
Health Systems Development

Role of Public Health in Economic Development

by
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Introduction

WHO's South-East Asia Region consists of 11 Member State. While the determinants of health in the countries of the Region are varied and complex including different population growth rates, economic development, cultural practices, environmental factors, and social settings, there are several commonalities in terms of the unfinished agenda and challenges. The Region bears a significant share of the global burden of diseases, partly due to the sheer size of its population, exceeding 1.5 billion, and the low social and economic status of a large proportion of the population.

Parliamentarians from the Asia and Pacific regions at their regional conference on economic crisis and its impact on health, held in Jakarta in December 1998 had noted that pursuing health and well-being in the era of globalization, and, particularly in the period of an economic crisis was one of the noble objectives of every government. The relationship of economic growth and social development with health had been seen during the period of economic turmoil during the late 1990s in most countries of the Region. This had led to decreasing public revenues leading to a drastic reduction in public health, inability to pay for imported materials which ultimately led to shortages and higher prices of medicines and other medical supplies.

During the last few decades, the process of liberalization has been very active globally, more than ever before. The use of computers, e-mail, cellular phones, increased travel and the mass media have brought countries and people closer. The progress in information and communication technology has been unprecedented. Economic reforms, democratization and liberal trade agreements have been revolutionary. In the field of health, the progress has been dramatic. Smallpox and guinea worm disease were eradicated from the Region, while polio is near eradication, and the leprosy elimination target for the Region is within reach by 2005.

Globalization and rapid trade liberalization, however, have generated numerous problems. While the rich are becoming richer, the poor are getting poorer in most countries, with the gap between rich and poor increasing. No doubt, developments in health technology are remarkable, but the costs involved are high and out of reach for the common man. The lack of capacity to pay for the high costs of medicines and health care only increases the frustration. Globalization is also leading to a change in eating habits and lifestyles. Affluence is bringing with it increased stress in day-to-day life, widespread use of alcohol, tobacco and drugs and consumption of unhealthy foods.

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There is increased environmental degradation with the rapid population growth, increased urbanization and depletion of our natural resources. Rapid travel and increased migration along with globalization of the food industry has considerably enhanced the risk of spread of epidemics and non-infectious diseases. The emergence of outbreaks of plague, Ebola virus, Mad Cow disease, Foot and mouth disease, virulent cholera, Avian Influenza (Bird Flu), SARs, Nipah virus, and meningitis in recent years reminds us of the global, regional and national threats from diseases, and also underlines the importance of global health security.

The South-East Asia Region is also prone to repeated occurrences of natural and man-made disasters. The earthquake and Tsunami of December 2004 had a major impact on health and development. In addition to the hundreds of thousands of people who died in the disaster, billions of dollars were lost on properties and businesses. In addition, the health, mental and social wellbeing of millions of people who were internally displaced or lost their family members has been severely affected.

In order to strengthen essential public health functions, and to mobilize additional funding for investment in the public health sector the countries need to strengthen or enhance their policy actions to combat ill-health and look at alternate mechanisms for health care financing to achieve universal coverage and to develop healthy societies. This paper highlights the importance of public health which will give better dividends in terms of economic development leading to a reduction in the burden of diseases related to poverty and ill health. The focus is on why the policy makers and legislators

need to critically review the policies and legislations across the ministries/sectors that have implications and contribute to the health of the people. The paper also emphasizes the need for enhancing advocacy for higher investment in health, not necessarily in the traditional health sector alone but also in other sectors which have a positive impact on health development.

Health situation and trends

At the start of the 21st century, the Region is witnessing demographic transition at varying paces. While India passed the level of 1 billion population in 2000, Indonesia and Bangladesh are the next largest populated countries with 238 million and 168 million respectively. The total population of the Region continued to grow rapidly, crossing the 1.6 billion mark by 2002. According to UN estimates, the total population of the Region will reach 1.75 billion by 2010, and 2.06 billion by 2025. Six countries – DPR Korea, India, Indonesia, Maldives, Sri Lanka and Thailand – had already achieved life expectancy at birth (LEB) of over 60 years by 2000. These countries expect to attain the levels beyond 70 years by 2025. The remaining countries would also reach LEB of more than 60 years by that time. In the mega countries like Bangladesh, India and Indonesia, 8-12% of their populations will be above 60 years by 2025. This demographic transition could lead to epidemiological changes with increasing incidence of degenerative, cardiovascular, and chronic diseases and cancer.

By 2000, there were five mega cities with more than 10 million population, (Mumbai, Kolkata and New Delhi in India, Dhaka in Bangladesh and Jakarta in Indonesia). This number would increase to seven in 2015, with the addition of two cities

(Hyderabad in India and Bangkok in Thailand). This rapid population growth in urban areas is mainly due to the people's perception that there are increased opportunities for better life and improved income with stable and lucrative employment. Rapid urbanization has also brought in its wake major health problems due to inadequate provision of safe water, sanitation, electricity, garbage disposal and health care, which has put an added burden on the already burdened municipalities and local governments.

Another phenomenon is the temporary and permanent migration of people from one country to another. These external migrants usually have minimal skills to venture out in search of employment for higher income. Some countries even promote external migration (mostly of a temporary nature) to increase their foreign exchange earnings through repatriation by temporary migrants.

The rapid changes in the political, social, economic, environmental, technological, demographic and epidemiological situations taking place in the Region and elsewhere have posed unprecedented health challenges. Most countries have continued to maintain steady GDP growth rates, since the late 1990s. While there is an increase in overall economic growth, the gap between the 'haves' and 'have-nots' is widening not only among countries, but also between areas within countries. While six countries in the Region are categorized as least developed (LDC), the rest are in the middle-income category.

The biggest enemy of human development is poverty. Leaders all over the world are getting convinced that development is the key for removing poverty. The

struggle for better health is an integral part of the struggle for development. Better health cannot be achieved by focusing on diseases only. The basic battle must be fought for providing safe drinking water, sanitation, education, environmental safety and basic health care.

There is no doubt that the countries of the Region have achieved their development objectives partially to some extent. From a comparative analysis of human development index (HDI) among SEAR countries, we can see that Thailand, Sri Lanka, Maldives and Indonesia are in the group achieving a higher level of HDI, while Bangladesh, Bhutan and Nepal are at the other end. India and Myanmar fall in between. Health, education and income are the three pillars of human development, as shown by using them as basic indices for measuring human development as HDI. These are inter-related and complement each other.

While the linkages between education and economic development are well known, the impact of health on economic growth is now increasingly becoming evident. Compared to medical care which reduces morbidity and mortality, public health on the other hand, with the community-based approach, leads to healthy and economically productive populations by focusing on health promotion and disease prevention. From the evidence available, it can now be shown that public health can boost the economy. There is a clear link between health and economic growth.

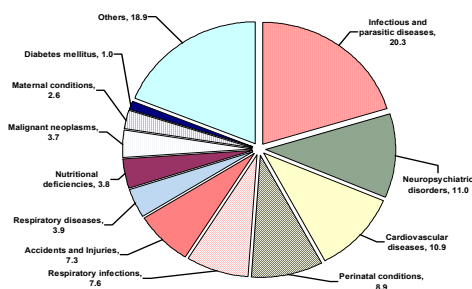
Double Burden of Diseases

The Region faces the double burden of diseases, posing serious challenges to the health systems and calling for considerable

changes in the allocation of already scarce resources. There is still a significant gap in the data on the burden of diseases that hinders assessment of a country's priorities for public health action.

According to WHO estimates, the Region accounted for nearly 30% of the global disability-adjusted life years (DALY's) losses (Note: One DALY loss is one year lost of "healthy" life). The leading causes of DALY's were Group II conditions (which contained cardiovascular diseases and neuropsychiatric diseases) accounting for 46.1% of the global burden. Group I conditions (infectious diseases) also accounted for 41.5% of the total global DALY's, while Group III (injuries) conditions were the balance 12.4% of the global DALY's. Communicable diseases like malaria, tuberculosis, HIV/AIDS, and many vaccine preventable diseases are highly prevalent and play a significant role in slowing down health development in the Region. Respiratory infections and diarrhoeal diseases continue to be major causes of morbidity and mortality among young children and the elderly. (see Figure 1)

Figure 1: Leading causes of morbidity, SEA Region, 2000 (as percentage of Global Disease Burden in DALY)



Successful implementation of immunization and diarrhoeal diseases

control programmes in the recent past in all countries has been instrumental in dramatically reducing the incidence of these childhood diseases. While infectious and parasitic diseases may still be the leading cause of DALY's, noncommunicable conditions like cardiovascular diseases and neuropsychiatric disorders are rapidly becoming important causes of premature death and disability in the Region. Of the individual conditions, cardiovascular diseases are the biggestcrippler and killer (28.9%) in the Region. The changes in lifestyles which have resulted in sedentary habits, poor physical activity, unhealthy diets and smoking have all contributed to a high prevalence of cardiovascular diseases in the Region.

Economic Growth and Health

Health is a cause rather than an effect of economic development. History is a witness to the fact that important breakthroughs in public health, disease control and improved nutritional intake has given rise to great takeoffs in economic development □ rapid growth of Britain during the industrial revolution, rapid growth of Japan in the 20th century, and Europe and East Asia in the 1950s and 1960s. Health is among the basic capabilities that gives value to human life (Sen, 1999). Health and education are two cornerstones of human capital and, furthermore, health is the key determinant of education and vice versa. There exists a correlation between better health, and higher economic growth for health determines job productivity, the capacity to learn in school and the capability to grow intellectually, physically and emotionally. Elimination of disease and improvement of individual health will enhance income-earning capacity over three times.

It is erroneous to assume that better health is a by-product of economic growth. Disease burden slows the economic growth that is presumed to solve the health problems. For example, more than half of Africa's growth shortfall relative to the high-growth countries of East Asia could be explained statistically by disease burden, demography, and geography, rather than by more traditional variables of macroeconomic policy and political governance (Bloom and Sachs, 1998). Economic study done in India showed that the treatment of leprosy in the state of Tamil Nadu improved individual income three-folds. Thus, health improvement helps the poor in augmenting the income. Diseases actually reduce the number of years of healthy life expectancy, as already shown of the reverse trends of life-expectancy in some countries especially in Africa. The society afflicted with high infant mortality rate lacks a secure knowledge of its children's longevity, witness's higher rates of fertility, and experiences "quality-quantity" trade-off in child rearing. Disease burden diminishes the return to business and infrastructure investment in addition to the effects on individual worker productivity.

Health and development

Addressing health within a broad developmental framework has two important aspects. First, it means developing viable health and health related development strategies that prioritize the needs of the poor and, in doing so, contribute to poverty reduction, social protection, the empowerment of marginalised groups and fulfilment of human rights. Second, it means ensuring that health and health related development strategies are firmly rooted in and reflect broader economic and poverty reduction

policies, such as civil service reform, decentralization and poverty reduction. Health is now used as inputs as well as outputs of national socioeconomic development programmes and national poverty reduction strategy papers (PRSP).

It goes without saying that the approach taken should be tailored to the country context. The problem of inequitable health outcomes between rich and poor is an issue in all countries, developing and developed, though it is usually worst in the poorest or least developed countries. Limited health resources are typically spent in urban health areas, providing health care to relatively better-off and more vocal populations, while the rural poor and slum dwellers are more likely to seek care from expensive private providers. In this way, the health systems can itself contribute to poverty, when health-care payments push the poor or near-poor into destitution, or when lack of access to care creates life-long disability, limiting earning power.

A "pro-poor" approach does not always imply establishing separate health services for the poor - although targeted outreach services can often be a useful tool for reaching poor communities. Rather, it means addressing the inequitable allocation of staff and funds by shifting resources towards services and activities which benefit the poor and marginalized. For many countries, the essence of a pro-poor approach is to renew or reinvigorate the primary health care strategy through investments in quality public health and personal care services, ensuring equitable financing establishing and making links with other sectors which influence health outcomes, such as education, water and the environment.

Raising the profile of health in national development processes

Broader socioeconomic policies and government-wide reform programmes can have a profound impact on the functioning of the ministry of health, particularly in the area of improved accessibility of health care for all. Yet, health issues are rarely taken into account when such programmes are designed and implemented, and the contribution of health professionals to these processes is often limited. There are some basic fundamental reasons for this: inadequate capacity within ministries of health; inadequate oversight or consultation of ministries such as finance and planning with line ministries; and inadequate capacity at local level for health governance. There are some good examples to strengthen this argument.

Public Expenditure reviews and reform:

One of the main reasons that health systems function poorly, particularly in rural areas, is that they receive their budget allocation erratically or late. This is typically a problem across all public sectors, and can only be addressed through government-wide reforms, e.g., through Public Expenditure Reviews (PER). In the health sector, a systematic compilation of national and sub-national health accounts initially for the public sector and later for the private sector would support this policy process. Regular updating of national health accounts in a few countries such as Thailand, Sri Lanka and Bangladesh has helped the national health authorities and the parliamentarians to have a good review of public and private health expenditures, and to provide evidence-based information for annual budgeting exercises or at local level for expenditure review and budgeting. Regular

updating of national health accounts requires capacity building in the areas of accounting, health economics and public health.

Decentralization process: The process of decentralization itself has a profound impact on health care delivery. National health priorities as defined by the Ministry of Health may not, sometimes, be respected, once local authorities have jurisdiction over the allocation of scarce health resources. Again, health authorities need to be closely involved when decentralization plans are drawn-up, implemented and revised.

National poverty reduction strategies (PRS) and associated expenditure frameworks.

A prominent place for health in the national PRS will help to ensure political backing for health strategies, co-ordination with other sectors, and appropriate funding. It is well acknowledged that health, education and economy form the basic core of social development. Similarly the link between poverty and ill health is also well documented. Poverty breeds ill health due to increased vulnerability and lack of access to health services. Ill health traps people in poverty, from which they cannot escape. Poverty does not mean just lack of, or low income, but the undermining of human capabilities including health. Accordingly, deprivation of the means (such as physical access to health care) to achieve human capability is referred to as human poverty. In fact, the UN General Assembly placed health at the heart of development when it set the Millennium Development Goals. However, the social dynamics of health include a variety of interactive processes. Economic capability as indicated by income has an impact on access to health and health promotion activities. On the other

hand, ill-health limits people's economic capability and contributes to poverty. This two-way causal relationship between the economy and health has been highlighted by the Commission on Macroeconomics and Health (WHO 2001).

The Commission, while calling upon the low and middle-income countries to scale up the access to health care for the poor, recommended that each developing country establish a National Commission on Macroeconomics and Health (NCMH) to organize and lead the scaling up effort. More than 40 countries have taken steps towards this direction based on three overarching themes:

- Develop a multi-sector investment plan to improve health outcomes, especially among the poor;
- Strengthen commitments to increased financial investments in the health plan to achieve MDGs and other national goals; and
- Determine how to minimize non-financial constraints to the absorption of greater investments by increasing efficiency and effectiveness

The commission estimated that a minimally adequate set of interventions and the infrastructure needed to deliver them would cost nearly \$30 to \$40 per capita. Other estimates suggest that as much as \$60 per capita is needed. While these figures differ markedly, the overriding message is that, in the poorest countries, health spending needs to be of a different order of magnitude compared to its current level of just \$8-\$10 per capita. Attention is now turning from costing exercises to the difficult question of how to generate

sustained political support for long-term investment in health - both domestically and from donors.

MDGs, Health and Human Development

The eight goals derived from the UN Millennium Declaration, known as the UN Millennium Development Goals (MDGs), mark a turning point in the history of development. For the first time national governments, international agencies and the UN system have together agreed on a common set of priorities for their development efforts, and set targets against which to measure progress. The MDGs call for quantifiable improvements in key areas of human development. Health is prominently reflected, representing three of the eight goals, and contributes to the achievement of other MDG targets including those related to poverty reduction. Indeed, the comprehensive nature of the MDGs is recognition that development is an inter-sectoral and inter-dependent process: improved nutrition helps school completion rates, improved education levels contribute to better health, and better health contributes to poverty reduction. In other words, the eight MDGs are synergistic, and cannot be achieved in isolation. Goal 8, on developing an international partnership for development, recognizes that this holistic approach must also include the actions of rich countries.

The synergistic nature of the MDGs has important implications for the development of policies and strategies to achieve them. Public health experts have always known that health outcomes (as measured by mortality and morbidity) are determined by a host of political, social and economic factors, and do not improve with increased coverage of disease interventions alone. Improving health

outcomes therefore requires action in other areas, including gender equality (which has an impact on maternal mortality and the spread of HIV/AIDS); water and sanitation, food security and nutrition (which all affect child health); and education (impacting on maternal health, including fertility, and child health).

Selected diseases and their economic burden

Keeping in view the existing disease profile and the degree to which they affect various sections of the population, a brief insight into the associated and discernible costs would help to develop a perception as to how preventable diseases continue to affect the lives of millions. It has already been seen that there is a widespread disparity in the burden of diseases between high and low-income countries. The conditions are worse when one looks that the burden is disproportionately carried by the poor. In general, there are certain identifiable direct and indirect costs of ill-health. These costs seem to have a considerable effect on the individuals as well as the economy as a whole. Hence, there are various channels, most of which are interlinked, through which the burden of disease translates itself into economic loss. A cause of added concern is that most of these diseases are preventable and the losses arising out of their incidence can be controlled. Therefore, before directing our efforts towards formulating of plans and policies to restrict these costs and strive towards a disease-free world, it becomes almost mandatory to highlight both the direct and indirect costs of ill-health due to some selected diseases.

Tuberculosis

Tuberculosis (TB) is a leading public health problem worldwide, particularly in the developing countries. In view of the seriousness of the problem, WHO, in 1993, declared TB to be a global health emergency. Nearly three million cases and 700 000 deaths occur every year in the SEA Region, and six countries, namely, India, Indonesia, Bangladesh, Indonesia, Myanmar and Thailand account for 95 per cent of these deaths. TB afflicts people mainly in the economically productive ages between 15-60 years, directly affecting the household's and the nations' economic well-being. As the likelihood that a patient suffering from TB also has a high risk of being afflicted by HIV/AIDS, has further complicated the treatment strategy for TB afflicted persons. Moreover, tuberculosis is the largest single infectious cause of women's deaths in the Region. It is estimated that in 2000, between 56 and 80 per cent of AIDS patients in the Region were also suffering from tuberculosis. Both the diseases affect men and women in the most productive age groups. TB levies a tremendous social and economic cost on individuals as well as nations. It has been estimated that up to one third of the household income and between 4-7 per cent of National GDP is lost on account of morbidity and mortality due to TB. On the whole, this disease alone costs around US\$ 4 billion every year in the Region. Curing the infected person in the early course of the disease best prevents tuberculosis. Properly formulated programmes can cure up to 90 percent of the patients and check the speed of the disease.

Malaria

The risk for malaria infection has always been geographically specific, mostly confined

to the tropical and subtropical zones. However, the link between malaria and poverty is very subtle. The nexus between malaria and poverty can be established by the fact that poor countries predominate in the same regions where malaria is highly prevalent. It has been empirically observed that the rate of economic growth in the countries with high malaria burden has been dismal. The severity of malaria infection significantly contributes to child mortality and can also cause acute disease in pregnant women. Malaria has life-long effects on cognitive development and educational levels through the impact of induced anaemia by chronic malaria and school time lost due to illness. It is also seen that malaria, along with other childhood infectious diseases, exacerbates malnutrition (Gallup and Sachs, 2001). Approximately one million children under five are lost to this disease every year. The incidence of the disease does not depend on poverty per se. It is the geographical location which determines the severity of the disease on human population. Like other diseases, malaria too diverts household savings into less productive areas. There are certain endemic regions in South-East Asia which have a high incidence of malaria such as the Myanmar-Thailand border, Myanmar-India-Bangladesh borders and parts of Bhutan.

HIV/AIDS

The burden of HIV/AIDS and its effect on the lives of millions is enormous. As a result of the AIDS pandemic, individuals in their prime working lives are struck down which in turn, slowed down the aggregate economic growth. The economic losses to the society as a result of truncated lives, due to a combination of early deaths and chronic disability is phenomenally large. The economy is threatened by the adverse impact

of AIDS on savings and productivity. The huge macroeconomic costs to the economy are due to cost of treatment, which diverts the bulk of the savings away from productive investments. The loss arising from the death of a person infected with AIDS is not restricted to the individual and the family or the economy at large but also has an impact on the future generation as well. Premature disability or death results in affected families being thrown into conditions of abject poverty. Since a large proportion of HIV-infected people are in the reproductive ages, the impact on productivity, costs and on the economic environment is considerable. The vulnerability of workers at the workplace is being recognized as one of the greatest threats to manufacturing firms and industrial houses.

Employers are likely to face increased labour costs because of low productivity, absenteeism, shortage of labour, shorter working hours, sick leave and other benefits, early retirement and additional training costs. Well-educated and skilled, as well as uneducated and unskilled workers are equally affected by HIV/AIDS. Even otherwise, healthy workers have to devote time in caring for the sick, which takes away a considerable part of their time at work. It also puts pressure on public services, reducing savings and investments, and slows economic growth. The World Bank estimates that negative growth in GDP can be expected when national HIV prevalence rates reach 5 per cent.

Apart from these, there are other serious indirect effects on individuals, households and on society at large. A sharp increase and changes in the pattern of household expenditure is expected to be associated with a depletion of savings. Many will incur additional debts, and assets, including land, livestock and implements

may be sold to meet the growing medical needs or loss of income. Studies have highlighted the impact on schooling, with children being withdrawn from school and pushed into the labour market at an early age.

In the case of a migrant worker losing a job because of inability to work, there are ripple effects, even if he does not return to his native village, because the remittances to the village may be curtailed or entirely cut off. As a consequence, elderly members of the household are forced to stay back in the labour market for long. Due to the AIDS-led disability, the number of female-headed households is on the increase wherein the burden of running the household falls heavily on the woman. Often the person affected is subjected to social exclusion and also loses family support in many cases. There have been reports of an increasing number of orphans due to the infection.

Tobacco Use

Tobacco consumption accounts for 3.5 million deaths annually across the globe, with one life lost in every nine seconds. It is estimated that the number of deaths by 2030 would exceed 10 million, with 70 per cent of the deaths occurring in the developing countries. Scientific evidence shows that at least 25 diseases/chronic conditions are related to smoking. About 20 per cent of the deaths in the 1990s were due to tobacco and its related products. In the age group 35-69 years, about 35 per cent of the deaths among men and 15 per cent among women are caused by tobacco. Apart from the tragic health consequences, smoking encompasses several other economic and social costs. A 1994 World Bank study revealed that the use of tobacco resulted in a global loss of US \$ 200 000

million per year, with half of the losses occurring in the developing world. The costs include direct medical care for tobacco-related illness, absenteeism from work, fire losses, reduced productivity and loss of income due to mortality. In spite of the growing awareness regarding the health hazards of tobacco, the consumption of manufactured tobacco more than doubled in 1992 from 1967, from 2.8 trillion to 5.7 trillion cigarettes, with the per capita cigarette consumption increasing by 25 per cent during the same period globally.

An effective way to control tobacco use is to curb the social acceptance of the smoking habit at the individual level and by the adoption of appropriate legislative measures as part of healthy public policy. Millions of lives saved by preventing early deaths from infectious diseases may be lost at the middle-age period, due to new generations of adolescents and young adults taking up smoking. Cessation efforts need to be promoted and encouraged. Tobacco control mechanisms should be directed towards the prevention of smoking by the young and productive age-groups, and also to ensure that traditional non-smokers like young women are not induced into smoking. Preventing involuntary exposure to environmental tobacco smoke would reduce the risk amongst children and non-smoking men and women.

Effective action against the tobacco epidemic requires a clear idea of the epidemic's scope. The amount of tobacco consumed is an important measure of the magnitude of the problem.

There are several public awareness programmes which have been initiated in almost all countries of the Region. In this regard, the observance of World No-Tobacco Day on 31 May every year has

been designed to publicize the health hazards related to smoking. National legislation has been passed in several countries to prevent advertising and promotion of tobacco consumption. Taxes and duties have been levied in some countries in order to discourage the purchase of tobacco and other related products. In some countries, a proportion of the tax revenue is used for health promotion.

Reproductive Health

WHO estimates that half a million women die due to complications in pregnancy and childbirth every year. Nearly 99 per cent of these deaths take place in developing countries. The risk of dying in developing countries is almost 50 to 100 times higher than in the developed countries. A typical woman is exposed to the risk of death not just once but 6 to 8 times in her lifespan. About 20 to 40 per cent of the deaths of women of childbearing age can be attributed to childbirth and pregnancy complications. In the USA, the figure is less than 1 per cent. It has also been observed that maternal morbidity is as harmful as maternal mortality. Adolescents under the age of 15 are 5 to 7 times more likely to die in pregnancy and childbirth than women in the lowest risk age group of 20-24 years.

Millions of women are malnourished and suffer from chronic anaemia, malaria and intestinal diseases that weaken their ability to bear healthy children and survive deliveries. The health of a child depends greatly on the health of the mother. In the developing countries, one third of the DALY's lost by women aged 15 to 44 years result from reproductive health problems. Highly cost-effective interventions costing less than \$100 per DALY saved can benefit more females than males between the ages of 5 to 44 years.

Weak health systems, poor coverage and quality of antenatal care, lack of trained assistance during delivery, lack of access to essential emergency obstetric services for high-risk and complicated cases, and lack of referral and transport system, are major reasons for the high levels of maternal morbidity and mortality. One of the priority areas for interventions is to ensure that every delivery is attended by trained personnel who can recognize complications and provide timely interventions to save lives. Besides, providing for antenatal, intra-natal and post-natal services that have a bearing on the health of both the mother and the child are important low-cost interventions.

There is a complex interplay of socioeconomic, environmental, and cultural factors that contribute to the reproductive ill-health of populations, particularly women, in developing countries. Poverty, ignorance, illiteracy and malnutrition are major determinants of women's health status. Age at marriage and pregnancy, the number and frequency of child births with, and the numbers of unwanted pregnancies and abortions are significant factors that contribute to morbidity and mortality among women and their babies. The lower the status and worth of women in society, the higher the maternal mortality. And, not the least important are the health service-related factors such as lack of access to quality reproductive health services.

Globally, WHO estimates that reproductive ill-health accounts for 36.6 per cent of the total disease burden in women as compared to 12.3 per cent for men of the same age. Data show that maternal mortality is three to four times higher in the 15-19 year age group compared to the 20-30 year group. Antenatal care and trained attendance at delivery varies from 18 to 97 per cent and from 6 to 97 per cent,

respectively. Other diseases such as HIV infection also contribute to reproductive ill-health.

Several studies have revealed that investment in women's health is beneficial not only for women in particular but also for the family and community at large. It is in line with the argument that women play a crucial role in ensuring healthy lives for the family. Women, through their interactive roles at home, are the key providers of health and nutrition to their dependants. A woman, therefore, has to lead a healthy life herself in order to ensure that her children are healthy. The health of women does not depend only on the health services being accessible, but primarily on their economic status and the degree of health awareness. The educational status of women is relevant in this context.

It has been observed that literate women are more health conscious and, therefore, the prevalence of diseases related to maternal health and otherwise is less among this particular class of women. Consequently, there is a divergence of health status among rural and urban women in general. Women with increased economic independence are able to provide better health and nutrition for themselves and their children.

The distressing status of maternal health in developing countries reflects the poor and scarce health facilities available to women despite the claims of huge public expenditure on reproductive health. However, it can be argued that often geographical and socio-cultural barriers prevent women from accessing the available health services. Thus, it can be inferred that the available health services are inadequate to cater to the health requirements of women in particular. Improvements in women's

health increase personal and family productivity and also help ensure healthier generations in future. National economies, communities and households all depend on women's paid and unpaid labour and ultimately benefit from investments in women's health.

Nutrition

Overall inadequacy of food intake to meet the needs for growth, immune function, cognitive development and reproduction affects 30 per cent of children and 25 per cent of women. Nearly 56 per cent of all under-5 deaths are indirectly associated with some form of malnutrition.

Malnutrition is the result of an interaction between food intake, disease risk factor and behaviour. Disease is the result of exposure to disease, lack of resistance and treatment at home and medical interventions. Frequent diseases associated with anorexia, fever and diarrhoea have the greatest effect on nutrition. Malnutrition, in turn, reduces resistance to disease. Reducing the effect of disease on nutrition involves immunization, improved water supply and sanitation, improved hygiene and access to minimum nutrition inputs in the context of health care.

The highest levels of malnutrition and under-nutrition are present in the SEA Region, even higher than the chronic food deficit countries of Sub-Saharan Africa. The high levels of anaemia among women, especially pregnant women, reveal the high degree of nutritional deficiency in the Region. Women are found to have inadequate intake of iron supplemented diet. Practically in all countries of the Region, the health of women and children in particular is neglected. Often, social norms and practices contribute to the low health and nutritional

status of women. Poor health conditions of children and the prevalence of malnutrition are reflected by the prevalence of underweight among children as well as by the incidence of stunting and wasting. The main cause of malnutrition among infants is identified as low levels of breastfeeding and poor methods of weaning. Most of the countries have adopted comprehensive health programmes to improve the health and nutritional levels of the masses. However, because of lack of access to most of these programmes, due to the lack of funds as well as geographical hindrances, people have not been able to benefit from these programmes on a large scale.

Links between Health and the Economy

Health exhibits both investment and welfare characteristics. The investment theory views health as an essential input to produce human capital ultimately resulting in improved economic productivity. On the other hand, the welfare argument sees the enhancement of health as an objective of development irrespective of whether or not it is economically productive. But, the link between macro-economic growth of a nation and the state of health, which is often understood as an individual attribute, has not been established across the world, especially in the emerging economies of the South-East Asia Region. If at all, it is normally believed that a fast pace of economic growth in terms of higher GDP growth is a pre-condition to improve people's health. The fact that health gains can be achieved through efficient allocation of scarce resources even at lower levels of national income is not well understood. The other side of the argument, that better health, also contributes to enhancement of GDP, is often not considered.

History is full of examples to show that much of the major gains in the health of individuals and communities occur as a result of concurrent innovations, change in the understanding of epidemiology, inventions of key medications, and improvements in disposable incomes. The latter facilitated a number of behavioural changes leading to improvement in personal hygiene, healthy and sanitary lifestyles and motivation to seek preventive care as opposed to post-episodic cure and treatment. The advent of scientific explanations for the occurrence of disease, bacteriology and virology provided the basis for people adopting modern medicine, and hygienic practices were the natural fallout of an increase in incomes and education. Wars and natural disasters often stimulated thought and innovations in the field of public health as well.

The macro economic evidence across the world confirms that countries with weaker levels of health and education have a much harder time achieving sustained growth than countries with better conditions. On the other hand, countries such as China and many South East Asian 'tiger' economies had an advantage since the initial conditions in terms of health and education were relatively better amongst them. In healthier economies, individuals live much longer and their lifetime earnings are therefore higher. Such households also invest a higher fraction of their income in education and financial savings and reap the benefits of such investments.

Economic growth requires not only healthy individuals but also education and other complementary investments, such as appropriate division of labour between the public and private sectors, well functioning markets, good governance and institutional

arrangements that foster technological advancement. The other way to link health with economic growth is to recognize that the health of people improves with an increase in personal income. It is empirically found that the income elasticity for the health and nutrition-related products are positive and more than one. As levels of personal income rise, a relatively higher share is spent on consumption of health care products and products enhancing and sustaining better nutrition. At the same time, a person who is healthy devotes quality energy for work and thereby can earn a living. In this context, it is seen that poverty or inadequate income levels contribute to the persistence of ill-health as the person concerned is not able to finance his treatment. This, in turn, contributes to greater loss of working hours, culminating in a decline in the growth of GDP of the entire economy.

Presently, out of US\$ 60 billion spent worldwide annually by both the public and private sectors on health research, only about 10 per cent is devoted to 90 per cent of the world's health problems, which are in the developing countries. The economic and social costs, either directly or indirectly, paid by humanity as a result of such misallocation of resources are tremendous. Among the poorer population, the direct cost is high, given the vicious nexus between poverty and poor health.

People's Health and Productivity

A Healthy population is considered as an engine for economic growth. We are living in an era of unprecedented technological advances. These technologies can yield optimal results only if applied efficiently by healthy productive human resource. Healthier human resources are physically and mentally more energetic and robust,

more productive and earn higher wages. This fact is important when attracting foreign direct investment. Healthier workers are less likely to be absent from work due to illness or illness in their families. A healthy population enjoys greater mental and physical capabilities and has greater incentives to invest in acquiring skills and knowledge and retaining part of its earnings as savings which can be used to avoid the debt trap in case of serious emergencies. Healthy children are able to learn better and become better educated and higher-earning adults. Irrespective of the economic, social and political profiles of any country and its stages of economic development, the effects of ill-health on the well-being of the people are quite universal. Contracting any disease, be it communicable or otherwise, results in suffering to the individual concerned. Herein starts the process of economic loss and social turmoil.

The individual suffering is translated into crisis, the burden of which is borne by the other members of the household. Ill-health results in increased medical expenditure, which, in most poor households, is met by a subsequent curtailment of other essential expenditures. In the event of ill-health of the sole breadwinner of the household, it is observed that a fall in income due to disability and, at times, death is accompanied by rising medical expenses. The most common curtailment is reduced food intake by women and children. The workload of women increases substantially so as to supplement the reduced household income. Children are found to drop out of school and join the labour market at a very early stage in order to add to the family income. In many ways, the quality of life of the household undergoes a dramatic change. As the expenditure on nutrition, education and

other basic needs are squeezed, the health of the other members in the household are adversely affected.

With increasing ill-health of children and high rates of infant mortality, the poor households consider their children as future security, whereby they choose to have more children and further aggravate the problem of uncontrollable population. Perhaps the worst consequence of ill-health pertaining to the economic well-being of the household can be cited in terms of the households being caught in the poverty trap. Increased medical expenses and cost of care also results in the disposal of household assets (e.g. land, livestock, jewellery, etc). This has led to even the not so poor or near-poor being caught in the poverty trap.

A fallout of ill-health is the loss of valuable work hours and life-years, which translates itself into a decline in personal income. Aggregating the loss of all personal income culminates in the shrinking of national income. The adverse effects of ill-health trickle down from the individual concerned to his household and to the economy at large.

The issues concerning the household might appear trivial in the first instance, but can assume proportions when seen from the point of view of the economy as a whole. In order to control the endemic nature of the diseases characteristic of the Region, there has been a growing pressure on the government to reallocate the already scarce resources. This situation is compounded by the declining government revenue as a result of a decrease in the number of taxpayers. Ill-health resulting in disability and death has reduced the number of people employed in the organized sector. In the light of these issues, it is essential to gear our efforts in analysing the fact that ill-health aggravates

poverty rather than restricting our view to the fact that poverty accentuates conditions of ill-health. Healthy life translates itself into longer lifespan and increased productivity, improving the prospects of enhanced personal as well as national income. Apart from the fall in personal and national income and the subsequent impoverishment of the household, it is also observed that deteriorating levels of personal productivity can be detrimental to the productivity of the firms. Ill-health results in long periods of absenteeism from work. This results in a decline in output while the quality of work is also hampered. Firms have been facing rising costs of expenditure. This trend can be attributed to additional costs incurred in order to compensate for long periods of absenteeism and the declining productivity of the workforce.

Health Financing and Health as an investment

Many studies have provided clear evidence of the economic benefits of improving health. Healthy nations and healthy individuals are able to generate higher economic growth, and this relationship has been found to be causal. In other words, survival rates or life expectancy are powerful predictors of income levels or of economic growth. Countries in Asia and the Pacific, where opportunities for health, education and economic participation were faster, showed better overall growth and development compared to countries where social opportunities (health care and education) were much slower. Social opportunities facilitated high employment economic growth, which, in turn, created a favourable environment for reducing of mortality and improving life expectancy. Most developing countries are facing

macroeconomic imbalances: rising inflation, imbalances in aggregate demand and supply and foreign exchange crisis. In order to tackle these imbalances, the countries have undertaken structural adjustment programmes, often in collaboration with international lending agencies. The structural adjustment programmes and stabilization processes often necessitate cuts in government expenditure, devaluation of currency, relaxation of price controls and restraint on wage levels. In the context of the present analysis of health expenditure, it is observed that a reduction in government expenditure in the social sectors results in a squeeze on health spending. The consequences of such a reduction have diverse negative effects on the health status of the economically weaker sections in particular.

Primarily when governments move out of the health sector as major providers of health services, the private sector players come in rapidly to fill the gap, and this has led to increasing the cost of health care. It is the economically disadvantaged people who bear the brunt. The poor find themselves in a position where they cannot avail of either public or the private health care services. In this context, the government plays a vital role in ensuring the provision of health care, especially for the underprivileged. This may be a part of the total fallout of structural adjustment programmes. Relaxation of price controls on essential services, especially non-health services, results in people spending more on these goods and services. This reduces their spending on health services.

Health spending among the poor is much more income and price elastic compared to the well-off sections. Estimates reveal that the poor tend to spend a greater proportion of their income on acquiring health services. Even if the nominal income

of the people is unaffected, the rise in the general price levels results in a fall in the real income whereby the share of income spent on health services shrinks. Nutrition has considerable influence on the health status of the people. In periods of crisis, people resort to a less nutritious diet whereby their intake of essential vitamins and nutrition is reduced. This makes them more susceptible to certain diseases. At the same time, they are unable to access medical treatment and continue to suffer from preventable diseases.

Similarly, wealth is health. Individuals in wealthy nations live longer and healthier lives. Wealth works in several ways to improve health. First, wealth leads to a better, overall standard and quality of life resulting from higher literacy, nutrition intake, sanitation, infrastructure and other facilities. All these collectively contribute to a long and healthy life. Secondly, when the national income is high, the dependency ratio is low and life expectancy tends to be high. Thirdly, rich countries spend a higher share of GDP on health and spend more on health per capita leading to higher longevity. Life expectancy follows the economic growth path indicating that investment in health is very productive.

In other words, poverty is a strong barrier to health. Poor nations/individuals are poor in both health and wealth. Many diseases are primarily concentrated in the poorest countries, and within those countries, they disproportionately afflict populations that are living in poverty. Those living in absolute poverty, compared with those who are not poor, are estimated to have a five times higher probability of death between birth and the age of 5 years, and a 2.5 times higher probability of death between the ages of 15 and 59 years. Yet, health care resources are concentrated in rich countries/individuals.

Conclusion

In WHO's South-East Asia Region, the countries suffer disproportionately from the double burden of both communicable and noncommunicable diseases, along with poorly functioning health systems. The only way the health challenges in this vast region can be overcome is to have strong and responsive public health systems. There will be many challenges preventing public health from playing its legitimate role in health development and in boosting economic development. These include low government expenditure on health and health systems, inequitable distribution of health services making them inaccessible to the poor and the needy, greater allocation to medical care than to preventive services, and inability to scale up cost-effective interventions against major diseases.

A healthy human resource is a cumulative result of medical care that people get when they are ill and that of an effective public health system that promotes health at community level. Whereas medical care is disease- and individual-orientated, public health is based on the well established concepts of primary health care and health for all strategy. The age-old dictum, prevention is better than cure, is, and shall always remain valid since it promotes health and is fundamental to economic growth. As

the fight against poverty gains momentum globally with the Millennium Development Goals laying strong emphasis on poverty reduction and improvement in health, public health clearly emerges as the vital ingredient to drive fair, equitable and sustainable socio-economic development. To achieve these goals, a paradigm shift in policy and strategy is required to put public health at the centre of national socio-economic development and thereby according public health a high priority.

Countries must invest more on health in order to get better returns in the form of socio-economic development. Cost-effective interventions against major diseases through a strong health system, especially focusing on the poor and the vulnerable, must be scaled up urgently. While promoting/strengthening the role of the other sectors that influence health such as safe water, environmental sanitation, female education and civil society, strengthening government's stewardship role is essential. More funding is needed for research to develop new tools and appropriate interventions for application in the Region. This is a holistic task that requires unprecedented political will and leadership to ensure that public health contributes to poverty reduction, better quality of life and sustainable development worldwide, but more specifically in countries of the South-East Asia Region.

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