

The temporal trend of the smoking endemic disease in Brazil

Tendência temporal da epidemia do tabagismo no Brasil

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ABSTRACT

In Brazil, diseases caused by smoking account for 47.6% of total deaths, especially diseases of the circulatory system (31.3% of deaths) and neoplasias (16.3%). Currently, an epidemiological transition characterized by three basic changes is observed: the replacement of transmissible diseases by non-transmissible diseases, the offset of morbidity and mortality from younger to elderly groups, and the transition from the situation in which mortality predominates to that in which morbidity dominates. The current prevalence of smoking in Brazil decreased from 12.1% (2012) to 11.3% (2013); with a reduction in both genders, from 9.2% to 8.6% among women and 15.5% to 14.4% among men. The percentage values of the prevalence of smoking were mostly low among Brazilian capitals and the Federal District.

Key words: Tobacco Smoke Pollution; Smoking; Tobacco Use Cessation; National Program of Tobacco Control.

RESUMO

No Brasil, as doenças causadas pelo tabagismo são responsáveis por 47,6% do total de mortes, com destaque para as doenças do aparelho circulatório (31,3% dos óbitos) e as neoplasias (16,3%). Ocorre nesse momento período de transição epidemiológica caracterizada por três mudanças básicas: substituição das doenças transmissíveis por não transmissíveis, o deslocamento da morbimortalidade dos grupos mais jovens para os mais idosos e a transformação de situação em que predomina a mortalidade para outra em que se observa dominância da morbidade. A prevalência atual do tabagismo no Brasil diminuiu de 12,1% (2012) para 11,3% (2013); e houve redução em ambos os gêneros, de 9,2% para 8,6% para as mulheres e 15,5% para 14,4% para os homens. Os valores percentuais da prevalência do tabagismo nas capitais brasileiras e Distrito Federal foram na grande maioria menores.

Palavras-chave: Poluição por Fumaça de Tabaco; Hábito de Fumar; Abandono do Uso de Tabaco; Programa Nacional de Controle do Tabagismo.

INTRODUCTION

Non-transmissible chronic diseases (NTCD) are among the major current problems of public health. In Brazil, the diseases caused by smoking have been responsible for 47.6% of deaths, especially diseases of the circulatory system (31.3% of deaths) and neoplasias (16.3%).¹

The World Health Organization (WHO) estimates that NTCDs were responsible for 63% of the 36 million deaths in 2008.²

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In Brazil, an epidemiological transition characterized by three basic changes is observed: the replacement of transmissible diseases by NTCs, the offset of morbidity and mortality from younger groups to the elderly, and the transformation of a situation in which mortality by other diseases predominates, with dominant morbidity, for example, cardiovascular and respiratory diseases.³

The tobacco smoke and other pollutants can accelerate the aging of lungs or aggravate aging lung-related events through chronic inflammation. How aging causes the decline of pulmonary function and inflammation in diseases related to smoking is not well established, however, WHO estimates that 65 million and 3 million people have and die from chronic obstructive pulmonary disease (NTCD), moderate and severe, respectively, mainly caused by smoking; in 2030, this will be the third cause of death in the world.^{2,4}

In Brazil, about 5 million people are suffering from NTCs. In 2010 and 2011, 116,680 and 116,707 hospitalizations occurred, costing the Ministry of Health (MH) 83.6 and 87.1 million Reais to public funds, per NTC, respectively. A total of 57,881 hospitalizations were recorded until July of 2012 at the cost of 45.1 million Reais. The number of deaths is also increasing in recent years. It grew 12%, from 33,616 in 2005 to 37,592 in 2010.³

Smoking cessation is an effective intervention and cost-effective approach. The abandonment of tobacco consumption means reducing the risk of developing lung disease and stopping its progression (level of evidence A).⁵

About 80% of smokers are suffering from lung diseases related to this habit and wish to stop using tobacco; however, only 3% are able to abandon it. This is an indicator of the ability of nicotine to cause addiction because those who have the lowest level of dependence are able to stop smoking without the formal treatment. It is also an indicator of the restricted access smokers have to the latest approaches to smoking abstinence. The treatment of smokers is among the medical interventions that present the best cost-benefit ratios.⁶

Cost-benefit estimates based on a brief assessment of smokers by doctors show that 2.7% to 3.7% no longer use tobacco with this measure; the estimated cost per year of saved lives would be in the order of US\$748 - US\$2,020, quite inferior to the treatment of mild to moderate hypertension (US\$ 11,300-US\$ 24,408), hypercholesterolemia (US\$65,511- US\$ 108,189), and infarction (US\$55,000).⁶

In Brazil, since 2006, the MH implemented the Surveillance Study of Risk and Protection Factors for Chronic Diseases by Telephone Survey (VIGITEL) and has updated the epidemiological data relating to smoking yearly.³

The current prevalence of smoking in Brazil decreased from 12.1% (2012) to 11.3% (2013). Considering the gender for the same period, there was a reduction in both, 9.2% to 8.6% in females and 15.5% to 14.4% in males.^{3,7}

In relation to the number of cigarettes smoked per day (20 cigarettes or more), the values went from 4%³ to 3.4%⁷, however, considering the population of the 26 capitals and the Federal District, the frequency of domestic secondhand smokers was 10.2%, similar in both genders.⁷ The number of secondhand smokers at working environments fell from 10.4%-9.8,^{3,7} however, the population of male secondhand smokers showed higher frequencies in all age groups, from 18 to 65 years of age when compared with women.⁷

The indicators of smokers in Brazil until 2013, for males and females, were 14.4 and 8.6%, respectively; the numbers of ex-smokers are 25.6% (males) and 18.9% (females).⁷

Every individual interviewed by the Vigitel study in the 26 Brazilian capitals and the Federal District considered two factors. The first was the inverse of the number of telephone lines in the interviewee domicile. This factor corrects the greater chance that individuals from households with more than one phone line had to be selected for the sample. The second factor is the number of adults in the interviewee domicile. This factor corrects the chance that individuals living with more people had to be selected for the sample. The product of these two factors provides a sampling weight that allows obtaining reliable estimates of the adult interviewed population.

The prevalence of smoking estimated per Brazilian capitals and the Federal District for 2012 and 2013 were, respectively: Aracajú (8.1% – 7.9%), Belém (8.0% – 7.7%), Belo Horizonte (12.5% – 12.8%), Boa Vista (8.8% – 9.2%), Campo Grande (11.8-12.7%), Cuiabá (11.3-10.8%), Curitiba (12.4-13.7%), Florianópolis (13.6-12.4%), Fortaleza (8.8-7.2%), Goiânia (9.9-10.4%), João Pessoa (10.3-7.3%), Macapá (10.3-10.1%), Maceió (9.5-8.8%), Manaus (8.5-7.0%), Natal (9.7-6.2%), Palmas (8.8-5.7%), Porto Alegre (18.2-16.5%), Porto Velho (11.8-11.7%), Recife (11.8-10.7%), Rio Branco (14.7-9.6%), Rio de Janeiro (13.5-11.8%), Salvador (6.3-5.2%), São Luís (7.9-8.1%), São Paulo (15.5-14.9%), Teresina (11.4-7.6%), Vitória (8.7-8.2%), and the Federal District (10.4-10.7%).^{3,7}

Data for temporal trends in endemic smoking in Brazil as well as in developing countries, using comparable designs, are still scarce. The percentage values of the prevalence of smoking among Brazilian capitals and the Federal District were mostly low. One hypothesis is that the various strategies have been shown to be effective in reducing smoking. This is an important reason to continue the search to identify weaknesses in the various used strategies to approach smoking in Brazil, and to strengthen the existing ones.

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