



## EDITORIAL

## Fighting cardiovascular disease in developing countries. A focus on tobacco

Cardiovascular diseases (CVD), previously known to affect developed countries only, are now taking an important death toll in developing countries. The epidemiologic transition, first described by Omran in 1971, is now well established in developing countries, with some difference between and within countries. In brief, the transition encompasses the change in ranking of disease, as nutritional and infectious diseases decrease, chronic diseases, e.g. CVD and diabetes increase. In countries such as Argentina, Chile and Cuba, where infant mortality has declined markedly, CVD now represent now a large percentage of the mortality [1]. In Chile, for example, infectious and perinatal conditions were the number one cause of death in 1960 (44% of all deaths). However, by 1999, CVD had become the number one cause of death (55% of all deaths) [2]. Countries, where the decline in infant mortality has not been so dramatic, e.g. Guatemala, are experiencing the “double burden of disease”, with CVD increasing and infectious and perinatal conditions still accounting for a considerable percentage of all deaths. In addition to between country differences, there are also within country differences that need to be taken into consideration when establishing CVD prevention programs. Rural areas in Latin America and India are now in the first stage of the epidemiologic transition, where CVD deaths account for 5–10% of the total number of deaths. Urban areas of Latin America and India are now in the third stage of the transition, where CVD deaths account for 35–65% of the total number of deaths [1]. As rural areas experience a decrease in infant mortality rates and become more “westernized”, e.g. less physical activity and more smoking, we can expect the death toll from CVD to increase to more than 50% of the total number of deaths.

This epidemiologic transition is fueled by an increase in life expectancy, in part due to the decrease in infant mortality and by an increase in CVD risk factors. Of particular relevance among CVD risk factors is tobacco use. In the year 2000, tobacco caused an estimated 1.62 million CVD deaths worldwide (11% of all CVD deaths) [3]. In addition, tobacco is different from other CVD risk factors in at least two ways. First, the effect of tobacco smoke in passive smokers is nearly as large as it is in active smokers [4]. After 4 min of exposure to active or passive smoking there is already an increase in arterial stiffness [5,6]. Second, the tobacco industry earns large profits as the tobacco epidemic spreads worldwide. In this regard, Philip Morris International, British American Tobacco, and Japan Tobacco International, the three largest tobacco manufacturers [7], should be held accountable for the deaths caused by tobacco. Heavy marketing of their product, obstructing sound legislation and diverting attention of governments away from the tobacco epidemic, are just some of the strategies the tobacco industry has engaged in during the last decades to protect their earnings. In some cases, researchers, physicians, environmentalists, and politicians, have compromised their profession to work for the tobacco industry to obscure science and obstruct legislation in exchange for consultant fees [8–10]. These strategies, first described in developed countries, have now been identified in developing nations, giving the latter an opportunity to anticipate the industry’s doings.

Tobacco control has now a powerful tool to advance health worldwide, the World Health Organization Framework Convention on Tobacco Control (FCTC). The FCTC aims to guide governments and non-governmental organizations (NGOs) through evidence-based policies to reduce tobacco consumption. But tobacco control should not rest

solely on governments and NGOs. It should be a responsibility shared with local communities and governments, e.g. municipalities, healthcare professionals, environmentalists and those fighting for social justice, among others. Otherwise we shall face defeat by a well-financed and well-organized tobacco industry.

In order to foster research from developing countries on tobacco control and to share results with an international audience, this issue and the next of *Prevention and Control* includes a section on tobacco in developing countries. In this issue, two articles address tobacco from a different perspective. Bianco et al. give a "snapshot" of where Latin America stands on the tobacco epidemic and what has been done to curb the epidemic in this region of the world [11]. Valdes-Salgado et al. focus on the tobacco epidemic in Mexico as an example of a Latin American country where the double burden of disease is present [12]. We look forward to the next issue, where the experience in Russia and Argentina will broaden our awareness of approaches to controlling tobacco and the CVD epidemic.

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