

CHRONIC NCD 4

Key Messages

- Since 1980s, chronic non-communicable diseases (NCDs) have surpassed communicable diseases as the leading cause of deaths in Sri Lanka. With an annual increase in death rates ranging from 0.4% to 5.8% (1.3% for cardio-vascular diseases), NCDs will continue to exert a heavy burden on the health system, household and national economy. However, non-communicable diseases, their complications and deaths can be prevented.
- The rising trends in NCD risk factors (e.g. biological, behavioural, psycho-social and early life) are exacerbated by the changing demographic patterns and the socio-economic political milieu. They call for a shift in the health system.
- The MoH has initiated programmes and projects to respond to the increasing NCD burden. It has formulated policies and guidelines. It has collaborated with the external development partners and other stakeholders in health promotion and disease prevention.
- The Healthy Lifestyle Programme in Kuliypitiya division (Kurunegala district) highlighted the need, generated the demand and indicated the interest for reducing NCD risk factors. It demonstrated the potentials of schools, workplaces, a village and local health settings in promoting health and well-being.
- Meanwhile, the introduction of a passive surveillance system in Polonnaruwa was assessed favourably by all sectors as it does not only generate information on NCD & risk factors but also promotes continuity of patient-care and improves job performance of staff from the hospitals, RDHS and MOH.
- Both the RDHS Kurunegala and Polonnaruwa plan to continue their initiatives and during the next 5 years comprehensively implement the three elements of the global strategy – surveillance, prevention and patient management.
- Strict enforcement of existing policies (e.g. National Authority on Tobacco and Alcohol Act) and adoption of the National Health Promotion Policy and National Policy for NCD Prevention and Control will facilitate the implementation of the Kurunegala and Polonnaruwa action plans.

4.1 CHALLENGES

4.1.1 A PANDEMIC AFFLICTING EVEN THE POOR COUNTRIES

Chronic NCDs are becoming a pandemic. They are responsible for 6 of 10 deaths globally (Table 4- 1). Although they accounted for less than half (43%) of the total disease burden in 1998, they are expected to exert a heavy burden (73%) by 2020.

TABLE 4- 1: CONTRIBUTION OF CHRONIC NCD TO MORTALITY AND DISEASE BURDEN¹

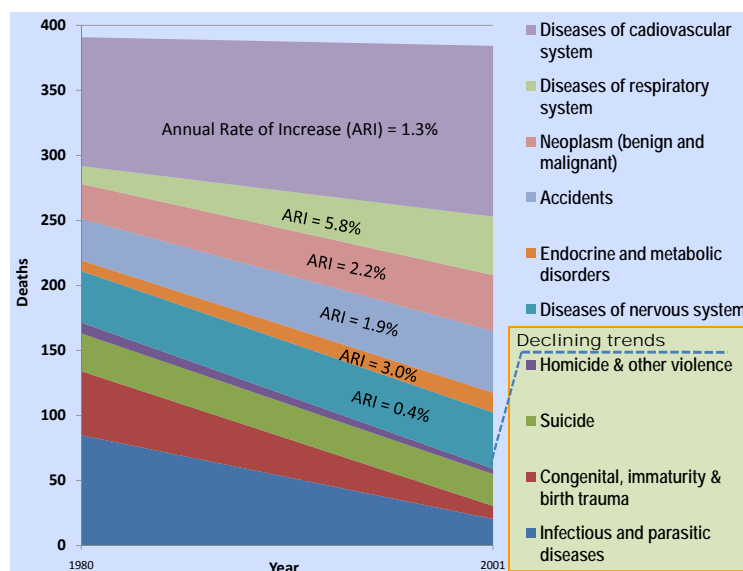
	Global	SEAR
Percent of deaths	60	51.6
Percent of burden of disease, 1998	43	37.9
Percent of burden of disease, 2020	73	

NCDs are responsible for 6 out of 10 deaths in the world

Chronic NCDs are the most common causes of deaths in all of the six WHO regions except in Africa, where it ranked second. They are responsible for over 75% of the deaths in Europe. In most areas, except in the least developed countries, the people who are more likely to develop chronic diseases are the poorer members of the society. In the South East Asian Region (SEAR), the burden of chronic NCD is more than that of other conditions; they are liable for more than 50% of the deaths.

4.1.2 SRI LANKA: MOUNTING DISEASE BURDEN & RISKS

A. TRENDS IN SOME DISEASE CONDITIONS



¹WHO, 2001

²Registrar General Department, 1980-2001

Since 1980, a number of chronic non-communicable diseases have been responsible for an increasing number of deaths in Sri Lanka (Figure 4- 1). In particular, cardio-vascular diseases have been the leading cause of deaths with an annual rate of increase of 1.3%. While infectious and parasitic conditions dropped from the 2nd to the 7th position, diseases of the respiratory system have been rapidly increasing (5.8% annually) so that they have moved up from the 8th to the 3rd position among the top 10 causes. Between 1980 and 2001 deaths rates of neoplasms have increased 1.5 fold , while those for endocrine and other metabolic conditions (such as diabetes) have shown the 2nd highest annual rate of increase (3%).

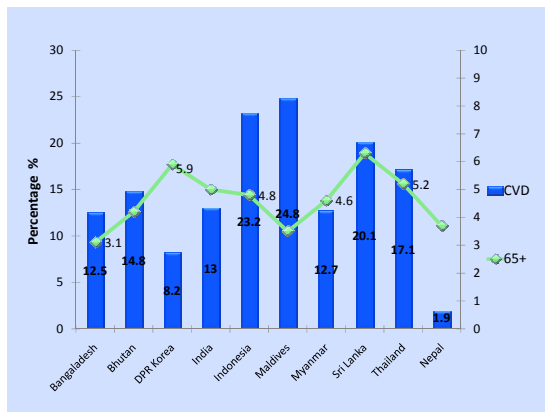


FIGURE 4- 2: CARDIOVASCULAR RELATED DEATHS AND THE ELDERLY POPULATION IN THE REGION OF SOUTH EAST ASIA¹

Compared to other member countries of the WHO South East Asia Region (Figure 4- 2), Sri Lanka has the third highest death rate due to cardiovascular diseases or CVD (20.1%)². With the greying population, CVDs will continue to predominate. The age-standardised death rate of Sri Lanka is already comparable to those of Great Britain and the United States.³

According to the WHO information base, 5.2% of the population is seen with diabetes in Sri Lanka. The highest prevalence of diabetes mellitus is seen in the age group of 55-59 years (8.6%) followed by those in the 50-54 age group (7.1%), 60-64 (6.6%), 45-49 years (6.2%) and 40-44 (5.5%). The least number is 1% in the age group of 30-34.⁴

In 2003, there were 40,697 reported cases of mental disorders⁵. Schizophrenia, schizotypal and delusional disorders were the commonest group accounting for 31%. There were 22% cases of mental and behavioural disorders due to alcohol and 5% due to other psychoactive substance use. Most of the alcohol related cases were reported from Gampaha district. Kurunegala and Colombo districts had the second and third highest numbers.

In 2005, the total number of poisoning cases was 52,540⁶. Most of the cases were from Kurunegala district (12%), Anuradhapura (8%) and Colombo (7%) districts.

Cirrhosis and liver diseases are indicators of a persistent regular high-risk drinking pattern which has been in existence for over long

¹WHO Global info base, infobase.who.int, UN, World Population Prospects, 2000

²Ibid

³WHO Global info base, infobase.who.int

⁴Ibid

⁵Annual Health Bulletin, 2003

⁶Medical Statistics Unit, 2007

periods of time. Death rates due to liver diseases have increased from 3.8 in 1975 to 14.1 per 100,000 in the year 2000¹. The second leading cause of hospital deaths was due to diseases of the gastrointestinal tract of which at least 50 % were due to cirrhosis and other liver disease among males.

The most common sites of cancers reported from 1985-2005 in males are the lip, oral cavity and pharynx while in females it is the breast (Figure 4- 3). Bronchial and lung cancers have rapidly increased in males but they are not in the top 6 cancers among females.

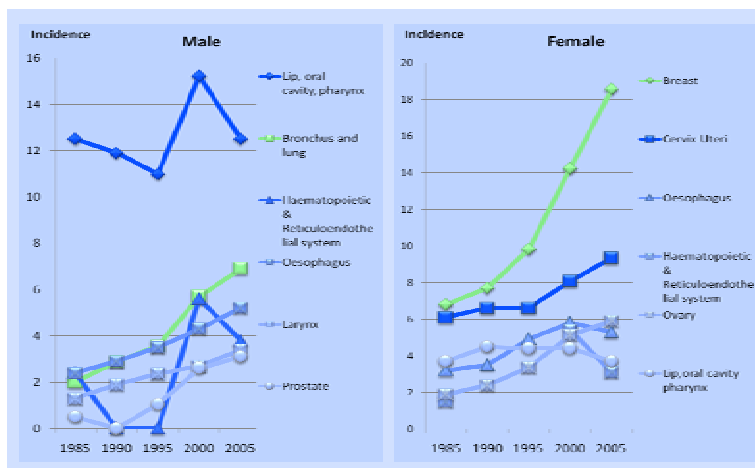


FIGURE 4- 3: INCIDENCE OF THE SIX MOST FREQUENT CANCERS AMONG MALES & FEMALES, 1985-2005²

B. TRENDS IN SOME RISK FACTORS

Risk factors of chronic NCDs can be categorised into the following (Figure 4- 4): a) individual factors (i.e. biological, behavioural, psychosocial and early life); b) availability, accessibility and utilisation of health services; and c) environmental factors; and d) non-modifiable factors. Although it is non-modifiable, the ageing of the population is a significant risk factor for chronic NCD. Its rapid rate in ageing in

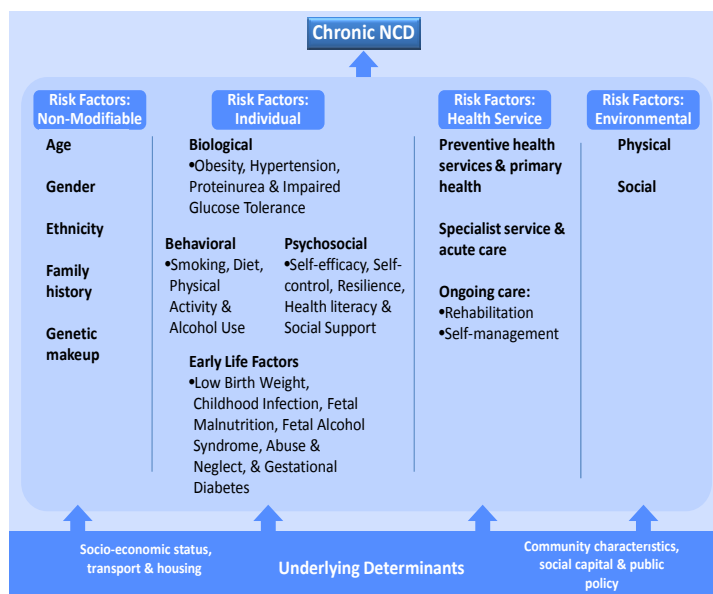


FIGURE 4- 4 FIVE CLUSTERS OF FACTORS AND DETERMINANTS INFLUENCING CHRONIC NON- COMMUNICABLE DISEASES³

¹De Silva, 2006

²National Cancer Control Unit, 2007

³National Public Health Partnership, 2001

Sri Lanka will further increase the disease burden. These risk factors are in turn influenced by urbanisation, other socio-economic and political determinants.

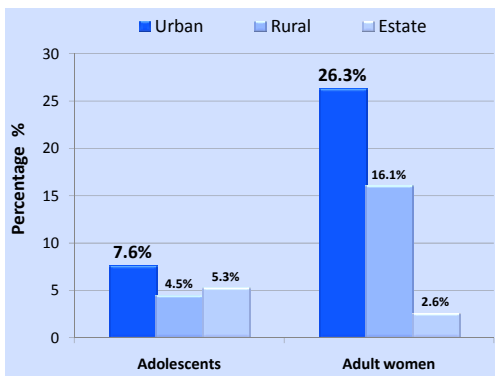


FIGURE 4- 5: SECTORAL DISTRIBUTION OF OVERWEIGHT CHILDREN AND ADULTS¹

In Sri Lanka, hypertension and obesity are major biological risk factors. Being overweight is a problem that cuts across all sectors (Figure 4- 5). It is most common among urban residents and least among adult women in the estates. Surprisingly, adolescents in rural areas are not as overweight as their counterparts in the other sectors.

Sri Lanka is in a “nutritional transition” state. Its vegetable-rich traditional diet is shifting to one that is stuffed with animal fat and free sugar. For example, the overall consumption of fruits, green leaves and other vegetables among children aged 10-12 years is not within satisfactory levels - only 23% had them daily.² On the other hand, the consumption of coconut and coconut oil has declined during the last 3 decades³.

The physical activity of children has also become quite limited. A survey revealed that 1 of 5 had never engaged in playing and more than half (57%) had never engaged in organized games during the preceding week⁴. Half of the children did not play daily but every 6th child had a chance to play at least 2 hours per day.

Alcohol consumption and alcohol-related problems are risk factors for NCD. From 1985 to 2001, the average alcohol consumption of a Sri Lankan adult had increased 6 times⁵. By 2003, the current number of users of alcohol was reported to be 35.9% whereas the global level in 2004 was only between 20-30%. The use of alcohol was most common among those who were at least 40 years old⁶. Only one out of 10 took alcohol daily. In 1997, a survey documented heavy drinking to be associated with an increase in domestic violence against women and children⁷. Furthermore, 35% of the minor offences and 76.8% of family disputes reported were linked to alcohol consumption.

Smoking is a habit that is formed due to many reasons. There is a high prevalence of smoking in the estate community as well as the urban slum communities. In 2004 a survey documented 43.9% of the respondents to be smokers; 51.1% of them were at least 40 years old

¹ Jayatissa, 2006

² Medical Research Institute, 2003

³ Department of Census, 2005

⁴ Medical Research Institute, 2003

⁵ De Silva, 2006

⁶ Alcohol and Drug Information Centre, 2005

⁷ Pathmeswaran, 1997

and almost 86% were daily users¹. The probability of smoking is lower among men who have higher educational attainment. Another survey among adolescent respondents showed that more than 80% perceived smoking as a negative characteristic². They were aware of the indirect promotional strategies of the tobacco companies.

C. ECONOMIC BURDEN

From the time a person is brought to a hospital and diagnosed to have a chronic NCD to the time he expired, the patient accumulates a substantial burden on the health system and household economy. The daily cost of treating a myocardial infarction (commonly known as heart attack) alone can be about 1,100 rupees in a teaching hospital and 4,500 rupees in a base hospital³. Unlike most communicable diseases, the care for NCD continues even after the patient leaves a health institution. For daily wage earners, skipping an average of 2 workdays due to hospitalisation for myocardial infarction, for example, has an immediate impact on the family.

4.1.3 SHIFTING THE HEALTH SYSTEM

The Sri Lankan health system has been a model of “good outcome at low costs”. It succeeded in reducing the key infant and maternal mortality indicators to a level similar to developed countries. It put under control a number of infectious diseases to a level that they are not considered to be of public health hazards anymore. However, the epidemiological, nutritional and demographic patterns have changed during the past two to three decades (Figure 4- 6). The country and its people are also experiencing a shifting socio-economic and political milieu. All these necessitate a need for shifting the health system so that it can continue to be a good model while responding to the growing NCD challenge.

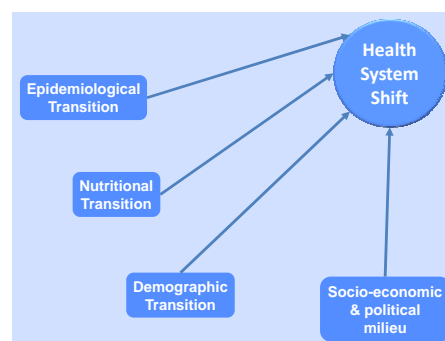


FIGURE 4- 6: SHIFTING THE HEALTH SYSTEM

¹Alcohol and Drug Information Centre, 2005

²Alagiyawanna, Wickramaratne, & Samarasekera, 2005

³Kasturiratne, 2007

4.2 INITIATIVES: SOME EXAMPLES

4.2.1 GOVERNMENT INITIATIVES

The MoH established a separate directorate to launch a comprehensive NCD programme throughout the country. The NCD Directorate conducts programmes using the existing health infrastructure so that these activities will be sustainable and have long-term effects. It is spearheading the Health Sector Development Project (HSDP). The NCD subcomponent of the HSDP has a US\$1.92 million budget aimed at launching key activities for the prevention and control of heart diseases, hypertension, stroke and diabetes. The baseline risk factors survey is still going on. A social marketing campaign is scheduled to be initiated in 2007. The other HSDP subcomponents that have NCD-related activities are being coordinated by the other units of the ministry such as the Mental Health, Nutrition, Family Health Bureau (FHB) in collaboration of Ministry of Education, Epidemiology, Health Information, and Medical Statistics. The subcomponent on “Improving Hospital Efficiency and Quality” has a budget of US\$3.49 million that was partly used for developing and implementing best practice guidelines for the management of selected diseases and conditions. Support is also provided for strengthening the Registrar General’s Department.

NCD Directorate Priorities:

- Social marketing
- Screening
- Service delivery

5 Components of a School Health Programme:

- Health-related practices
- School medical services
- Healthy school environment
- Life skills-based health education
- School community participation

On top of the HSDP, other activities that facilitate NCD prevention and control are being undertaken by the MoH agencies. For example, the FHB promotes antenatal care that contributes to minimising the risks due to early life factors. It collaborates with the National Cancer

Control Programme (NCCP) in providing screening services for clients of the Well Woman Clinics. The NCCP has six approaches in reducing cancer incidence and mortality: primary prevention of cancer; secondary prevention of cancer; tertiary cancer care; palliative care; cancer registry; maintaining the studies on epidemiology; and cancer research.

The Directorate for the Youth, Elderly and People with Disability initiated a programme entitled “Promotion of Active Ageing” to improve the health of elders in the communities and to ensure that they are well enough to carry out their daily activities. Since its inception in 2000 till 2006, the programme has expanded to 252 MOH areas.

The Health Information Directorate has been collaborating with other health institutions in strengthening the information system. With Polonnaruwa District, for example, a model hospital information system is envisioned to support the needs of clinicians, continuity of care and avoid

repetition of laboratory and radiological investigations, thereby, saving money, time and lives¹. Its strategy is to develop and use a single record for each patient that will be retrieved every time a consultation or admission is required. In addition, a model drug supply information system has also been initiated to ensure availability of quality stocks.

With the mandate of undertaking surveillance of communicable and non-communicable diseases, the Epidemiology Unit worked together with WHO in piloting a multi-disease surveillance system in some health institutions. It has provided technical support to the Mental Health Directorate and the North Central Province in developing systems for their specific requirements.

The Health Education Bureau is the national centre of excellence for health education and health promotion. Its major responsibility is to bring about improved standards of health and well being through health education/promotion. It has supported various health programmes of the Department of Health Services including educating the public on health and environmental issues to enable them to play their role in promoting individual and community health.

MoH Offices with NCD-related Activities:

- NCD Directorate
- Mental Health Directorate
- National Cancer Control Programme
- Trauma Secretariat
- Family Health Bureau
- Youth, Elderly and People with Disability
- Health Education Bureau
- Nutrition Coordination Unit
- Nutrition Unit
- Medical Research Institute
- Epidemiology Unit
- Health Information Directorate
- Medical Statistics Unit

The national nutrition policy aims to achieve the optimal state of nutrition for the people in Sri Lanka. The Nutrition Coordination Division plays a major role in making that goal a reality. It identifies the appropriate nutrition interventions and resources needed to be mobilized. It introduces an effective coordination system for efficient implementation of programmes.

The Nutrition Unit is working with various organizations to address nutrition related-problems in Sri Lanka. It has worked with Sri Lanka Medical Association in increasing people's awareness on the role of diet in diseases. It had close links with the World Food Programme in implementing the drought relief programme and developing the maternal and child nutrition programme. Food based dietary guidelines were completed and distributed to the health sector and other nutrition-related sectors.

The Medical Research Institute plays an important role in carrying out researches linked to NCD. It has been involved in developing dietary guidelines and drafting the national nutrition policy which has promoted rice-based products and traditional Sri Lankan diet. It has sought the

¹Senanayake, November 2005

Legislations on Alcohol & Tobacco:

- National Authority on Tobacco & Alcohol Act No. 27 of 2006
- Regulation No 2004/21 Ministry of Education
- Railways Ordinance No. 9 of 1902, Transport Board 19/1978, Private Omnibus Services Act 44/1980, Sri Lanka Railways Authority Act 60/1993
- Motor Traffic Act Sec. 151
- Public Administration Circular No. 08/99
- Tobacco Tax Act 8/1999
- Gazette No. 928/1-1996.06.17
- Excise Notification No. 781
- Excise (Special provisions) Act No. 13 of 1989 Sec. 3(1)
- Act No. 41 of 1979 Sec. 02
- Children and Young Persons Act 2/1978 Sec 76
- Excise Ordinance No. 8 of 1912

support of media to promote correct food habits and the importance of lifestyle changes. It provides training on nutrition for its staff and also for primary healthcare personnel.

Several local health authorities and institutions have established units for and organised activities on health promotion. They have mobilised their staff to work together with the schools, workplaces and communities. They have carried out several education programmes on risk factors in several settings.

4.2.2 EXTERNAL DEVELOPMENT PARTNERS

Most of the external development partners directly or indirectly support the MoH with respect to the formulation of policies or plans and implementation of prevention and management programmes/projects. In the case of WHO, its three strategic objectives from 2006-2011 are:

- Support prevention and control of major NCDs and related priorities (cardiovascular disease, cancer, diabetes, psychosocial and mental health, alcohol and substance abuse, violence and injuries particularly road traffic and occupational accidents);
- Promote integrated and cost effective approaches for prevention and management of the major NCDs; and
- Support surveillance of the NCD risk factors and their determinants.

Apart from the EBM Study, the Japan International Cooperation Agency (JICA) also carried out the “Study on the Urban Transport Development of the Colombo Metropolitan Region in the Democratic Socialist Republic of Sri Lanka” or Urban Transport Study. The study identified the high-risk areas that require better road designs, lighting or repair of road defects. It analysed the perspective of pedestrians. JICA is also collaborating with the University of Peradeniya on a study of NCD risk factors.

4.2.3 OTHER STAKEHOLDERS

Professional organisations, unions, non-governmental organisations, research and academic institutions, media and other stakeholders have initiated NCD-related activities (see Chapter 2 of the “Resource Book III: NCD”).

4.3 INTERVENTIONS: INITIAL & PILOT

4.3.1 GLOBAL STRATEGY ON NCD PREVENTION & CONTROL

The objectives of the Global Strategy on NCD Prevention and Control are:

- To **map** the emerging epidemics of NCD and to analyze the social, economic, behavioural and political **determinants** of the diseases with particular reference to poor and disadvantaged populations, in order to provide guidance for policy, legislative and financial measures related to the development of an environment supportive of control;
- To **reduce the exposure** of individuals and populations to the major determinants of NCD and to **prevent the emergence** of preventable common risk factors, namely tobacco consumption, unhealthy diet and physical inactivity;
- To **strengthen healthcare** for people with NCD by supporting health sector reform and cost-effective interventions, with emphasis on primary healthcare.

Global Strategy on Diet:

- Achieve energy balance & a healthy weight
- Limit energy intake from total fats, shift to unsaturated fats & eliminate trans-fatty acids
- Increase consumption of fruits, vegetables, legume, whole grains & nuts
- Limit free sugar
- Limit salt

Global Strategy on Physical Activity:

- Maintain adequate levels of physical activity throughout life
- Different health outcomes require different types & amounts of physical activity

Lessons in NCD Prevention & Control

- Most common NCDs are preventable & its progression is reversible.
- In reducing risk factors, adopt a comprehensive strategy targeting the population & high-risks individuals. Interventions against the risk factors should be integrated at the family & community level. They should be of adequate dose at a sustained period.
- Social isolation and suppression of feelings are as significant to mortality rates as smoking, high blood pressure, high cholesterol, obesity and lack of physical exercise.
- Policy on trade, food and pharmaceutical production, agriculture, urban development and taxation may generate more health gains than policies on health alone.
- Inter-sectoral action is a must.