Available evidence indicates that there was a significant decline in smoking in Brazil between 1989 and 2006. About two decades ago, the government launched a tobacco control program, with a marked acceleration of efforts since 1990, focusing on non-price interventions such as bans on advertising, restrictions on smoking in public places and other activities. Although the Brazil tobacco control program is considered one of the most comprehensive in the developing world, no formal evaluation has been carried out.

A recent study1 assessed the smoking situation in Brazil, and the role of the tobacco control program, and compared it to experience in other countries. The study assessed key trends in smoking rates and lung cancer in Brazil, and reviewed price and non-price interventions. A discussion of fiscal instruments and smuggling is also included in the report.

Evidence gathered by the study indicates that in Brazil:

- Smoking prevalence decreased significantly between 1989 and 2006. In 2006, about 20 percent of males and 13 percent of females smoked in the main cities. Smoking prevalence among adults in state capitals ranged from a low of 9.5 percent in Bahia to 21.2 percent in Porto Alegre and Rio Branco.
- Smoking is more concentrated among the uneducated groups of the population, which may also be the poorer. There is a 1.5-2 fold higher prevalence of smoking among those with little or no education as compared to those with more years of schooling.
- Total cigarette consumption per adult also decreased significantly, but has stabilized in recent years. Legal and illegal sales of cigarettes decreased from 1,700 cigarettes per year in 1990 to 1,175 cigarettes in 2003-2005.
- In metropolitan areas, the percentage of households with smokers decreased from 34 percent in 1995-96 to 27 percent in 2002-2003. The proportion of tobacco expenditures in total household expenditures also decreased from 3 percent in 1995-96 to 2 percent in 2002-03.
- Lung cancer rates during early adult life decreased among males between 1980 and 2004, but increased among females, which may be related to smoking cessation among men, and increased smoking among women.
- From 1996 to 2005, there were over 1 million hospitalizations attributable to smoking. Tobacco-related hospitalizations cost about US$0.5 billion, or 1.6 percent of the hospitalization budget between 1996 and 2005.

Even at its peak, in the 1980s, cigarette consumption per capita was

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1 Extracted from “Tobacco Control in Brazil” by the same authors. Paper prepared for the World Bank’s Human Development Department, Latin America and the Caribbean Region, August 2007. Available at http://www.worldbank.org/hnppublications
always much lower in Brazil than in OECD countries such as the US, Canada, France, Germany, and Italy (Table 1). Brazil smoking prevalence rates and cigarette consumption among adults have also been lower than those in several neighboring countries, which may be the result of domestic tobacco control policies implemented in the 1990s. However, consumption has remained stable in Brazil in recent years, while it is lower and continues to decline in Chile.

The Brazil tobacco control program has been very innovative, and is considered best practice on advertising bans and warning labels – for example, Brazil was the first country to ban misleading descriptors such as light and mild from cigarette packages – but it has mainly focused on non-price instruments. These have included bans on tobacco advertising and smoking in public transportation; regulation of tobacco products, such as limiting the levels of tar, nicotine and carbon monoxide in cigarettes, and including severe warnings and images on cigarette packages and tobacco products; and launching awareness and education campaigns. In addition, the program developed surveillance and monitoring initiatives; built institutional capacity; and decentralized tobacco control initiatives to states and municipalities.

The government has already complied with many provisions of the WHO Framework Convention on Tobacco Control (FCTC), which was signed in 2003 and ratified in 2005. However, to be in full compliance

Table 1. Tobacco Mortality and Total Disability-Adjusted Life Years by Gender and Region 2000

<table>
<thead>
<tr>
<th>Region/Gender</th>
<th>Tobacco Deaths (thousands)</th>
<th>Total DALYs (thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
<td>Females</td>
</tr>
<tr>
<td>East Asia and Pacific</td>
<td>829</td>
<td>274</td>
</tr>
<tr>
<td>Europe and Central Asia</td>
<td>754</td>
<td></td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>177</td>
<td>97</td>
</tr>
<tr>
<td>Middle East and North Africa</td>
<td>97</td>
<td>28</td>
</tr>
<tr>
<td>South Asia</td>
<td>768</td>
<td>187</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>105</td>
<td>66</td>
</tr>
<tr>
<td>Low-and middle-income</td>
<td>2,730</td>
<td>813</td>
</tr>
<tr>
<td>High-income</td>
<td>929</td>
<td>548</td>
</tr>
<tr>
<td>World</td>
<td>3,659</td>
<td>1,361</td>
</tr>
</tbody>
</table>

Source: Ezzati and Lopez 2003; DCPP website. DALY = disability-adjusted life year.

Smoking and Tobacco Control in the World

Tobacco smoking is a leading cause of death worldwide. Until recently, the epidemic of chronic disease and premature death due to tobacco mainly affected rich countries, but it is rapidly shifting to the developing world. Smoking was estimated to kill nearly 5 million people annually by 2000, accounting for 1 in 10 adult deaths globally. About half of those deaths were in low-income countries. In 2000, tobacco accounted for 1 in every 5 male deaths, and 1 in 20 female deaths, over age 30. Males accounted for 3.7 million deaths, or 72 percent of all tobacco deaths. About 60 percent of male deaths and 40 percent of female deaths due to tobacco were of middle-aged people (35-69 years).

The 20th century saw 100 million tobacco deaths, most of them in developed countries and the former socialist economies. On current smoking patterns, annual tobacco deaths will rise to 10 million by 2030. The 21st century is likely to see 1 billion tobacco deaths, most of them in low-income countries.

Indirect estimates suggest that some 300,000 people died from smoking in the Latin American and Caribbean region in 2000, making it a more important cause of death than HIV/AIDS and TB combined. The specific numbers of deaths from tobacco and of total disability-adjusted life years (DALYs) by gender and region show that smoking accounted for about 12-14 percent of all adult deaths in the region.
with the treaty’s provisions, the government needs to take additional steps, including raising tobacco taxes. Price instruments have been used only indirectly, with higher taxes being implemented for fiscal reasons. Even in the context of illegal sales, higher tobacco taxes reduced consumption and increased government revenue in the 1990s. Between 1990 and 1993, the price of cigarettes experienced a real increase of almost 78 percent, despite high inflation rates. The increase in price contributed significantly to the observed decline in overall consumption. Tobacco specific tax collection grew 23 percent at constant 2005 values, between 1992 and 1996, despite a reduction of legal consumption per adult of 15 percent in this period.

Due to lower taxes, the real price of cigarettes in 2005 was lower than the average real price in the period 1992-98 (Figure 1). The percentage of retail price due to the specific tobacco tax (IPI) decreased from nearly 40 percent to 20 percent between 1993 and 2004. However, the price decline in the period 1998-2001 did not lead to a commensurate increase in smoking, which may have been due to the impact of non-price instruments over demand.

Brazil has established a network of state and municipal focal points and programs in major cities of the country. This network started to bring and adapt tobacco control actions and regulations to the local level, creating the necessary instruments to advance tobacco control at community level. However, this network has been weakened in recent years, as the mechanism formerly used by the National Cancer Institute (INCA) to transfer funds to states and municipalities from the federal level is no longer available, and no other mechanism has replaced it.

**Recommendations**

Brazil has laid a strong foundation for unprecedented public health gain. Tobacco control in the country has been effective. Modest additional action could yield substantial additional health gains by preventing premature death among the 21 million current smokers. However, to achieve sustainable reductions in premature death and disease due to tobacco, Brazil should continue to invest on its comprehensive control program and focus both on avoidance of initiation and on cessation efforts, which are central to preventing millions of deaths.

More emphasis should be placed on the revitalization of the state and municipal tobacco control network, which has received less attention and funds from the federal government. Further reductions in smoking prevalence and increases in smoking cessation require financing and strengthening of the state and municipal tobacco control programs. State health secretaries should resume annual meetings to plan activities and review strategies and policies, as well as training activities. State and municipal coordinators require more support from the Ministry of Health for the implementation of decentralized programs. There is also demand for scaling up the smoking cessation program, which requires staff training and provision of cessation aids, as well as coordination of the national tobacco control program with the Unified Health System.
Price instruments may be used far more effectively, to build on the substantial program that has been implemented based on non-price instruments. Tobacco taxes are the most cost-effective instrument to reduce cigarette consumption while increasing public revenue due to the low price elasticity of cigarette demand. It is at least paradoxical that a country such as Brazil, with a high public debt to GDP ratio, spends public money on tobacco control measures without effectively using price and tax instruments to curb smoking. Returning to the prices and taxes practiced in the mid 1990s would boost public revenue and public health gains.

The study found that a 10 percent increase in smoking restrictions (legal and other restrictions), would reduce consumption by 2.3 percent in the long-term; a 10 percent price increase would reduce consumption by about 4.8 percent in the long-term. The study shows that an increase of 72 percent in the cigarette specific tax (IPI) would increase prices by about 14 percent, decrease consumption per adult 7 percent, and increase fiscal income from tobacco by 60 percent. A specific recommendation is twofold:

- In the short-term, return to the 1993 real price of cigarettes. This would involve an increase of 23 percent of the 2005 average price, or an increase of 118 percent on the 2005 average rate of IPI tax. In 2005 prices, this would result on an average street price of R$2.72 (about US$1.36). Such increase would reduce consumption by about 11 percent or about 100 legal cigarettes per capita per year.

- In the longer-term, raise the percentage of retail price that comes from the IPI tax from about 20 percent to about 40 percent.

In conjunction with tax increases, the government should continue to counter illegal sales of cigarettes. As part of the 2000 Health Act, Brazil established a national register of importers, exporters and producers of tobacco products for fiscal purposes, and strengthened controls on the marketing of cigarettes through the use of control stamps and production of counting equipment in production. Policies to fight the illegal market should reduce the demand for illegal cigarettes through counter-propaganda; increase the probability of smugglers being caught and the severity of their punishment through greater control and enforcement of the law; and adopt customs and value-added taxes that are paired with anti-smuggling technologies, including product tracing and use of prominent tax stamps with warning labels in local language, and enhanced punishment of illegal street sales.

Finally, effective monitoring of the tobacco epidemic is needed. Reliable surveys of smoking prevalence and cessation, and studies of the impact of smoking on mortality are necessary. Studies on consequences of smoking would complement the findings from smoking prevalence and consumption surveys.

Reliable monitoring of smoking mortality should document the often unexpected hazards of various types of tobacco use, to maintain public support for regulating tobacco and evaluate control programs. Innovations such as including information on smoking habits in death certificates could also be considered.

Econometric studies, such as those included in this report, may contribute to appraise policy impact on public health. Analyzes of costs of smoking to households, health system, labor market and the economy, as well as the impact of price and tax increases on smoking habits and burden of disease, would provide useful contributions for further development of public policy in this area.

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