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## The Global Tobacco Epidemic

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## The Global Tobacco Epidemic

### Abstract

This paper focuses on the first century of the global tobacco epidemic and its current status, reviewing the current and projected future of the global tobacco epidemic and the steps that are in progress to end it. In the United States and many countries of western Europe, tobacco consumption peaked during the 1960s and 1970s and declined as tobacco control programs were initiated, motivated by the evidence indicting smoking as a leading cause of disease. Despite this policy advancement and the subsequent reductions in tobacco consumption, the global tobacco epidemic continued to grow in the later years of the twentieth century, as the multinational companies sought new markets to replace those shrinking in high-income countries. In response, the World Health Organization developed between 2000 and 2004 its first public health treaty, the Framework Convention on Tobacco Control (FCTC), which entered into force in 2005. An accompanying package of interventions has been implemented. New approaches to tobacco control, including plain packaging and single representation of brands, have been implemented by Australia and Uruguay, respectively, but have been challenged by the tobacco industry.

### Keywords

nicotine, tobacco control, FCTC, lung cancer, tobacco industry

### Cover Page Footnote

This Frontiers article is a shorter version of the following article: One Hundred Years in the Making: The Global Tobacco Epidemic by Heather Wipfli and Jonathan M. Samet. Click here to access the full article in the Annual Review of Public Health: <http://arevie.ws/2d5C0ce>. No competing financial or editorial interests were reported by the authors of this paper.

## INTRODUCTION

Today's global tobacco epidemic may represent one of the first instances of the globalization of a non-infectious cause of disease. Tobacco use is ubiquitous and the cigarette industry is global and multinational, largely driven by a handful of extremely large corporations: Philip Morris International, the China National Tobacco Corporation (a state monopoly), British American Tobacco, Japan Tobacco International, and Imperial Tobacco. Sustained efforts to control the epidemic started more than 50 years ago when research began to document the adverse health consequences of smoking. Although continually opposed by the tobacco industry, tobacco control has had successes in many countries. Tobacco use and rates of some of the diseases it causes have declined in many high- and middle-income countries. Nevertheless, tobacco use remains highly prevalent in some high-income countries, and many low- and middle-income countries are at risk for increasing use of tobacco from the strategies of the multinational tobacco companies. We review the current and projected future of the global tobacco epidemic and the steps that are in progress to end it.

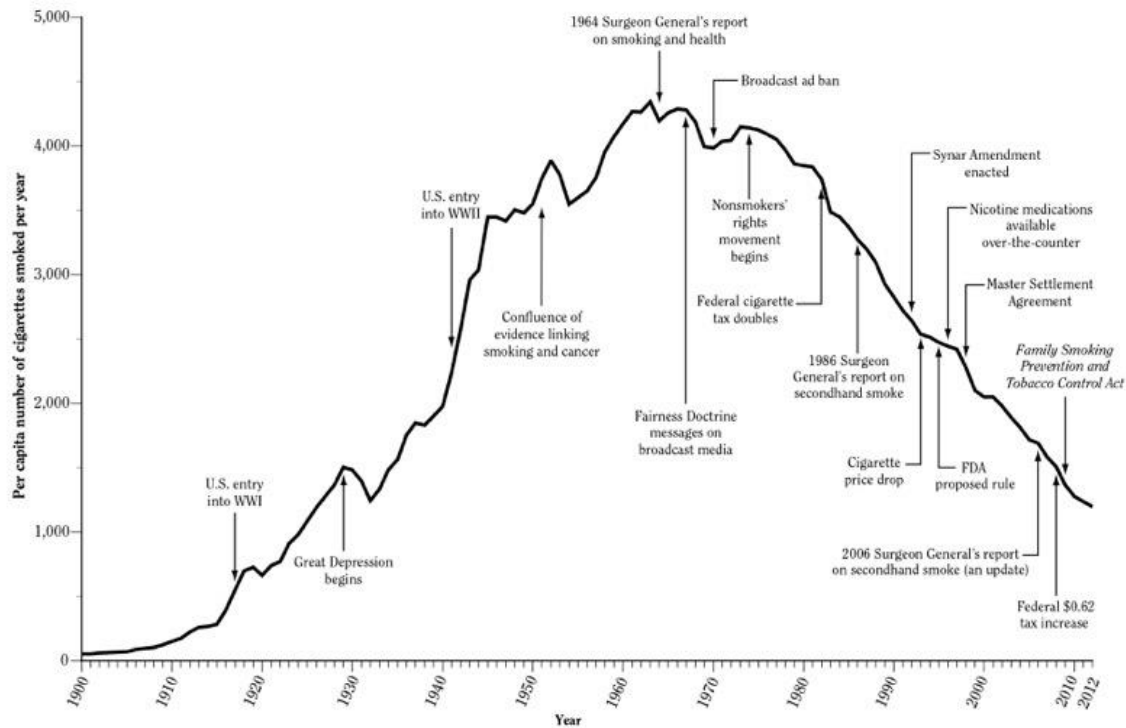
## RISING CIGARETTE USE, SCIENTIFIC DISCOVERY, AND TOBACCO CONTROL

The tobacco epidemic was born out of the mass production and marketing of the cigarette, now a device that is highly engineered to deliver nicotine and to promote and sustain addiction. The invention of mass-produced cigarettes required the development of mass demand. Hence, tobacco companies turned to new and highly effective marketing and promotion methods. Throughout the early years of the 20th century cigarette consumption rose dramatically, although there was a dip at the time of the Great Depression in the United States (Figure 1).<sup>1</sup> Subsequently, from the 1960s on, there has been continued decline as various evidence-based tobacco control measures have been implemented. Strategies for tobacco control were motivated by the growing evidence from the 1950s that cigarette smoking was a powerful cause of disease and premature death and from the 1970s that passive smoking caused disease in nonsmokers. Throughout these decades, there was opposition by the tobacco industry, which sought to undermine the scientific foundation for tobacco control and to use its influence to delay strong tobacco control. Some of these strategies later led to the tobacco industry being found guilty of racketeering in the U.S. Federal Court.

### Industry Globalization, the WHO Framework Convention on Tobacco Control (FCTC) and the Bloomberg Initiative to Reduce Tobacco Use

Despite policy advancement and subsequent reductions in tobacco consumption in some countries, the global tobacco epidemic continued to grow exponentially in the later years of the twentieth century, as the multinational companies sought new markets to replace those shrinking in high-income countries. The tobacco industry took full advantage of trade liberalization, foreign direct investment, new production technologies, global communications, and other elements of the emerging globalized economy to gain customers in low- and middle-income countries and to increase profits. In 1998, 75% of the world's cigarette market was controlled by just four companies: Philip Morris, British American Tobacco, Japan Tobacco, and the China National Tobacco Corporation. The major transnational tobacco companies established a presence in almost every country.

Despite some individual policy successes, by the mid-1990s tobacco control groups recognized the need for multinational cooperation and effective international action to control transnational factors. In 1994, at the Ninth World Conference on Tobacco or Health in Paris, a resolution calling on national



**Figure 1.** Surgeon General's Report on the rise and fall in tobacco consumption in the last century and its decline, 2014<sup>2</sup>

governments, ministers of health, and WHO to “immediately initiate action to prepare and achieve an International Convention on Tobacco Control to be adopted by the United Nations . . . ” was passed.<sup>3</sup> Eventually, the resulting Framework Convention on Tobacco Control (FCTC) represented the first treaty negotiated under the auspices of WHO and the first collective response to non-communicable diseases (NCDs). The treaty came into force in 2005 and now most states have ratified the FCTC.<sup>4</sup>

Following the successful negotiation of the FCTC, the Bloomberg Initiative to Reduce Tobacco Use was formally launched in 2007 with a financial commitment from former New York City Mayor Michael Bloomberg, later augmented by a contribution from the Gates Foundation. The Bloomberg Initiative, working with the World Health Organization, sought a new paradigm for tobacco control in the form of MPOWER, overlapping with the FCTC. MPOWER is a package of proven tobacco control strategies: **M**: monitoring tobacco use and the industry; **P**: protecting nonsmokers from exposure to secondhand tobacco smoke; **O**: offering assistance to smokers who want to quit; **W**: warning consumers of the health consequences of tobacco use; **E**: enforcing bans on advertising, sponsorship, and promotion; and **R**: raising tobacco taxes.<sup>5</sup>

Since the FCTC entered into force and MPOWER was launched, increasingly comprehensive tobacco control policies have been adopted worldwide. There is mounting coverage of the world with the MPOWER provisions, particularly for monitoring because of the success of the Global Adult Tobacco Survey (GATS).

## **THE GLOBAL TOBACCO EPIDEMIC TODAY**

The long-recognized need for surveillance of the global tobacco epidemic is now met by the Global Tobacco Surveillance System (GTSS), which has components directed at youth and adults, the Global Youth Tobacco Survey (GYTS) and the GATS, respectively.

The results of GYTS and GATS document the ongoing epidemic and its heterogeneity. GYTS findings document the industry's continuing recruitment of new youth smokers, the global extent and heterogeneity of initiation, and the current close comparability of prevalence among male and female youths. Table 1 provides findings from GATS through 2014 for 26 countries, covering a substantial majority of the world's smokers. Several patterns are notable: the generally higher prevalence of smoking among men, particularly in Asia; the very low smoking rates among Asian women—making them a target for the tobacco industry; the particularly high rates of smoking among men in Asian countries, Indonesia, Russia, and Greece; and wide variation in the percentages of former smokers. The findings make clear the challenges for global tobacco control—the large number of smokers at risk for premature mortality and excess morbidity; the persistence of high rates of smoking; and the large numbers of non-smoking women who represent an appealing future market.

## **NEW FRONTIERS OF GLOBAL TOBACCO CONTROL**

In all countries, regardless of their progress in implementing provisions of the FCTC, significant challenges to controlling tobacco remain. Although many of these challenges are specific to individual country settings and domestic realities, some are universal, including ongoing tobacco industry efforts to retain and grow their market, the rapidly changing tobacco product market, and the rise of tobacco-related trade disputes between countries. Industry tactics include Corporate Social Responsibility (CSR) programs to remake their image, use of new social media channels for

marketing, use of trade and intellectual property agreements to combat innovations in tobacco control including plain packaging and single brand representation, and new products, including electronic cigarettes.

New tobacco control approaches include plain packaging, pioneered in Australia, and single brand representation in Uruguay. Both of these approaches have withstood the industry's attacks. One positive development is the emergence of a unified approach to prevention of NCDs, in part following from attention to this emerging global challenge by the United Nations. A high-level summit meeting was held in 2011, focusing on cancer, cardiovascular disease, chronic obstructive pulmonary disease, and diabetes and on four common risk factors for these diseases, including tobacco use. This new movement for NCD control should further enhance tobacco control.

**Table 1.** Prevalence of never, current, and former smokers among adults  $\geq 15$  years old in 26 countries as documented by the Global Adult Tobacco Survey

Country	Year	Prevalence (%)					
		Males			Females		
		Non-Smokers, Never Daily	Current Smokers	Non-Smokers, Formerly Daily	Non-Smokers, Never Daily	Current Smokers	Non-Smokers, Formerly Daily
<b>African (AFR)</b>							
Cameroon	2013	83.1(%)	11.8(%)	5.1	99.1	0.6	0.3
Kenya	2014	80.0	15.1	4.9	98.7	0.8	0.5
Nigeria	2012	89.2	7.3	3.5	99.3	0.4	0.3
Uganda	2013	83.9	10.3	5.8	96.0	1.8	2.2
<b>Eastern Mediterranean (EMR)</b>							
Egypt	2009	55.1	37.6	7.3	99.3	0.5	0.1
Qatar	2013	73.0	20.2	6.8	96.2	3.1	0.7
<b>European (EUR)</b>							
Greece	2013	32.4	51.2	16.4	67.0	25.7	7.3
Kazakhstan	2014	52.1	42.4	5.5	94.5	4.5	1.0
Poland	2009	41.3	36.9	21.8	64.3	24.4	11.3
Romania	2011	48.6	37.4	14.0	77.4	16.7	5.8
Russian Federation	2009	26.5	60.2	13.3	74.6	21.7	3.8
Turkey	2008	34.9	47.9	17.2	80.7	15.2	4.1
Turkey <sup>a</sup>	2012	--	41.5	--	--	13.1	--
Ukraine	2010	33.1	50.0	16.9	85.5	11.3	3.2
<b>Region of the Americas (AMR)</b>							
Argentina	2012	55.3	29.4	15.4	74.3	15.6	10.1
Brazil	2008	61.2	21.6	17.2	75.7	13.1	11.2
Mexico	2009	67.6	24.8	7.6	89.8	7.8	2.5
Panama	2013	87.5	9.4	3.1	95.0	2.8	2.2
Uruguay	2009	48.8	30.7	20.5	67.5	19.8	12.7
<b>South-East Asia (SEAR)</b>							
Bangladesh	2009	46.8	44.7	8.4	97.5	1.5	1.0
India	2009	73.0	24.3	2.7	96.5	2.9	0.5
Indonesia	2011	27.0	67.0	6.0	96.7	2.7	0.6
Thailand	2009	37.5	46.6	16.0	96.2	2.6	1.2
Thailand <sup>b</sup>	2011	--	46.6	--	--	2.6	--
<b>Western Pacific (WPR)</b>							
China	2010	40.2	52.9	6.9	97.2	2.4	0.4
Malaysia	2011	51.7	43.9	4.4	98.8	1.0	0.1
Philippines	2009	41.3	47.6	11.0	88.5	9.0	2.5
Vietnam	2010	39.9	47.4	12.7	98.0	1.4	0.5

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