

# Economic Burden of Tobacco Related Diseases in Assam

## Highlights

According to the Global Adult Tobacco Survey India (2009-10), in Assam 39% of adults (15 years and above) used tobacco. About 14% of adults were smokers and 33% used smokeless tobacco. Furthermore, 51% of adults were exposed to secondhand smoke at home.

The study on *Economic Burden of Tobacco Related Diseases in India*, was conducted to estimate the economic burden of disease attributable to tobacco use. The study estimates the direct<sup>1</sup> and indirect<sup>2</sup> costs from all diseases due to tobacco use as well as the cost of each of the following four diseases: cardiovascular diseases, cancers, respiratory diseases and tuberculosis in 13 states in India.

### Major state level estimates (Assam)

- The total economic costs attributable to tobacco use in Assam amounted to Rs 541 crores in the year 2011 for persons aged 35-69, of which 47% was direct medical costs and 53% was indirect morbidity costs.
- The economic cost for four specific diseases (CVD, cancer, tuberculosis and respiratory disease) amounted to Rs 158 crores.
- Cancers shared the highest economic burden (Rs 59 crores) on account of tobacco use, followed by cardiovascular diseases (CVD) (Rs 48 crores), respiratory disease (Rs 42 crores) and tuberculosis at (Rs 9 crores).
- Among the four diseases, cancers contributed the highest at 41% of the total direct medical cost and; CVD and cancers contributed the highest at 34% each of the total indirect cost.
- The economic cost for all diseases due to tobacco use was higher in males in comparison to females except the, economic cost for smokeless tobacco was higher in females at Rs 136.8 crores (as compared to Rs 56.3 crores for males).

### At national level

The estimated economic cost of diseases attributable to tobacco use at Rs 1,04,500 crores was 1.16% of the GDP. This was 12% more than the combined state and central government expenditures on health in 2011-12. The total central excise revenue from all tobacco products in the year 2011-12 amounted to only 17% of the estimated economic costs of tobacco.

Of the total economic burden, direct cost was 16%; indirect costs were 84%, of which premature mortality cost contributed significantly by nearly 70%. For state level estimates, only direct medical and indirect morbidity costs were estimated. If the cost of premature mortality was to be included in the estimates the actual expenditure would increase manifold.

<sup>1</sup>Direct medical costs included the direct health care expenditures for inpatient hospitalization or outpatient visits, including surgeon's fees, medicines, diagnostic tests, bed charges, attendant charges, medical appliances, ambulatory services for treating tobacco related diseases and other such expenditures that are directly related to the inpatient hospitalization or outpatient visit.

<sup>2</sup>Indirect costs are of two types: (1) indirect morbidity costs comprising of expenditures incurred for transportation other than ambulance and lodging charges for caregivers, and additionally the loss of household income to the whole household due to inpatient hospitalization or outpatient visits as a proxy for the value of lost productivity; and (2) indirect mortality costs which is the cost of premature mortality.

Table 1. Health Costs of Disease among tobacco users in Assam (in Rs crores)

	Assam		India	
	4 diseases	All diseases	4 diseases	All diseases
Male	139.6	379.9	8438.1	24707.9
Female	18.243	161.3	1705.1	6768.0
Total	157.8	541.2	10143.3	31475.9

Table 2. Direct cost of smoking and smokeless tobacco in Assam (in Rs crores)

	Smoking		Smokeless tobacco	
	Male	Female	Male	Female
CVD	10.3	1.1	4.5	3.6
Cancer	24.0	0.3	4.4	1.9
Tuberculosis	2.8	1.0	0.8	0.8
Respiratory disease	18.4	0.1	NA	NA
All diseases	141.6	13.4	24.7	75.2

Table 3. Indirect cost of smoking and smokeless tobacco in Assam (in Rs crores)

	Smoking		Smokeless tobacco	
	Male	Female	Male	Female
CVD	13.0	1.9	6.0	6.4
Cancer	23.4	0.1	4.3	0.5
Tuberculosis	2.3	0.3	0.6	0.2
Respiratory disease	23.8	0.1	NA	NA
All diseases	181.9	11.0	31.7	61.7

The report calls for prioritisation of tobacco control for larger population level benefits in Assam.

Increased resource and budget allocations for NCD prevention and control, including full implementation of the WHO Framework Convention on Tobacco Control (WHO FCTC) and the tobacco control laws is imperative.

*We need to act now to save lives!*

The study on the, “Economic Burden of Tobacco Related Diseases in India” was conducted by the Public Health Foundation of India, in collaboration with the Ministry of Health & Family Welfare, Government of India and the WHO Country Office for India.