

The economic burden of smoking in Belgium: Incremental healthcare costs and lost productivity

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BACKGROUND

Despite a decrease in the number of daily smokers since 1997, the prevalence of tobacco use in Belgium remains high (19%). Tobacco use is among the leading behavioural risk factors for morbidity and mortality, resulting in a high cost to the society.

AIM

To provide a contemporary overview of the direct medical and indirect costs attributable to tobacco use in Belgium.

METHODS

Data from the Belgian Health Interview Survey (2018) was combined with health insurance data. Healthcare costs were calculated on individuals' tobacco use patterns while cost of absenteeism was calculated by multiplying the number of absence days by the national average wage cost per day in Belgium. Univariate and multivariable regression analysis with negative binomial distribution and log link were performed to evaluate the average healthcare costs and indirect costs in relation to tobacco use.

	Non- Smoking	Daily smokers	Occasional smoker	Former smoker
Total, (N)	N= 4,171	N= 1,131	N= 301	N= 1,722
Age, mean (SD)*	49.4 (19.8)	47.5 (15.4)	43.8 (16.3)	57.7 (15.8)
Gender, % (n)*				
Men	39.4% (1644)	56.8% (642)	56.8% (171)	58.5% (1007)
Women	60.6% (2527)	43.2% (489)	43.2% (130)	41.5% (715)
Education level, % (n)*				
No diploma	6.31% (263)	5.92% (67)	3.99% (12)	5.92% (102)
Lower secondary	11.0% (458)	18.0% (204)	6.64% (20)	13.9% (239)
Higher secondary	28.3% (1179)	40.1% (454)	24.9% (75)	30.1% (518)
Higher education	53.0% (2209)	33.7% (381)	61.8% (186)	48.6% (837)
Preferential Reimbursement				
No	82.4% (3438)	75.3% (852)	86.4% (260)	86.8% (1494)
Yes	17.5% (728)	24.4% (276)	13.6% (41)	13.0% (224)

*P<0.05, based on t-test or chi-square test

Direct costs	RR	Standard error	P-value	95% CI	Incremental cost ^o
Never smoked (reference)	1	—	—	—	—
Daily smoker	1.20	0.08	0.03	1.02-1.41	393.50
Occasional smoker	1.27	0.13	0.07	0.98-1.63	412.85
Former smoker	1.27	0.06	<0.001	1.13-1.43	647.73

^oPer individual, per year

Indirect costs	RR	Standard error	P-value	95% CI	Incremental cost ^o
Never smoked (reference)	1	—	—	—	—
Daily smoker	1.35	0.18	0.10	0.95-1.92	1092.09
Occasional smoker	1.14	0.23	0.57	0.73-1.77	354.12
Former smoker	1.37	0.18	0.07	0.97-1.93	1198.58

^oPer individual, per year