

# The NCD Alliance

Putting non-communicable diseases  
on the global agenda



## TOBACCO: A MAJOR RISK FACTOR FOR NON-COMMUNICABLE DISEASES

Director-General of the World Health Organization, Margaret Chan, has described non-communicable diseases (NCDs) as a 'slow-moving catastrophe' with the potential to overwhelm all countries unless decisive action is taken to address their causes.<sup>1</sup>

Tobacco use is the one risk factor common to the four main groups of NCDs — cardiovascular disease, cancer, chronic lung disease and diabetes. It is also a risk factor for infectious diseases, tuberculosis and lower respiratory infections — health burdens that afflict much of humanity.

### The scale of the problem

By 2030, NCDs are projected to account for more than 75% of deaths worldwide.<sup>2</sup> NCDs are not predominantly diseases of the affluent world: 80% occur in low and middle income countries.<sup>3</sup>

Tobacco use is the single greatest preventable cause of NCDs:

- Tobacco use kills more than 15,000 people a day and accounts for one in six of all NCD deaths.<sup>4</sup>
- Although fewer people are using tobacco in some countries, the global trend is on the rise. By 2020, WHO estimates that tobacco will cause 7.5 million deaths annually, or about one in ten of all deaths.<sup>5</sup>
- An estimated 100 million people were killed by tobacco used during the 20<sup>th</sup> century. Unless we act together to take strong and immediate steps to avoid it, a billion lives will be lost in this century to tobacco use.<sup>6</sup> This will include about 250 million of our children already alive today.<sup>7</sup>

### A peril to health for all segments of the population

- About 1.3 billion people use tobacco in some form.<sup>8</sup> The majority smoke manufactured cigarettes, but tobacco is also smoked in traditional forms, such as bidis from South Asia, kreteks from Indonesia and water pipes, which are originally from the Middle East but now growing in popularity globally, especially among young people.
- Smoked tobacco is responsible for more disease than any other type of tobacco use but smokeless tobacco is heavily

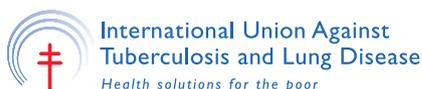
used in some parts of the world. In India, an estimated 26% of all adults, or 75% of tobacco users, use smokeless products,<sup>9</sup> and in Bangladesh, the comparable figure is 27% of all adults, or 63% of tobacco users.<sup>10</sup>

One of the astonishing things about tobacco is the number and variety of fatal and disabling diseases and conditions it causes.

- Tobacco causes at least 16 different types of cancer. It is most closely associated with lung cancer, the world's leading cause of cancer deaths, accounting for nearly one in five cancer deaths.<sup>11</sup> Tobacco use is known to cause several cancers of the throat and oral cavity, as well as cancer in diverse sites, such as the bladder, kidney, stomach and uterine cervix.<sup>12</sup>
- Smokeless tobacco causes oral and other cancers, hypertension and heart disease.<sup>13</sup>
- Cardiovascular disease is the leading cause of death in the world.<sup>14</sup> Smoking increases the risk of heart disease and stroke by two to four times.<sup>15</sup>
- Smoking causes chronic lung diseases that can be severely disabling or fatal, increasing the risk of death 12 times.<sup>16</sup>
- Smoking is an independent risk factor for diabetes, and it has been estimated that 12% of diabetes incidence in the United States is attributable to smoking.<sup>17</sup> Diabetics who smoke have an increased risk of death, and of complications associated with diabetes, such as amputations and problems with vision.



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## PREGNANCY

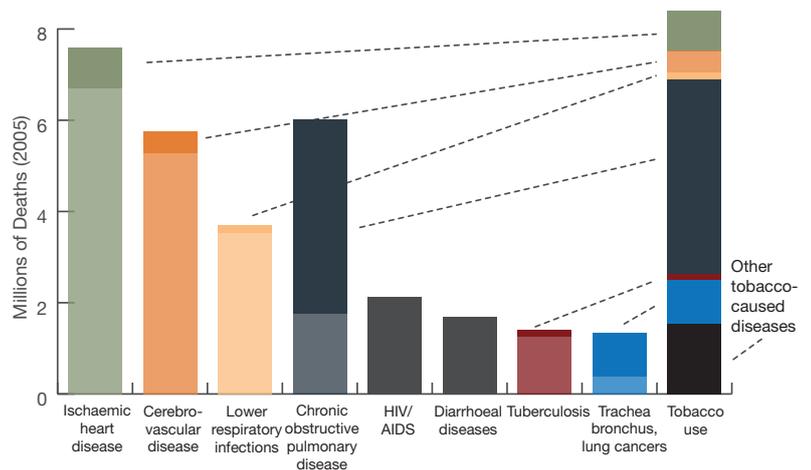
Smoking in pregnancy is associated with a number of conditions that are hazardous to the health of both the mother and child, including ectopic pregnancy, miscarriage, pre-term delivery, low birthweight and sudden infant death syndrome.<sup>18</sup>

Women who smoke during pregnancy have an increased risk of developing gestational diabetes and increase the risk to their child of developing diabetes later in life.<sup>19,20</sup>

## INFECTIOUS DISEASES

Tobacco use is a major risk factor for tuberculosis. More than 20% of the global TB incidence<sup>21</sup>, and 40% in India, may be attributable to smoking.<sup>22</sup>

Both smoking and being exposed to other people's smoke are significantly associated with TB infection, disease and mortality.<sup>23</sup>



Tobacco use is a risk factor for six of the eight leading causes of death in the world.

## Second-hand smoke (SHS)

Tobacco not only imperils the health of those who are actively smoking but also those around them who breathe the smoke.

- SHS is responsible for at least 600,000 deaths a year among non-smokers, with more than six in ten deaths due to heart disease.<sup>24</sup>
- Although only about 20% of the world's estimated 1 billion smokers are women, nearly half of deaths from SHS occur among adult women and over a quarter among children under the age of five.<sup>25</sup>
- Children and infants are especially vulnerable to the effects of SHS. Exposure can lead to reduced lung function, increased lung infections, asthma attacks and other problems.<sup>26</sup>
- Pregnant women exposed to SHS are at higher risk of preterm birth, and the growth of the baby in the womb can also be restricted.<sup>27</sup>

A growing number of jurisdictions are legislating to make workplaces and public places smoke-free, in compliance with Article 8 of the Framework Convention on Tobacco Control (FCTC). There is now compelling evidence that smoking bans reduce exposure to SHS; the resulting reduction in exposure has reduced hospital admissions for heart attack and other coronary conditions.<sup>28,29</sup>

**Tobacco use is the one risk factor common to the main groups of NCDs. Accelerated implementation of the FCTC is an essential way to tackle NCDs and save lives.**

[1] Opening remarks, *First Global Ministerial Conference on Healthy Lifestyles and Noncommunicable Disease Control*. Moscow, Russian Federation, 28 April 2011. [2] World Health Organization (2008) *The global burden of disease: 2004 update*. Geneva: World Health Organization. [3] World Health Organization (2011) *Global status report on noncommunicable diseases 2010*. Geneva: World Health Organization. [4] Beaglehole R, Bonita R, Horton R et al. (2011) *Priority actions for the non-communicable disease crisis*. The Lancet, Early Online Publication, 6 April 2011 doi:10.1016/S0140-6736(11)60393-0. [5] Mathers C, Loncar D (2006) *Projections of global mortality and burden of disease from 2002 to 2030*. PLoS Medicine, 3:e442. [6] World Health Organization (2009) *WHO report on the global tobacco epidemic: the MPOWER package, 2008*. Geneva: World Health Organization. [7] Jha P, Chaloupka F (1999) *Curbing the epidemic: governments and the economics of tobacco control*. Washington DC: World Bank. [8] World Health Organization 2009 op.cit. [9] International Institute for Population Sciences (IIPS), Ministry of Family Health and Welfare, Global Tobacco Surveillance System, World Health Organization, Center for Disease Control and Prevention (2010) *Global Adult Tobacco Survey (GATS) Fact Sheet: India 2009-2010*. Mumbai: Ministry of Health and Family Welfare. [10] National Institute of Preventive and Social Medicine BBoS, National Institute of Population Research and Training, (2009) *Global Adult Tobacco Survey Fact Sheet: Bangladesh*. World Health Organization. Available from: [http://www.who.int/tobacco/surveillance/fact\\_sheet\\_of\\_gats\\_bangladesh\\_2009.pdf](http://www.who.int/tobacco/surveillance/fact_sheet_of_gats_bangladesh_2009.pdf). [11] Ferlay J, Shin H, Bray F et al. (2010) *Estimates of worldwide burden of cancer in 2008: Globocan 2008*. Int J Cancer 127(12): 2893-917. [12] U.S. Department of Health and Human Services (2004) *The health consequences of smoking: a report of the Surgeon General*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. Office on Smoking and Health. [13] International Agency for Research on Cancer (2007) *Smokeless tobacco and some tobacco specific N-Nitrosamines*. Lyon, France. World Health Organization International Agency of Research on Cancer. IARC monographs on the evaluation of carcinogenic risks to humans Volume 89. [14] World Health Organization (2008) op.cit. [15] US Department of Health and Human Services (2004) op.cit. [16] *ibid.* [17] Willi C, Bodenmann P, Ghali W. et al. (2007) *Active smoking and the risk of Type 2 diabetes*. JAMA 298: 2654-2664. [18] U.S. Department of Health and Human Services (2001) *Women and smoking: A report of the Surgeon General*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. Office on Smoking and Health. [19] Montgomery S. (2005) *A very bad start: smoking, pregnancy and diabetes*. Diabetes Voice Smoking and diabetes special issue; 50:30-32 11. [20] Bellamy L et al. (2009) *Type 2 diabetes mellitus after gestational diabetes: a systematic review and meta-analysis*. The Lancet 373: 1773-1779. [21] World Health Organization (2007) *A WHO/The Union monograph on TB and tobacco control*. Geneva: World Health Organization. [22] World Health Organization (WHO). *Tuberculosis and Tobacco*. World Health Organization; 2009. [23] *Ibid.* [24] Oberg M, Maritza JS, Woodward A, et al. (2010) *Worldwide burden of disease from exposure to second-hand smoke: A retrospective analysis of data from 192 countries*. The Lancet. Published Online November 26, 2010 DOI:10.1016/S0140-6736(10)61388-8. [25] *Ibid.* [26] British Medical Association (2007) *Breaking the cycle of children's exposure to cigarette smoke*. London: British Medical Association. [27] British Medical Association (2004) *Smoking and reproductive life: the impact of smoking on sexual, reproductive and child health*. London: British Medical Association. [28] Callinan J, Clarke A Doherty et al (2010) *Legislative smoking bans for reducing secondhand smoke exposure, smoking prevalence and tobacco consumption*. Cochrane Database of Systematic Reviews, Issue 4. [29] Sim M, Maxwell R, Bauld L et al. (2010) *The short-term impact of smokefree legislation in England: a retrospective analysis on hospital admissions for myocardial infarction*. British Medical Journal 340, DOI: 10.1136/bmj.c2161.

