

## C. GLOBAL HEALTH FROM THE ARAB AND DEVELOPING WORLD PERSPECTIVES

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*Ethn Dis.* 2007;17[Suppl 3]:S3-53-S3-54

**Key Words:** Global Health, Arab World

### INTRODUCTION

Thirty-five million people died in 2005 from chronic diseases mainly from cardiovascular disease, stroke, cancer and diabetes mellitus.<sup>1</sup> The worldwide epidemic of chronic diseases resulted in more than 60% of all deaths, at least half of which were considered premature deaths. Only 20% of these deaths have occurred in high-income countries while 80% occurred in low- and middle-income countries. The projected number of chronic disease deaths will increase from 35 million in 2005 to 41 million in 2015, in the same time the disability adjusted life years (DALYs) will rise from 725 to 808 million.<sup>2</sup> (Table 1)

The Arab world is currently facing the epidemiological transition phenomenon that leads to the extension of chronic diseases. For example, in Tunisia, a country in transition,<sup>3</sup> we have observed a hypertension prevalence rate of 28.8% (BP  $\geq$  140/90 mm Hg) among a representative sample of individuals of Sousse ( $N = 957$ ). History of diabetes was found among 10.2%, obesity (BMI  $>$  30) among 27.7% (significantly higher among women: 34.4%), android obesity among 36%, and smoking habits among 21.5% (significantly higher in men: 61.4%). The epidemiological situation is mostly similar for the rest of the Arab countries with respect to chronic diseases risk factors.

Three common and highly preventable risk factors – tobacco use, diet, and physical inactivity – play a dominant and often synergistic role in the development of these chronic diseases. For developing countries, the problem is more serious because many have not yet conquered communicable diseases and their health systems are ill-prepared to provide the costly care required for these

chronic diseases. Despite the new interest and emphasis on public health and prevention, it appears that the challenge of chronic disease control in developing countries remains before us. Urbanization is expected to raise the level of chronic diseases risk factors as a result of the adoption of new dietary habits, lack of physical activity, and stressful work conditions in the urban area.

Many myths about chronic diseases have serious consequences for the health and welfare of people in low- and middle-income countries. In these countries, the costs of chronic disease are often born by patients as out-of-pocket payment leading to more family poverty. From another side, the environment and economic pressures in developing world may result in poor diet choices and limited physical activities, which constitute the unhealthy behaviours that lead to chronic disease morbidities.

### PREVENTING AND CONTROLLING CHRONIC DISEASES

Fortunately, many of these diseases are amenable to successful intervention as is clearly demonstrated in developed countries.<sup>4,5</sup> Evidence indicates that a small number of risk factors and conditions are common to major chronic diseases. This means that integrated actions against selected risk factors implemented within the social context can lead to the reduction of major chronic diseases.<sup>6,7</sup> Low- and middle-income countries should follow these proven concepts of integrated prevention of chronic diseases as an essential component of existing health systems and should focus on health promotion at a general level.

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**Table 1. Projected global deaths and DALYs from chronic disease by age from 2005 to 2015**

	Deaths (millions)		DALYs (millions)	
	2005	2015	2005	2015
0–29 years	1, 7	1, 5	220	219
30–59 years	7	8	305	349
60–69 years	7	8	101	125
≥70 years	20	24	99	116
All ages	35	41	725	808

Available evidence supports the feasibility and effectiveness of population-wide prevention directed toward increasing the proportion of people at low-risk of chronic diseases.<sup>8,9</sup> In addition, chronic disease, and particularly cardiovascular disease (CVD), risk factors can be linked directly to social, economic and environmental determinants of health. Factors that have a major impact on the development of chronic disease include: education, availability and affordability of healthy foods, access to health services, and infrastructures that support a healthy lifestyle.<sup>7</sup> Advances in etiological research of CVD have resulted in numerous intervention projects and programs through the developed world. The scope of these activities is broad, from preventive action on a single risk factor such as tobacco or a disease such as coronary heart disease (CHD) to a more comprehensive approach involving several risk factors common to several chronic diseases.<sup>6</sup> In fact, there is scientific evidence of the effectiveness of such strategies,<sup>8</sup> but, at the same time, a lack of commitment to prevention may undermine the launching of these initiatives.

We can hypothesize that community-based intervention programs designed for the whole population of developing world, where everyone would have access to positive healthy living, smoke free air, healthy nutrition, regular physical activity and supportive working environ-

ments would lead to a reduction in the burden of chronic disease risk factors behaviors and consequently to chronic disease burden. The integrated prevention programs for chronic diseases should target the young, as well as the adults, by the implementation of lifestyle modification and educational activities in the context of a community mobilization perspective. The improvement of the preventive practices of health professionals at the different levels of care must be central to the programs.

This approach addresses all sectors of the community (from symptom-free individuals to high-risk persons) and proposes interventions centered on the promotion of healthy habits (smoking abstinence promotion and control of tobacco addiction, balanced food, sustained physical activity) and the prevention of the main underlying risk factors (arterial hypertension, smoking, obesity, diabetes, hypercholesterolemia). The ultimate goal is to reduce (or to delay) the occurrence of chronic diseases and their related risk factor behaviors (smoking, physical inactivity and unhealthy diet).

The program employs interventions targeting the internal factors under the control of the individual, but also targets environmental factors not under the individual control. The effectiveness of interventions with regard to behavior modifications constitutes the main challenge to the integrated program designed to control chronic diseases.<sup>10</sup>

The prospects of preventing and controlling risks for chronic diseases are relatively very slowly improving.<sup>11</sup> Sustained progress to bridge the gap will occur only when governments, relevant international agencies, non-governmental agencies and civil societies acknowledge that the promotion of public health should include the prevention of chronic diseases and their risk factors. The challenges of chronic disease prevention are enormous and their control efforts must be scaled up proportionally to the increasing burden.<sup>11</sup>

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