Report on

Tobacco Control in India

Executive Summary

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Introduction

This report owes its origins to the recent global surge in action against tobacco. As awareness of the dangers posed by tobacco spread, nations across the world resolved to forge a campaign strategy and frame a battle plan to overcome the tobacco threat. India's anti-tobacco law emerged in April 2003, close to the closure of the intergovernmental negotiations on the World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC) in March 2003. Soon thereafter, the Ministry of Health and Family Welfare, Government of India (MOHFW), decided to commission a detailed review of the status of tobacco control in India. This was intended to collate the Indian experience and craft a plan for future action based on a critical appraisal of global evidence and India's specific needs.

The total number of premature deaths caused by tobacco during the twentieth century has been estimated at about 100 million worldwide and, if current levels of tobacco use continue during the twenty-first century, the death toll is projected to go up to one billion. The WHO, which provides these estimates, also predicts that India will have the fastest rate of rise in deaths attributable to tobacco in the first two decades of the twenty-first century. Many of these deaths will occur in the productive years of adult life, as a consequence of an addiction acquired in youth. The compelling need to save many of these lives from falling prey to tobacco use addiction and the urgent imperatives of avoiding the huge health, economic, social and environmental burdens that would be imposed by tobacco on a nation that aspires for accelerated development, form the *raison d'etre* of this report.

India's tobacco problem is more complex than probably that of any other country in the world, with a large consequential burden of tobacco-related disease and death. The prevalence of tobacco use among men has been reported to be high (generally exceeding 50%) from almost all parts of India (more in rural than in urban areas). Women from most parts of India report smokeless tobacco use and the prevalence varies between 15% and 60%. Among 13–15-year-old school-going children, the current use of any tobacco product varies from 3.3% in Goa to 62.8% in Nagaland. In the late 1980s, the number of tobacco-attributable deaths in India was estimated to be 630,000 per year. On conservative estimates, the tobacco-attributable deaths currently range between 800,000 and 900,000 per year. The cost of the tobacco-attributable burden of just three groups of diseases—cancer, heart disease and lung disease—was estimated as Rs 277.611 billion (US$ 6.5 billion) in 1999. This increased to Rs 308.33 billion (US$ 7.2 billion) in the year 2002–2003.

The purpose of this report is to provide a comprehensive overview of the tobacco problem in India, from public health challenges to policy responses. The objective is to synthesize the available scientific knowledge on tobacco use in India with a view to assessing the magnitude of the problem, the health problems being caused, identifying the gaps in knowledge, reviewing policies and attempts towards reducing the burden of tobacco in India and providing a credible basis for evolving future tobacco control policies.

Historical Overview of Tobacco in India

From the middle ages to modern times

Tobacco cultivation has a history of about 8000 years. Europeans were introduced to tobacco when Columbus landed in America in 1492. Portuguese traders introduced tobacco in India during 1600. Tobacco's easy assimilation into the cultural rituals of many societies was facilitated by the medicinal (and perhaps intoxicating) properties attributed to it. Tobacco became a valuable commodity in barter trade and its use spread rapidly.

Introduced initially in India as a product to be smoked, tobacco gradually began to be used in several other forms. *Paan* (betel quid) chewing became a widely prevalent form of smokeless tobacco use. Although some Chinese and European systems of medicine supported the use of tobacco, Ayurveda—the Indian system of medicine—never supported the use of tobacco as medication. The ill effects of tobacco use on human health were recognized even in the sixteenth century, which led to restrictions on its use. Tobacco thrived everywhere in the world despite social (and some religious) disapproval.

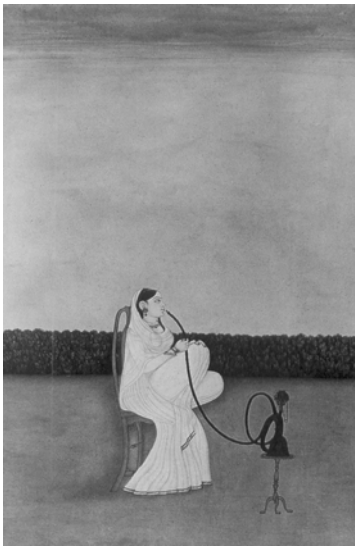

Fig. 1 An East India Company painting of a *bibi* (woman) sitting on a western chair, contentedly smoking a *hookah*

Pre-Independence period

The following steps were taken by the government (British India) to introduce tobacco as a major crop:

1787—Establishment of the Botanical Gardens at Sibpur, Calcutta (trials to grow tobacco were conducted).
1829—The government decided to promote cultivation of superior tobacco. Imported seeds were made available to the Agrihorticulture Society of Calcutta and trials on an improved variety continued for several years.
1875—Attempts were made to produce Virginia tobacco at Ghazipur in Uttar Pradesh.
1875—Growing and curing of tobacco continued in the Pusa farm in Bihar.
1901—The British and American Tobacco Company expanded their trade into India and set up three companies, which later together became the Imperial Tobacco Company India, i.e. the present Indian Tobacco Company (ITC) Ltd.
1903—The establishment of the Imperial Agricultural Research Institute and College at the Pusa farm initiated the cultivation of a new variety of tobacco.
1920—The Indian Leaf Tobacco Division (ILTD) of ITC experimented on the black soils of Guntur, Andhra Pradesh and successfully cultivated Virginia tobacco in 1928.
1929—Commercial and large-scale production of tobacco was initiated by the ILTD. The company established demonstration barns, provided technical guidance to them and encouraged local farmers to grow tobacco by providing financial assistance to construct barns, purchase fertilizers, wood fuel, etc. Slowly, tobacco cultivation spread to all the coastal districts of Andhra Pradesh.
1933—The ILTD introduced flue-cured Virginia (FCV) tobacco into the international market.
1936—A cigarette tobacco research station was established in Guntur to study the effect of soil and manure on the flavour of tobacco.
1937—Tobacco cultivation was introduced in Karnataka (Mysore State) by the Mysore Tobacco Company Ltd.
1938—India produced 499 million kg of tobacco and ranked second in production next to the USA (628.7 million kg).

1940s—Cultivation of FCV tobacco was initiated in north Bihar (1940), Uttar Pradesh (1940) and Gujarat (1945–1946). In the first year (1943–1944), excise revenue from tobacco was Rs 9.65 crore.

1943—The government set apart an annual, non-lapsable grant of Rs 10 lakh from the proceeds of excise duty imposed to extend the cultivation of high-quality leaf and improve the production of tobacco.

1945—The Tobacco Grading Inspectorate was established at Guntur to ensure the quality control of tobacco for exports, and the Indian Central Tobacco Committee (ICTC) was set up to look after the cultivation, technical and economic aspects of tobacco cultivation in India.

(Adapted from ICTC 1960; Directorate of Tobacco Development 1997; Kori 1998; Tobacco Board 2002)

Post-Independence period

1947—The Indian Central Tobacco Committee (ICTC) established the Central Tobacco Research Institute for undertaking research on cigarettes and the Lanka type of tobacco. Later, four research stations were established in Tamil Nadu (in 1948 for cigarette, cheroot and chewing tobacco), Bihar (in 1950 for *hookah* and chewing tobacco), West Bengal (in 1952 for wrapper and *hookah* tobacco) and Karnataka (in 1957 for FCV tobacco).

1956—The Tobacco Export Promotion Council (TEPC) was established to support, protect and promote the export of tobacco (*see also* Table 1).

1965—The ICTC was abolished.

1966—The Directorate of Tobacco Development was established to gather information on tobacco production, trade, marketing, export and consumption.

1975—The Tobacco Board was constituted under the Tobacco Act, 1975, replacing the TEPC. The Tobacco Board is responsible for regulating the cultivation, production, marketing and export of FCV tobacco.

1980–81—The Agricultural Prices Commission recommended a minimum support price for FCV tobacco grown in light and black soils.

1983—The National Cooperative Tobacco Growers' Federation Ltd. (TOBACCOFED) was established by the Ministry of Agriculture and Rural Development to promote the production and marketing of non-FCV tobacco in India. However, TOBACCOFED has been defunct for a long time.

1984—Auction sale of FCV tobacco was introduced for the first time by the Tobacco Board in Karnataka and in Andhra Pradesh in 1985.

(Adapted from Tobacco Board 2002; Directorate of Tobacco Development 1997)

Table 1 Tobacco economy in the post-Independence period

Year	Area (X1000 hectare)	Production (million kg)	Excise revenue (Rs in million)	Export revenue (Rs in million)	Tobacco consumption (million kg)
1950–1951	360	260	258	150	245
1960–1961	400	310	540	160	328
1970–1971	450	360	2284	320	367
1980–1981	450	480	7553	1400	360
1990–1991	410	560	2,6957	2630	474
2000–2001	290	490	8,1824	9034	470
2001–2002	–	601	–	8885	–

Source: Tobacco Board 2002; Directorate of Tobacco Development 1997

Sociocultural aspects of tobacco use

Historically, tobacco consumption has been linked with social status and commensality. The habit of rural men, usually assembled in caste-based or social class-based groups, sharing a *hookah* in daily gatherings, is an example of fellowship, solidarity and the consultative process. The use of tobacco by women is often considered, by different sections of society, in ways different from that of men. Among urban women, smoking is often seen as a symbol of emancipation and modernity. Among other sections of women, tobacco chewing has a higher level of social acceptance than smoking. As traditional values slacken their stranglehold in rural societies, the sociocultural influences that encourage or discourage tobacco use are altering. These need to be studied carefully to control tobacco consumption.

Tobacco Use: Practices and prevalence

In India, *beedi* smoking is the most popular form of tobacco smoking, followed by cigarette smoking. *Paan* with tobacco is the major chewing form of tobacco. Dry tobacco–areca nut preparations such as *paan masala*, *gutka* and *mawa* are also popular and highly addictive. Tobacco dentifrice is popular in some areas, and children also use it. Table 2 shows the practices, patterns and prevalence of tobacco use in India.

Table 2 Tobacco use practices

Type of tobacco use	Description
Smoking forms	
Beedis	*Beedis* are the most popular smoking form of tobacco in India. Thirty-four per cent of the tobacco produced in India is used for making *beedis*.
Cigarettes	Cigarette smoking is the second most popular smoking form of tobacco used in India. The prevalence varies greatly among different geographic areas and subgroups such as rural–urban.
Cigars	Cigars are made of air-cured, fermented tobacco, usually in factories, and are generally expensive. Cigar smoking is predominantly an urban practice.
Cheroots	A *cheroot* is a roll made from tobacco leaves.
Chuttas	*Chuttas* are coarsely prepared *cheroots*. About 3000 million pieces of *chuttas* are made annually in India. *Chutta* smoking is widespread in the coastal areas of Andhra Pradesh, Tamil Nadu and Orissa.
Reverse *chutta* smoking	Reverse *chutta* smoking is practised extensively by women in the rural areas of Visakhapatnam and the Srikakulam district of Andhra Pradesh.
Dhumti	*Dhumti* is a kind of a conical cigar made by rolling tobacco leaf in the leaf of another plant.
Pipe	Pipe smoking is one of the oldest forms of tobacco use.
Hooklis	*Hooklis* are clay pipes commonly used in western India.
Chillum	*Chillum* smoking is an exclusively male practice; it is limited to the rural areas of northern India.
Hookah	The *hookah* is an Indian water pipe in which the tobacco smoke passes through water before inhalation.
Smokeless forms	
Paan (betel quid)	*Paan* consists of betel leaf with tobacco (*Piper betel*), areca nut (*Areca catechu*), slaked lime [$Ca(OH_2)$] and catechu (*Acacia catechu*).
Paan masala	*Paan masala* contains areca nut, slaked lime, catechu and condiments, with or without powdered tobacco. It is popular in urban areas and is fast becoming popular in rural areas.

Table 2 (*Cont.*) Tobacco use practices

Type of tobacco use	Description
Tobacco, areca nut and slaked lime preparations	Combinations of tobacco, areca nut and slaked lime are chewed in several regions of north India, where they are known by different names.
Mainpuri tobacco	In the Mainpuri district of Uttar Pradesh and nearby areas, this preparation is very popular. It contains mainly tobacco with slaked lime, finely cut areca nut, camphor and cloves.
Mawa	It contains thin shavings of areca nut with tobacco and slaked lime. Its use is becoming popular in Gujarat, especially among the youth. The prevalence of *mawa* chewing has increased in recent years.
Tobacco and slaked lime (*khaini*)	Use of a mixture of sun-dried tobacco and slaked lime, known in some areas as *khaini*, is widespread in Maharashtra and several states of north India.
Chewing tobacco	Small pieces of raw or commercially available finely cut tobacco are used for this purpose. Chewing of tobacco alone, however, does not appear to be very common in India.
Snus	Swedish snuff (*snus)* is available in teabag-like pouches, which can be kept in the buccal or labial groove and sucked.
Tobacco products for application	
Mishri	*Mishri* is a roasted, black powder made by baking tobacco on a hot metal. Women, who use it to clean teeth initially, soon apply *mishri* several times a day. *Mishri* use is common in Maharashtra and Goa.
Gul	*Gul* is a pyrolysed tobacco product used as a dentifrice in the eastern part of India.
Bajjar	*Bajjar* is dry snuff (*tapkeer*) applied commonly by women in Gujarat on the teeth and gums.
Lal dantmanjan	*Lal dantmanjan* is a red-coloured tobacco-containing tooth powder. After the passage of a law banning the use of tobacco in dental care products, the listing of tobacco as an ingredient was stopped.
Gudhaku	*Gudhaku* is a paste made of tobacco and molasses. It is commonly used in Bihar, Orissa, Uttar Pradesh and Uttaranchal. *Gudhaku* is applied to the teeth and gums, predominantly by women.
Creamy snuff	Commercial preparations of tobacco paste are marketed in toothpaste-like tubes. They are advertised as possessing anti-bacterial activity and being good for the gums and teeth. These products are thus used like regular toothpaste, but users soon become addicted. This practice seems popular with children in Goa.
Tobacco water	Tobacco water (known as tuibur in Mizoram and *hidakphu* in Manipur) is manufactured by passing tobacco smoke through water.
Nicotine chewing gum	Nicotine chewing gum containing 2% nicotine (brand name *good-kha*) has been launched as a help for tobacco cessation. For chewers, it is available in *gutka* flavour and for smokers, in mint flavour.
Areca nut preparations	
Areca nut	In addition to being an ingredient of *paan*, occasional chewing of areca nut (usually processed) alone is quite common in India, but habitual chewing is comparatively rare. In Assam, a fermented form of areca nut, known as *tamol* or *bura tamol*, is chewed extensively. This is prepared by preserving raw areca nuts together with areca leaves in an underground pit with an inner lining of straw for four months. *Bura tamol* is often infected with fungus. This product contains high levels of arecoline.
Supari	Areca nut is known as *supari* in several parts of north India. Some commercial *supari* preparations are made by cutting dried areca nuts into bits and roasting them in fat to which flavouring, sweetening agents and condiments are added.
Meetha mawa	*Meetha* (sweet) *mawa* consists of thin shavings of areca nut, grated coconut, dried fruits and other sweetening agents. It is used commonly in Gujarat and similar preparations with different names are used widely in other regions.

Prevalence of tobacco use

The National Household Survey of Drug and Alcohol Abuse in India (NHSDAA), conducted in 2002 among males, covered over 40,000 individuals aged 12–60 years in nearly 20,000 households in 25 states. Table 3 shows that there is an increase in tobacco use with age, levelling off after 50 years of age. Table 4 gives the prevalence rates of tobacco use in individuals above the age of 15 years, which were calculated from the 52nd Round of the National Sample Survey (NSS) and the National Family Health Survey (NFHS)-2.

Table 3 Tobacco use among males by age category (NHSDAA, 2002)

	12–18 years	19–30 years	31–40 years	41–50 years	51–60 years
Sample (n)	8587	13216	7805	5920	5168
Tobacco users (n)	1860	7026	5186	4193	3638
Prevalence	55.8	54.9	67.6	72.0	71.5

Source: Srivastava *et al.* 2004

Table 4 Available national data for India on tobacco use prevalence among adults, for 1995–1996 and 1998–1999

Survey	Strata	National Sample Survey, 52nd Round, 1995–1996	National Family Health Survey-2, 1998–1999
Age group		15+ years	15+ years
No. surveyed	Urban+ Rural	396,546	315,597
Regular	M (%)	51.3	46.5
tobacco users	F (%)	10.3	13.8
Regular	M (%)	35.3	29.3
smokers	F (%)	2.6	2.4
All (%)	19.2	NR	
Regular	M (%)	24.0	28.1
smokeless	F (%)	8.6	12.0
users	All (%)	16.4	NR

NR: not reported; M: male; F: female
Note: Confidence intervals were not available for any national survey data
Source: Rani *et al.* 2003

Regional differences in tobacco use (amomg women)

According to NFHS 1998–1999 data, regions in increasing order of prevalence of tobacco use among women are the north, south, west, central, east, and the northeast. Chewing in various states in 1998–1999 among women was as follows:

- Up to 61% in Mizoram
- Between 30% and 40% in Orissa and Arunachal Pradesh
- Between 20% and 30% in Meghalaya and Assam
- Between 15% and 20% in Manipur, Sikkim, Nagaland, Madhya Pradesh, Uttar Pradesh, West Bengal and Maharashtra
- Between 10% and 15% in Karnataka, Kerala and Tamil Nadu
- Between 5% and 10% in Andhra Pradesh, Goa, Gujarat, Tripura and Bihar
- Between 2% and 4% in Delhi and Rajasthan
- Less than 1% in Punjab, Himachal Pradesh, Haryana, and Jammu and Kashmir.

Smoking in various states among women in 1998–1999 was as follows:

- Between 10% and 25% of women currently smoked in Mizoram and Manipur.
- Between 5% and 10% of women currently smoked in Jammu and Kashmir, Bihar, Tripura, Sikkim, Meghalaya and Arunachal Pradesh.
- Less than 5% of women currently or ever smoked in the large majority of states.

Prevalence of tobacco use among the youth

According to the Global Youth Tobacco Survey (GYTS), 2000–2004, tobacco use among students (Grades 8–10) were as follows:

- 17.5% were current users of tobacco in any form (range: 2.7%–63%);
- 14.6% were current smokeless tobacco users (range: 2.0%–55.6%);
- 8.3% were current smokers (range: 2.2%–34.5%).

Estimation of the number of tobacco users

The estimated number of tobacco users in India among those 10 years of age and above is around 250 million.Table 5 shows the observed prevalence rate of tobacco use (chewing and smoking forms) in urban and rural areas among males and females. The prevalence of tobacco use increases with age. Among males, the rates decreased after 60 years of age but not in females. A similar pattern is seen in the age-specific prevalence distribution from NFHS-2 (Table 6).

Table 5 Percentage of household members above 15 years of age who currently chew tobacco or smoke by gender 1998–1999 (NFHS-2)

	Male		Female	
Residence	**Chew tobacco**	**Currently smoke**	**Chew tobacco**	**Currently smoke**
Rural	31.3	32.6	13.8	3.1
Urban	20.8	21.4	8.8	0.9
Total	28.3	29.4	20.5	16.2

Source: International Institute for Population Sciences 2000

Table 6 Age-specific prevalence of tobacco use in males and females (NFHS-2)

	Male		Female	
Age group (years)	**Chew tobacco**	**Currently smoke**	**Chew tobacco**	**Currently smoke**
15–19	9.4	4.4	2.1	0.2
20–24	20.3	13.7	4.3	0.6
25–29	28.0	25.1	8.0	1.1
30–39	34.1	37.6	12.3	2.2
40–49	35.6	45.0	18.6	4.0
50–59	35.4	45.3	22.8	5.7
60+	37.6	38.6	25.0	5.3
Total	28.3	29.4	20.5	16.2

Source: International Institute for Population Sciences 2000

Table 7 shows the all-India tobacco use prevalence and estimated number of users (chewers and smokers) in the age group of more than 30 years.

Table 7 All-India tobacco use prevalence and estimated number of users (chewers, smokers) in the 30+ age group

Men		Women	
Chewers	**Smokers**	**Chewers**	**Smokers**
35.4%	41.2%	18.2%	3.9%
75,479,712	87,873,798	36,762,373	7,833,853

Source:NFHS-2 age-specific data from International Institute for Population Sciences, 2000

Health Consequences of Tobacco Use

There is sufficient evidence to infer a causal relationship between smoking and vascular diseases such as coronary heart disease, stroke and subclinical atherosclerosis, respiratory diseases such as chronic obstructive pulmonary disease and pneumonia, adverse reproductive effects and cancer at ten sites (Table 8).

Table 8 Health consequences related to tobacco exposure

Heart and blood vessel diseases
- Atherosclerosis, coronary heart disease
- Cerebrovascular diseases
- Abdominal aortic aneurysm
- Peripheral vascular disease (may cause gangrene in the legs)
- Erectile dysfunction or impotence (atherosclerosis and endothelial dysfunction of the internal pudendal and penile arteries)

Cancer
- Cancers of the bladder, cervix, oesophagus, kidney, larynx, lung, oral cavity and pharynx, pancreas, stomach and leukaemia
- Precancerous lesions: Leucoplakia, erythroplakia of the oral cavity

Respiratory diseases
- Chronic obstructive pulmonary disease: Chronic bronchitis
- Acute respiratory illnesses: Pneumonia, bronchitis and other respiratory infections
- Respiratory effects mediated *in utero*: Reduced respiratory function in infants
- Respiratory effects in childhood and adolescence: Decreased physical fitness, potential retardation in the rate of lung growth and the level of maximum lung function among children and adolescents
- Respiratory effects in adulthood: Acceleration of age-related decline in lung function among adults
- Other respiratory effects: Increased cough, phlegm production, wheezing, respiratory infections and dyspnoea

Reproductive effects
- Foetal death and stillbirth: Sudden infant death syndrome (SIDS)
- Fertility: Delayed conception (primary and secondary infertility)
- Low birth weight: Foetal growth restriction and preterm delivery
- Pregnancy complications: Premature rupture of membranes, abruptio placentae and placenta praevia

Other effects
- Cataract
- Adverse surgical outcomes related to wound healing and respiratory complications
- Low bone density among postmenopausal women, and risk of hip fractures
- Peptic ulcer disease, periodontitis

Overall (all-cause) mortality due to tobacco

The relative risk for death due to tobacco use in cohort studies from rural India is

—40% to 80% higher for any type of tobacco use;
—50%–60% higher for smoking;
—90% higher for reverse smoking;
—15% and 30% higher for tobacco chewing in men and women, respectively;
—40% higher for chewing and smoking combined.

An urban cohort study in Mumbai found that the relative risk of dying was more than 50% higher for smokers and about 15% higher for smokeless tobacco users. An urban case–control study in Chennai found that the relative risk of dying for smokers was slightly higher than 2-fold. Overall, smoking currently causes about 700,000 deaths per year in India.

Tobacco and cancer

Case–control studies in India have shown that tobacco chewing in its various forms is directly responsible for cancers of the oral cavity, oespohagus, pharynx, cervix and penis. *Beedi* and cigarette smoking cause oral, pharyngeal, oesophageal, laryngeal, lung, stomach, gallbladder, urinary bladder and penile cancers. Global data show that cancers in certain other anatomical sites such as the kidney, liver and pancreas and myeloid leukaemia have also been associated with the use of tobacco.

Tobacco and vascular diseases

Cardiovascular diseases (CVD) are major contributors to death and disability. By 2010, CVD will be the leading cause of death in developing countries. Tobacco use is a major known risk factor for CVD. CVD is the leading cause of tobacco-related deaths. Tobacco use is associated with earlier myocardial infarction (MI) (heart attacks) and coronary heart disease (CHD)-related deaths at an early age. Many of the deaths due to CVD occur at a younger age in India compared to other countries. In India, 42% of the total deaths by 2020 are projected to be due to cardiovascular causes. Global studies show the association between active and second-hand smoking, and CVD, cerebrovascular stroke, peripheral vascular disease and sudden cardial death (SCD). Presently, there is limited evidence relating smokeless tobacco use and CVD.

Tobacco and lung disease

Chronic obstructive pulmonary disease (COPD) is a progressive and disabling lung disease which leads to respiratory crippling and premature death. In India, it affects over 5% of males and 2.7% of females who are over 30 years of age. Tobacco smoking is responsible for over 82% of COPD, which accounts for about 12 million adults suffering from smoking-attributed COPD in India.

Smoking and pulmonary tuberculosis

Tuberculosis (TB) is a major cause of premature death in India, both in early adult life and in middle age (25–69 years), particularly among men who smoke. The prevalence of TB is about three times higher among ever-smokers than among never-smokers. The heavier the smoking, either cigarettes or *beedis*, the greater the prevalence of TB among smokers. Mortality from TB is three to four times higher in ever-smokers than in never-smokers.

Tobacco use and reproductive health outcomes

Tobacco use has an adverse effect on the sexual and reproductive health of both men and women. Men who smoke have a lower sperm count and poorer sperm quality than non-smokers. The effects of maternal tobacco use (smoked and smokeless) during pregnancy include decreased foetal growth, spontaneous abortions, foetal deaths, pregnancy complications including those that predispose to preterm delivery, and long term effects on the surviving children.

Tobacco-related oral mucosal lesions and dental diseases

Tobacco use is associated with oral precancerous lesions such as leucoplakia and erythroplakia, and other oral mucosal lesions. Leucoplakia is the most common precancerous lesion associated with smoking and/or chewing tobacco. Oral submucous fibrosis (OSMF) is emerging as a new epidemic, especially among the youth. The dramatic increase in OSMF among young people in India has been attributed to chewing *gutka* and *paan masala*.

Green tobacco sickness among tobacco harvesters

Tobacco is harmful without being smoked or chewed. Workers engaged in tobacco cultivation suffer from an occupational illness known as green tobacco sickness (GTS), an acute form of nicotine toxicity resulting from absorption of nicotine through the skin.

Health Care Costs: Social and personal

The total social costs of tobacco products exceed the direct outlay on them, owing to morbidity, mortality and negative externalities associated with the consumption of tobacco products. The costs inflicted by tobacco consumption extend much beyond the direct users to cover secondary smokers as well as non-users, and are spread over a period much beyond the period of actual consumption of tobacco. The direct cost of tobacco consumption in India, aggregating to around 2%–3% of the total private final consumption expenditure (PFCE) in the economy over a long period of time, is more or less on par with the total private final spending on health care and medical services.

The costs of tobacco consumption are related to personal costs such as those arising from the consumption *per se*, costs of adverse health effects and their medical care. Each of these costs needs to be estimated as comprehensively as possible to obtain an estimate of the total costs arising from tobacco.

The total and indirect costs of the three major tobacco-related diseases in India has increased from Rs 277.60 billion in 1999 to Rs 308.33 billion in the year 2002–2003 (Table 9). It may be noted that this cost imposed by unchecked tobacco consumption (in the year 2002–2003) exceeds the total combined revenue and capital expenditure (Budget estimates) by the Centre and the States on medical and public health, water supply and sanitation which, according to the Indian Public Finance Statistics (2002–2003), amounted to Rs 290.49 billion.

Table 9 Estimates of the cost of three major tobacco-related diseases for the year 2001–2002

Population in 2001–2002	1037 million
Population in 1999–2000	1001 million
Number of coronary artery disease (CAD) cases	4.45 million
Percentage of CAD cases	0.4%
Number of tobacco-related cancer cases	163,500
Percentage of tobacco-related cancer cases	0.2%
Number of chronic obstructive lung disease (COLD) cases	39.2 million
Percentage of COLD cases	3.92%
Estimated number of cases (in million) in 2001–2002 of	
CAD	4.6
Tobacco-related cancers	0.2
COLD	40.7
Cost structure, 1999–2000	(in Rs)
CAD	
Direct cost	16,559
Indirect cost	12,441
Total cost	29,000
COLD	
Direct cost	4404
Indirect cost	18,896
Total	23,300
Cancers	
Direct cost	49,980
Indirect cost	300,020
Total cost	350,000

1. Direct cost increased by 11% (based on the increase in WPI index number (base 1993–1994) in 2001–2002 over 1999–2000). (*Source:* Economic Survey, 2002–2003, Ministry of Finance, Government of India)
2. Indirect cost increased by 19.2% (based on the increase in nominal Net National Product (NNP) index numbers with 1950–1951 base. (*Source:* Economic Survey, 2002–2003, Ministry of Finance, Government of India)
3. Using 10% discount rate, the additional direct and indirect costs for the year 2001–2002 have been reduced by 10%.

Projected cost in 2001–2002	(in Rs)
CAD	
Direct cost	16,559
(+) 1%	166
Indirect cost	12,441
(+) 9.2%	1144
Total cost	30,310
COLD	
Direct cost	4404
(+) 1%	440
Indirect cost	18,896
(+) 9.2%	1738
Total cost	25,478
Cancers	
Direct cost	49,980
(+) 1%	4998
Indirect cost	300,020
(+) 9.2	27,602
Total cost	382,600

Total cost of CAD: 4.61 million × Rs 30,310 = Rs 139.7 billion

Total cost of COLD: 40.65 million × Rs 25478 = Rs 103.57 billion

Total cost of cancers: 0.17 million × Rs 382600 = Rs 65.04 billion

Total cost of the three major tobacco-related diseases (2001–2002) = Rs 308.33 billion

Ecological and environmental effects of tobacco use

Tobacco contributes to deforestation in three ways: forests cleared for cultivation of tobacco, fuelwood stripped from forests for curing and forest resources used for packaging of tobacco, tobacco leaves, cigarettes, etc. Tobacco growing depletes soil nutrients at a much faster rate than many other crops, thus rapidly decreasing the fertility of the soil. Tobacco displaces the indigenous flora and fauna and gradually becomes a source of pests for other crops. This destabilizes the predator–prey relationship. Tobacco requires large amounts of chemicals, which may run off into water bodies, contaminating local water supplies.

Battle for Tobacco Control—The India experience

Legislation and enforcement

The Government of India in 1975 enacted the Cigarettes (Regulation of Production, Supply and Distribution) Act, which made it mandatory to display a statutory health warning on all packages and advertisements of cigarettes. During the 1980s and 1990s, the Central and State Governments imposed further restrictions on tobacco trade and efforts were initiated to bring forth a comprehensive legislation for tobacco control. The Indian Parliament passed the 'Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Bill, 2003 in April 2003. This Bill became an Act on 18 May 2003. Rules related to some sections of the law were formulated and enforced from 1 May 2004.

Indian Law—At a Glance

Key provisions of the Cigarettes and Other Tobacco Products Act, 2003

- Ban on smoking in public places (including indoor workplaces)
- Ban on direct and indirect advertising of tobacco products
  —Point-of-sale advertising is permitted
- Ban on sales to minors
  —Tobacco products cannot be sold to children less than 18 years of age
  —Tobacco products cannot be sold within a radius of 100 yards of educational institutions
- Pictorial health warnings
- English and one or more Indian languages to be used for health warnings on tobacco packs
- Testing and regulation: Ingredients to be declared on tobacco product packages (tar and nicotine)

The WHO Framework Convention on Tobacco Control (FCTC) and its Implications for India

The World Health Assembly adopted the Framework Convention on Tobacco Control (FCTC) at its 56th Session in May 2003. India was the eighth country to ratify the convention on 5 February 2004. India advocated strong provisions in the FCTC and was unanimously elected as the coordinator of the countries belonging to the WHO South-East Asian Region. India's effective leadership in the negotiations and strong advocacy of pro-public health positions was acclaimed and formally recognized by civil society groups. The Indian Government has been pursuing a proactive and bold strategy for tobacco control. Although the Indian Act goes beyond the obligations set out in the FCTC in many respects, there is a need for some additional measures to be taken, to ensure full conformity with the FCTC (Table 10).

Table 10 Framework for national action and international cooperation under the FCTC

Framework for national action	Framework for international cooperation
• Comprehensive ban on advertising • Protection against second-hand smoke • Prohibition of youth access • Prominent health warnings • Testing and regulation of contents • Increase in tobacco taxes • Cessation programmes • Alternative crops • Surveillance	• Ban on cross-border advertising • Prevention of illicit trade • Scientific and legal cooperation • Technical assistance • Financial support for FCTC implementation (bilateral and multilateral channels) • Monitoring
Requires partnerships within countries	Requires partnerships among countries

Litigation, consumer action and judicial verdicts

Judicial activism has played a major role in providing impetus to the tobacco control legislation, both by directing the government to take much needed steps for tobacco control and by creating a climate of public support for such legislation. The High Court of Kerala in July 1999 issued a path-breaking judgment that banned smoking in public places in that state. On 2 November 2001, the Supreme Court of India banned smoking in public places and issued directions to the Union of India, the State Governments and the Union Territories to take necessary action to ensure implementation of the ban. Some State Governments imposed a ban on the sale of *gutka*. The manufacturers of *gutka* challenged this ban on several grounds. The Supreme Court of India ruled that the Central Government alone was vested with the power to ban these products.

Civil society's initiatives

Civil society organizations play an important role in tobacco control as they advocate for regulating tobacco products, raise awareness among the masses, demand regulation and litigate against other issues related to tobacco. Nine national NGOs (2001) in India formed the Advocacy Forum for Tobacco Control (AFTC), which designed and implemented informative messages that clarified the benefits of having such a law in India to key Members of Parliament. Efforts made by some select NGOs in India for tobacco control are given in Table 11.

Table 11 Efforts made by selected NGOs in India for tobacco control

NGO and website	Establishment and location	Activity profile	Networking with other NGOs and GOs	Key focus area or strengths
Action Council Against Tobacco (ACT)-India www.act_india.org	Functional since 1991 Registered since 1993 (Mumbai, Maharashtra)	• **Health education activities:** Cancer awareness and education programmes for schoolchildren, school personnel and college students were conducted. Awareness in the community regarding the ill-effects of tobacco. Exhibition on the ill-effects of tobacco, opportunistic screening camps in the community for tobacco-related cancers and radio talk shows on the ill-effects of tobacco and tobacco cessation. Training workshops on tobacco control for NGOs, media personnel and health care providers were conducted. • **Advocacy programmes/efforts:** ACT-India was actively involved in framing and lobbying for the Tobacco Control Bill in Parliament and lobbying for signing and ratification	Active collaboration with other organizations and providing support in terms of training, literature, educational material	Health education and training on advocacy for tobacco control

Table 11 (*cont.*) Efforts made by selected NGOs in India for tobacco control

NGO and website	Establishment and location	Activity profile	Networking with other NGOs and GOs	Key focus area or strengths
		of the FCTC by the Government of India. Acted as a watchdog through monitoring of advertisement ban. Three programmes for fellows in tobacco control leadership were organized to train and develop a large number of tobacco control advocacy leaders in India and the South-East Asia region of WHO. A strategy planning workshop for Advocacy Forum for Tobacco Control (AFTC) was conducted. • **Litigation:** Provided scientific support to individuals and organizations fighting the tobacco menace. Support was provided to FDA Minister Mr Anil Deshmukh for formulation of a gutka control law in Maharashtra, and to Mr Murali Deora for arguing in favour of a public interest litigation (PIL) filed by him and others in the Supreme Court of India for a complete ban on smoking in public places. • **Focused campaigns:** The Global Youth Tobacco Survey (GYTS), Global School Personnel Survey (GSPS) and Global Medical Doctors Survey (GMDS) were conducted to study the knowledge, attitude and practices of tobacco use. Clinic- and community-based tobacco cessation activities were initiated. Training sessions were organized for teachers and school health personnel of municipal corporations, NGOs, and medical officers of municipal corporations. • **World No Tobacco Day (WNTD) activities:** Exhibitions were organized at major railway stations, bus depots in Mumbai to create awareness and educate the masses about the ill-effects of tobacco. Radio and TV talk shows on tobacco and its ill-effects were aired. Free health check-up was provided for tobacco users. Painting competitions were organized for schoolchildren on the theme of tobacco.		
Green Motherland www.greenmotherland.info	Functional since 1995 (Chennai, Tamil Nadu)	• **Health education activities:** Published WHO tobacco facts in local newspapers to create awareness on the evils of smoking among the public. • **Advocacy programme/efforts:** An advocacy effort was successfully made through 20 MLA of the Pasumai Thaayagam in the Tamil Nadu Legislative Assembly to ban smoking in public places. • **Focused campaigns:** A campaign against the film industry was made through sending individual letters to film personalities by the president of Pasumai Thaayagam. • **WNTD activity:** Since 1996, WNTD activities are being carried out through poster and sticker campaigns on evils of smoking. A hoarding was put up with anti-tobacco slogans in the heart of Chennai city in 2002. • **Countering the industry:** Repeated appeals have been made to the concerned people of organizations such as the film and fashion industries about curbing tobacco promotion through films.	Nil	Health awareness and advocacy
Health Related Information Dissemination Amongst Youth–Students	Functional since 1992 Registered since 1999	• **Health education activities:** Involved in educating the youth and community around 300 schools and 10 colleges in Delhi. Expanded the programme of health awareness and tobacco control advocacy to 10 cities of India in 2003. Created a tobacco control education	ASHA (Lucknow, UP); Task Force Advocacy Support Group (Ghonda, UP);	Health awarencess and tobacco control advocacy among and

Table 11 (*cont.*) Efforts made by selected NGOs in India for tobacco control

NGO and website	Establishment and location	Activity profile	Networking with other NGOs and GOs	Key focus area or strengths
Health Action Network (HRIDAY–SHAN) www.hriday-shan.org		and advocacy curriculum for youth in India. • **Advocacy efforts:** Actively involved in advocating with policy-makers since 1998 and advocated with parliamentarians during April–May 2003 to ensure smooth passage of the Indian Tobacco Control Bill, 2003. —Organized signature campaigns, appeals, press releases and articles in the media to support tobacco control policies. • **Research:** Testing the effectiveness of interventions related to tobacco control education and advocacy among the youth. —Conducted the Global Youth Tobacco Survey (GYTS) and Global School Personnel Survey (GSPS) in Delhi • **Focused campaign:** Tobacco control awareness and advocacy among youth by using innovative strategies such as the All India Student Parliament on Health in 2003. —Train teachers and students through workshops to implement a tobacco control curriculum in schools. • **Countering the industry:** IEC material is distributed (posters, postcards, films, fact sheets, etc.) to counteract tobacco promotion messages. • **WNTD activity:** Formed well-informed activist groups: Teacher Against Tobacco (TAT), Parents Against Tobacco (PAT) and Students Against Tobacco (SAT), which work together on the themes of WNTD every year. Signature campaigns and community outreach programmes were conducted, and films shown to build an environment conducive for enforcing tobacco control legislation. Campaigns were organized for tobacco-free sports/fashion.	Rajasthan Cancer Foundation (Jaipur, Rajasthan); Voluntary Health Association (Bhubaneshwar, Orrisa); National Organization for Tobacco Eradication (NOTE)-INDIA (Panaji, Goa); Kerala Voluntary Health Services (Kottayam, Kerala); Academy for Nursing Studies and Women's Empowerment Research Studies (Hyderabad, Andhra Pradesh); Himachal Pradesh Voluntary Health Association (Shimla, Himachal Pradesh); Yuvak Pratisthan (Mumbai, Maharashtra)	by youth
Voluntary Health Association of India (VHAI)	Registered voluntary organization (New Delhi)	• **Health education activities:** VHAI began its tobacco control activities in 1986 focusing on schoolchildren in 60 public and government schools of Delhi. Activities conducted include talks on the dangers of tobacco and the tobacco industry's marketing strategies, essay writing and poster painting competitions. Later, schools in Gwalior, Varanasi, Guwahati and Dharamsala were also included with the support of VHAI's State branches. An innovative programme 'Leadership in Health' was conducted in collaboration with the 'Health or Tobacco' group of the All India Institute of Medical Sciences, Delhi. *IEC materials:* These included 'Touch me not' for schoolchildren on the tobacco issue and 'Radio DATE' (Drugs, Alcohol and Tobacco Education). • **Advocacy programme/efforts:** Since 1987, VHAI has been advocating very strongly for a comprehensive central tobacco act. Since 1995, VHAI advocated for tobacco sponsorship-free sports through writing letters to concerned personnel, press releases and letters to prominent MPs. • **Litigation:** VHAI filed a PIL in 1998 in the Delhi High Court against the Board of Control for Cricket in India for advertising and promoting cigarette smoking among the youth. In 2001, ITC voluntarily withdrew	27 State Voluntary Health Associations (SVHAs) and 3500 CSOs working on health and development in the country. In 1987, VHAI set up the first national network of NGOs and professionals on tobacco control called ACTION (Action to Combat Tobacco —Indian Organizations Network). VHAI networked with over 300 NGOs in the country for organizing 4 regional workshops on 'Innovative approaches to tobacco control' supported by	Health education, advocacy, litigation

Table 11 (*cont.*) Efforts made by selected NGOs in India for tobacco control

NGO and website	Establishment and location	Activity profile	Networking with other NGOs and GOs	Key focus area or strengths
		its sponsorship of the Indian cricket team. • **WNTD activity:** Talks were organized in all state capitals, press releases and letters to health officials are sent for stricter controls on tobacco use in public. On 31 May 2004, with the support of the Ministry of Health and WHO, VHAI coordinated the observance of WNTD through its 27 state offices. Rallies, huge bonfires of tobacco products and burning of the effigy of the tobacco industry was done. • **Counter-activity against tobacco industry tactics and strategies:** VHAI took strong objection to the Barista chain of restaurants for flouting the ban on public smoking. VHAI wrote a letter to Godfrey Philips expressing deep concern at hurting the sentiments of the people of Rajasthan, urging Godfrey Philips to immediately withdraw the 'Jaisalmer' re-launch campaign.	the Ministry of Health and WHO. VHAI is presently part of the AFTC. All India Institute of Medical Sciences, Indian Council of Medical Research, All India Radio and the Central Health Education Bureau	

For details of other NGOs, see the main Report (Available from URL: http://www.hriday.shan.org)

Tactics of the tobacco industry

India is a potential target of tobacco giants due to its billion strong population and many non-smokers. The Indian Tobacco Company (ITC Ltd) controls about 65% of the entire cigarette market in India followed by Philips India Ltd (GPI), Vazir Sultan Tobacco Company (VST) and Golden Tobacco Company (GTC). *Beedi* and smokeless tobacco, which form another huge segment of tobacco trade in India, was earlier an unorganized sector but now is shaping up as an organized corporate sector.

Tobacco advertising contributed Rs 3000–4000 million every year to the Indian advertising industry, before the ban on advertising was enforced. The tobacco industry used various media to promote and push their products among selected audiences by sponsoring sports and cultural events such as international cricket, television programmes, and advertisements in newspapers, magazines, transport vehicles, etc. The tobacco industry in India is increasingly investing in and extensively advertising non-tobacco products by the same brand name. Attractive schemes such as bravery awards, filmfare awards have also been conducted by several tobacco companies, indirectly promoting their products.

Health education and mass media efforts

The primary tool for tobacco control is to impart comprehensive information to the population about the ill-effects of tobacco use. Public education is an integral part of the efforts to both prevent initiation of tobacco use and encourage tobacco cessation. Efforts made by the government and NGOs for educating the community on issues related to tobacco control, although few, have intensified in the past few years. NGOs have played a major role in organizing educational activities on the ill-effects of tobacco. Evaluation of some of the educational intervention studies has shown a positive impact on the reduction of tobacco use.

Indian experience with tobacco cessation

Tobacco cessation services have been found to be feasible in Indian settings. The quit rates achieved with behavioural change counselling, which is the least expensive and most feasible option, are satisfactory and provide scope for further improvement. The overall quit rate at 6 weeks was around 16%. The addition of pharmacotherapy improved the quit rates. Counselling is cost-effective and can be the preferred option.

Fiscal measures

The conflict between tobacco stakeholders and public health advocates defines the political economy of tobacco control. Economists have convincingly shown the positive trade-off of restricting tobacco use and that there is no immediate danger to the existing economic interests as a result of measures to lower tobacco use. The positive pay-off from tobacco control is substantial in terms of the multiplied effects of improvements in public health, reduced disease and death, and other externalities, which inevitably follow measures to ward off the tobacco epidemic. In addition to gains in terms of productivity and growth following from a healthier and more active workforce (better human capital), effective tobacco control contributes to cleaner streets and air quality, preservation of forests, reduced absenteeism, reduced fire hazards, healthier mothers and children; in brief, to a better quality of life. The overall impact of fiscal measures for tobacco control on economic, social and human development, including its contribution to the goal of health for all in the twenty-first century, is likely to outweigh any short term dislocation which may follow. In fact, since the poor and illiterate are found to be more addicted to tobacco, the more effective the tobacco control, the lower the vulnerability of the poor to the adverse economic and social effects of tobacco use.

An analysis of the fiscal policy of the government needs to consider not just the cash subsidies but also other kinds of support that flow from different government departments for the promotion of tobacco cultivation and production. In addition, the role played by the tobacco industry also needs to be considered as it induces both tobacco consumption and tobacco production. Increasing the tax base of tobacco by covering all types of tobacco products, irrespective of the turnover, is essential to stop people shifting from costlier to cheaper products. Those who profit from tobacco products should pay taxes, while those who consume it have to be discouraged from using it. There should not be significant differences between the tax policies for various types of tobacco.

Tobacco Control: What works?

The recent enactment of legislation for tobacco control and ratification of the Framework Convention on Tobacco Control (FCTC) by India should only be regarded as steps which mark the beginning of a major national effort to deal effectively with an active and increasingly menacing threat to health and development. The follow up process requires a comprehensive multicomponent strategy which is implemented through coordinated multisectoral measures. Such a strategy should combine measures for demand reduction as well as interventions intended for reduction of supply. Some supply-side actions to supplement demand-reduction measures to achieve early and effective tobacco control are shown in Fig. 2.

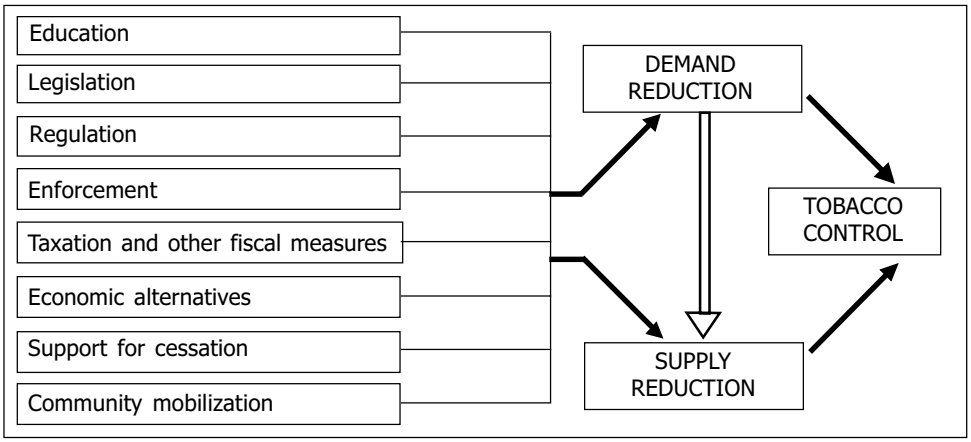

Fig. 2 Tobacco control needs actions to reduce demand and supply

Such measures involve interventions at multiple levels. Policy-level interventions would include levy of taxes (to raise prices of tobacco products and act as a disincentive for purchase, especially to youth on the threshold of tobacco experimentation), regulation of tobacco products (for constituents, emissions, health warnings and misleading health claims) and measures to reduce supply (ban on sale to youth, curbs on smuggling and programmes to aid tobacco farmers and workers to switch over to alternative livelihoods).

Interventions at the community level would involve programmes for empowering people, especially vulnerable sections, with the knowledge, motivation and skills required to abstain from or abandon the use of tobacco habit. These would also require the creation of suitable environments to stimulate, support and sustain healthy lifestyle choices (such as tobacco-free norms at schools, worksites, homes, etc.).

At the level of the individual, the interventions would focus on behaviour change, especially aimed at tobacco cessation. This requires the availability of services ranging from counselling to de-addiction therapies and an affordable supply of pharmacological agents for those who need it. It must, of course, be clearly recognized that cessation by individuals is also greatly facilitated by interventions at the policy level and the community level.

Policy interventions: Taxation

A rational tax structure needs to be designed to provide a tax- and price-based disincentive for tobacco consumption in all forms, rather than merely transferring consumption from one tobacco segment to another. While taxes on cigarettes must be progressively increased, *beedis* and oral tobacco products should be taxed at sufficiently high rates. Several countries, e.g. New Zealand, Australia and the USA, have used an earmarked 'tobacco tax' to generate financial resources for funding health promotion programmes and specifically designed tobacco control programmes. Table 12 shows international evidence on the impact of increasing cigarette taxes on the consumption of and revenue generated by cigarettes. India has used an earmarked *beedi* tax to provide several benefits to *beedi* workers. This concept needs to be extended to a dedicated tax or cess that will be utilized for resourcing tobacco control programmes.

Table 12 Impact of increasing cigarette taxes on the consumption of and revenue generated by cigarettes

Countries	Change in cigarette consumption (%)	Change in cigarette tax revenue (%)
Bangladesh	–2.40	7.36
China	–3.23	6.45
Nepal	–5.86	3.56
Sri Lanka	–1.91	7.90
France	–3.00	6.70
Japan	–2.40	7.36
Singapore	–2.92	6.79
UK	–3.12	6.57
USA	–1.20	9.68

Tobacco product regulation, testing and laboratory strengthening

The regulation of tobacco products aims to progressively reduce the levels of harmful chemicals and alter their physical characteristics. A Scientific Advisory Committee on Tobacco Product Regulation (SACtob), established by the WHO in 2002, provides technical guidance on matters related to tobacco product regulation—limitations of testing methods, setting up of upper limits for toxic ingredients and their emissions. India needs to develop laboratory capacity for regulatory testing of tobacco products (both smoking and chewed tobacco products). To monitor and discipline the tobacco industry, it is essential to develop a National Regulatory Authority with a clearly defined mandate and adequate resources.

Policy interventions: Supply-side actions

Supply-side actions are complementary to demand-side measures to control tobacco consumption in India. Supply-side actions pertain mainly to crop substitution, trade restrictions, controlling smuggling and even banning of the product. It is feasible and viable for tobacco cultivators to switch over to alternative crops such as cotton, chillies, *isabgul* (*Plantago*), cotton, maize, soya bean, sugarcane and potato. An in-depth market analysis is required to identify alternative crops. This should include considerations of the size of the potential market—both domestic and international—elasticity of demand and supply, inter-regional and international competition, and the relative advantages of the tobacco-growing region (i.e. production, costs, soils and access to markets) compared with competing regions. The government should provide assistance during transition, especially to poorer farmers, which include rural training, broader off-farm employment opportunities and assistance with crop diversification. The feasibility of non-farming jobs should also be considered, which might entail infrastructural investment.

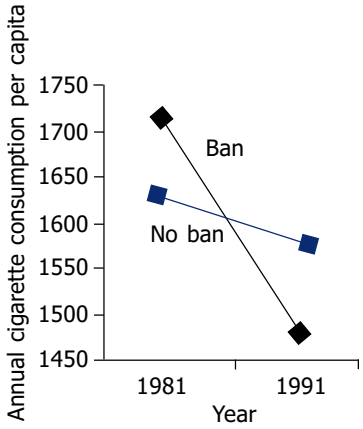

Fig. 3 Trends in weighted cigarette consumption per capita in countries with a comprehensive ban compared with countries with no ban

Source: Saffer, Henry. The control of tobacco advertising and promotion. Background paper, cited by Jha and Chaloupka

The effect of tobacco advertising on young people

On comparing tobacco consumption trends over time in 102 countries with relatively complete bans on advertising and promotion and those with no such bans, it was found that in countries with nearly complete bans, the downward trend in consumption was much steeper (Fig. 3).

Policy interventions: A comprehensive ban on advertising

There is convincing evidence that tobacco advertising plays an important role in

encouraging non-smokers to begin smoking. When countries ban tobacco advertising in one medium, such as television, the industry can substitute advertising in other media with little or no effect on overall marketing expenditures. Comprehensive bans on tobacco advertising and promotion can result in a considerable reduction of tobacco consumption at the national level. A complete ban on advertisements coupled with an intensive public information campaign on the ill effects of using tobacco products will lead to a reduction in tobacco consumption by 6%. In India, surrogate advertisements are still prevalent in the media and the existing laws need to be strengthened and enforced.

Fig. 4 Examples of proposed health warnings on tobacco products in India, which are being field-tested

Packaging and labelling of tobacco products

Warning labels on tobacco products are an effective way to inform smokers about the hazards of tobacco consumption, encourage smokers to quit, and discourage non-smokers from starting to smoke. Warnings are effective only if they contain multiple, strong and direct messages that are prominently displayed. Health warning message labelling on the product package is a critical component of a comprehensive tobacco control strategy. Health warning message labels are a cost-effective way to inform the public, especially smokers, of the hazards of tobacco use. Figure 4 shows some of the proposed health warnings to be used on Indian tobacco packages.

Protection of vulnerable groups: A human rights' approach to tobacco control

What is often not recognized, in the context of tobacco control, is the particular vulnerability of certain population groups for becoming the victims of tobacco. These include the poor, the young and women. In virtually every region of the world, the poor consume tobacco more frequently than the affluent sections of the society. Education, in particular, has a major effect on tobacco consumption. The higher the level of education, the less likely is tobacco use. The poor have less access to education and hence are more vulnerable to acquiring and maintaining tobacco use. The youth and women of all countries, but especially those of developing countries, have become prime targets for the tobacco industry, which seeks multitudes of new customers each year to replace the millions who die from the deadly effects of tobacco. They too are vulnerable in many respects, especially when poverty intertwines with their age- or gender-based susceptibility.

Tobacco control policies must encompass a human rights' approach to protect vulnerable groups from its hazards. Tobacco smoking is inversely associated with educational status. Homeless people in India spend more on tobacco than on food, education or savings. Enabling conditions must be created to help individuals make informed choices.

Community interventions: Protecting the youth from tobacco

It is estimated that, as in other developing countries, the most susceptible time for initiation of tobacco use in India is during adolescence and early adulthood, i.e. in the age group of 15–24 years. The majority of users start using tobacco before the age of 18 years, while some even start as young as 10 years. It is estimated that 5500 adolescents start using tobacco every day in India, joining the 4 million people under the age of 15 years who already use tobacco regularly. This early age of initiation points to an urgent need to plan effective interventions for this vulnerable age group. Raising the prices of tobacco products through taxes, increasing the size of the packages and a comprehensive ban on tobacco

advertising (direct and indirect) are effective means of preventing the youth from initiating use. Youth involved in anti-tobacco advocacy are more likely to avoid tobacco use.

Community interventions: Smoke-free public places

There is now incontrovertible evidence that exposure to other people's smoke is dangerous to health. Exposure to second-hand smoke is an entirely preventable cause of significant morbidity and mortality associated with tobacco use. Smoke-free workplaces not only protect non-smokers from the dangers of passive smoking, they also encourage smokers to quit or reduce consumption. For smoking bans to succeed, enthusiastic endorsement by and active participation of the community and an awareness of the health consequences of exposure to second-hand smoke are needed. The combined effect of people stopping smoking and reducing consumption reduces the total cigarette consumption by 29%. Regulations restricting smoking in public places have a considerable impact on teenage smoking behaviour. It affects the teenager's decision to become a smoker rather than the number of cigarettes smoked.

Community interventions: Strengthening health literacy on tobacco-related matters

Increasing the knowledge and awareness about the harmful effects of tobacco use among the people is one of the ways to reduce tobacco use. Health education leads to a long-lasting reduction in tobacco use, when it is imparted through the mass media and combined with a school- and community-based education programme. Education campaigns through the mass media are among the most cost-effective methods currently available to prevent or reduce tobacco use. School-based tobacco prevention programmes that identify the social influences which promote tobacco use among the youth and teach skills to resist such influences can significantly reduce or delay adolescent smoking, especially if strengthened by booster sessions and communitywide programmes involving parents and community organizations. Public education programmes should be well funded and based on rigorous research. The distinct cultural profiles of the targeted population groups should be kept in mind while designing programmes.

Individual interventions: Promoting tobacco cessation

Tobacco cessation is essential to reduce the mortality and morbidity related to tobacco use. The majority of tobacco-related deaths that can be prevented over the next 40 years will be among current smokers who can be persuaded to quit, according to projections by the WHO.

Tobacco cessation is an essential component for reducing the mortality and morbidity related to tobacco use, as the lack of it may lead to an additional 160 million global deaths among smokers by 2050. Tobacco cessation provides the most immediate benefits of tobacco control and maximizes the advantages for a tobacco user who quits the habit. Tobacco cessation services should be made widely accessible to tobacco users and should cater to the wide range of products used in India. Capacity-building strategies for the identification and management of tobacco use and disorders related to its use must strengthen the services available through the existing health care facilities. Involvement of the community is an essential component of a tobacco cessation programme.

Tobacco Control: What is needed?

Resourcing: Financial resource mobilization and human resource development

The agenda of tobacco control is as vast as it is urgent. It requires multisectoral action to prevent the primary uptake of tobacco, promote tobacco cessation, regulate tobacco products, protect non-smokers from second-hand smoke, and encourage a shift to alternative crops and industries. Each of these components of a comprehensive tobacco control strategy requires action at multiple levels, utilizing diverse implementation pathways and connecting with a wide variety of stakeholders.

To successfully initiate, implement and evaluate a National Programme for Tobacco Control, the scale of financial and human resources required would be much larger than currently available. Financial resources can be generated from a variety of sources: increased government allocations, an earmarked tobacco tax or cess, regulatory levies, penalties, private sector resources, civil society resources, international financial assistance. Human resource development, as relevant to tobacco control, must enhance the capacity of: the health care system, the education system, other development-related sectors, civil society groups, enforcement agencies, non-health professional groups, local self-governments, and the community as a whole.

Coordination: Establishment of a national coordinating mechanism

Effective enforcement of a tobacco control programme at the national level can be achieved by establishing a national coordinating mechanism that includes government and non-government stakeholders. A common Indian Tobacco Control Plan, with synchronized action by different groups, would provide greater synergy to the campaign and ensure uniform action. With the enforcement of the Indian Tobacco Control Act, coordination at the national level would ensure its effective implementation. A national coordinating mechanism becomes absolutely essential from the point of view of legislation enforcement. India, being a signatory to the FCTC and having ratified it, will also be required to adhere to the provisions of the FCTC. (*Since the publication of the Report in November 2004, FCTC has come into force at the global level in February 2005.*) Article 5.2 (a) of the FCTC obliges the ratifying parties to establish or reinforce and finance a national coordinating mechanism or fiscal points for tobacco control. A national coordination mechanism should have four types of agencies—a National Regulatory Authority (NRA), a National Coordinating Body, an Inter-ministerial Coordination Committee and a State-level Coordinating Body (Fig. 5). Without a strong and effective NRA, the provisions of the Indian Act may be faced with implementation failure.

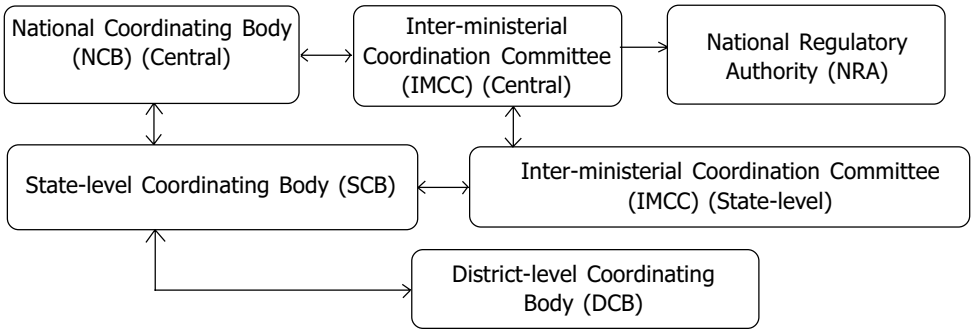

Fig. 5 Proposed scheme for a national coordinating mechanism for tobacco control

Integration of tobacco control into health and development programmes

The tobacco control programme should be comprehensive in nature and involve all the stakeholders in the entire process, right from development to implementation and evaluation. It should be integrated into the existing delivery systems such as the health care system and other developmental programmes. It will require dedicated budgetary support, which can be drawn from a tobacco cess.

What is Possible? A vision for 2020 and beyond

Tobacco control: What can be set right?

There are many ways in which the menace of tobacco can be countered and diminished, if there is a political will and collective societal commitment to strengthen tobacco control in India. This can be accomplished through the following measures:

1. Raise taxes on all tobacco products to increase prices and generate revenue for tobacco control
2. Spend the additional revenue on social sector initiatives benefiting the poor and on strengthening tobacco control programmes
3. Impose a ban on oral tobacco products such as *gutka*
4. Strengthen enforcement of existing laws and regulations
5. Establish coordinating mechanisms at the Central and State levels
6. Mobilize the people through mass education and community empowerment
7. Promote tobacco cessation through multiple avenues
8. Restrict the import of tobacco products into India
9. Progressively reduce the area of land under tobacco cultivation in India

India should aim to achieve at least a 30% reduction in the prevalence of tobacco consumption by 2020 and a 25% reduction in tobacco-related mortality by 2050. These targets are not modest, considering the large projected rise in tobacco-attributable mortality that has been forecast for India. However, a comprehensive tobacco control programme which combines high levels of passion, planning, performance and perseverance has a good chance of accomplishing these goals, or even bettering them.

Tobacco Control: Who all will need to act?

Recommendations for the Central Government

As mandated by Parliament of India and as directed by the Supreme Court of India, the Central (Union) Government has the responsibility for initiating legislative and administrative measures for tobacco control at the national level. While the Ministry of Health and Family Welfare must function as the focal point of a national programme, tobacco control requires multisectoral action to be undertaken by several ministries. It is recommended that the Central Government

1. Establish a Secretary-level Inter-ministerial Coordination Committee for developing, implementing and monitoring a National Programme for Tobacco Control (NPTC), which integrates demand-reduction and supply-reduction strategies (as recommended by the WHO Framework Convention on Tobacco Control [FCTC]), and channels

them into a multisectoral implementation pathway. Activities to be included in the National Programme for Tobacco Control are:

- Effective enforcement of a comprehensive ban on tobacco product advertising/promotion
- Curbs on cross-border advertising
- Strict ban on the sale of tobacco products to and by minors
- Rigorous enforcement of the ban on smoking in public places
- Anti-tobacco health education to be provided in schools and colleges through curricular and co-curricular activities
- Development and implementation of a dedicated media plan to provide health education related to tobacco avoidance
- Effective counter-mechanisms to tackle the influence of the tobacco industry
- Higher taxes on tobacco products, across the board, to protect vulnerable groups of society
- Effective health warnings on the packaging and labelling of tobacco products, to adequately inform consumers
- Setting up a National Regulatory Authority to administer tobacco product regulation
- Providing facilities and resources for promoting tobacco cessation
- Effective controls on illicit trade of tobacco products (smuggling)
- Stringent penal provisions to deal with violators of the law
- Identification and in-depth market analyses of alternative crops for tobacco

2. Establish a National Regulatory Authority for regulating the constituents and emissions of tobacco products.
3. Establish and help maintain independent National Laboratories for Tobacco Product Testing, which are free from the influence of the tobacco industry.
4. Effectively enforce existing laws, evolve new laws as may be necessary (such as for imposing a ban and penalties on cross-border advertising) and undertake additional administrative action as may be needed (such as imposition of a nationwide ban on *gutka* under the Prevention of Food Adulteration [PFA] Act).
5. Pursue a policy of progressively increasing the taxation on all tobacco products to reduce tobacco consumption through price mechanisms.
6. Extend the ambit of tobacco product taxation, especially the excise tax, to hitherto untaxed or lightly taxed products such as *beedis* and chewed tobacco products, and bring their taxes on par with those on cigarettes, to reduce the consumption of such non-cigarette tobacco products through price mechanisms.
7. Discontinue direct and indirect subsidies and financial incentives to tobacco farming and the tobacco industry.
8. Levy an earmarked tobacco cess, whose revenue would be utilized for strengthening health programmes in the country, especially in the area of tobacco control.
9. Establish partnerships with civil society organizations and the private sector (other than the tobacco industry and its affiliates) for advancing the implementation of the NPTC.
10. Establish a National Coordinating Body, with participation of relevant stakeholder groups but excluding the tobacco industry and its affiliates, to guide and monitor the implementation of the NPTC.
11. Integrate elements of the NPTC into other national health programmes and developmental programmes.
12. Establish and support a nationwide surveillance system for monitoring the patterns of tobacco product consumption among different population groups and the trends

in major tobacco-related diseases, along with systems for monitoring the determinants of tobacco consumption (from community health beliefs to tobacco industry behaviour).

Recommendations for State Governments

The delivery of health services is mainly the responsibility of the State (provincial) Governments, as per the allocation of powers and duties under the federal structure of the Indian Constitution. No health programme can hope to succeed without the active participation and leadership of the State Governments. The multisectoral nature of the tobacco control programme must be recognized by these governments too, as in the case of the Centre. It is recommended that the State Governments

1. Establish a State-level Inter-ministerial Coordination Committee of Secretaries, representing relevant ministries, to guide and monitor the implementation of activities envisaged under the NPTC, in each State/Union Territory.
2. Establish district-level Coordination Committees, with representation of multiple stakeholder groups (excluding the tobacco industry and its affiliates), for guiding and monitoring the implementation of activities envisaged under the NPTC, at the State level.
3. Integrate programme-related activities into the regular functioning of primary, secondary and tertiary health care services in the State, as relevant.
4. Establish partnerships with civil society organizations and the private sector (excluding the tobacco industry and its affiliates) for advancing the implementation of the activities proposed under the NPTC.
5. Adopt fiscal policies (tax-linked financial disincentives, and discontinuation of direct and indirect subsidies) that will reduce tobacco consumption.
6. Empower local self-government bodies (*panchayats*) to effectively undertake tobacco control programmes in rural areas.

Recommendations for civil society

Sections of civil society who are committed to the goals of tobacco control represent the bulwark of the anti-tobacco coalition in any country. In India too, the civil society has played a major role so far in advancing the agenda of tobacco control and would be a key contributor to the success of the NPTC in the future. It is recommended that civil society should

1. Increase public awareness about the disease and environmental consequences of tobacco use, using all possible channels of communication for mass education as well as for influencing target groups (such as children and women's groups).
2. Promote tobacco cessation through educational efforts to motivate tobacco smokers to quit and create community-based cessation facilities to assist them in doing so.
3. Pursue informed advocacy with policy-makers for advancing tobacco control policies and strengthening tobacco control programmes.
4. Perform a 'watchdog' function to monitor the implementation of tobacco control laws (such as bans on advertising, smoking in public places and sale to minors). Violations should be reported to the concerned authorities and followed up to check for the actions taken.
5. Monitor the marketing and promotion tactics of the tobacco industry and counter them in every legally possible manner.

6. Demand withdrawal of support for the tobacco industry by the government, public financing institutions, insurance companies, public sector corporations and, whenever possible, responsible sections of the private banking and corporate sectors.
7. Not accept financial or other forms of support offered by the tobacco industry to any civil society organization and oppose such support being received by universities, research institutes and other academic institutions.
8. Work in a unified, organized and coordinated manner to advance tobacco control in the country.
9. Interact and liaise with international counterparts to understand the global strategies of tobacco companies to expose the tactics employed by them in the country and advance tobacco control globally.

Recommendations for international organizations

India, along with China, represents the epicentre of the tobacco epidemic in the twenty-first century—both in terms of the largest numbers of people at risk and the highest rate of rise of tobacco-related deaths and disability. The global battle against tobacco cannot even be considered to have truly begun, let alone won, unless well-resourced national tobacco control programmes start to operate in India and China. In recognition of this reality, international organizations should extend technical and financial assistance to a National Programme for Tobacco Control (NPTC) in India. It is recommended that

1. WHO extend technical and financial assistance to help the Government of India to develop and implement a comprehensive NPTC, through specifically committed budgetary allocations.
2. International lending institutions such as the World Bank and the Asian Development Bank extend financial assistance to prioritized components of the NPTC for implementation through Central- and State-level projects.
3. Multilateral organizations such as the European Union provide financial and technical assistance to the Government of India for implementing the NPTC.
4. The Conference of Parties (COP), to be established under the FCTC, guide its operations, establish a multilateral Global Fund for Tobacco Control, to provide financial assistance to developing countries such as India to enable them to fulfil the mandate of the FCTC.
5. The Food and Agriculture Organization (FAO) provide technical and financial assistance to the Government of India for enabling tobacco farmers to shift to alternative crops.
6. Other UN organizations such as the UNDP, UNESCO, UNESCAP and UNEP integrate elements of tobacco control into the programmes funded by them.
7. The World Trade Organization (WTO) upholds actions that accord precedence to the public health objectives of tobacco control over trade practices.

Recommendations for health professionals

Health professionals are a critical resource for advancing the agenda of tobacco control, by actions which empower the community, catalyse policy and promote technical assistance to other stakeholder groups. They contribute the principal agency through which information on the health consequences of tobacco is communicated to people as well as policy-makers. They also provide direct services for tobacco cessation, through counselling and other forms of therapy. Recognizing the importance of their role, it is recommended that health professionals

1. Must strongly advocate tobacco cessation among colleagues and provide special cessation services to them, since tobacco use by health professionals has a negative influence on the community.
2. Keep medical conferences and other events organized by associations of health professionals completely tobacco-free and avoid sponsorship of any kind from tobacco companies or their affiliates.
3. Ensure that health facilities are completely tobacco-free, over and beyond what is required by the law.
4. Evolve guidelines and specific recommendations for advancing tobacco control and advocate for implementing these recommendations with the government and civil society.
5. Utilize all opportunities for patient contact to enquire about tobacco use and advise about tobacco cessation, as may be required.
6. Provide broad-based cessation services which include counselling for behaviour change for all tobacco users, and pharmacotherapy, where essential.
7. Partner civil society organizations and governmental agencies in promoting community awareness on tobacco-related issues.

Recommendations for research scientists

While there is adequate information to commence action for tobacco control in India, research is needed to better inform policies and strengthen programmes. Such research must not only provide accurate and regularly updated information on the prevalence of tobacco use and its health consequences but also clearly delineate the dimensions of the economic and environmental damage caused by tobacco. Research must also identify multiple determinants of tobacco use in diverse population groups, assess the impact of interventions to reduce tobacco use and measure the cost-effectiveness of different programme components. It is recommended that research scientists

1. Develop a standardized, population-based surveillance mechanism, with India-specific tools, to generate reliable data for assessing tobacco use patterns and related health consequences in India.
2. Evolve mechanisms to obtain more precise estimates of morbidity and mortality attributable to tobacco use in India.
3. Identify the economic and sociocultural determinants of tobacco use in different demographic groups in India.
4. Evaluate the impact of policy interventions on reducing tobacco consumption in India.
5. Assess the economic and environmental consequences of tobacco production and consumption in India.
6. Design, implement and evaluate community interventions intended to prevent the primary uptake of tobacco, especially by the youth.
7. Assess the cost-effectiveness of community-based and clinic-based interventions to promote cessation among adults and the youth.
8. Periodically evaluate the performance of the NPTC and measure the cost-effectiveness of various programme components.

Recommendations for multisectoral action

The implementation of the NPTC requires well-coordinated multisectoral action to ensure synchrony of effort and synergy of effect among various stakeholder groups responsible for different activities. There is a need to stimulate, strengthen and sustain a variety of partnerships (public–public; public–private and private–private) as well as to facilitate multiple functions ranging from advocacy to regulation. To enable such coordination, it is recommended that

1. A National Coordinating Body (such as a National Commission for Tobacco Control) be created, through an initiative of the Union Ministry of Health and Family Welfare. This body should have representatives of key stakeholder groups (excluding the tobacco industry and its affiliates). It should help to catalyse policy, create partnerships, facilitate implementation at multiple levels, monitor performance of NPTC-related activities and provide advice to Central and State Governments on the methods and means by which programme implementation can be strengthened. Such a body should ideally have the status of a statutory body but should remain fully autonomous. Its establishment and functioning should be supported by specified financial allocation from the budget of the Health Ministry. This body should also be connected to the Central- and State-level Inter-ministerial Coordination Committees for enabling a regular exchange of information and advice on the functioning of the NPTC.
2. A broad-based platform for periodic consultation among the stakeholder groups may also include an Annual National Consultation on Tobacco Control.

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