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A Neglected Global Epidemic

Cardiovascular diseases - the need to act

Today, the burden of deaths and disability in developing countries caused by noncommunicable diseases, particularly cardiovascular conditions, outweighs that imposed by long-standing communicable diseases. To tackle this well-recognized "double burden", last year's World Health Report proposes a "double response" which integrates prevention and control of both communicable diseases and noncommunicable diseases within a comprehensive health care system.

Twenty-five years ago, when the delegates at the international Alma-Ata conference drew up a list of eight essential elements for primary health care, there was no mention of the treatment or prevention of conditions such as heart disease and stroke. The priority was to deliver adequate nutrition, safe water and basic sanitation, maternal and child health care, immunization against the major infectious diseases, the prevention and control of local endemic diseases, and the provision of essential drugs to the poorer countries of the world.

Cardiovascular diseases (CVDs) – heart disease and stroke – and other noncommunicable diseases were considered diseases of the industrialized countries – so-called "Western diseases" – brought about by ways of life utterly different from those in most of Africa, Asia and many other parts of the developing world. It is noteworthy, however, that as early as 1954 the delegate of India to the World Health Assembly called for steps to be taken towards the prevention of CVDs in developing countries.

The global health agenda is still dominated by the notion that communicable diseases need to be prevented and treated before CVDs receive attention. There is a lingering view that CVDs are mostly confined to wealthy people and are caused by natural ageing and degenerative processes. There persists a widespread belief that they are "lifestyle diseases", fully under the control of individual decisions.

The reality is quite different. CVDs have not only emerged in all but the very poorest countries, but are already well advanced; this growing burden has real potential to hinder social and economic development. Risk factors are indicators of future health status, and five of the top 10 risks worldwide are specific to noncommunicable diseases. These include raised blood

pressure, tobacco use, alcohol consumption, cholesterol, and obesity or overweight. This is part of the well-documented epidemiological transition called the "double burden" that sees the arrival of the whole group of noncommunicable diseases with their shared risk factors on top of the persisting threat of communicable diseases. As a consequence, health systems are now required that can deal comprehensively with all common diseases, irrespective of their origin.

In today's world most deaths are attributable to noncommunicable diseases (32 million) and just over half of these (16.7 million) are the result of CVD; more than one-third of these deaths occur in middle-aged adults. In developed countries, heart disease and stroke are the first and second leading causes of death for adult men and women. These facts are familiar and hardly surprising. What is surprising, however, is that in some developing countries, CVDs have also become the first and second leading causes, responsible for one-third of all deaths.

In fact, twice as many deaths from CVD now occur in developing countries as in developed countries. Overall, in developing countries, CVD ranks third in disease burden (after injuries and neuropsychiatric disorders). Even in high-mortality developing countries, CVD is ranked very high.

A particular cause of concern is the relatively early age of CVD deaths in developing countries compared with those in the developed regions. One in two of the CVD-related deaths in India occur below the age of 70 years, compared with one in five in economically well-developed nations. In both rural and urban areas of the United Republic of Tanzania, stroke mortality rates are three times higher than those in England and Wales. What is not often recognized is that, globally, CVDs account for as many deaths in young and middle-aged adults as HIV/AIDS.

This does not mean that communicable diseases have quietly gone away, require less funding, or are now safely under control. The advent of HIV/AIDS shattered that hope. Malaria and tuberculosis are among other enormous threats that remain and are growing. In addition, new infectious diseases have been emerging at the rate of one a year for the last 20 years or more: SARS is the latest. So it is legitimate that public health communities remain vigilant towards infectious diseases, and that this vigilance begins with primary health care, in accordance with the Declaration of Alma-Ata. However, the world cannot afford to lose sight of the growing social and economic threats posed by CVD and other noncommunicable diseases.

Ironically, CVDs are now in decline in the industrialized countries first associated with them. But from that irony stems hope: the decline is largely a result of the successes of primary prevention and, to a lesser extent, treatment. What has worked in the richer nations – and especially for the most advantaged members of these societies – can be just as effective in their poorer counterparts.

There is now abundant evidence to initiate effective actions at national and global levels to promote and protect cardiovascular health through population-based measures that focus on the main risk factors shared by all noncommunicable diseases. The population-wide application

of existing knowledge has the potential to make a major, rapid and cost-effective contribution to their prevention and control and to benefit all segments of the population .

The main issue for policy-makers, at all levels of public health in developing countries, is how to deal with the growing burden of epidemics of noncommunicable diseases in the presence of persisting communicable disease epidemics. Furthermore, this challenge must be faced even where health system resources are already inadequate. Although considerable policy gains can be made very cheaply, especially intersectorally, extra provision must be found. This requires a greater share of national resources for health care, better use of existing resources, and new sources of funding. A special tax on tobacco products for disease prevention programmes is a readily available source of new funds for most countries.

The causes are known, policies are available

The good news is that an impressive body of research has identified the causes of the CVD epidemics within populations. Global trade and marketing developments continue to drive the nutrition transition towards diets with a high proportion of saturated fat, sugar and salt. At the same time, protective elements like fibre and phytochemicals in fresh fruit and vegetables are being progressively depleted in diets. When combined with tobacco use and low levels of physical activity, this diet leads to population-wide atherosclerosis and the widespread distribution of CVDs. Variations in these same major risk factors explain much of the major difference in rates of CVDs between countries.

In summary, the major CVD risk factors of tobacco use, inappropriate diet and physical inactivity (primarily expressed through unfavourable lipid concentrations, high body-mass index, and raised blood pressure) explain at least 75-85% of new cases of coronary heart disease. In the absence of elevations of these risk factors, coronary heart disease is a rare cause of death. Unfortunately, the vast majority of the populations in almost all countries are at risk of developing CVD because of higher than optimal levels of the main risk factors. Only about 5% of adult men and women in wealthy countries are at low risk with optimal risk factor levels. There are only a few very poor countries in which these factors have not yet emerged as major public health problems.

One of the most exciting possibilities to emerge in public health in recent years is the integration of communicable disease and CVD prevention and control into comprehensive health systems led by primary care. Bringing this to fruition will mean reshaping the future of primary health care in response to a changing world. It would see all patients being offered – across their lifespan – prevention, treatment and long-term management of both sides of the double burden.

Achieving such integration will not be easy. Apart from other considerations, it will require cooperation between professional rivals, who each regard their side of the double burden to be more important than the other, and who compete for their share of limited resources. Such competitiveness has long been entrenched across the battlefields of public health. And yet, as

SARS has shown, cross-disciplinary collaboration is not only possible but can be enormously rewarding to all concerned. In the case of this new epidemic, the world's best scientists, clinicians and public health experts were willing to set aside academic competition and work together for the public good – because the circumstances so clearly required it. Paradoxically, a matching policy response to tackle public health challenges of even greater magnitude is lacking: the mounting menace of the global CVD epidemic is evolving rapidly. (...)

Acting now and measuring progress

There have been striking and rapid reductions in CVD death rates in wealthy countries – especially benefiting the wealthiest and most educated – because of comprehensive approaches including both improved prevention and the management of high-risk people. Policy interventions in developed and developing countries can lead to a surprisingly rapid response. In Mauritius, government action to encourage consumption of healthy oils resulted in a rapid decrease in population levels of blood cholesterol. In Finland, government agricultural subsidies were used to reduce dairy farming and increase berry production. And in Poland, increased consumption of fresh fruit and vegetables, consequent to changes in the policy environment, were associated with a sharp decline in CVD death rates. A WHO/FAO expert consultation report on diet, nutrition and the prevention of chronic diseases reviewed the evidence and provided recommendations for nutrient intake goals for the prevention of CVD and other noncommunicable diseases.

A coherent policy framework, encompassing legislation, regulation and mass education is critical for CVD prevention and control, since individual behaviour change is difficult in the absence of conducive environmental alterations. A suggested stepwise framework for a comprehensive response to CVD prevention and control is outlined in this report and can be modified according to national needs, goals and targets. (...)

WHO and governments cannot confront the challenges of CVD prevention and control alone. As with tobacco control, partnerships and interactions with international consumer groups and global commercial multinationals are essential. WHO is developing a Global Strategy on Diet, Physical Activity and Health as a strategic framework within which WHO and Member States can work together across sectors in preventing CVD and other noncommunicable diseases. This population-wide prevention strategy is based on extensive consultations with stakeholders: Member States, the United Nations and intergovernmental organizations, civil society and the private sector.

Globally, there is still only limited advocacy for the CVD prevention and control agenda. What there is tends to be fragmented. The lack of unified advocacy for health promotion compares poorly with the growing dominance of commercial and consumer groups who have placed treatment at the centre of health policy debates and funding priorities. Broader alliances of major health professional bodies, consumer groups and others are needed to promote the prevention of major risk factors for CVD and to track progress to agreed national and global goals – perhaps modelled on the Millennium Development Goals. Since the determinants of

CVD are multisectoral, advocacy and action, too, must extend well beyond the health sector. The involvement of nongovernmental organizations in articulating the demand for speedy implementation of policies and programmes relevant to CVD control is critical for catalysing policy change and for mobilizing communities to ensure that the benefits flow to the entire population.

While the pace of globalization of the major risks for CVDs is increasing, progress towards CVD prevention and control is slow. Sustained progress will occur only when governments, international agencies, nongovernmental organizations and civil society acknowledge that the scope of public health activities must be rapidly broadened to include CVDs and their risk factors.

The challenge is to work towards the integration of prevention and control of both communicable diseases and CVDs, while acknowledging the different time scales of these epidemics and the competition for limited resources. A place must be found for the prevention and control of CVD on the agenda of health systems led by primary care. At Alma-Ata 25 years ago it was deemed unnecessary. Today, it is indispensable.

**Extract of: Neglected Global Epidemics: Three Growing Threats. In: World Health Organisation, The World Health Report 2003 - Shaping the Future, Chapter 6. Internet: www.who.int/whr/2003/chapter6/en/ (full version including references)*

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