

Second-hand smoke's worldwide disease toll



Despite mounting global efforts to control tobacco use, tobacco smoking remains a common addiction with over 1 billion smokers in the world—about 40% of men and 10% of women.¹ As a result, exposure to second-hand smoke, a known cause of morbidity and premature mortality, is widespread, occurring wherever people spend time in the presence of smokers. In *The Lancet*, Mattias Öberg and colleagues² present first estimates on the extent of worldwide exposure to second-hand smoke in 2004 and the associated burden of disease and premature death. These estimates further strengthen the evidence base supporting expansion and enforcement of comprehensive smoke-free laws. The investigators used standard comparative risk assessments, which have their origins in the approach proposed in 1953 by Levin³ for estimating the proportion of lung cancer cases caused by cigarette smoking. Öberg and colleagues found that about 1.0% of worldwide mortality is attributable to second-hand smoke, and that the largest burden (61%) of the morbidity is inflicted on children.

Authoritative findings, dating to the mid-1980s, that exposure to second-hand smoke causes morbidity and premature mortality have motivated smoke-free policies and laws worldwide. The smoke-free movement began locally but now reaches globally. WHO's first public health treaty, the Framework Convention on Tobacco Control (FCTC), legally binds all ratifying nations to implement effective measures to protect people from such exposure to the extent that they can do so nationally.⁴ Since adopting the FCTC, more than 60 countries have initiated campaigns for smoke-free laws and over 17 countries now have a national law requiring all workplaces and public places to be smoke free.⁵ Despite evidence that such regulations work with little to no economic burden and that they reduce smoking, much of the world's population continues to live in communities not covered by 100% smoke-free regulations. The tobacco industry continues to attempt to slow progress towards meeting the requirements of the FCTC's Article 8, which addresses passive smoking. These new estimates highlight the need for moving forward expeditiously on the conditions of Article 8.

The estimates also point to a crucial gap in regulatory and legal strategies, which cannot reach into homes, the main place of exposure for women and children. Although

the social norm change that comes with smoke-free laws can spill over to homes, broad initiatives are needed to motivate families to put their own policies into place to reduce exposure to second-hand smoke at home. In some countries, smoke-free homes are becoming the norm, but far from universally. In a 31-country study on three continents, we found that 88% of parents who smoked did so at home and that over 80% smoked near their children.⁶ Smoking by parents doubled the level of nicotine in their children's hair. Because smoke-free homes cannot be mandated, education of parents is central to protect children; health-care providers should motivate parents to protect their children, beginning with prenatal care and continuing during childhood. Illnesses caused by exposure to second-hand smoke, such as acute lower respiratory tract infections and exacerbation of asthma, represent teachable moments for emphasising the need for a smoke-free home.^{7,8}

The global profile of exposure to second-hand smoke and disease burden highlighted by Öberg and colleagues reiterates the crucial need for empowering women in tobacco control, the topic of World No Tobacco Day in 2010. On current trends, women will increasingly experience the hazards of second-hand smoke, especially in countries where rates of smoking are increasing in men.⁹ However, if empowered, women can have a key role in protecting themselves, their children, and other family members from this exposure. Gender-sensitive health education programmes are needed, and women

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need to be further encouraged to engage with all aspects of tobacco control at the local and global levels to ensure that their perspectives and rights are embodied into the movement. Empowering women to take a more active leadership role in protecting their health and the health of their families is not only crucial for tobacco control, but also for all efforts aimed at improving health and promoting development worldwide.

There are well acknowledged uncertainties in estimates of disease burden. However, there can be no question that the 1.2 billion smokers in the world are exposing billions of non-smokers to second-hand smoke, a disease-causing indoor air pollutant. Few sources of indoor air pollution can be completely eliminated. However, smoking indoors can be eliminated—with substantial benefits, as shown by this new set of estimates.

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