

**CHALLENGES OF TOBACCO CONTROL IN  
LOW/MIDDLE INCOME COUNTRIES**

by

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## **ABSTRACT**

Five million people die annually in the world as a result of tobacco use. One in four of the deaths occur in the Western Pacific Region. Mongolia, one of the 37 member states in the region, is experiencing increased tobacco consumption. In Mongolia, an estimated 67.8% of all men and 25.5 % of women smoke cigarettes. Smoking has become a major public health problem in Mongolia. Tobacco-related diseases such as cancer and cardiovascular diseases have become the leading cause of death in the country.

The objective of this project is to identify barriers to the effective implementation and enforcement of the Tobacco Control Law. The project was carried out by examining national documents on tobacco and conducting interviews with government officials and representatives of NGOs.

Specific recommendations were put forward with regard to issues such as availability, advertising, price and taxation, smoke-free environments, cessation support, and human and financial resources.

**Keywords:** tobacco; low-and middle-income countries; developing countries; challenges; smoking

**Subject Terms:** Tobacco use-Developing countries; Smoking-Prevention-Developing countries; Tobacco industry-Developing countries; Smoking-Developing countries; Smoking-Law and legislation-Developing countries

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## INTRODUCTION

Whereas tobacco use has been significantly reduced in many high-income countries with the implementation of effective tobacco control interventions, it has been increasing throughout the low- and middle- income countries by about 3% a year (Chelala, 1998). The projected increase in tobacco consumption in low- and middle-income countries is predominantly due to the removal of trade barriers, and aggressive marketing campaigns by the tobacco companies (WHO, 1999). Cigarettes are made more accessible and more available in low- and middle-income countries, and as a result, tobacco sales are soaring there. Of the estimated 1.3 billion smokers worldwide, about 80% live in low- and middle-income countries (WHO, 2004). In low- and middle-income countries, tobacco use is significantly higher among males (50%) than it is among females (9%), but this is changing rapidly as more women are smoking in response to aggressive marketing by the tobacco industry (Mackay & Eriksen, 2002). As reported by the World Health Organization (WHO, 2004), the current upsurge of smoking by females is set to increase from 218 million in 2000 to 259 million by 2025. Women in low- and middle-income countries represent a key potential market for the tobacco industry (WHO, 2004). Additionally, in most low- and middle-income countries, there is a significant increase in the prevalence of smoking among children and adolescents, where about 68,000 to 84,000 young people become regular smokers and risk addiction to nicotine every day (WHO, 1999). Consequently, these young people increase their risks of developing smoking-related diseases and dying prematurely (WHO, 2004).



## **BURDEN OF DISEASE**

Tobacco smoking is a risk factor for mortality and morbidity from many non-communicable disease (NCD) conditions, such as ischaemic heart disease, cerebrovascular disease, chronic obstructive pulmonary disease, and cancers of the trachea, bronchus and lungs (Boutayeb A & Boutayeb S, 2005; Biener et al., 2000; Fichtenberg & Glantz, 2000; Mathers & Loncar, 2006). According to Boutayeb A & Boutayeb S, smokers have two to three more times the possibility of dying from coronary heart disease and cerebrovascular disease than nonsmokers (2005). Tobacco use increases the risk of lung cancer 20- to 30-fold (Boutayeb & Boutayeb, 2005). Globally, tobacco causes 8.8% of deaths (4.9 million/year) and 4.1% of DALYs (59.1 million/year) (World Health Report, 2002). Half of tobacco-attributable deaths (2.41 million) occur in low- and middle-income countries (World Health Report, 2002).

Non-communicable diseases are shifting from high-income countries to low- and middle-income countries, where they create a “double burden”. Large increases in mortality rates are projected between 2002 and 2030 for non-communicable diseases (NCDs) in all income groups, including low- and middle-income countries (Mathers & Loncar, 2006). Mathers and Loncar estimate that the proportion of deaths due to NCDs will rise from 59% in 2002 to 69% in 2030 (Mathers & Loncar, 2006). In 2000, cardiovascular diseases (1.69 million deaths), chronic obstructive pulmonary disease (0.97 million deaths), and lung cancer (0.85 million deaths) were the leading causes of death globally from smoking (Ezzati & Lopez, 2003; Ezzati, Henley, Lopez & Thun, 2005).

In 2015, it is projected that smoking will be the cause of 33% of cancer deaths, 30% of cardiovascular deaths, and 30% of deaths from chronic respiratory diseases globally (Mathers & Loncar, 2006). About 80% of the global CVD-related deaths and 87% of CVD-related disabilities occur in low- and middle-income countries (Population Reference Bureau, 2004). Population growth and life style changes (smoking) are the main factors contributing to the rise in NCDs for many low- and middle-income countries (Matheres & Loncar, 2006). These diseases are having a negative impact on national economies in terms of health costs and lowered productivity (WHO, 2004; WHO, 1999).

Studies assessing the health consequences of active and passive smoking have firmly established that tobacco is the leading preventable cause of death worldwide (World Bank, 1999). Tobacco is highly addictive, and results in death in one out of two long-term users (World Bank, 1999). Mathers and Loncar have published global projections for tobacco-related deaths in 2030 (Mathers & Loncar, 2006). In low- and middle-income countries, they project that tobacco-attributable deaths will rise from 3.4 million in 2002 to 6.8 million in 2030 (Mathers & Loncar, 2006). It is estimated that smoking kills 6.7 times more men than women in LMICs and half of those people die during middle age, losing an average 20-25 years of life (Ezzati and Lopez, 2003; World Bank, 1999). If nothing is done to curb the epidemic, tobacco-related diseases are expected to kill 50% more people than HIV/AIDS by the year 2015 (Mathers & Loncar, 2006).

In light of the projected increase of tobacco-related diseases, there is an urgent need to help LMICs develop effective preventive strategies to curb the epidemic of tobacco. The urgency also calls for all LMIC governments to support the ratification and implementation of the WHO Framework on Tobacco Control.

## **FRAMEWORK CONVENTION ON TOBACCO CONTROL**

In response to the tobacco epidemic, WHO member countries adopted the Framework Convention on Tobacco Control (WHO FCTC) in May 2003. The treaty entered into force in 2007, and becomes a legally binding treaty on countries that have ratified it (WHO, 2003). As of January 24, 2008, 168 parties have signed the treaty, and 152 have ratified it (WHO, 2003). Approximately 70% of the parties that have passed national legislation or made agreements to implement the FCTC are LMICs (WHO, 2003). The FCTC sets strategies to help low- and middle-income countries strengthen their tobacco control policies.

In many LMICs, there are some major weaknesses in enforcing the policies, particularly concerning restrictions on indirect advertising, restrictions on sales to minors, and restrictions on smoking in public places (WHO, 1999; World Bank, 1999).

In order to contain the global rise and spread of the tobacco epidemic, the FCTC outlines six national obligations:

1. price and taxation: "Parties are obliged to raise tobacco taxes to increase prices" (article 6 of the WHO FCTC);
2. protection from exposure to tobacco smoke: "Parties shall provide for protection from exposure to tobacco smoke in indoor workplaces, public transport, indoor public places, and as appropriate, other public places" (article 8 of the WHO FCTC);

3. packaging and labeling of tobacco products: "Health warnings should be 50% of tobacco packages, not less than 30%, and may be in the form of pictures or pictograms" (article 11 of the WHO FCTC);
4. tobacco advertising, promotion, and sponsorship: "Parties shall, in accordance with their constitutional principles, undertake a comprehensive ban of all tobacco advertising, promotion, and sponsorship" (article 13 of the WHO FCTC);
5. parties must provide treatment for tobacco dependence (article 14 of the WHO FCTC);
6. youth access: Parties shall ensure that tobacco vending machines under their jurisdiction are not accessible to minors and do not promote the sale of tobacco products to minors" (article 16 of the WHO FCTC) (WHO, 2003).

## EFFECTIVE STRATEGIES

Effective tobacco control programs in developed countries have been achieved via a mix of strategies designed to prevent initiation of smoking, protect bystanders from exposure to secondhand smoke, and help smokers quit (U.S. Department of Health and Human Services, 2000; Wakefield & Chaloupka, 1999; Biener, Harris, & Hamilton, 2000).

Extensive research in both high- and low-income countries has clearly demonstrated that price and tax policies on tobacco are effective components of a comprehensive tobacco control program (Jha *et al.*, 2006; Jha & Chaloupka, 1999; Chaloupka *et al.*, 2000; Townsend, 1996; Grossman & Chaloupka, 1997; Chaloupka & Wechsler, 1997). Increasing the price of cigarettes has proved quite effective in promoting cessation among current smokers and preventing initiation among young people (Grossman & Chaloupka, 1997; Chaloupka & Wechsler, 1997; Meier & Licari, 1994).

A 10% price increase has been reported to reduce consumption by 8% in low- and middle-income countries (Jha & Chaloupka, 1999). Tax increases have the biggest impact on young people and lower income groups (Jha *et al.*, 2006; Jha & Chaloupka, 1999; Chaloupka *et al.*, 2000). This is positive in that it reduces tobacco consumption by young people. In low- and middle-income countries, the majority of smokers are young people, thus the impact of price elasticity could lead to greater benefits there (WHO, 1999). Raising the real price of cigarettes by 10% is predicted to cause 42 million smokers alive in 1995 to quit

smoking, thus preventing 10 million tobacco-related deaths (Ranson, Jha, Chaloupka & Yrekli, 2000). Taxation also increases government revenues that can be used for health promotion and tobacco control programs (WHO, 2003).

Smoking restrictions in public places are another key element in a comprehensive tobacco control strategy (Elmont, Choi & Novotny, 1993). There is strong evidence from high-income countries that such restrictions reduce cigarette consumption among smokers, and protect the health of nonsmokers (Woollery, Asma & Sharp, 2000). Additional non-price measures, including comprehensive bans on advertising and the introduction of warning labels, are also found to be effective in reducing cigarette consumption (Woolery *et al.*, 2000). These measures have a positive impact on populations with limited knowledge of the harmful effects of smoking (Woolery *et al.*, 2000).

Today, in many LMICs, such ignorance is supported by a lack of educational materials on the adverse consequences of smoking (WHO, 1999). In most LMICs, the prevalence of smoking is highest among people of low educational background and among the poor and marginalized groups (WHO, 1999). A combined set of tobacco control measures using restrictions on smoking in public places, total bans on advertising and promotion, prominent health warnings, and information campaigns could have persuaded 23 million smokers alive in 1995 to quit, preventing 5 million tobacco-related deaths (Ranson, Jha, Chaloupka & Yrekli, 2000).

## **CASE STUDY: MONGOLIA**

Mongolia is a landlocked country situated in Central Asia between Russia and China. China is the world's largest producer of tobacco (Warner, 2002). In 2006, the population of Mongolia was estimated at 2,594,792 (UNDP, 2007). The Mongolian population is young, with approximately 42% below the age of 18 (UNDP, 2007). The country therefore provides a potential new market for the tobacco industry.

Mongolia is one of the 37 member states of the WHO Western Pacific Region. Driven by the Chinese population and economy, the Western Pacific Region, home to 1.6 billion people, is the fastest growing tobacco market in the world (WHO Western Pacific Region, 2000). One in three cigarettes is consumed in the region (WHO Western Pacific Region, 2000). Mongolia is experiencing increased tobacco consumption. The National Statistical Office of Mongolia (2006) reports that between 1995 and 2006, per capita cigarette consumption increased from 28 to 609 sticks. Increases in consumption are due to many factors, including accessibility and availability, peer pressure, advertising, lack of access to knowledge.

Manufactured cigarettes account for the largest proportion of tobacco consumption in Mongolia, at about 60% of the total market (WHO Western Pacific Region, 2000). No tobacco is grown in Mongolia (WHO Western Pacific Region, 2000). The tobacco industry depends mainly on imported cigarettes. In 2006, over 900 million manufactured cigarettes were imported, and the country



manufactured 143 million cigarettes (The National Statistical Office of Mongolia, 2006).

As we can see from the figures, cigarettes are being sold in Mongolia at an increasingly alarming rate. An estimated 67.8% of adult men and 25.5 % of adult women smoke cigarettes (WHO, 2004). Smoking among youth is also increasing in Mongolia. The Mongolia Global Youth Tobacco Survey (GYTS) conducted in 2003 showed that 15.5% of students between the age of 13 and 15 were smokers (Boy = 21.4%, Girl = 10.6%). Furthermore, results of the GYTS revealed an extremely high rate of young people (64.2% of students) who were exposed to second-hand smoke (GYTS, 2003).

Sources documented that surveys on smoking prevalence in developing countries may have methodological limitations, and may involve underreporting (WHO, 2004). Thus, it is worth noting that prevalence figures for Mongolia could be much higher and more devastating.

## BURDEN OF DISEASE

When the burden of disease is expressed in terms of disability-adjusted life-years (DALYs), which is the sum of years of life lost (YLL) due to premature death and years of life lived with disability (YLD), tobacco was responsible for 18% of DALYs in the Western Pacific Region (WPR) (WHO WPR, 2004). In the WPR, tobacco kills an estimated 3000 people every day (WHO WPR, 2004). In Mongolia, the consequences of tobacco use are devastating (Association of Mongolian Public Health Professionals, 2006). Tobacco-related diseases such as cancers, respiratory diseases and cardiovascular diseases have become the leading causes of mortality (AMPHP, 2006). These three diseases comprised approximately 64% of the total mortality in 1997 (WHO WPR, 2000). The statistics in the following surveys show that the prevalence of tobacco-related diseases is disturbingly high in Mongolia:

- From 1985 to 1990, among 2000 patients admitted to the National Oncological Centre, 82.8% of lung cancer patients and 61.7% of stomach cancer patients were smokers (WHO WPR, 2000).
- A review of the medical histories of 311 lung cancer patients in 1997 revealed that 280 were smokers (WHO WPR, 2000).

The WPR accounts for 20% of all tobacco-attributable deaths worldwide (WHO WPR, 2004). In Mongolia, 13, 000 deaths and 331, 000 DALYs were associated with non-communicable diseases in 2002 (World Health Report, 2002). Cardiovascular disease standardized death rates per 100 000 population

in 2002 varied from 171 (Singapore) and 199 (Thailand), and to more than 480 in Mongolia (WHO Global infoBase, 2002). In the region, the fraction of deaths due to malignant neoplasms was the highest in Mongolia at 306/100,000 (WHO Global infoBase, 2002).

## LEGAL APPROACHES TO TOBACCO CONTROL

Mongolia is one of the countries that have ratified the World Health Organization Framework Convention on Tobacco Control (WHO, FCTC). In 2005, the country's parliament approved one of the most comprehensive tobacco control laws in the world. The Mongolia Tobacco Control law includes the following:

- The sale of tobacco to and by persons under the age of eighteen is prohibited (s.6.7.7);
- The introduction of tobacco vending machines is banned (s.6.7.9);
- The minimum legal size of a package of cigarettes is 20 (s.6.7.2);
- The sale of single cigarettes is prohibited (s.6.7.8);
- The sponsoring of cultural, sports and other social events and any donations, contributions or grants by the tobacco industry is prohibited (s.8.1.4);
- Tobacco advertising to teach and encourage children to smoke tobacco is prohibited (s.8.1.2);
- Retailers can be fined for selling to minors, selling cigarettes individually, or having a vending machine (s.13).

The Tobacco Control Law is in line with most of the provisions of the WHO Framework Convention, but review of the evidence indicates that implementation and enforcement are inadequate.

## **METHODOLOGY**

The aim of this project was to identify barriers to the effective implementation and enforcement of the tobacco law. The project was carried out through examination of national policy documents on tobacco (Law of Mongolia on Tobacco Control, Law of Mongolia on Excise Tax Stamp, Law of Mongolia on Value Added Tax, Law of Mongolia on Combating Tobacco Hazards, and Summary Report on Excise Tax Goods).

In addition, the project was carried out through participation in World No-Tobacco Day (WNTD; 31 May) 2007, organized by the Mongolian Ministry of Health and the World Health Organization (WHO). During May 31 World No Tobacco Day and during the same week before and after, local broadcast media in the country were monitored for anti-tobacco messages. Finally, key interviews with government officials and representatives of NGOs were conducted. A list of the people interviewed is provided in the appendix.

# **BARRIERS TO EFFECTIVE IMPLEMENTATION AND ENFORCEMENT**

## **Availability**

Cigarettes in Mongolia are easily accessible to minors. It is estimated that there is about one kiosk (small, sidewalk vendor) for every 100 people in Ulaanbaatar (Interview with G. Tsetsegdary, 2007). These kiosk vendors sell tobacco, including single cigarettes or partial packages. In addition to these kiosks, youths obtain cigarettes from itinerant vendors, restaurants, and even pharmacies. Furthermore, there are large numbers of larger retailers willing to sell cigarettes to minors. The enforcement of the law is non-existent. The 2003 Mongolia Global Youth Tobacco Survey (GYTS), conducted with 4183 students, found that over 92% of young people who bought cigarettes in a store were not refused purchase because of their age. Unemployment and poverty in the city promote the informal sale of cigarettes, which provides many people with a living. The informal sale of cigarettes by itinerant vendors results in increased accessibility and increased consumption, particularly among children.

## **Advertising**

The Law on Tobacco Control (2005) bans tobacco advertising in all media, but there is still a great deal of advertising of cigarettes both direct and indirect (cultural and sports sponsorship by the tobacco industry). The media still plays an important role in promoting tobacco use. A survey conducted in 2004 found tobacco advertisements in 52 issues of national daily newspapers (AMPHP,

2006). At retail kiosks throughout Ulaanbaatar displays of cigarettes on storefronts reinforce their attractiveness.

## **Price and taxation**

Mongolia imposes excise and value-added taxes on both imported and locally manufactured cigarettes. In 2007, the government took steps to reduce tobacco consumption by doubling excise taxes for all tobacco products from 0.30 to 0.60 USD per 100 cigarettes (Law of Mongolia on Tobacco Control, 2005). Despite increased excise taxes, cigarettes are still relatively cheap. Also in 2007, the country reduced its value-added tax from 15% to 10% on all products including tobacco products (interview with Mashbatra, 2007). This is in contradiction to the country's objective to make tobacco less accessible to the population. The Mongolian tax increase is still below what exists in some other countries of the region. At kiosks throughout the city, the retail price of a pack of cigarettes ranges from a low of 300 MNT (approximately \$0.30 CAD) for local brands to a high of 1600 NNT (approximately \$1.60 CAD) for imported brands.

## **Smoke-free environments**

Exposure to second-hand smoke is high in Ulaanbaatar, where the majority of the population is still nonsmokers. As observed during the practicum, the vast majority of restaurants permit smoking inside their premises. The airport is the only place that provides smoking rooms with ventilation systems. The country lacks strong public awareness of the health risks of passive smoke. Smoking is culturally acceptable, and the exchange of cigarettes is common at

social gatherings (Interview with G. Tsetsegdary, 2007). Cigarettes are often exchanged as gifts during the Mongolian New Year (Interview with G. Tsetsegdary, 2007). Establishing smoke-free public places would help de-normalize smoking. The Mongolian Tobacco Control Law (2005) prohibits smoking in public places but allows smoking areas. Laws banning smoking in public places are less likely to be self-enforcing if they are partial (Woolery et al., 2000).

### **Cessation support**

Although the rate of current smokers is very high there is no cessation program in place in Mongolia. Most smokers have tried to quit smoking, but cessation interventions are lacking. According to the Mongolia Global Youth Tobacco Survey (2003), over 75% of smokers tried unsuccessfully to stop smoking during the preceding year. Environmental factors such as cheap cigarettes, strong tobacco advertisements, peer pressure, and the ability to smoke in public places do not help smokers quit. There is a need to create a supportive environment to make smoking socially unacceptable, and help smokers avoid relapse. Experience shows that improving the accessibility of nicotine replacement therapy and providing brief consultations are quite effective in helping smokers quit (Elmont, Choi & Novotny, 1993).

### **Financial and human resources**

A number of barriers undermine the effective implementation and enforcement of the law, including lack of human and financial resources. At the



National Center for Health Development, there is only one person working full time on tobacco control for the whole country. The country lacks stable and sustainable funding for tobacco control. Their tobacco control program relies exclusively on external funding. The National Center for Health Development focuses its efforts on educational programs about the hazards associated with tobacco and secondhand smoke, particularly during the World No Tobacco Day.

## DISCUSSION

There are a number of strategies that need to be implemented to reduce tobacco use in Mongolia. These include restricting the sale of cigarettes to minors, banning indirect advertisements, increasing the real price of cigarettes, banning smoking in public places, providing cessation services, and securing sustainable funding to control tobacco. Under the Tobacco Control Law (2005), the sale of cigarettes to and by persons under the age of 18 years of age is prohibited. However, retailers are not legally required to verify the ages of the buyers. In addition, many children buy cigarettes individually through unlicensed vendors and the informal sector. They have access to a wide array of cigarettes and are not refused purchases. Public educational campaigns are not strong. Many of these children do not understand the addictive nature of nicotine and the detrimental health effects of smoking.

The effectiveness of youth access restrictions is weakly supported by evidence (Difranza, Celebuski & Seo, 1998). Some studies have found such measures as effective in reducing youth smoking, while other studies have not (Chaloupka & Wechsler, 1997; Celebuski & Seo, 1998). The fact remains that children in Mongolia have easy access to cigarettes and the population is predominantly young. It is therefore imperative that the authorities move towards a comprehensive country-wide tobacco sale license and enforcement program. In the long term, the government should look at reducing the number of retailers and itinerant vendors selling cigarettes in the city.

Purchases of cigarettes are made without any point-of-sale signage to inform the public about the legal age to buy or sell cigarettes. The cost of a pack of locally manufactured cigarettes is as low as MNT 300 (approximately CAD\$0.30). In Mongolia there is an urgent need for changes in tobacco availability. Tobacco tax increases that raise the price of cigarettes between two thirds and four fifths of the retail cost have proved effective in reducing tobacco use (World Bank 1999; WHO, 1999). Cheaper cigarettes and their display on storefronts everywhere in the city send deceptive messages to Mongolians of all ages. Therefore, strategies to address availability of tobacco in Mongolia must consider strict retail controls through licensing, including fines and the revocation of licenses from those who sell cigarettes to minors (Jha & Chaloupka, 1999; Townsend 1996). Vendors at all licensed outlets need to be educated about the restriction of sales to minors under 18 years of age, and the consequences of being caught in violation.

Mongolia is not actively enforcing the law to prohibit tobacco sales to youth. One measure that has been implemented in many high- and middle-income countries to deter selling tobacco to minors is random compliance checks of tobacco vendors. Review of tobacco control documents at the National Health Center, which is the implementing agency of the Ministry of Health, revealed no published compliance check surveys conducted since the enactment of the law in 2005. As the Surgeon General's Report has noted, "Restricting youth access to tobacco products will contribute to a changing social norm with regard to smoking

and may influence prevalence directly” (US Department of Health and Human Services, 2000, p. 254).

The Tobacco Control Law allows enforcement by police officers and state inspectors, who can issue administrative penalties. However, the enforcement is problematic as it places a burden on an already underpaid and overworked police force. Increasing the number of health inspectors to enforce the Tobacco control law and more training will be needed.

Increasing the powers of local governors in introducing tobacco control bylaws was recommended by some of the interviewees. The constitution of Mongolia does not give local government the ability to create local bylaws (Interview with G. Tsetsegdary, 2007). In Canada, major anti-smoking initiatives often have occurred at the local level with strong bylaws (Studlar, 2002). Expanding the policing powers of local authorities would strengthen local efforts to license tobacco vendors and prohibit sales of cigarettes to minors (Studlar, 2002). The use of tobacco by youth carries significant negative consequences because of the life-long addictive nature of nicotine. Once started, quitting smoking becomes extremely difficult. Therefore, preventing tobacco use by youths is very important to reduce the rate of smoking in Mongolia.

Research shows that total bans of advertising and promotion reduce tobacco consumption, particularly among young people (Tye, Warner & Glantz, 1987; Chaloupka & Wechsler, 2000). Exposure to tobacco advertisement is greater for young people, making it crucial to focus prevention on youth (Jha & Chaloupka, 1999). In Mongolia, the tobacco companies still target young people

through indirect forms of advertising such as cultural and sports events.

Cigarettes are highly visible on storefronts, and are displayed at the eye level of children. These practices contribute to the social acceptability of cigarettes, particularly among children. The 2003 Mongolia Global Tobacco Youth Survey found that over 74% of young people saw pro-cigarette ads in newspapers or magazines. Mongolia should adopt tougher enforcement on tobacco advertising and sponsorship of cultural events. There is evidence from many countries that mass media messages can counteract these dominant positive images of cigarettes (US Department of Health and Human Services, 2000; Siegel, 1998; Goss, 1997).

In a country like Mongolia, media-based public education to counter pro tobacco messages is nonexistent. It is only during the May 31 No Smoking Tobacco Day that educational materials are distributed to the public. An examination of 784 issues of two daily newspapers in 2004 revealed only four anti-tobacco messages (AMPHP, 2006). Studies relating to tobacco have shown that media advocacy and counter-advertising are effective in reducing cigarette consumption (Siegel, 1998).

The Law on Tobacco Control (2005) requires text-only warnings on 20% of tobacco product packages. The country is lagging behind when compared to other LMICs such as Thailand. Health warnings on tobacco packages in Thailand helped increase awareness of risks and reduce cigarette consumption (WHO, 1999). Thailand requires rotated picture-based health warnings on 50 percent of the packages (WHO, 1999). In South Africa, picture-based warnings on tobacco

products have been strongly linked with smokers' decisions to quit smoking (WHO, 1999). More than 58% said that they were motivated by the warning labels (WHO, 1999). In Brazil, after graphic warnings on tobacco product packages were introduced, two-thirds of the smokers intending to quit were motivated by the graphic warning labels, and the number of calls to Hot Lines increased almost 300% (Calvante, 2001).

Experience from other countries has shown that picture-based warnings are more effective than text-only warnings in motivating smokers to quit or to reduce their cigarette consumption (Hammond et al., 2007; Hammond et al., 2003). In Mongolia, introducing picture-based health warnings on cigarette packs would increase awareness of the health effects and will reduce consumption. One difficulty in Mongolia is that the sale of cigarettes individually is widespread; as a result, warning labels on packaging may have a limited effect.

As well in Mongolia, there appeared to be some resistance from the Ministry of Agriculture to the idea of placing pictorial health warnings on cigarette packs. As one informant explained, the Ministry of Agriculture is considering making Mongolia a tobacco-producing nation. This move will render the situation worse, particularly in terms of availability and accessibility of tobacco products. It also demonstrates competing priorities between public health and economic development which delay or obstruct the implementation of effective and comprehensive tobacco control programs.

Studies have shown that a 10% increase in the real price of a pack of cigarettes reduces consumption by 8% in low- and middle-income countries

(World Bank, 1999). Much of this research is conducted in both high- and low-income countries, and therefore would likely hold true for Mongolia. Another benefit is that increasing the price of cigarettes would generate significant new revenues for the government (World Bank, 1999). Revenues gained through tax on tobacco products can be used to fund tobacco control and health promotion programs. Increasing taxes has accomplished important positive results in South Africa, a model for tobacco control. For example, South Africa raised cigarette taxes by over 350% in the period of seven years between 1990 and 1997 (WHO, 1999). This was followed by a 22% decrease in consumption, and a 177% increase in revenues (WHO, 1999).

During the interviews, participants consistently cited smuggling as a reason why the government is not raising taxes. Some indicated that higher taxes might fuel the smuggling of cigarettes from neighbouring countries (China and Russia). This fear of smuggling has some foundation. According to Mongolia Customs, more than 52 million cigarettes were confiscated in 2006 (State Specialized Inspection Agency, 2006). Tobacco smuggling is a problem in all countries, regardless of tobacco tax levels (World Bank, 1999). Large differentials in tobacco tax levels between countries provide an obvious incentive for cigarette smuggling (Studlar, 2002). Corruption within many LMICs is a strong indicator of smuggling (World Bank, 1999; WHO 1999). Interviewees indicated critical weaknesses in the enforcement of cross-border smuggling due to high levels of corruption. According to the 2007 Corruption Perceptions Index, Mongolia is ranked 99 th out of 179 countries with a score of 3.0 (Transparency

International, 2007). Transparency International's corruption index is a 10-point numerical scale where the score of 10 indicates the absence of corruption (Transparency International, 2007). In Mongolia, street vendors sell illicit cigarettes in black markets with seemingly little negative consequence from local authorities. Consideration should be given by the government to improve tax-paid markings and to introduce a high level of enforcement. It is also important that taxation be harmonized so that tax rates are similar to rates in neighbouring countries (Studlar, 2002). Increases in tobacco taxes must continue to be used to help curb the tobacco epidemic in Mongolia.

Scientific evidence demonstrates that there are health risks from exposure to secondhand smoke. Comprehensive bans on smoking in public places reduce smoking prevalence and increase quitting rates (Elmont, Choi & Novotny, 1993). "The development of public policy on tobacco is incomplete without the consideration of clean indoor air" (Woolery *et al.*, 2000, p.273). Although the Mongolian Tobacco Control Law prohibits smoking in public places, there is no enforcement.

Exposure to tobacco smoke is ubiquitous in the capital city where many are still unaware of the health hazards resulting from exposure to tobacco smoke. According to the Mongolia Global Youth Tobacco Survey, more than eight in ten youth reported being exposed to smoke in public places (GYTS, 2003). Aside from World No Tobacco Day, there is no community awareness about the health hazards from tobacco smoke (Interview with Mashbatra, 2007). Increased campaigns on the health risks of secondhand smoke could be one



way to make smoke-free policies self-enforcing in Mongolia. Such campaigns would incite or encourage nonsmokers to demand clean air from smokers (Woolery *et al.*, 2000).

Protection from Environmental Tobacco Smoke is a key element of the WHO Framework Convention on Tobacco Control (FCTC), which Mongolia has ratified. Thus, the government has the responsibility to enforce the smoking ban in public places. Section 9 of the law requires that signs and warnings be posted at places where smoking is prohibited (Law of Mongolia on Tobacco Control, 2005). However, it is widely ignored and there is no signage to support the ban. There is an urgent need to enforce the smoking ban in public places.

One of the barriers identified by the interviewees regarding the enforcement of smoking bans in public places is the low severity of penalties for businesses. A majority of interviewees admitted that increasing the severity of the penalties would serve as a deterrent. Currently, if a business is caught violating the provision of the ban on smoking in public places, punishment is in the form of fines of MNT 100,000-150,000 (approximately \$100 CAD - \$150 CAD). Interviewees reported that sanctions are never applied.

Studies suggest that smoking bans in public places need to be well-enforced in order to provide a real impact on the community (Chaloupka & Pacula, 1998). Research findings from several high-income countries indicate that smoke-free policies alter the social perception of smoking among smokers and protect the health of nonsmokers (Woolery *et al.*, 2000). Therefore, a

properly enforced ban of smoking in public places could be a major tool for the control of tobacco in Ulaanbaatar.

Unlike many other countries (Thailand, Taiwan) where smoking cessation programs have been introduced, Mongolia does not provide cessation services. Nicotine replacement therapies are not widely available, and counselling services are non-existent. "Tobacco dependence is characterized as a long-term disorder with high relapse rates demanding ongoing care" (WHO<sup>a</sup>, 2003, p.35). Many interviewees were concerned about the lack of cessation services to help smokers quit. Due to the adverse health effects caused by smoking, the government should introduce or fund smoking cessation interventions.

In Mongolia, the reliance on external funding has an impact on its ability to implement tobacco control activities. However, international experience shows that it may be possible to address the high cost of enforcement by establishing licensing fees for tobacco vendors, imposing fines on vendors who don't comply with the law, and increasing the taxes on tobacco products (DiFranza, Celebucki, & Seo, 1998; Chalopuka *et al.*, 2000). Mongolia is one of the few LMICs that have introduced an earmarking tobacco tax mechanism. The Law on Tobacco Control enacted on July 2005 established the Health Promotion Foundation funded from an earmarked excise tax of 2% (Law of Mongolia on Tobacco Control, 2005). The country has not started using the funds to finance health promotion activities. A Health Promotion Fund has been used effectively in Thailand. The Thai experience illustrates how an earmarked excise tax of 2%

constitutes an important source of funding for health promotion activities for LMICs.

Adequate funding is necessary to help the country build a tobacco control strategy that works. The National Center for Health Development will need funding support from the Health Promotion Fund in order to be able to conduct enforcement and education activities. According to the 2006 summary report of the Mongolian Customs Central Administration, \$5,924,000 CAD was collected as excise tax revenues. If the Health Promotion Foundation requiring 2% of excise tax revenues had been initiated that year, it would have translated into approximately \$118,000 CAD of funding for tobacco control programs in 2006.

## CONCLUSION

In Mongolia, as for LMICs, the tobacco epidemic has become a major public health problem where high consumption exerts direct effects in terms of increased non-communicable diseases. Each day thousands of people die prematurely because of smoking. LMICs need to strengthen their tobacco control policies in compliance with the key principles of the Framework Convention on Tobacco Control (price and tax, advertising and promotion, labelling and environmental tobacco smoke) to win the fight against the tobacco industry. Mongolia is a country with a high prevalence of tobacco use, where tobacco use is projected to have devastating health and social consequences if the country does not adopt an effective tobacco control strategy. Tobacco-related disorders and cancers have become the leading causes of death there (Association of Mongolian Public Health Professionals, 2006). Mongolia has a comprehensive tobacco control law in place, but what is required is a strong political will, as well as wide advocacy and communication campaigns, to tackle the epidemic of tobacco. High tobacco taxes and restrictions of smoking in public places are among the key components of an effective tobacco control strategy (Chaloupka & Wechsler, 1997). The law banning indoor smoking and sales to minors is widely ignored in the city. The National Center for Health Development will need funding support from the Health Promotion Foundation in order to be able to conduct enforcement activities.

## RECOMMENDATIONS

To guide decision makers in creating effective tobacco control programs and in reducing smoking prevalence and tobacco consumption in Mongolia, a mix of strategies with short- and long- term impact is needed in the following areas:

- Legislative changes regarding excise taxes and raising the real price of tobacco are urgently needed. International research has clearly demonstrated that an appropriate level of increase in taxes on tobacco products reduces tobacco use and tobacco-related harm.
- The national law that bans smoking in public places must be well-enforced through comprehensive routine inspections of all places, mandatory displays of clean air decals, and increased sanctions for violators.
- Regulations regarding sales of cigarettes to minors need to be enforced.
- The authorities should look at licensing tobacco vendors. A number of studies have found that reducing the availability of tobacco does reduce tobacco use. Local governors must be involved in this process.
- Providing dedicated funding for tobacco control activities is an urgent necessity.
- A total ban on all forms of indirect advertising and sponsorship should be instituted.
- Wide access to smoking-cessation therapy and counselling needs to be provided.

- Health education programs and mass media counter-advertising are needed.
- Policy makers should be educated about the risks of tobacco, and build support for policy changes.
- The Health Promotion Foundation must be made operational to provide funding for enforcement activities.
- Local governments should administer the licensing system for tobacco vendors.
- Continued compliance checks must be undertaken to determine the level of compliance with the tobacco law, and educate retailers about the sale of tobacco to minors. Compliance surveys should be sufficient in number (e.g. two per year).
- Surveillance methods must be established to get baseline data on the level of compliance with the law. The data must be used to convince politicians that the strategy is working and lobby for further increases in the cigarette tax to reduce both the youth and adult rates of smoking.
- Training opportunities must be provided for Tobacco Enforcement Officers.
- A comprehensive communication strategy must be created to ensure that the public knows that the law is being enforced.
- The distribution of tobacco control resources to the population and proprietors of establishments must be facilitated.

- The creation of policies on tobacco-free cessation programs to help smokers who want to quit must be facilitated.

## **APPENDIX**

### List of persons interviewed

1. *Dr. Ts. Sodnompil, Director, National Center for Health Development Mongolia*
2. *Dr. S.Dulamsuren, Deputy Director, National Center for Health Development Mongolia*
3. *Dr. G. Tsetsegdary, Senior Officer, Ministry of Health Mongolia*
4. *Dr. Mashbatra, Director, Public Health Professional's Association Mongolia*
5. *K. Chultem, Project Officer, Adventist Development and Relief Agency (ADRA) Mongolia*
6. *Ms. Tugsdelger, Asian Development Bank (ADB) Mongolia*



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