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Review

Burden of non-communicable disease: Global overview

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ABSTRACT

Non-communicable diseases continue to be important public health problems in the world, being responsible for sizeable mortality and morbidity. Non-communicable diseases (NCDs) are the leading causes of death and disability worldwide. In 2005 NCDs caused an estimated 35 million deaths, 60% of all deaths globally, with 80% in low income and middle-income countries and approximately 16 million deaths in people less than 70 years of age. Total deaths from NCDs are projected to increase by a further 17% over the next 10 years. Knowing the risk factors for chronic disease means that approximately 80% premature heart disease and stroke, 80% of Type 2 diabetes and 40% of cancers are preventable. Within next 20 years, NCDs will be responsible for virtually half of the global burden of disease in the developing countries. Risk factors, such as tobacco and alcohol use, improper nutrition and sedentary behavior contribute substantially to the development of NCDs, which are sweeping the entire globe, with an increasing trend mostly in developing countries where, the transition imposes more constraints to deal with an increasing burden of over population with existing communicable diseases overwhelmed with increasing NCDs in poorly maintained sanitation and environment.

By 2020, it is predicted that these diseases will be causing seven out of every 10 deaths in developing countries. A major feature of the developmental transition is the rapid urbanization and the large shifts in population from rural to urban areas. Even the rural people are increasingly adapting urbanized lifestyle. The changing pattern of lifestyle leads to the development of obesity, stroke, stress, atherosclerosis, cancer and other NCDs.

Considering the future burden of NCDs and our existing health care system we should emphasize the need to prioritize the prevention and control of NCDs. Our strategies should be directed to monitor the incidence of NCDs along with their risk factors. Some NCDs have their common risk factors which should be addressed with minimum cost but maximum output. The three key components of the strategy are surveillance, health promotion and primary prevention, and management and health care.

According to the WHO criteria there are three steps for screening of NCDs. Step 1: Estimation population need through assessing the current risk profile and advocate for action. Step 2: Formulate and adopt NCD policy. Step 3: Identify policy implementation steps. Management of NCDs should be to increased awareness among the public regarding the signs and symptoms of the disease and its complications.

Health promotion strategies, with a strong focus on disease prevention, are needed to empower people to act both individually and collectively to prevent risky behavior, and to create economic, political and environmental conditions that prevent NCDs and their risks. Risk trends need to be monitored and intervention strategies need to be evaluated with respect to their expected outcomes. Issues such as rapid population ageing, gender and income inequality, persistent poverty and the needs of developing countries require close consideration as they influence the prevalence of NCDs – and the success of interventions.

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1. Background

Non-communicable diseases (NCDs) continue to be important public health problems in the world, being responsible for sizeable mortality and morbidity. Demographic changes and changes caused in the environment and the economy are the major reasons for shift against a predominantly communicable diseases scenario. Ageing population allows manifestation of cardiovascular diseases, diabetes, cancer and mental disorders, which also result in high prevalence of chronic disability. Four of the most prominent NCDs – cardiovascular disease (CVD), cancer, chronic obstructive pulmonary disease and diabetes – are linked by common preventable risk factors including tobacco use, unhealthy diet and low physical activity.

NCDs are the leading causes of death and disability worldwide. Disease rates from these conditions are accelerating globally, advancing across regions and social classes [1]. The pandemic of NCDs continues to grow. In 2005 NCDs caused an estimated 35 million deaths, 60% of all deaths globally, with 80% in low income and middle income countries and approximately 16 million deaths in people under 70 years of age. Total deaths from NCDs are projected to increase by a further 17% over the next 10 years. Knowing the risk factors for chronic disease means that approximately 80% premature heart disease and stroke, 80% of type II diabetes and 40% of Cancers are preventable. Within 20 years, NCDs will be responsible for virtually half of the global burden of disease in developing and newly industrialized countries. Risk factors, such as tobacco and alcohol use, inadequate diets and sedentary behaviour, contribute substantially to the development of NCDs. They are typically initiated during youth, continued into adulthood and their consequences are exacerbated with ageing. Economic, environmental and political conditions also contribute significantly to NCDs and related risk factors.

2. Epidemic transition and increasing trends of NCDs

By the dawn of the third millennium, non-communicable diseases are sweeping the entire globe, with an increasing trend in developing countries where, the transition imposes more constraints to deal with the double burden of infective and non-infective diseases in a poor environment characterized by ill-health systems. By 2020, it is predicted that these diseases will be

causing seven out of every 10 deaths in developing countries. Tackling associated with risk factors can prevent many of the non-communicable diseases (Fig. 1).

2.1. Developmental transition

The attainment of food adequacy is usually accompanied by a change in the pattern of food consumption, which along with mechanization and sedentary lifestyles is often detrimental to health in the long run. These changes influence the alterations in health leading to a health transition and alter the risks to individuals and thus result in a risk transition. Developmental transition hence includes the demographic, epidemiological, nutrition, health and risk transitions that occur during the process of economic development in societies.

2.2. Demographic and epidemiologic transition

The usual backdrop to this shift in disease profile from one dominated by mortality largely attributable to infectious and communicable diseases to a scenario characterized by premature adult mortality due to chronic, degenerative and non-communicable diseases are the preceding ‘demographic transition’. ‘Epidemiologic transition’ on the other hand, focuses on the complex changes in patterns of health, disease and mortality, which result from these demographic changes, and the associated economic and

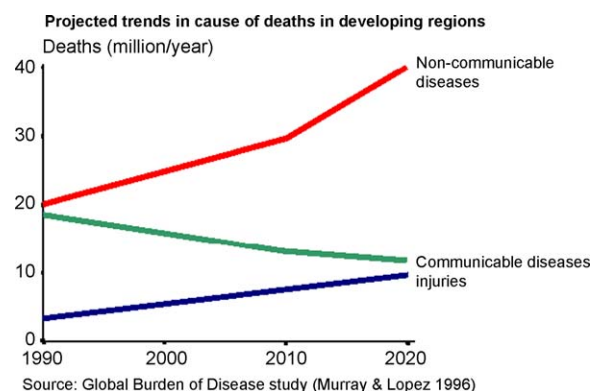


Fig. 1. Trends of causes of death in developing world.

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