Policy Making Challenges on Dual Burden of Environment Related Diseases

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Policy-makers in the developing countries face dual burden health impacts from infectious and non-infectious disease. Moreover, environment hazards in developing countries bear the economic cost, lost productivity, the burden on the health sector, a burden from degraded resources and long-term social consequences. In published report of WHO/ UNEP (2004), every minute, five children in developing countries die from malaria or diarrhea. Every hour, 100 children die as a result of exposure to indoor smoke from solid fuels. Every day, nearly 1800 people in developing cities die as a result of exposure to urban air pollution. Every month, nearly 19 000 people in developing countries die from unintentional poisonings[1].

If we assess disease burden in developing countries, it is still dominated by infectious diseases (ID) - all of them so-called diseases of poverty. There is an increasing trend in developing countries, where the demographic and socio-economic transition imposes more constraints on dealing with the double burden of infectious and non-infectious diseases (NID) in a poor environment, characterized by poor-health systems. It is predicted that, by 2020, non-infectious diseases will cause seven out of every ten deaths in developing countries. Among non-infectious diseases, special attention is devoted to cardiovascular disease, diabetes, cancer, chronic pulmonary and renal diseases. The burden of these conditions affects countries worldwide but with a growing trend in developing countries. Preventive strategies must take into account the growing trend of risk factors correlated to these diseases. Despite the success of vaccination programs for polio and some childhood diseases, other diseases like AIDS, tuberculosis, malaria and dengue are still out of control in many regions of the world[2].

WHO estimates that 63 percent of the 57 million deaths each year are linked to non-infectious diseases. What was once considered a burden of the developed world is now disproportionately affecting low- and middle-income countries, in 2008 accounting for 29 million of the total 36 million NID-related global deaths. Changing smoking and diet/nutrition habits, urbanization, social disruption and unhealthy lifestyles - often linked to poverty- are just some of the explaining factors. Accidents and violence are of increasing concern in causing injuries, disabilities and deaths.

In addition, burden of vector-borne disease in which different vectors that transmit pathogens and parasites from one infected person (or animal) to another, causing serious diseases in human populations is a serious concern. These diseases are commonly found in tropical and sub-tropical regions and places where access to safe drinking-water and poor sanitation systems.

Vector-borne diseases account for 17% of the estimated global burden of all infectious diseases. The most deadly vector-borne disease, malaria, caused an estimated 627 000 deaths in 20123 and the world's fastest growing vector-borne disease is dengue, with a 30-fold increase in disease incidence over the last 50 years[4].

Moreover, the devastating global pandemic has been raised more than once in recent years. Recent disease events such as SARS, Swine flu (H1N1), avian influenza and hemorrhagic fevers have focused attention as never before on the need to understand and prepare for these unpredictable events. A series of new infectious diseases have also emerged (many of them zoonoses, with their origins in animal species), linked to changing patterns of land use, interactions between humans, livestock and wildlife and new patterns of social behavior[5].

At the same time, developing countries are coping with a rapid rate of modernization and change. Environment and health issues need to be high on policy agendas. Development decisions should involve a thorough consideration of issues related to environment and health, ahead of major investments and infrastructure commitments. But that is not always the case. Why?

Environmental hazards, which may be unseen and/ or emerge slowly over time, also compete as policy priorities with social, political, economic and humanitarian crises - some of which may be related to long-neglected environmental problems (e.g. floods and epidemics or drought and famine).

In addition, changes in society, technology and the microorganisms themselves are contributing to the emergence of new diseases, the re-emergence of diseases once controlled, and to the development of antimicrobial resistance. Two areas of special concern in the twenty-first century are food-borne disease and antimicrobial resistance. The effective control of infectious diseases in the new millennium will require effective public health infrastructures that will rapidly recognize and respond to them and will prevent emerging problems[3,4].

Hence, there is an urgent need to develop efficient preventative strategies to control the growing trend of infectious diseases and non- infectious diseases through the control of risk factors like smoking, alcohol, obesity, diet and inactivity, sexual contacts and environmental factors in general. Considering the level of poverty and the cost of prevention and management of chronic diseases, the most affected countries are unable to cope with the burden of disease. For health strategies to be successful, international solidarity and public-private partnerships are needed to tackle the problems of shortage and lack of treatments, resistance, and the need for new drugs, vaccines and diagnostic procedures.

Challenges toward future policy is important to develop more effective, sustainable and socially just approaches to dealing with epidemics, in all their complexity and uncertainty, is a key challenge for the future. This will require flexible organizations which can enable respond and co-ordinate with diverse expertise and priorities. New disciplinary and professional mixes, linking the work of technical specialists (medical doctors, epidemiologists, Laboratory scientists, veterinary and public health professionals) with the perspectives of social and political scientists, ecologists and environmental specialists, 'frontline' practitioners, and people who live with disease on a day-to-day basis. Thus, developing country like Nepal need for health policymakers and government to prioritize the development and implementation of such environment related disease policies is a must.

References

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