Role of Public Health Sector in Sustainable Development of the Region

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There are over a hundred definitions of sustainability and Sustainable development, but the best known is that of the World Commission on Environment and Development.

The World Commission on Environment and Development suggests that development is sustainable where it meets the needs of the present without compromising the ability of the future generations to meet their own needs.

Where does Public Health come into sustainable development?

Development is intimately connected to health as inadequate development leads to poverty and inappropriate development results in over-consumption. When inappropriate and inadequate development is coupled with an expanding population, it can result in severe environmental health problems in both developed and developing countries.

Improvement in Health, environment and socio economic conditions require intersectoral efforts. Such efforts, involving education, housing, public works, and community groups, are aimed at enabling people in their communities to ensure sustainable development.

Countries should develop plans for priority actions such as

- Meeting Primary Health care needs – especially in rural areas
- Controlling communicable diseases
- Protecting vulnerable groups
- Meeting the urban health challenges
- Reducing health risks from environmental pollution and hazards
- Preventing Non-communicable diseases through life-style modifications.

The concept of Primary Health Care (PHC) was introduced in Alma Ata in 1978 by he World Health Organization (WHO). This concept is nearer to sustainable development.

Health is both a resource for, as well as an outcome of, sustainable development. The goals of sustainable development cannot be achieved when there is a high prevalence of debilitating illnesses and poverty. Further, the health of a population cannot be maintained without a responsive health system and a healthy environment.

Environmental degradation, mismanagement of natural resources and unhealthy consumption patterns and lifestyles has an impact on health. Ill-health in the population in turn hampers poverty alleviation programs of the state and economic development.

Development policies and practices need to take into account current and future impacts on health and the environment. Strengthened partnerships and alliances are needed both inside and outside the health sector to address the emerging challenges.

Burden of Ill-health

The global trend in Health and related interventions during the 20th century is depicted in Fig. 1. The global expectation of life at birth n 1900 was 47.3. This rose to 74.7 by the end of the century. In 1900, the leading causes of death were dominated by Communicable diseases. This situation changed to an increase in Non-communicable diseases by the end of the century.

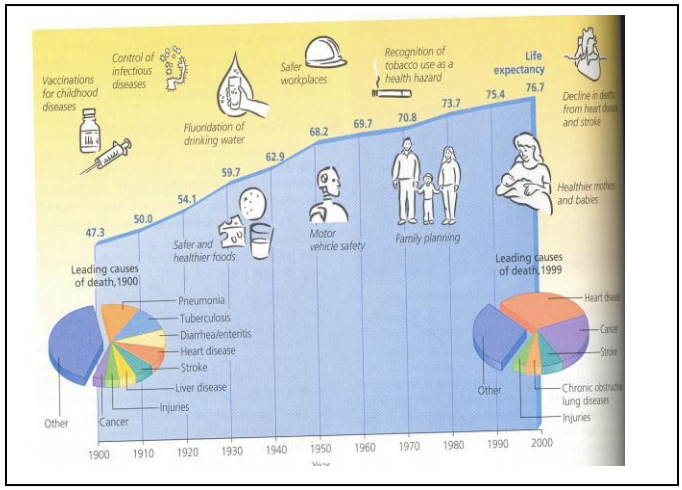


Fig. 1 Global Trends in Health during 1900-2000

The introduction of immunization of children, control of infectious diseases spreading across borders, fluoridation of water, safer work places, recognition of tobacco use as a health hazard and the introduction of safer and healthier tools at workplaces, motor vehicle safety, family planning, mother and childcare and other similar interventions lead to the change in pattern of disease and increasing trend in life expectancy.

The leading causes of hospitalization and deaths are given in Table 1 & 2.
The major cause of admissions to hospitals in Sri Lanka is Traumatic Injuries, while the major causes of deaths in hospitals in Sri Lanka are Non-communicable diseases.

Table: 1. Leading causes of Hospitalization in Sri Lanka - 2006

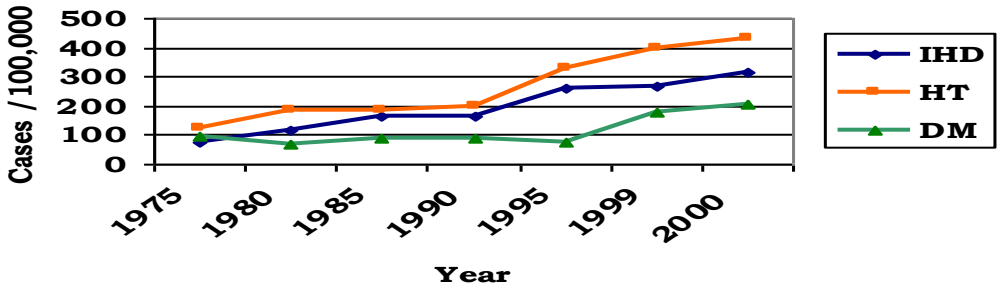
Rank order	Cause of Hospitalization	Proportionate Morbidity	Rank order	Cause of Hospitalization	Proportionate Morbidity
1	Traumatic Injuries	17.0 %	7	Diseases of the Urinary tract	3.9 %
2	Diseases of the Respiratory system	10.4 %	8	Intestinal Infectious diseases	3.8 %
3	Ill defined conditions	8.4 %	9	Diseases of the skin and subcutaneous tissues	3.6 %
4	Viral Diseases	7.3 %	10	Diseases of the Musculo skeletal system	2.6 %
5	Diseases of the Gastro-intestinal tract	5.9 %	11	Hypertensive diseases	2.6 %
6	Direct & Indirect Obstetric causes	5.1 %	*Source: Annual Health Bulletin 2006 Ministry of Health, Sri Lanka – (http://www.epid.gov.lk)*		

Table: 2. Leading causes of Hospital Deaths in Sri Lanka - 2006

Rank order	Cause of Hospital Death	Mortality (per 100,000 population	Rank order	Cause of Hospital Death	Mortality Per 100,000 population
1	Iscahemic Heart Disease	20.5	7	Zoonotic & other Bacterial Diseases	8.0
2	Pulmpnary Heart Disease & Diseases of the Pulmonary circulation	16.5	8	Diseases of the Urinary system	7.8
3	Neoplasms	16.3	9	Symptoms, signs & abnormal clinical & Laboratory findings	7.7
4	Cerebro-vascular disease	14.5	10	Pneumonia	7.3
5	Diseases of the Respiratory system, excluding diseases of the Upper Respiratory tract	11.4	11	Traumatic Injuries	6.2
6	Diseases of the GIT	11.3	*Source: Annual Health Bulletin 2006 Ministry of Health, Sri Lanka – (http://www.epid.gov.lk)*		

Trends in hospitalization during the period 1975 to 2000 show an increasing hospitalization for Non communicable diseases such as Ischemic Heart Diseases (IHD), Hypertension (HT) and Diabetes Mellitus (DM). These are life style related diseases and probably caused by life style changes. The rising trend is seen since 1990s. (Fig 2).

Fig: 2.Trends in Hospitalization of IHD, HT & DM 1975-2000 in SL



Hospital deaths due to ischemic heart diseases, which was 9.7% in 1997 increased to 12.6% in 2006.

Similarly the deaths due to neoplasm which was 6.5% in 1997 increased to 8.9% in 2006 which is a 36% increase over the figure in 1997. The trend appears to be upward.

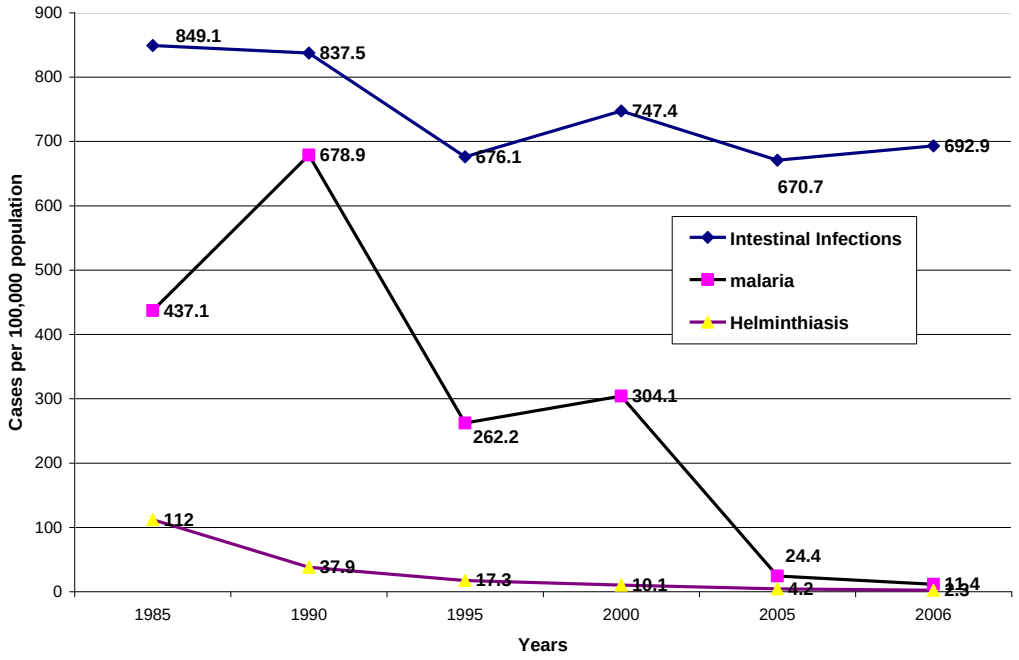
A major concern is the increase in the admissions due to Diabetes mellitus – especially among the younger people. There had been a steep rise from the year 2000 (Table 3). It is to be noted that the data does not include the prevalence of diabetes in the Northern and Eastern provinces (as usually happens in most health data, published by the Ministry of Health)

Table:3: Hospitalization due to Diabetes Mellitus in Sri Lanka - 1985 – 2006
(Excludes data from Northern and Eastern Provinces)

Year	Per 100, 000 population
1985	86.6
1990	87.5
1995	78.6
2000	204.8
2005	265.2
2006	296.8

On the other hand, trends in hospitalization due to Communicable diseases have shown a decline. The trend in selected (Intestinal infections, Malaria & Helminthiasis) is given in to Fig. 3. Intestinal infections have shown a slight decrease while malaria and helminthiasis has shown a very rapid fall between 1985 and 2005.

Fig:3. TRENDS IN HOSPITALIZATION FOR SELECTED INFECTIOUS DISEASES - 1985-2006



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The trend in Jaffna District is similar to the trends in the rest of the country. However there are some regional variations contributed by the ethnic conflict which has lasted over five decades

Challenges and solutions

The number of Health institutions in the Jaffna District remains the same for the past half a century. In fact some are non-functioning or not functioning at all.

The human resources for these institutions too remain a major challenge. Although much is spoken about lack of doctors, other categories of staff (like nurses, Medical Laboratory Technologists, Physiotherapist, pharmacists and counselors) are lacking.

The Jaffna Teaching hospital needs 32 specialists and 179 medical officers. But presently there are only 20 specialists and 150 medical officers. The Pathology laboratory is functioning without a qualified pathologist for several years.

In the periphery there are 42 medical institutions under the Provincial administration. These medical institutions need 17 specialist and 121 medical officers; but there is only one specialist and 30 medical officers available. Some medical officers are looking after two or more institutions.

The Health Ministry should give priority to appointing staff to the peripheral hospitals. The Government Medical Officers Association (GMOA) insists on provision of accommodation facilities before appointing Medical officers and the state has limited provisions for construction of quarters and as a result, the people in the periphery have to suffer. They have to by-pass peripheral hospitals and come to the Jaffna Base hospital. As a result, the peripheral hospitals are underutilized and the Jaffna General Hospital is overcrowded with patients who could be conveniently treated in the periphery if the human resource is available.

Nearly one third of the typhoid cases reported in Sri Lanka are from the Jaffna District. Food and water sanitation has to be looked into as an urgent need. A vast Majority of the population of Jaffna depend on underground water for consumption. This underground source of water is being continuously polluted by dumping the fecal matter in the soil and by improper and unsanitary disposal of refuse. The responsibility of proper disposal of human waste lies with the local authorities. This has been neglected for decades because there were no local bodies. Even though local bodies have now started functioning, local authorities give very low priority to sewage and refuse disposal.

Even most of the state and private hospitals in the Jaffna District do not have proper incineration facilities to dispose of clinical waste. These are disposed with general garbage and form a major health hazard to the community.

There is not even a single functioning sewage treatment plant in the entire Jaffna District. If only the Jaffna Municipal council and the three Urban council in Jaffna District (Chavakachcheri, Point Pedro and Valvettiturai) installs sewage treatment plants in its areas, a quarter of the population in Jaffna will have access to proper disposal of sewage. In fact no urban council should function or no pradeshya sabai should be elevated to an urban council level unless it has a functioning sewage and refuse disposal plant.

Underground water pollution is not only the result of biological pollution. Chemical pollution is also taking place due to indiscriminate use of insecticides, pesticides, chemical fertilizers and dumping of refuse and waste oil from vehicle service stations. These will have long term effect on the health of the people of Jaffna.

For proper sustainable development of the region, establishment of these facilities and strict monitoring of the services is essential for a proper.

The essential public Health Functions in sustainable development include:

1. Monitoring, evaluation and analysis of Health status
2. Surveillance, research and control of the risks and threats to Public Health

3. Health promotion
4. Social participation in health
5. Development of policies and institutional capacity for public health planning and management
6. Evaluation and promotion of equitable access to necessary healthy service
7. Human resource development and training in Public Health
8. Quality assurance in personal and population based health services
9. Research in Public Health
10. Reduction of the impact of emergencies and disasters in health

We should always remember the Native American Proverb, when considering the sustainable development of our environment

"Treat the earth well
It was not given to you by your parents
It was loaned to you by your children
We do not inherit the earth from our ancestors
We have borrowed it for our children"