including population-based approaches that have wide reach (mass communication, brief advice, and quitlines) and, where resources permit, more intensive individual approaches (specialized treatment services). The ITC Project monitors changes in smokers’ awareness and use of a wide range of cessation and treatment interventions as countries implement new policies and programs in accordance with Article 14. ITC surveys of smokers in 15 countries, ranging from medium- to high income, provide evidence of high rates of quit attempts, but considerable variability around the world in the level of quitting activity and the use of various forms of cessation support.\(^\text{12, 13}\) These differences reflect, in part, the history of tobacco control efforts in a country, the capacity of a country to provide cessation services or the ability of its smokers to access and afford different quit methods, and tobacco control policy priorities.

Quit Attempts

ITC surveys in 15 countries show that, in every country, over half of smokers have attempted to quit smoking at least once. Reports of ever having tried to quit range from around 60% of smokers in New Zealand, Uruguay, Mexico, Malaysia, and China to over 80% in most of the other ITC countries (see Figure 3). The prevalence of recent quit attempts varied from less than 20% of smokers in China to almost 50% in Thailand and Korea.

Advice to Quit from Health Professionals

The Draft Guidelines for Article 14 recognize the efficacy of health professionals providing brief advice to quit and recommend that “Parties use existing resources and infrastructure as much as they can, and ensure that tobacco users at least receive brief advice” before other mechanisms for providing tobacco dependence treatment are put into place.

There is a striking variation across ITC countries in the rate of visiting health professionals in the past year and whether health professionals advised smokers to quit during this visit (see Figure 4). Physician visits were most common among smokers in developed countries, where between 50 and 70% of smokers visited a physician or health professional in the last year. In contrast, less than 30% of smokers in Mexico and Malaysia visited a health professional in the last year. The percentage of smokers who received advice to quit when they visited also varied markedly. In countries such as Thailand, Malaysia, and the US more than two-thirds of smokers who visited a health professional reported getting advice to quit. In contrast, in the Netherlands, less than 20% of smokers who visited a health professional reported getting advice to quit. Considering all smokers, there was only one country where more than half of the smokers in the population received advice to quit from a health professional (the US at 52%). Canada and Australia were other countries that were relatively high (41% and 37%). In contrast, only 7% of smokers in the Netherlands received advice from a health professional to quit, with Mexico and Malaysia only slightly higher at 11%.

These findings suggest the need to emphasize other cessation support strategies in countries where most smokers do not visit health professionals regularly and where the capacity of the health care system to play a role in promoting cessation is limited. Also, the important role that health professionals can play in reaching smokers must be more widely recognized, particularly in countries where the majority of smokers have access to, but are not currently receiving this intervention.

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\(^{13}\) The results are intended to identify large-scale differences between countries for the purpose of promoting policies to support smoking cessation, rather than to make fine-grained comparisons between countries.
Use of Quitlines

The Draft Guidelines for Article 14 recommend that all Parties offer quitlines where callers can receive advice from trained cessation specialists. The Draft Guidelines suggest that quitlines should be free, offer proactive support, and be widely publicized (including printing the quitline number on packs) and adequately staffed.

ITC surveys in 15 countries indicate that use of quitlines ranged from a high of 12% among smokers who tried to quit in New Zealand, to less than 4% in some countries where this service is known to be very limited (Thailand, Malaysia). The relatively high quitline use in New Zealand likely reflects strong promotion of this service, including display of the quitline number on cigarette packs as part of the graphic health warning, and its provision of heavily subsidized nicotine replacement therapy.

Use of Smoking Cessation Medications

The Draft Guidelines for Article 14 recognize that medications have been clearly shown in clinical trials to increase the chances of tobacco cessation and should be readily available and accessible to tobacco users wanting to quit and, where possible, be provided free or at an affordable cost. This strategy is part of a stepwise approach that follows after the basic infrastructure and environment that prompts quit attempts is established to increase the likelihood of quit attempts succeeding in the long term.

ITC surveys show that the use of smoking cessation medications varies greatly between countries. There is a higher use of quit smoking medications among those who made quit attempts in the previous year in Western countries (over 40% in Australia, Canada, UK, and the US) than in middle-income countries. This reflects the wider availability in Western countries of cessation medications and support services and greater likelihood of reimbursement for these aids. To the extent that the low use in some countries reflects a low level of demand and barriers to access, it is important to motivate more smokers to quit smoking, increase awareness of the benefits of assistance, and increase access to affordable medication before rates of use are likely to approach those of Western countries.

Use of Cessation Clinics

The Draft Guidelines for Article 14 recommend, where resources allow, specialized tobacco dependence treatment services where tobacco users can receive intensive specialized cessation support by specially trained practitioners. These services should offer behavioural support, and where appropriate, medications or advice on the provisions of medications and, where possible, be provided free or at an affordable cost.

In the 10 countries that have cessation clinics overall use is low, but highest in the UK (17% of those who made quit attempts in the last year) which has a well-funded, dedicated network of clinics. However, the UK model may not be desirable, nor feasible for many countries to make progress in reducing smoking prevalence. Australia, for example, has limited availability of face-to-face cessation services, but has made progress in reducing smoking prevalence through a broad range of strategies including public education, tax increases, smokefree environments, and a national network of quitlines.
Cessation Challenges among Special Populations

One of the underlying considerations identified in the Draft Guidelines for Article 14 is that “Tobacco cessation and tobacco dependence treatment should be as inclusive as possible, and should where appropriate be tailored to the needs of individual tobacco users”. Factors such as age, gender, culture, ethnicity, religion, educational background, literacy, socioeconomic status (SES), income, disability, and the needs of groups with high rates of tobacco use should be considered.

The ITC Project provides a unique opportunity to examine the quitting process over time among special populations in various countries with the objective of identifying effective cessation and treatment strategies for these groups. Studies conducted in the following ITC countries have identified priority populations along with targeted approaches to reach and meet the needs of these groups:

- **Canada, US, UK, and Australia** (The ITC Four Country Survey): how socioeconomic disparities influence the quitting process and success with quit methods, as well as predictors of quit intentions and quit attempts among older smokers
- **China**: how less expensive cigarette brands undermine quitting among low income populations
- **New Zealand**: how to increase the use of cessation services among Māori (the indigenous people of New Zealand) and socioeconomically disadvantaged smokers

Evidence of Socioeconomic Disparities in Quitting

Lower socioeconomic status (SES) groups have higher rates of tobacco use – those with lower SES have about twice the odds of smoking compared to those of higher SES. Although smoking prevalence has declined in more developed countries, evidence suggests that socioeconomic inequalities in smoking have persisted over time, and have even increased. The ITC Project has found that **socioeconomic disparities exist throughout the quitting process** (from quit intentions to making quit attempts to achieving smoking abstinence), suggesting that these disparities need to be considered when implementing cessation interventions.

**ITC Four Country Survey**: Surveys of smokers in Canada, the US, the UK, and Australia found that:

- Smokers with **high education** were **more likely to have quit for at least one month** than those with low or moderate education, as were those with **high income, compared with low or moderate income**. Those with **high education** had about **one third greater odds of having quit for at least 6 months** than those with low or moderate education, while no significant differences were observed by income. Abstinence at 12 months was not significantly related to either socioeconomic measure.14

- Smokers with high **‘financial stress’** were more likely than others to want to quit smoking but **slightly less likely to make a quit attempt and considerably less likely to stay quit**.16 Among those who tried to quit smoking, the odds of a successful attempt were 48% lower in smokers with financial stress than others.

- Smokers from disadvantaged backgrounds and older smokers were **more likely to have risk-minimizing beliefs** including ‘Skeptic’ beliefs (e.g. “The medical evidence that smoking is harmful is exaggerated”); ‘Jungle’ or normalizing beliefs (e.g. “Smoking is no more risky than lots of other things people do”) and ‘Worth-it’ beliefs (e.g. “You’ve got to die of something...”).17 Smokers who hold these beliefs are less likely to make quit attempts.

- Smokers with **high education and income** were **more likely to quit smoking abruptly** versus a gradual approach.18 There is some evidence that abrupt quitting is associated with better cessation outcomes. The odds of adopting abrupt quitting were about 40% higher among respondents with high income compared with those with low income. Similarly, respondents with a high level of education (university degree) were about 30% more likely to use abrupt quit methods compared with those with a low level of education. Surprisingly, smokers who called a quitline or used stop-smoking medications were less likely to quit abruptly. There is some evidence to suggest that those who adopt gradual quitting are more likely to successfully quit if they also used stop-smoking medications.19 This is an area that requires further investigation.

**ITC China Survey**: A 2006 Survey of 4815 smokers in 6 cities in China found that:

- Smokers who reported buying **less expensive brands** at last purchase tended to have **lower education and income** and be heavier smokers.20 This is consistent with evidence showing that US smokers of discount or generic brands tend to have a lower income and be more addicted to smoking.21 Studies suggest that poorer and heavier smokers are more sensitive to changes in cigarette prices and more likely to switch to less expensive brands. As a result, poorer smokers may be less likely to quit or reduce consumption following a price increase.
Identification of Strategies to Reach High Need Populations

The ITC New Zealand Survey has studied use of the national Quitline by smokers and the introduction of pictorial health warnings. Two survey waves conducted 1 year apart (n=1376 and n=923 smokers respectively) found that:

Māori were significantly more likely to call the Quitline than were European/other smokers (11.5% vs 6.8%). Relatively higher call rates also occurred among those reporting higher deprivation, financial stress, a past mental health disorder, a past drug-related disorder, and higher psychological distress (Kessler 10-item index). Likely contributing factors for the successful reach of Quitline Service to these populations include:

- Campaigns on Māori television and radio stations featuring Māori and low-income smokers/quitters
- Promotion of the service at relevant cultural events (Māori and Pacific peoples)
- Partnering with Māori health providers on campaign development
- Having Māori Quit Advisers responding to the telephone calls
- Providing heavily subsidized nicotine replacement therapy via the Quitline

Some Implications of ITC Project Findings

- There is wide variation in proportions of smokers making quit attempts and seeking support across different countries.
- Support (behavioural and pharmacological) is effective but a ‘one size fits all’ approach to developing cessation support is inappropriate and each country should develop its own tailored cessation strategy.
- There are vast opportunities to increase physician and other health professional advice, especially in countries already having a strong health care infrastructure.
- Interventions such as mass media campaigns, pictorial health warnings, increased taxes and targeted Quitline campaigns are particularly important in addressing lower quit intentions among socioeconomically disadvantaged populations.
- Quitline numbers should be clearly identified on tobacco packaging and required as part of health warnings (for countries with quitlines).
- Interventions in Western countries may need to be targeted at the high prevalence of risk-minimizing beliefs among low income and older smokers and smokers in financial stress.
- More attention also needs to be paid to maintaining cessation given high relapse rates and that for many smokers, staying off cigarettes lies outside of human volition.

FCTC Article 14

Tobacco Dependence and Cessation

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**FUTURE DIRECTIONS**

The ITC Project continues to explore opportunities for collaborating with low- and middle-income countries to help policy makers design, implement, and evaluate FCTC policies.

**THE ITC RESEARCH TEAM**

The ITC International Research team includes over 80 tobacco control researchers in 20 countries worldwide. Its Principal Investigators are:

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- Gerard Hastings – University of Stirling and the Open University, United Kingdom
- Ann McNeill – University of Nottingham, United Kingdom

**THE ITC PROJECT: EVALUATING THE IMPACT OF FCTC POLICIES IN...**

20 countries • 50% of the world’s population • 60% of the world’s smokers • 70% of the world’s tobacco users

**20 countries**

- Australia
- Bangladesh
- Bhutan
- Brazil
- Canada
- China (Mainland)
- France
- Germany
- India
- Ireland
- Malaysia
- Mauritius
- Mexico
- Netherlands
- New Zealand
- South Korea
- Thailand
- United Kingdom
- Uruguay
- United States of America

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