

# Introduction

The next two decades will see dramatic changes in the health needs of the world's populations. In the developing regions where four-fifths of the planet's people live, noncommunicable diseases such as depression and heart disease are fast replacing the traditional enemies, such as infectious diseases and malnutrition, as the leading causes of disability and premature death. By the year 2020, noncommunicable diseases are expected to account for seven out of every ten deaths in the developing regions, compared with less than half today. Injuries, both unintentional and intentional, are also growing in importance, and by 2020 could rival infectious diseases worldwide as a source of ill health.

These changes are expected because of the rapid aging of the developing world's populations. As a population's birth rate falls, the number of adults relative to children increases, and the population's commonest health problems become those of adults rather than those of children. In China, some other parts of Asia and Latin America, this so-called "epidemiological transition" is already much further advanced than many public health specialists appreciate. In all regions the rapidity of change, and the very large absolute numbers involved, will pose serious challenges to health-care systems and force difficult decisions about the allocation of scarce resources. Yet, until now, many governments have lacked even the most basic data they needed to inform debate and to assess priorities for public health.

Now, for the first time, this gap has been filled with a landmark publication. Researchers at the Harvard School of Public Health and the World Health Organization, with more than 100 collaborators from around the world, have produced a comprehensive, internally consistent and comparable set of estimates of current patterns of mortality and disability from disease and injury for all regions of the world, with projections to the year 2020. *The Global Burden of Disease and Injury Series*, the ten-volume result of their study, is a unique resource that

provides policy-makers with their first comprehensive picture of the world's current and future health needs.

The researchers involved in this ambitious five-year effort developed a new approach to measuring health status. Their method quantifies not merely the number of deaths but also the impact of *premature* death and *disability* on a population, and combines these into a single unit of measurement of the overall “burden of disease” on the population.

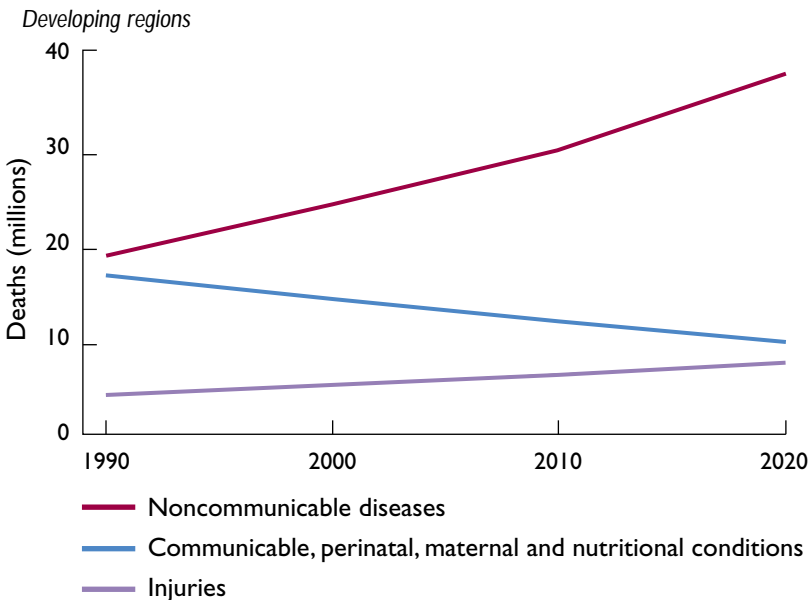
The series also presents the first estimates of the proportion of mortality and disability that can be attributed to certain risk factors for disease, including tobacco, alcohol, poor water and sanitation, and unsafe sex.

A timely assessment of global health needs

Far from confirming what was already known, the study offers significant surprises. Overall, it shows that the epidemiological transition is already

*Deaths from noncommunicable diseases are expected to climb from 28.1 million a year in 1990 to 49.7 million by 2020—an increase in absolute numbers of 77 per cent.*

**Figure 1** Projected trends in death by broad cause Group, developing regions



well advanced, suggesting that public health policy, with its traditional emphasis on infectious disease, has not kept pace with events. In addition, it makes a number of startling individual observations. Just four examples are highlighted here:

- The burdens of mental illnesses, such as depression, alcohol dependence and schizophrenia, have been seriously underestimated by traditional approaches that take account only of deaths and not disability. While psychiatric conditions are responsible for little more than one per cent of deaths, they account for almost 11 per cent of disease burden worldwide.
- Adults under the age of 70 in Sub-Saharan Africa today face a higher probability of death from a noncommunicable disease than adults of the same age in the Established Market Economies.
- Men living in the Formerly Socialist Economies of Europe have a disturbingly poor, and deteriorating, health status, including a 28 per cent risk of death between the ages of 15 and 60.
- By 2020, tobacco is expected to kill more people than any single disease, surpassing even the HIV epidemic.

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The Global Burden of Disease study (GBD) has involved an estimated forty person-years of effort. An extraordinarily large volume of data—on 483 separate sequelae of 107 diseases and injuries, and 14 million death certificates—has been subjected to rigorous analysis using both newly developed and well-established methods. Volume I, *The Global Burden of Disease*, summarizes the key concepts, methods and results and Volume II, *Global Health Statistics*, presents the mass of underlying

epidemiological and demographic data. Details of the remaining eight volumes, which deal with specific conditions and country-based analyses, are shown on page 43 of this booklet.

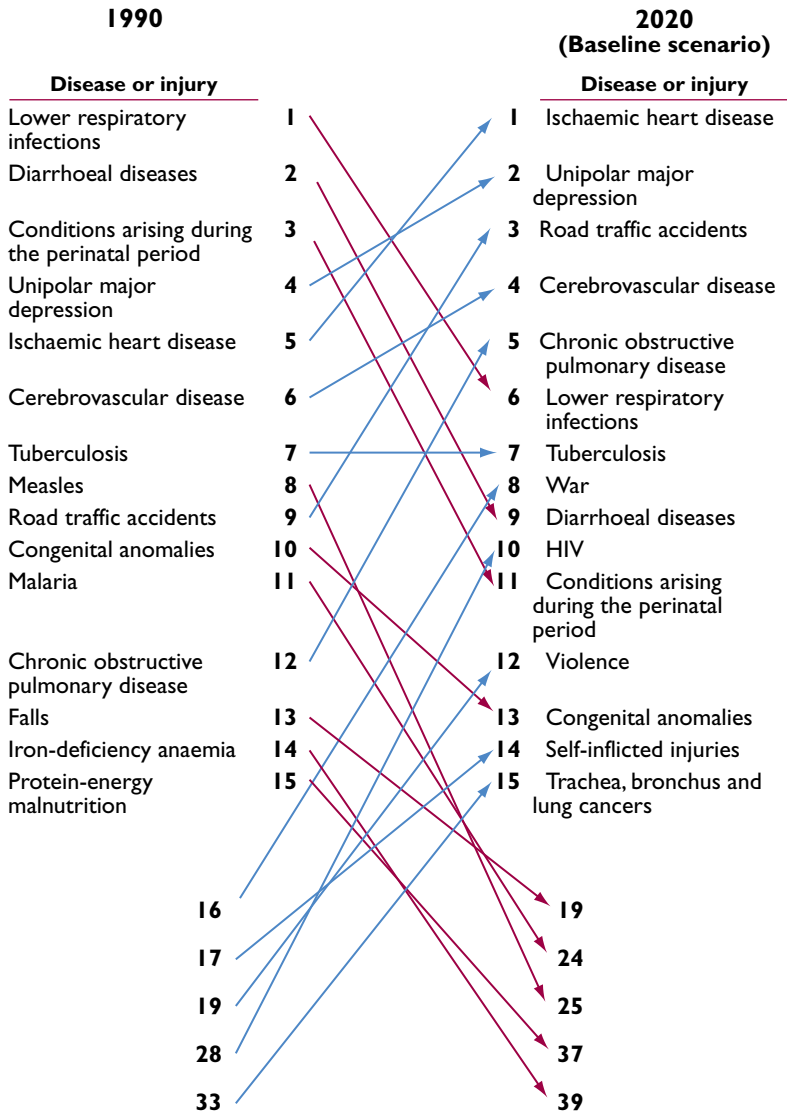
The burden of disease and injury has been calculated for eight demographic regions (see Map): the Established Market Economies (largely the OECD countries) (EME); the Formerly Socialist Economies of Europe (FSE); India (IND); China (CHN); Other Asia and Islands (OAI); Sub-Saharan Africa (SSA); Latin America and the Caribbean (LAC) and the Middle Eastern Crescent (MEC). Burden is analysed by five age groups, by sex and by cause.

This booklet presents the key findings of Volume I. The first section summarizes the concepts and methods involved in developing a single measure of health status. Sections 2 through 5 present the results for the 1990 assessments and section 6 summarizes the 2020 projections. The final section provides details and samples of the content of Volumes I and II.

**Figure 2** Change in the rank order of disease burden for 15 leading causes, world, 1990–2020

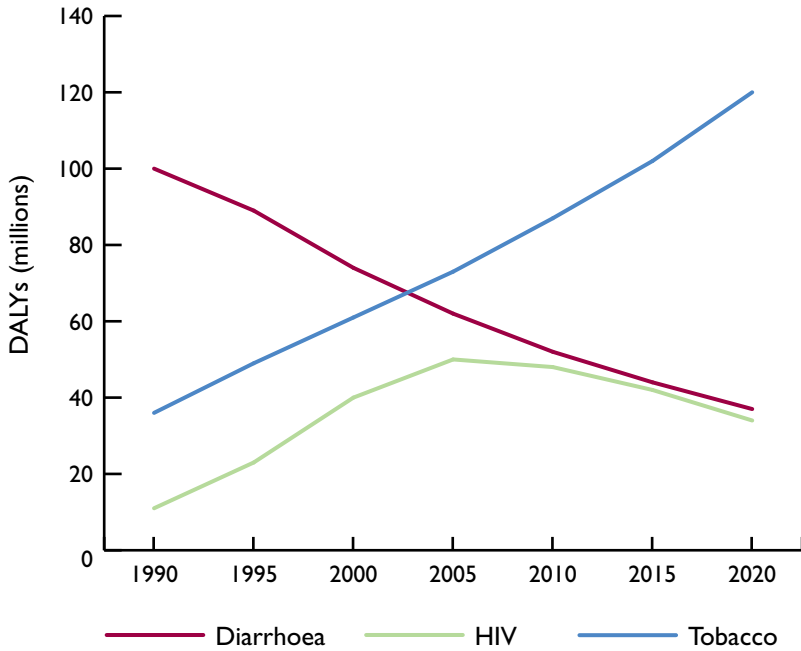
Disease burden measured in Disability-Adjusted Life Years (DALYs)

Vol 1 p 375



**Figure 3** DALYs attributable to diarrhoea, HIV and tobacco, 1990–2020 (baseline scenario)

Vol I p 317



**Figure 4** By 2020, tobacco is expected to cause more premature death and disability than any single disease

Vol I p 316 (See Map for explanation of regional composition)

