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## Tobacco in Portugal: present and future. Which path?

Tobacco smoke kills nearly 6 million people and causes great economic damage worldwide each year.

In the European Union, 14% of Non-Smokers (NS) are exposed to other individuals' tobacco smoke at home and 30% are exposed at the workplace. In 2004, children accounted for 28% of the more than 600 000 premature year deaths attributable to Second-hand Smoke (SHS).

Over 40% of children have at least one smoking parent. The International Study of Asthma and Allergies in Childhood (ISAAC) revealed an increased risk of asthma, rhino conjunctivitis and eczema symptoms in children and adolescents, when there was maternal and paternal smoking.

The only way to fully protect children from SHS exposure is to prevent all smoking in that indoor space. However, it is also critical to prevent tobacco consumption since early ages. According to World Health Organization (WHO), one third of youth experimentation with tobacco are due to advertising. Public education and community awareness play a key role against this epidemic and are the basis of the program – Take care of yourself – from the Portuguese Institute of Sport and Youth (IPDJ). Amongst others it promotes a healthy lifestyle including the prevention of tobacco consumption and cessation assistance.

In Portugal, approximately 31% of men and 12% of women over 15 years of age smoke. Although the prevalence is decreasing in men, it has been increasing in women.

Headed to the fact that the workplace is a major source of SHS exposure, a number of European countries issued smoking ban policy in indoor workplaces and/or hospitality premises, to protect citizens from SHS. However in Portugal it was politically necessary to include exceptions to the 37/2007 law that allowed for the provision of Designated Smoking Rooms (DSR). Nevertheless it has been difficult to monitor its compliance especially in restaurants, casinos, discotheques, bars and pubs. Government awareness and sensitivity to this weaknesses and the existence of mandatory audits to Indoor Air Quality (IAQ) are essential in order to keep public health. Furthermore, the knowledge of professionals who are on the ground, such as the Portuguese Association of Building Energy Performance Qualified Experts, can make a useful contribution to produce new legal framework, in order to effectively improve IAQ.

Restaurant and bar workers are at a significantly increased risk as these individuals are daily exposed to high doses of SHS. Even brief exposure can damage cells in ways that set the cancer process in motion. The oxidative stress caused by this exposure leads to an oxidant and antioxidant imbalance.

Several national studies have been made in the last years to understand the impact of the law both on IAQ of these venues and on its workers' health.

A study in Lisbon restaurants, from the National Institute of Health (INSA), revealed differences at both protein and DNA level related with SHS. The main goal was first to measure indoor SHS air contamination and then assess several health indicators in workers from DSR and non DSR.

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The oxidative stress imbalance is one of the hallmarks of Chronic Obstructive Pulmonary Disease, a disease estimated to become the third leading cause of death worldwide within the next decade. Together with asthma, these tobacco related diseases represent a very important threat to global economies in direct

and indirect medical costs and lost working days. However, some studies found a decrease in related hospitalizations after smoking bans in public spaces.

Other study from INSA, in the North of Portugal, demonstrated an improvement in IAQ and on the workers respiratory health and sensory symptoms when comparing data before and after the 2007 law.

All together these studies strongly support the implementation of nation-wide smoke-free policies that, in addition, may encourage people to protect children and other NS, by making the same in their homes and also reduces both adult and youth smoking.

However, since 2010 there has been little progress and, if no further prevention and control measures are adopted, by 2030, more than 8 million dead's are expected.

Governments must enact comprehensive smoke-free laws and maintain support through proactive, uniform enforcement. Timely and precise sciencebased advocacy facilitate this process, through accurate measurement of policy impact and adjustment of strategies, which greatly improve the likelihood of success. Generally, it has overwhelming popular support, causes no financial harm to leisure businesses, and promotes the health of both NS and S.

Therefore political together with scientific and public support are necessary to maximize the effectiveness of legislation towards one of the greatest rights above all, health.

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Solange Almeida Pacheco  
National Institute of Health Dr. Ricardo Jorge, Lisbon, Portugal  
solange.pacheco@insa.min-saude.pt

João Paulo Teixeira  
National Institute of Health Dr. Ricardo Jorge, Oporto, Portugal  
joao.teixeira@insa.min-saude.pt

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