College of Community Physicians of Sri Lanka; Presidential Address 2001

PROVIDING HEALTH CARE TO THE NATION: ACHIEVEMENTS AND FUTURE CHALLENGES

Professor L.C Rajapakse

Section A

We are at the beginning of a new century, a new millennium. It is therefore an appropriate time to review the past, celebrate a century of achievement, draw its lessons and judge how far we have to go. In this presentation the past is described as a sequential narrative of historical events, identifying the main factors in different stages that contributed to the final outcome. The insight gained may help define approaches to face the challenges that lie ahead.

Sri Lanka is often quoted as being different among the developing nations. It has achieved and maintained high human development outcomes relative to per capita income. Classified as a 'low - income developing country', the health and educational status of its population are on par with countries that have a much higher economic status. The steady improvement of these indicators has continued, despite, widely varying economic performance.

Table 1. Some key demographic indicators

Indicator	Rate	Year
Birth rate*	17.3/1000 Population	1998
Death rate*	5.9/1000 Population	1998
Infant mortality rate*	15.4/1000 live births	1997
Under five mortality**	19/1000 live births	1998
Maternal mortality ratio**	60/100,000 live births	1998
Life expectancy at birth Male**	71.1 years	1996
Female**	75.6 years	1991
Adult literacy**	91%	1998
Total fertility rate***	2.0	1995-2000
Total Polpulation*	18 774 000	1998
Population growth rate****	1.1%	1997
GDP per capita**	802 US$	1998

* Annual Health Bulletin 1999 ** Human Development Report 2000

*** Preliminary Report, DHS 2000 **** Central Bank of Ceylon.

Today, it is a country of both low mortality and low fertility rates. The life expectancy at birth is 75.6 years for female and 71.1 years for males. The infant mortality is 15.4 per 1000 live births and the child mortality is 19 per 1000 live births, maternal mortality is 60 per 100,000 live births, the total fertility rate being 2.0 , which is below replacement level.

There has been marked reduction in many infections. The incidence of diseases targeted by the expanded programme of Immunization; diphtheria, whooping cough, tetanus, measles and childhood tuberculosis have been brought to negligible levels. Poliomyelitis has been virtually eradicated, the last case of Confirmed poliomyelitis was seen in 1993 and now the country has entered the stage of surveillance of Acute Flaccid Paralysis (AFP) cases and mopping up immunization. It is hoped that the country would be certified polio free by the year 2005. In general, gastrointestinal infections and parasitic diseases show a declining trend. The social stigma that was associated with diseases like tuberculosis and leprosy for centuries have been overcome. These outcomes are the result of continuous improvements that took place over nearly a century.

Table 2. Trends in some selected indicators

Year	Life expectancy At birth (male and female)	Crude birth rate per 1000 Population	Crude death rate per 1000 population	Infant mortality rate per 1000 live	Maternal mortality ratio per 1000 live births
1920	31.7	36.5	29.6	182.0	17.1
1930	-	39.0	25.4	175.0	21.4
1940	42.2*	35.8	20.6	149.0	16.1
1950	55.6	39.7	12.9	82.3	5.6
1960	61.7	36.0	8.6	57.0	3.0
1970	65.6	29.4	7.5	47.5	1.5
1980	69.7	28.4	6.2	34.4	0.6
1990	72.5	20.2	5.7	19.3	0.4

*Figure for 1946

What were the factors that contributed to these outcomes?

This exceptional performance has been the subject of much inquiry and debate among scholars. The improvement in health indicators can be traced back to the 1930s and early 1940s. These indicators were ahead of most other developing countries in Asia, at that time (1). This advantage has been maintained and improved upon despite widely varying economic performance. To understand, these developments and achievements, it is necessary to look back further and examine the events that took place during the later half of the 19th century and the first half of the 20th century.

Laying the foundations

As early as 1857 the state assumed responsibility for providing medical care and a Civil Medical Department was established (2). Maintenance of public health became a function of this department, but it was limited to the control of infectious diseases such as cholera, small pox, plague dysentery and malaria. As a means of preventing and controlling epidemics, legislation was enacted, some of the most important being the Public Health and suppressions of Nuisances Ordinance of 1862 (3), The Contagious Diseases Ordnance of 1866 (2), Vaccination Ordnance of 1886 (4), and the Quarantine and Prevention of Diseases ordnance of 1897(5), Vaccination was in fact introduced even prior to the introduction of legislation, in 1802 (6).

Another key event that took place during this period, which had significant influence on health outcomes, was registration of vital events that came into operation in 1867. This drew attention to the common causes of death at that time. From as early as 1921 (7), the Registrar General (RG) introduced a section on maternal mortality in his annual reports, highlighting the problem.

The focus on prevention and treatment of disease, and the need to provide services as close as possible to the afflicted people, necessitated the training of "an efficient class of medical practitioners to man the services" (8) Thus, a school for training medical officers was established in Colombo in 1870, and this was raised to a college ten years later in 1880. An Ordinance for the registration of Medical Practitioners was passed in 1905.Formal training in nursing and midwifery also commenced in 1878 and 1897 respectively (9). Legislation was introduced which required 'persons who practiced these disciplines to be trained in accordance with a prescribed curriculum and to be registered'. These measures ensured the quality of health care provided. Thus, human resource development in the health sector was addressed right from the beginning and there has been steady progress with regard to both quantity and quality. In response to the need for improvement, in the sanitary conditions in the country, a committee was appointed in 1912 by the then Governor, to examine Public Health needs. Based on its recommendations a Sanitary Branch of the Department was formed in the following year. This branch was responsible for the sanitation of urban and semi urban areas and the control of outbreaks of communicable diseases (2).

The establishment of the Civil Medical Department led to the development of a network of health care facilities. However, disparities in distribution of services existed between urban areas, plantation areas and the rest of the country. The extension of health services through out the country picked up momentum with the introduction of the elective principle in 1912, when "educated Ceylonese" were given the vote and with the granting of universal franchise in 1931 (10). These political changes were reflected in increased expansion of services in the areas of health, education and rural agriculture. Elected representatives were able to bring pressure on the Executive for a larger allocation of resources for the provision of services to the constituencies they represented. This resulted in an expanded program of construction of maternity homes, central dispensaries, rural hospitals and cottage hospitals in areas that had been hitherto neglected, ensuring accessibility and equity health care provision.

An important development of the Public Health Services was the inauguration of the 'Hook-worm Campaign' with the co-operation of the Rockefeller Foundation. This was a project to "help the people to avoid disease through education" (11). The success of the campaign demonstrated effectively the usefulness of individual health promotion and personal hygiene aspects of public health work, and this in turn resulted in the establishment of the first health unit in Kalutara in 1926 (2). This system emphasised the provision of preventive and promotive services at the community level delivered by a medical officer and at team of field health workers serving the population of a defined geographic area. The health unit system remains the cornerstone of the field health services even today. The increase in the number of health units took place very slowly at the beginning because this method of work was found to be too expensive. In 1936, i.e 10 years after the first unit was established only eight health units were functioning serving just 10% of the population. During the 1934/35 malaria epidemic, it was observed that areas covered by health units fared better than the other areas and following this, the legislature sanctioned the provision of 55 new health units and the number of units increased rapidly in the post independence era (12).

An important landmark in the health administration of the country was amalgamation of the curative and preventive services in 1926, thereby pre-dating by several decades, and the more recent international recognition of the importance of close linkages between preventive and curative services (2).

Another key feature was that; from its inception, medical care was provided by the government, free of charge. This made health care accessible to all the needy. The steady expansion of the system into the rural areas, particularly in the 1930s and early 1940s, ensured access for the rural poor. Direct taxation on income was Introduced in 1932 (13) and provided finances needed for the welfare schemes. During this period, the government allocated substantial resources for expanding the state health system, including preventive and curative care. In 1928, eight percent (8%) of government spending was for the health sector, and social sector expenditure reached a . peak in the 1950s when the proportion of the government budget expended on health was 10% (1).

Education

The first half of the 20th century also saw a rapid expansion of schools. The importance of raising the educational level of women was recognised early. A sub committee of the Legislative Council in 1987, highlighted the fact that "Female education had not reached, the classes of the people whom it should have chiefly benefited" (14).The priority accorded to women's education is reflected in the rapid increase in literacy levels in women during the first few decades of the 20th century.

Table 3. Trends in adult literacy

Year	1901	1910	1921	1946	1953	1963	1971	1981	1991
% Male Literacy	42	47.2	56.4	70.1	75.9	79.3	85.6	91.1	90.1
% Female Literacy	8.5	12.5	21.2	43.8	53.6	63.2	70.9	83.2	83.1

Expansion of education resulted in a health conscious people, supportive of government health programmes

and increased utilization of health services that were provided free. Despite improvements in living standards during the first half of the 20th century, malnutrition and high rates of morbidity were common. Available data suggests that a substantial proportion of the population had incomes below that needed for the intake of essential food (1). State benevolence and social welfare ideology, was a response to this widespread poverty. In the context of poverty and malnutrition, food subsidies and supplementary feeding programmes were introduced.

The improvements in health status during this early period are reflected in the decline in death rates and increased Life expectancy. Sarkar (15) analysing the age specific mortality rates noted that, the decline In infant and maternal mortality was not as high as in other groups, suggesting that decline in mortality has been achieved through general measures rather than through special efforts aimed at a particular group.

Second half of the 20th century

The period 1946-53 witnessed a dramatic decline in mortality and improvements in literacy. Life expectancy increased from 42.1 years to 58.2 years. Infant mortality and maternal mortality both recorded accelerated declines. A reduction in mortality of similar proportions has not been recorded before or since.

The cause of the steep decline in mortality has been the subject of much academic debate. The use of DDT in the control of malaria, introduction of antibiotics, the spread of the health care system, free health services and the range of care that was provided, are recognized as the main factors for this remarkable improvement.

The post war years witnessed a very rapid expansion of government health institutions when the building plans that were placed on hold during the war years were re-commenced, facilitated by the external resources accumulated during the war years. By 1948 the number of government institutions had increased to 247 including five provincial hospitals. In two years 4 more provincial hospitals were added while the total number of institutions increased to 263. The Administrative Report of the Director of Health services for the year 1948 records that, Health Unit type of work was adopted throughout the country in that year, with 104 Medical officers of Health (16). In addition there were special campaigns for Tuberculosis, Malaria, Filariasis, Leprosy and Venereal Diseases.

Post independence era

Since independence, even amidst financial difficulties, all governments have maintained the tradition of giving priority to the funding of health care. The structure of the health service that was developed earlier was continued and expanded. In the 1950s, the number of allopathic institutions increased very rapidly. The number of beds increased by 49%, and the major categories of health personnel doubled. However, from 1950 onwards, the Reports of the Director of Health Services refer to overcrowding of institutions. A report of a mission organized by the International Ban k for Reconstruction and Development, which visited Ceylon in 1952 at the request of the government observed that, “although death rate have fallen, the same cannot be said of the sickness rates”. It is Interesting to note that in 1950, one out of every nine persons in the island was an inpatient receiving free food for an average of 8.6 days while one out of seven was an outdoor patient. However, “the increase in recorded sickness is very probably due not or at least not wholly to their being actually more illness, but to greater, inclination on the part of the people to take advantage of the facilities offered” (17). More importantly, the report highlights the necessity for improving sanitation, water supply, housing and nutrition.

The spread of services was followed by increased attention in specific areas such as maternal and child health care. Ante natal and postnatal care was provided through a network of clinics and cadres of midwives, nurses and Medical Officers of Health. Utilization rates were high and contributed to the rapid decline of infant and maternal mortality. The rapidly declining death rates resulted in very high rates of natural increase and between 1946 and 1953, the population increased by 22% and in 1953-63 by 37%. The sharp decline in infant mortality and the high birth rates resulted in a large child population.

Table 4. Percentage increase of population in specific age groups

Population group	% increase in population 1946-1952	1953-1963
Total population	22	37
Pre school children	40	30
5-9 year olds	34	53
10-14 year olds		44%

Fertility decline •

Early political commitment, effective population policies, increasing mean age at marriage as a result of female education, and the widespread availability, acceptance and utilization of contraceptive services, resulted in the fertility decline. Reduction in infant mortality rate was another important contributory factor.

The fertility transition in Sri Lanka commenced in the mid, 1950's.The Demographic and Health Survey (2000) records a TFR of 2.0 for the five years preceding the survey, a rate lower than replacement fertility (18). The initial decline in fertility was mainly due to the rise in age at marriage of females, but after1970, increasing contraceptive use was the main contributor (19).

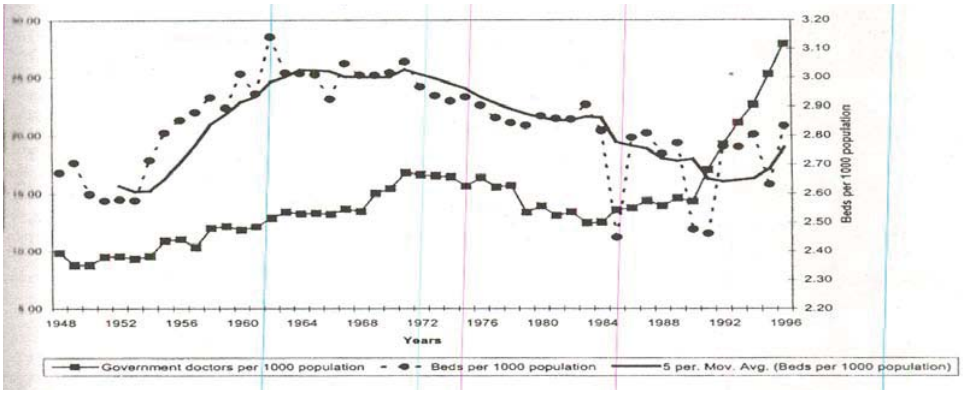
Family planning

Family planning activities were initiated in 1953 with the formation of the Family Planning Association (FPA), a non governmental organisation. The government supported the activities of the association by providing a grant and allowing the organization to conduct family planning clinics in government institutions.

In 1965, the government launched island-wide family planning services (20). The national family planning programme was incorporated into the existing field maternal and child health services, which had a well developed network of institutions and trained personnel. Family planning services reached the community through the Public Health Midwife, whose role was by then well accepted in the community. About 70% of the women in the reproductive age group were literate. The fact that family planning was introduced as part of the MCH package with emphasis on improving mother and infant health, contributed much to the acceptance of the programme. The Family Health Bureau was formed in 1972 and was mandated to co-ordinate and supervises family planning and field MCH services. This led to improved supervision and quality of care (19).

In the next decade 1960-1969, the number of beds in government hospitals kept up with the population increase and the number of doctors kept on increasing. The period 1970-77 saw resource allocation to the health sector reduced from 2.1 % of GDP in 1970 to 1.4% in 1977 beds per population continued to decrease from 1970-1989, and doctors in government service followed a similar trend until 1984.

Government doctors and beds per 1000 population 1948-1996



Growing unemployment and social discontent amongst other socio-political reasons led to a well organised revolt in April 1971, which engulfed the whole country. The period 1973-75 saw an increase in

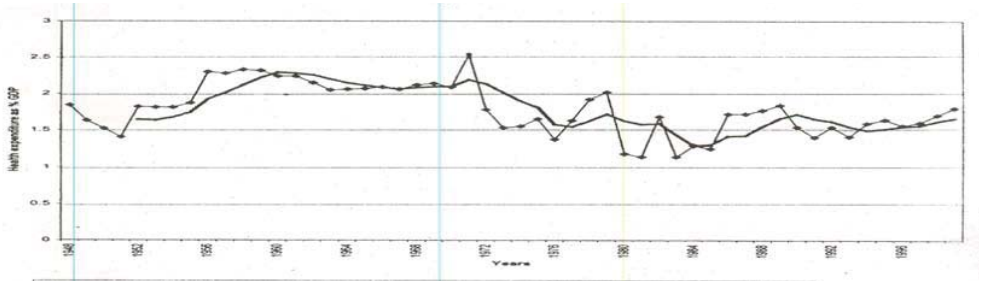
price of oil, foods and fertiliser. These resulted in high food prices, the effects of which could not be ameliorated through the food ration scheme, resulting in an acute shortage of food and an increase in malnutrition. The crude death rate and infant mortality rate both reflected the difficulties undergone by the population. However, maternal mortality rates continued to improve, probably a result of specific programs of care directed toward pregnant women. The effect of food deprivation is reflected in the growth curves of the less affluent birth cohorts of the years 73/74. Following this period, the mortality rates continued to decline but at a slower-rate than before. Morbidity continued to be high. Oral polio vaccine was introduced in 1962, and the expanded program of immunisation in 1977. Increasing immunisation coverage resulted in dramatic reductions in mortality and morbidity from these diseases. The success of the expanded programme of immunistion is internationally recognised as a model for developing countries.

From 1977 onwards, government policy was to promote the harmonious growth of both public and private sectors in health. This was in keeping with the then government's open economic policies. Demand for sophisticated diagnostic and curative services increased, and in response the number of specialized services available increased. From 1984 onwards, doctors per population in the government sector showed a rapid increase. However, the bed strength in government hospitals continued to decrease until the mid 1990s. The 1980s showed continuing shift of ambulatory care provision to the private sector, but inpatient use of government facilities continued to increase.

Financing of health Services

It is interesting to examine the pattern of funding of the health service through the years. The continued increase in utilisation of government health services have not been met by commensurate increases in the availability of general revenues. Although there has been an increase in the govermment sector health expenditure in absolute terms, there hasn't been a notable increase in its share of GDP. Throughout the 1990s, total expenditure (both private and public) on health was in the range of 3.1 % to 3.5 % of GDP.

Health expenditure as % GDP 1948-1999



The government expenditure initially fell as a percentage of GDP and then rose, but at the end of the decade it was no higher than the 1.7%, which was the figure for 1990 (21). The public services have continued to deliver an increasing volume of service by reducing unit costs through using personnel and infrastructure more intensively and in a productive manner (22). The largest components of spending by function are inpatient care services, the proportion of government spending rose from 29% in 1990 to 37% by 1999. The share allocated to preventive and public health services declined from 20% at the beginning of the decade to a mere 11 % in 1999 (23). Since the 1980s there has been a continuing shift of ambulatory care provision to the private sector. Health expenditures are now half public and half private in origin (21).

Table 5. Proportion of government spending on different components of health care

	1990	1999
In patient care	29	37
Out patient care	20	11

Given the present constraints on expenditure, it is unlikely that the share of the GDP spent on health would increase in the near future. On the other hand, there is continuing public demand for better quality and more expensive and sophisticated services. In the absence of an effective alternate financing mechanism a grow-

ing concern is the issue of sustainability of public health care interventions on a scale that will consolidate past achievements while addressing the emerging challenges.

Emerging problems

A rapidly ageing population, changing disease patterns, resurgence of malaria, persistence of tuberculosis, increasing importance of infections such as Japanese encephalitis and Dengue Hemorrhagic Fever, malnutrition among children under 5 years and risk of HIV/AIDS reaching epidemic proportions, are some of the challenges that lie ahead. Violence, accidents, suicide, mental illness, alcohol and tobacco related diseases are becoming serious concerns. The armed conflict has caused considerable deterioration and destruction of health facilities. For some the above diseases, no effective vaccines are available, others need environmental or socially complex interventions.

Demographic changes

The most significant demographic change is in the age structure of the population. The greatest challenge for the first half of the current century would be the character and unprecedented momentum of ageing of the country's population. The process of ageing would be somewhat gradual in the next few years but would gain momentum after 2010 (the first decade of this century). Old age dependency would be about 13% by the year 2011, and by 2041 the middle of this (21st) century, persons over 60 years will form more than 25% of the population (24).

In addition to this, the population would continue to grow till about 2025 and stabilise at around 23 million (25). From 1992-1998 the growth of the population was a mere 1% and may decline to less than 0.5% but the population would continue to grow adding more than 200,000 people annually , which is about the same volume, that was added in the 1950s when the rate of growth was 2.3% (24).

Epidemiological change

At present there are increasing numbers of deaths from diseases that are characteristic of the later stages of the epidemiological transition such as ischaemic heart disease, cerebrovascular conditions and malignancies, With demographic ageing, morbidity and mortality from these diseases as well as age related diseases such as, osteoporosis, and other degenerative disorders will increase substantially. These have to be understood in relation to changes in life styles and the environment. The increasing incidence of coronary heart disease, some cancers and diabetes are closely related to poor nutrition, obesity and sedentary lifestyles. These are in turn contributed to by aggressive marketing of particular consumerist life styles.

Table 6. Trends In hospitalisation - some diseases

	Cases per 100 000 population		
Disease	**1975**	**1985**	**1995**
Neoplasms		121.3	202.8
Diabetes mellitus	95.5	86.6	177.6
Hypertensive disease.	121.6	186.8	397.3
Ischaemic heart disease	76.4	163.9	270.1

Source Annual health Bulletin

Traumatic injuries have ranked as the number one cause of admissions to hospitals over the last 5 years. For the year 1999, 14.1 % of all admissions to government institutions and 4.5% of all hospital deaths were due to trauma, a reflection of the ongoing conflict situation. Injury, homicide and other causes of violence are the leading causes of death in the 15-49 year age group. Mortality due to transport accidents is high in those over 40 years (26). The ongoing civil strife has resulted in a sizable displaced as well as disabled population. The displaced are exposed to risk of disease, food insecurity and deprivations, but their capacity to deal with such situations have contracted. The disabled are mostly young persons; their rehabilitation poses a major challenge to both medical and social services of the country.

The problem of suicide is important enough to have received the attention of a presidential task force. The rates, though high, have been declining in recent years. Mortality due to suicides and self inflicted injuries are highest in 20-24 and 25-29 year age groups and in those over 70 years of age (26). Social stresses resulting from imbalances in the development process, as well as culture specific factors concerning interpersonal relationships especially among young adults are the major causative factors.

One of the foremost challenges to public health today is tobacco and alcohol related diseases. Although the prevalence of tobacco consumption in Sri Lanka has decreased in recent years, 62% of cases from tobacco related cancers could be attributed to the habit. Similarly, 53% cases of Iscaemic Heart Disease 54% of Cerbro-vascular disease in males could be prevented by removing this risk factor.

An extensive body of research amply demonstrate that tobacco related mortality and morbidity incur direct and indirect costs and that its financial impact on loss of production, far outweigh any economic gain from employment and taxation revenue to the government. Public health officials have traditionally relied on health education campaigns assisted by higher taxation resulting in increase in prices of products and regulation of advertising, to tackle this problem. However, these efforts have to compete with an industry advantaged by massive advertising budgets and influential connections (27, 28).

It has been reported that 25% of deaths seen in the wards of a consultant physician in the National Hospital Colombo, is related to alcohol consumption. Of the persons who died two thirds were less than 55 years of age (29). This percentage is likely to be more in the case of traumatic injury, homicide and other causes of violence. Alcohol consumption in the country has risen by nearly 50% between 1990 and 1995 (30). The number of persons treated for alcoholic psychosis has increased from 36 per 100,000 population in 1990 to 66 per 100,000 in 1999. The burden for the health officials lies not only in treating the health consequences, but increasing effort towards prevention and control.

These problems will co-exist with old infectious diseases such as malaria, tuberculosis, and diarrhoeal diseases. A few decades ago, it was believed that Infectious diseases could be eliminated as a public health problem. However, changes in society, greater mobility of people, behavior, impoverishment, civil conflict, unplanned urbanisation, environmental pollution, deforestation, global warming, have all contributed to infectious diseases continuing as a threat to public health. Microbial adaptation and drug resistance adds to the problem. Inadequate surveillance and the diminishing effectiveness of the traditional approaches to disease control have all combined to result in an increase in diseases of infectious origin. Furthermore microbes have gained in importance as some of them have been identified as risk factors or etiological agents for diseases that were thought of as “non communicable”.

Malaria has been and continues to be an important health problem. The high mortality seen in the earlier decades is not seen due to effective treatment but in 1997 -1999, an increase in both the incidence and mortality due to malaria was noted. Most of this increase has been noted in the North Eastern province where there are practical difficulties in case detection, treatment and control activities. Increase in P. falciparum infection has been recorded and gradual spreading of chloroquine resistance that has been observed has important implications for transmission. However, Wickremasinghe et al state “at the present time elimination of P. falciparum looks promising, given the renewed initiative on malaria control”. (31)

Viral infections such as Dengue Haemorrhagic Fever and Japanese Encephalitis are emerging as important causes of morbidity and mortality. Although mortality due to diarrheal diseases has decreased morbidity rates remain the same.

Global climatic changes are expected to influence the emergence and reemergence of infectious diseases. The incidence of mosquito borne diseases including malaria, dengue, and viral encephalitis are among those sensitive to climate change. Climatic change may affect disease transmission by shifting the vector’s geographic range, increasing reproductive and biting rates and by shortening the pathogen incubation periods. Climate related increases in temperature are also believed to lead to higher incidence of water borne infectious illness such as cholera. Susceptibility to infection may be further aggravated by malnutrition due to climate stress on agriculture.

Although HIV/AIDS prevalence rates are low in Sri Lanka and remain below the originally anticipated levels, the country is situated in close proximity to two epicenters of the pandemic, Southern India and Thailand. The country has many factors that may favour rapid transmission and therefore effective surveillance programmes are very important. Tuberculosis with around 6500-7000 new cases detected annually, remains a public health problem. There has not been a significant decline in the incidence since 1985, although low incidence rates are seen in the younger age groups reflecting the impact of the BCG vaccination programme. In view of its association with HIV/AIDS, and growing anti-microbial resistance, it remains a problem whose magnitude and nature would need careful assessment.

Although infant and maternal mortality rates have shown considerable decline further reduction of these may need different approaches and further attention in the coming decades. Improved management of labour, wide access to emergency obstetric care, prevention of neonatal infections and birth asphyxia are areas that need attention. Reduction in anaemia, improvements in weight gain during pregnancy, further reduction of low birth weight and preschool under-nutrition and micronutrient deficiencies are goals to be achieved. Although contraceptive prevalence is high, high rates of induced abortion, suggest a considerable unmet need. Different approaches to the delivery of contraceptives and services that are responsive to client expectations are essential to reach this group of persons whose needs are unmet.

The focus has also to be directed towards improving not only the physical quality of life, but also mental health and optimum development of children. Adverse, impacts of the ongoing conflict on children living in conflict areas and border villages need special attention. Adequate resources to deal with subtle long term effects on children are an urgent need.

Services in the future

The increase in population during the first half of this century will generate increasing demand for all types of health services but ageing will increase the demand for, both health care and social services specific for the elderly. These needs have to be met while maintaining and improving the current services for mothers and children. Adolescents and youth is another very vulnerable segment of the population comprising close to one fourth of the population. This age group is projected to decline to 19% by the year 2021 but numerically would form a sizable group. Another special group that would need considerable attention is the internally displaced.

The population who work in the plantation sector constitute an economically important group. At present, the responsibility for their health care is shared between the estate management and the government sector. This is a group for whom the state may have to assume increasing responsibility in the future. Improvements in occupational health services elsewhere in the country also needs attention. Furthermore, improved national health indicators hide considerable regional variation. Developing methods of reporting of routine statistics, which would enable the detection of such disadvantaged groups are important. The successes of the past have been attributed to equitable access to health care, which is provided free of charge, cost effectiveness together with high technical efficiency of the public sector delivery system and quality of care. The system provides the public ready access to trained health practitioners and reasonable health facilities.

However, the change in population structure and epidemiological transition, which is under way, has major implications for health expenditure. Consumers are well informed and their expectations are high. The system is overstretched and requires additional funding. It is increasingly difficult to find finances to keep pace with rapid medical progress. Prevention of diseases that are emerging as problems need life style modification. Change depends on an individual's perception of risk and motivation; even then change takes a long time, 25-30 years for results to be seen. These proprammes have low visibility and are unlikely to attract political patronage.

Adequate funding is necessary if quality of services is to be improved without damaging the strengths of the current system. Since user fees are not an option acceptable to the electorate, finding alternative mechanisms of financing health that would ensure protection to the poor against cost of illness while maintaining quality of care would be a major challenge. At present there is no coherent policy that addresses the roles of the public and private sector in the financing and provision of health services.

Thus, the focus will have to be on effective and efficient use of available resources. This would need careful planning both in the short term as well as in the long term. Human resources especially management capacity building and improved health statistics are essential for this purpose. Morbidity data available, are based on admissions to government hospitals, incidence data are scarce. Private sector or morbidity both indoor and out door and government sector out door morbidity data, do not enter national health statistics. National averages often hide much disparity, but we do not have routine data that allows us to identify or monitor such population groups or geographic areas. Optimum use of resources will also depend on location of services based on morbidity patterns, population distribution, accessibility etc. Therefore upgrading and expansion of services should follow a sound long term plan. Decentralisation of power to the provinces also has resulted in some ambiguity and lack of clarity in some aspects of health care delivery. Furthermore, "there is inequity between districts in terms of resources, leading to inequities in health care provision and use" (32). These inequities need to be addressed prior to devolution of more powers to the provinces.

The present health care system with its extensive service delivery has demonstrated that it is possible to achieve results where medical technology is available and could be delivered to deal with a specific problem either of disease or disease prevention; e.g. vaccination. However, not only has the pattern of disease changed but the expectations of access to health care also have changed considerably. People now turn to health systems not only for relief of pain, and treatment of a physical or mental disorder but also for advice on nutrition, child rearing and sexual behavior (to name a few). More often their contact with the health care system is as recipients of health related information and advice. The capacity of the health system to deal with problems originating in poverty, malnutrition, poor sanitation, inadequate knowledge of health risks is limited. The system is ill equipped to deal with situations where attitudinal and behavioral changes and where active participation of communities and individuals are required. This may partly be due to the fact that the system has fostered dependency on the state for improvement of health. This perception of state responsibility has to be changed towards responsibilities of the individual families and communities, if life style changes that are necessary for future improvement of health are to be addressed.

The World Health Report 2000, which deals with improving performance of health systems state that "the health systems have a responsibility not just to improve people's health , but also to protect them against the costs of ill health and to treat them with dignity responding to their expectations" (33). Thus reforms are necessary not only in funding, but also in the goals and responsibilities of the service as well as in skills and attitudes of providers necessary to respond to public expectations.

References

1. Gunatilleke G. Sri Lanka's social achievements and Challenges. In:Dharam Aha ed. Social Development and Public Policy; a study of some successful experiences. London: UN Research Institute for Social Development Macmillon Press Ltd. 2000: 139-8.
2. Administration report of the Director of Medical Sanitary Services for 1949 Ceylon Government press 1949: C7.
3. De Silva OM. Health progress in Ceylon; a survey. Colombo: Ministry of health,956:2.
4. Uragoda CG. A history of medicine in Sri Lanka. Colombo: Sri Lanka Medical Association;1987: 210
5. Administration Report of the Director of Medical Services for 1933. Colombo Ceylon Government Press, 1934:1 C8.
6. Uragoda CG. A history of medicine in Sri Lanka. Colombo: Sri Lanka Medical Association, 1987:210
7. Nadarajah T. Trends and Differentials in Mortality In: Population of Sri Lanka, Monograph Series NO.4. Bangkok: ESCAP, 1976: 123.
8. Uragoda CG. A history of medicine in Sri Lanka. Colombo: Sri Lanka Association, 1987: 266
9. Simeonov LA. Better Health for Sri Lanka; Report on a health manpower Study. New Delhi: WHO Regional Office For South East Asia, 1975: 121
10. Meegama SA. The Decline in Maternal and Infant Mortality and its relation in Malaria Eradication. Population Studies 1969; XXIII; no. 2: 289-301.
11. Uragoda CG. A history of medicine in Sri Lanka. Colombo: Sri Lanka Medical Association, 1987: 252
12. Wickremesinghe ,WG. The Premier Health Unit in Ceylon, in the final Jubilee Souvenir of the Health Unit Kalutara. Organising Committee of the Silver Jubilee Celebration. 6
13. Meegama SA. The Decline in Maternal and Infant Mortality and its Malaria and its relation in Malaria Eradication. Population Studies 1969; XXIII (2): 291.
14. Abayawardene HAP(1969) cited in Gunatilleke G. Sri Lanka's social Acheivements and Challenges. In: Dharam Aha ed. Social Development and Public Policy; a study of some successful experiences. London: UN Research Institute for Social Development, Macmillon Press Ltd. 2000
15. Sarkar NK. The Demography of C ylon. Colo bo: Ceylon Government Press, 1957: 12

16. Administration Report of the Director of Medical Services for 1948. Colombo: Ceylon Government Press, 1949: C5.
17. Economic Development of Ceylon; Report of a mission organized by the International Bank for Reconstruction and Development. Colombo: Ceylon Government Press, 1952: 397 -8
18. Department of Census and Statistics.. Sri Lanka Health and Demographic Survey 2000; Preliminary report. Ministry of Fiancé and Planning in collaboration with Ministry of Health 2001: 20.
19. Abeykoon ATPL. Fertility Transition. in Sri Lanka : Programme and non programme factors. Asia Pacific Population Journal 2000 Mar, 15 (1): 55-62.
20. Seneviratne HR, Rajapaksa LC. Safe Motherhood in Sri Lanka: a 100 year march. International Journal of Gynecology and Obstetrics 2000, 70: 113-
21. Ministry of health Sri Lanka. Sri Lanka National Health Accounts. Institute of Policy Studies Ministry of health 2001: 9
22. Hsiao W. A Preliminary Assessment of Sri Lanka's Health Sector and steps Forward, Cambridge: Harvard University, 2000 Jan: 59.
23. Ministry of health Sri Lanka. Sri Lanka! National Health Accounts. Institute of Policy Studies Ministry of health 2001: 9.
24. De Silva I, Boyagoda K. Population change and environmental degradation in Sri Lanka in Demography of Sri Lanka: Issues an Challenges. Colombo: Dept. of Demography, University of colombo 2000: 158.
25. Silva I, Boyagoda K. Population change and environmental degradation in Sri Lanka in Demography of Sri Lanka: Issues and Challenges. Colombo: Dept. of Demography, University of Colombo 2000:157
26. Department of Health Services Sri Lanka. Annual Health Bulletin 1999, Department of Health Services, 2000.
27. Ministry of Health Sri Lanka. Annual Health Bulletin 990 Ministry of Health, 1991.
28. Department of Health Services Sri Lanka. Annual Health Bulletin 1996, Department of Health Services, 1997.
29. Dissanayake P, Navaratne NMM. 24 % of male deaths alcohol related [letter]. CMJ 1999, 44: 40
30. Central Bank of Sri Lanka. Report on Consumer finance and socio economic survey 1996/97 Central Bank,1999.
31. Wickremasinghe A R, Wickremasinghe D.R, Galapppaththy G, Gunawardena D M Elimination of falciparum malarial from Sri Lanka an epidemiological reality. Journal of the College of community Physicians in Sri Lanka 1999, 4.21.7
32. Fernando D. Health care systems in transition III. Sri Lanka, Part I. An overview of Sri Lanka's Health System, Journal of Public Health Medicine, 22 (1): 14-22
33. WHO. The World Health Report 4000 Health Systems: Improving performance. Geneva, WHO, 2000.