CHAPTER 5

STEWARDSHIP OF THE HEALTH SECTOR

5 STEWARDSHIP OF THE HEALTH SECTOR

5.1 POLICY FORMULATION

(1) PROVINCIAL COUNCILS

Types of Policies or Policy Instruments

The health services of the government are under a Cabinet Minister. With the implementation of the Provincial Councils Act in 1989, the health services were devolved, resulting in the Ministry of Health at the National level and separate Provincial Ministries of Health in the eight provinces. Each province has a cabinet minister responsible for the health care services of his / her province. The provincial health minister has a secretary to his ministry. The Secretary of the Provincial Health Ministry has a Provincial Director of Health Services (PDHS) who is overall in charge of the health services of the province and under him a Deputy Provincial Director (DPDHS).

The function of the Provincial Health Ministry is to implement the national health policies and the national and provincial health objectives for the benefit of the people. The Province itself does not get involved in policy formulation.

Institutions and Human Resources

PDHS is responsible for the management of hospitals (provincial, base and district hospitals, peripheral units, rural hospitals and maternity homes and outpatient facilities such as central dispensaries and visiting stations.

DPDHS assists the eight PDHS. DPDHS areas are similar to administrative districts except for Mullativu and Kalmunai, which are amalgamated to Kilinochchi District and function as a separate division from Ampara respectively. Both curative and preventive services of the district are administered by the DPDHS. Each DPDHS area is subdivided into several Medical Officers of Health areas (MOH/DDHS), which are congruent with administrative units, i.e., Divisional Secretariat areas. The MOH/DDHS is responsible for the preventive and promotional health care in a defined area with a population ranging from 60,000 – 80,000 and carry out its work through the trained field staff working at field level.

All policy matters on Health are decided by the Central Government through the Ministry of Health and the PDHS; the DPDHS and the MOH/DDHS carry out the implementation of these policies. Unlike the central government there are no special institutions or a special cadre of people responsible for policy formulations. The above-mentioned people are sometimes included in committees convened by the central government to develop policy matters.

Systems and Procedures

The fact that there is no policy formulations within the Provincial Councils give uniformity to the health services in the country. However, it means that devolution of power is incomplete with the provinces having a separate cadre of people merely carrying out work that is dictated and laid out for them by the Central Government. In certain areas like Maternal and Child Health activities and epidemiological reporting of diseases such as the notification system, this factor is important as this means that the quality of work and services will remain uniform island-wide.

But different provinces will have different problems in certain areas like environmental health and occupational health since different geographical locations will be depending on agriculture, other areas on fishing, etc; also from time to time needs of provinces may change. In situations like this, would it be necessary to grant power to the provinces to formulate policies that would suit their needs? But in doing so, it is necessary to keep in mind some coordinating mechanism between the central government and the provinces.

Furthermore, hospital administration remains dominantly in the hands of the central MoH. The central government continues to control key functions such as capital expenditure, recruitment and allocation of doctors to provinces, divisions and facilities, and transfers, promotions and discipline. Provincial councils have not been given any authority for capital budgeting, but have been given some authority for carrying out the functions of annual planning and resource allocation, mid-term planning and recurrent budgeting.

(2) CENTRAL MINISTRY OF HEALTH

Types of Policies or Policy Instruments

In Sri Lanka a dynamic mechanism that formulates a health policy framework on a continuum and changing basis seems not to exist. Communication between health information, policy formulation and implementation of these policies is poor.

Even though the Ministry of Health formulated policy guidelines on issues as they arose from time to time, Sri Lanka never had a comprehensive National Health Policy to guide the health activities. The broad aims of the existing policies were to control preventable diseases and to carry on health promotion activities. Two policy formulation exercises were carried out at different times by successive governments. They were: The National Health Policy by the Presidential Task Force (1992 –2004) and the Presidential Task Force Proposals for Reform in the Health Sector in 1997. The terms of reference for the 1992 exercise were to examine the present system of health care, the proposed primary health care model, the role of private practice and the private sector, the role of the ayurveda sector and the responsibilities of the provincial councils and divisional secretaries. This was rather an extensive document and was submitted to the cabinet. But the political parties changed in 1994 and this paper was aborted.

In 1997, the new President, Mrs. Chandrika Kumaranatunga, convened a committee of 25 members to formulate a policy document. Following this exercise the Health Sector Reforms Unit was set up but the subsequent implementation of these policies by this unit has been very poor.

Institutions and Human Resources

The Management Development and Planning Unit (MDPU) of the MoH has a unit, which should be headed by a director for policy analysis, but for more than three years now the post of director has been vacant. Within the MDPU there is a separate project funded by the World Bank called the Policy and Human Resource Development Project. This was inaugurated in July 2002. In consultation with a panel

of experts, this project identifies areas where policy changes are needed. However, this project is dependent on outside funds and if it were withdrawn, it would have to stop halfway.

Systems and Procedures

Generally, when policies need revision the central government convenes a group of experts who meets and reviews, revises existing policies, and formulates new policies. This group of experts at times may or may not be assisted by technical experts in the field that policy formulations are being done. This factor would generally impede implementation of such policies, as there would be a lack in ownership. Also in the above mentioned policy formulation exercises the involvement of the central ministry was minimal which resulted in lack of coordination by technical experts and caused confusion and dissatisfaction during the implementation phases as well.

The tendency of successive governments to abandon previous policy proposals and formulate new proposals is also a disadvantage as this results in unnecessary wastage of resources and time. Would the more useful thing be to revaluate the existing policies from time to time? This should be an exercise shared by technical experts and administrators and the central ministry should take a pivotal role in bridging the two groups together and initiate the implementation of the formulated policies. For this to happen there should be a dynamic office in the ministry to coordinate policy formulation activities, which should also be a bridge between the provincial offices and technical experts in an advisory and strengthening capacity for implementation.

The Policy Analysis & Development Division ought to be open to constant suggestions for policy reforms by technical and managerial experts and have constant dialogues between these groups. Emerging problems such as accidents, tobacco, alcohol, domestic violence and expanding health care services to meet the needs of specific groups such as the elderly, victims of war and conflict and promoting specific areas of health care such as occupational health problems, mental health estate health and geriatric services should be priority issues in considering policy reforms. The department should also take an active role in the monitoring and evaluation activities of policy implementation and in building private-public partnerships.

As Prof. Hsiao pointed out in his report, “A preliminary assessment of Sri Lanka’s health sector and steps forward”, Sri Lanka does not have a policy as to the respective roles of public and private sectors in health financing, service delivery, and human resource development. This aspect would be very important for controlling cost/price inflation in the near future in Sri Lanka because the country’s health system is based on a fairly critical balance of the two sectors.

(3) NATIONAL LEVEL

Types of Policies or Policy Instruments

Even though there are no separate policy regulation activities at the National level, the government can convene a body for such activities as they please at any time. Examples of these are the presidential task forces convened for policy formulation activities in 1992 and 1997. During these activities the involvement of the central ministry of health was minimal. Generally the politicians decide the members of such committees. This factor has its advantages and disadvantages. In regulating the policies this would be a useful factor, as the politicians would accept the recommendations. On the other hand, the members selected for the committee may not be the necessary resource personnel.

The question is whether there should be a separate health task force at national level outside the central ministry of health. Could they function purely on an advisory level and perhaps undertake research on policy matters that would complement the activities of the Policy Analysis and Development Unit?

Ideally the Unit should be able to undertake research activities in concurrence with the provinces. But the present framework of the unit does not permit this as it is a small unit and the employed personnel are involved in the day-to-day work of the unit. Even if the unit does undertake research projects the scope of these projects would be limited, as quality research would involve total occupation with these projects.

It was recommended by the Presidential Task Force in 1992 to have policy measures for controlling the abuse of private practice by government doctors that would enable "better supervision and firm punitive action to control misuse of the privilege". Again, the Government would need to take a careful view on raising public sector salaries or on controlling private practice by government doctors and for avoiding uncontrolled cost/price inflation. If there was a separate health task force at the national level, could these issues be looked into more qualitatively?

5.2 PLANNING, PRIORITY-SETTING AND RESOURCE ALLOCATION

(1) PROVINCIAL COUNCILS

Types

There is a planning division within every provincial directorate that formulates the plans for the specific area. The block grant consists of the total allocation given to each Province. This includes recurrent expenditure, the criteria-based grant and the medium-term investment plan.

The DDHS /MOH and the Divisional Secretaries develop the annual health plan for their area. This proposed plan is submitted to the DPDHS. What follows is a discussion of this plan with the DDHS/MOH and a prioritisation of the needs depending on the morbidity trends of the area, the requests from the people, the needs identified by the health staff and others and the availability of funds. This consolidated Annual Health Plan is submitted to the Provincial Director of Health Services. PDHS in turn submits this plan to the Central Ministry through the Secretary of Health.

The DPDHS sends its annual estimates to the PDHS office. PDHS consolidates the annual estimates of all the districts and through the Secretary of Health submits this to the Chief Secretary. The Chief Secretary of the Province is the Chief Accounting Officer. Chief Secretary prepares the annual draft estimates with the data given to him by each Secretary of the Province. He submits the draft estimates to the finance commission.

From the block grant the M.T.I.P money is released to the Central Ministry. Central Ministry releases funds to the Chief Secretary and he / she in turn sends it to the PDHS through the Provincial Secretary. DPDHS finally releases the money to the DDHS.

Institutions and Human Resources

According to the Manual of Management for Provincial Directors, the PDHS may set up a planning unit or cell to assist in planning the health services. This unit should provide the guidelines and the necessary training for the Divisional Officers to prepare the Divisional Health Plan.

The planning and information unit of the PDHS office, when the PD decides to set up one, comes under the technical unit of the directorate. There is usually a medical officer attached to these units designated as medical officer/planning. They are sometimes supported by one or two staff members such a Programme Planning Officer (PPO) or a Survey Statistical Officer (SSO). Most of the PDHS offices have separate planning units.

Ideally every planning unit of the province should have a consultant community physician, at least two medical officers, a PPO, an SSO, a data entry operator and a labourer for efficient and useful functioning. This factor should be taken into account in strengthening the health aspects of the provinces.

Systems and Procedures

In planning for the community, the PDHS will assess the needs of the community by studying the demography, morbidity and mortality patterns and the quality, coverage & range of services provided by the public as well as the private sector.

Generally, the information necessary for this purpose is assessed by conducting periodical surveys and by designing, establishing and operating a management information system (MIS) and an epidemiological surveillance system.

The Provincial Director guides the Divisional Directors in the preparation of a plan of action utilizing the information obtained from assessment of needs to bridge the identified gaps and deficiencies in the quality and range of services and coverage of population groups.

These plans include the following:

a) Annual Health Development Plan

b) Medium Term Plan

c) Perspective Plan

d) Project Plans

The PDHS coordinates the preparation of these plans by conducting meetings with MoH/ DDHS periodically.

One specific drawback in the planning processes is the insufficient availability of information. There are certain routine data which are available such as the quarterly hospital morbidity and mortality return, notifiable diseases, EPI /CDD return – quarterly, and the monthly Vaccine / ORS stock return. But is it time to think of a mechanism that would assess the newly emerging important conditions such as mental diseases, accidents, etc. also on a routine basis for better planning?

The management committee of the provincial directorate conducts a technical review meeting every end of year prior to drawing up its plan of action for the following year. These plans are submitted to the Cabinet for funding. The central ministry is not involved in the actual planning but it does give advice to some extent.

(2) CENTRAL MINISTRY OF HEALTH

Types

The Ministry of Health set up a separate planning unit in 1981 to coordinate the planning activities of the preventive and curative health sector. This unit was subsequently organised and re-designated in 1989 as the Management Development and Planning Unit (MDPU). In 1999 the ministry and the department of health were separated and the ministry planning activities were separated from the MDPU with a separate planning unit being set up for the ministry. The MDPU was also the coordinators for the Health Master Plan exercise.

Institutions and Human Resources

The MDPU acts as the secretariat for all health development activities including those initiated and decided upon by the National Health Council, the National Health Development Committee and the Health Advisory Committee. The Deputy Director-General, Planning, (DDG/P) heads the MDPU and is the secretary to the national health council and the separate committees. At present four directors and one medical officer assist the DDG/P. Since the MDPU has been recognised as a training unit for doctors specializing in Community Medicine there are three MD postgraduate trainee doctors also attached to the unit. There are a total of 58 staff members in the MDPU.

The planning unit of the Ministry has two consultant community physicians and one medical officer. This unit is directly under the Additional Secretary/ Medical Services.

Systems and Procedures

The objectives of the MDPU are:

1) To help integrate health planning into the managerial process for health development;

2) To develop national health plans and provide support in the preparation of programme and project plans in the health sector;

3) To develop procedures and processes for planning, implementation, monitoring and evaluation of health services;

4) To upgrade capacities in health planning at different levels of the health system; and

5) To serve as a forum for national planning in health and international coordination concerning health policy and programme development.

The main functions of the MDPU are:

1) Assess the present state of health in terms of health problems, epidemiological patterns and trends; available service provisions and quality of care; people's access and utilization of services; and effects of current interventions on health status;

2) Identify managerial problems that affect efficiency and effectiveness of programmes and analyse them in terms of deficiencies, causes and associated factors;

3) Determine the health scenario desired in keeping with the milieu of people's aspirations, professional assessments, resources availability, technological advances and managerial competencies;

4) Design strategies and programmes for addressing problems, issues and deficiencies that impede service delivery in order to reach the desired health status of the people;

5) Train personnel at various levels of management in health planning and health systems management;

6) Undertake and promote health systems research in policy development, strategy design, and innovative approaches to health development;

7) Assist in designing, establishing and strengthening support systems for information, logistics, supplies, etc;

8) Monitor implementation of development programmes and evaluates the plans in terms of efficiency, equity, impact and sustainability;

9) Coordinate with other Government and Non-Government Organisations in their health development efforts; and

10) Liaise with international and UN agencies particularly WHO, UNICEF in coordinating and mobilising support for international and national health development activities.

Since the MDPU is the main planning unit in the health sector of Sri Lanka, there need to be overall coordination of all the sections and units in both the curative and the preventive sectors with the MDPU. However, this seems not to be happening resulting in confusion and duplication of certain activities. Separate units in the health sector receive independent funding from different sources that makes it possible for these units to carry out their own plans of work without consultation or coordination with the MDPU. One reason for this may be inadequate knowledge of the functions of the MDPU.

Another issue that may need revising is that evaluations done by the MDPU is mainly on utilisation of funds, and not by the quality of work. Should there be some system for the MDPU to evaluate all the activities in the health sector in terms of quality of work prior to receiving the government funds? If this happens could the planning unit, together with the separate units, be perhaps more able to focus on identification of priority issues?

This MDPU has appropriate technical planning capacities, in terms of its leadership and even some of the supporting professionals. But it needs to develop further organisational structure, team activities and mechanisms to maintain momentum in guiding the operational planning of Health Master Plan (HMP) programmes and projects and develop monitoring and evaluation mechanism useful to the implementers, the focal points and the overall management of HMP and stimulate technical capacity for planning in the different sections and directorates, as well as provinces and districts, and provide quality control on planning efforts by any MoH group.

The MoH during HMP undertook, for the first time, sector-wide planning that involved all DDG and DG, as well as all provincial health ministries and district offices. Yearly reviews of accomplishments and adjustments of the rolling plan should similarly be sector-wide and start creating a culture of mutual transparency and accountability for performance.

Prioritisation of health issues within the health sector does not occur in an organised manner. For a very long time communicable diseases and maternal & child health activities were given priority in respect to the morbidity and mortality levels of the two areas. But within the ministry setup there are no regular consultations among experts on changing priority issues. With the changing demographic and epidemiological patterns, prioritising will need to be a key issue in distributing resources.

Priority setting and sequencing

Why should we prioritise?

1) Public good needs to be optimised by a judicious choice of delivery methods and guidelines for care that optimise cost/effectiveness[1] and equity[2].

[1] For a critique and reflection on the ethics of using cost/effectiveness in isolation see Dan W. Brock's "Health Resource Allocation for Vulnerable Populations" in Ethical Dimensions of health Policy eds M. Danis et. al., Oxford University Press, 2002.

[2] Dan Brock, "The trade off between equity and choice: Ensuring fair procedures" In Hidden Assets: Values and Decision

2) Public funds are limited and if no priorities are made and made public in full transparency the rule becomes biased at best and special preference as well as potential corrupt practices is indirectly favored.

Is priority a one time process?

1) Priority setting is inevitable in health care at different levels:[3]

   - setting of strategic framework
   - Macro level of funding allocated to health sector
   - allocation of funds to care levels, programmes and geographic areas
   - inclusion of types of treatment and their support services
   - decisions on how to spend for what for individual patients

2) Priority setting needs to be flexible enough to adjust to changes in the epidemiology and local context.

3) The public debate on it will not stop quickly as many diverse interests are at stake, so it may be adjusted along the way.

Why should we sequence?

1) Not all projects are equally urgent and not all, even very important projects, can be started in year one as the prerequisite conditions are not available yet (adequate human resources and finances both for investment and running costs, equipment and supplies available).

2) PERT is a prerequisite of an efficient rolling plan, as it rationalises implementation and review of programmes.

3) **Supportive and or capacity building** projects like improvement of lab services derive their content and their timing from the variety of service improvement projects. Detailed collaborative planning and implementation of these supportive projects should come **very early in the sequences.**

4) **Early service projects** should either be **very urgent or promise early visible results within existing or easily mobilisable resources** that create momentum for plan implementation.[4]

5) Resource constraints in terms of human resources take some time to solve and clear sequences can help to **keep momentum.**

Making in NHS London, UK, The Kings Fund, 2002.
[3] Chris Ham and Angela Coulter, International experience of rationing (or priority setting).
[4] This criterion is particularly important given the lack of implementation of most past long-term plans in Sri Lanka.

(3) NATIONAL LEVEL

Types

At the National level, planning for the health sector occurs through the Minister of Health and the Ministry of Health. It is very rarely that a health plan will be drawn outside the Ministry of Health.

Institutions and Human Resources

Other than at the level of the central Ministry of Health and at the Provincial Council level, planning for health also occurs at the level of the municipal councils, urban councils and pradesheeya sabhas.

The Colombo Municipal Council has an extensive health network of both curative and preventive establishments and planning activities for health occurs in the office of the Chief Medical Officer of Health (CMOH). He is assisted by three Deputy Chief Medical officers of Health, for Administration, Environmental Health and Maternal and Child Health care, and annual plans for health are made and submitted through the Municipal Commissioner to the Chief Municipal Secretary.

5.3 REGULATIONS

(1) PROVINCIAL COUNCILS

Types of Regulations or Regulatory Instruments

There are about 30 different health and health-related enactments in Sri Lanka. Some of them have been amended to make them responsive to the current needs. Some of them are specific to one or more enactments, while some others are general. Majority of health legislation enactments come under environmental activities.

These are:

- Housing and Town Improvement Ordinance No. 19 of 1915,
- Town and Country Planning Ordinance of No.13 of 1946,
- Thoroughfares Ordinance No. 10 of 1961
- Urban Development Authority Act No. 14 of 1978,
- Wells and Pits Ordinance No. 27 of 1884,
- Nuisance Ordinance No. 15 of 1962, & Burial Grounds,
- Cemeteries and Burial Grounds Ordinance No. 9 of 1869,
- Food Act No. 26 of 1980,
- Bread Ordinance No. 10 of 1864,
- Registration of Dogs Ordinance No. 25 of 1901
- Rabies Ordinance No. 7 of 1893,
- Animals Act No. 29 of 1958 and
- Butchers Ordinance.
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Also matters pertaining to the Factories ordinance and the Cosmetics Devices and Drugs Ordinance are handled by the MoH office.

Other than environmental issues, Quarantine services are mainly concerned with the implementation of the International Health Regulations, which serve to ensure the maximum security against international spread of diseases, with the minimum interference with world traffic

Surveillance of passengers from endemic countries for yellow fever is carried out at the airport. According to legislations all passengers who do not posses a valid yellow fever vaccine certificate are supposed to be isolated at the infectious diseases hospital for six days or deported. Although all passengers arriving from yellow fever infected countries are requested to report to the health counter, some passengers are missed, as this is a voluntary check. In additional, all passengers going through the VIP lounge are not checked. Strict enforcement of laws may be necessary in these aspects. The recent SARS epidemic was an example as to how diseases can be easily spread through international travel and cause morbidity and mortality.

Institutions and Human Resources

There are three types of Local Authorities functioning in Sri Lanka at present. They are: Municipal Councils, Urban Councils, and Pradesheeya Sabhas. Pradesheeya Sabhas have been constituted for areas other than Municipalities and Urban Council areas. Legal provisions for their constitution, powers and functions are incorporated in the Pradesheeya Sabhas Act. A Pradesheeya Sabha is entrusted with the responsibility of performing several functions relating to public welfare in the area of the authority.

Systems and Procedures

The local authorities have mandated to delegate Medical Officers of Health, the powers of the Chairman of the Local Authority, as provided for in the Pradesheeya Sabha Act.

Certain health related ordinances are not effectively enforced because of non-availability of enforcement officers. In view of their importance, suitably qualified officers from other government departments and agencies are empowered to enforce them.

(2) CENTRAL MINISTRY OF HEALTH

Types of Regulations or Regulatory Instruments

The central ministry does not on its own get involved in enactment of the above-mentioned environmental legislations. The enactments are enforced by the Medical Officers of Health through their Public Health Inspectors.

But there are deficiencies in a proper regulatory framework when the Ministry of Health has no control over the private sector. Up to now the perceived need and pressure for regulation has been subdued mainly due to the professional culture of self-regulation.

Regarding regulating the practice of medicine by doctors in both sectors, some previous studies pointed out the weakness of the regulatory framework. As Dr. Russell pointed out in his report "The Role of Government in Adjusting Economies", the MoH has had difficulties to regulate the performance in the private sector due to both weak organisational capacity and wider social, political and economic factors beyond its control. This issue needs to be looked into in a detailed manner.

5.4 LEGISLATION

Law is described as the body of principles recognised and applied by the state in administration of Justice. Law is further defined as an obligatory rule of conduct. Legislation is commonly referred to as legislative instruments, enacted by the supreme law making body or authority or by such other bodies, agencies or persons to whom the power of enacting legislation has been delegated. This could include principal enactments like Parliamentary laws, decrees or subsidiary instruments such as legislation and orders.

Health law on the other hand covers national laws, regulations and other related practices, judicial decisions, treaties, which could have a direct or indirect effect on the health and well being of individuals and the community.

Health law provides a legal basis for conceptual and operational matters and aspects and interventions relating to curative and prophylactic services and measures delivered or provided through the health services system.

The term Medical Law though used throughout the world to indicate the areas of law that govern the practice of medicine, according to the WHO digest of the Health legislation, no exact definition to this branch of law exists. Health Legislation expresses and formulates health policies and provides governments with a regulatory framework for its implementation.

The role of the health legislation is very important to promote health polices and action-oriented strategies. As health issues are getting more and more complex day by day owing to emerging new issues and to address and arrest the issues and situations, a closer link or cooperation, in the form of a link or alliance, is needed between law and medicine.

MoH-JICA commissioned a study with the general objective of collecting important legislation pertaining to health in order to develop a synopsis and to determine the opinion of frontline health care workers and community members on different facets of health/medical legislation.[5]

A few key findings are given below:

1) Important areas of health / medical legislation

- Food and Drugs act
- Nuisance ordinance
- Control of Communicable Diseases
- Environmental Act
- Penal Code

2) New areas that should be considered for legislation

- Legislation to regularise the private sector
- Legalisation on compulsory medical insurance
- Clear laws on litigation on medical malpractice
- Abortion should be legalised
- Prohibit private practice by government doctors
- Legislation to eliminate “quacks”
- Euthanasia should be legalised
- SLS standards to be introduced to all food items

[5] MoH/JICA Study No. 30. (Supporting Document II)

3) Reasons for not being satisfied with implementation of health legislation

- Delays in implementing litigation
- Lack of proper legal backing for the government
- Unavailability of an official/supervisor at district level to provide technical support
- Legislation not being fool proof
- No training on legislation application
- Lack of legislative power in the MoH
- No participatory approach in bringing in new legislative amendments
- Corruption within the system
- Delays in implementing litigation
- Lack of proper legal backing for the government
- Unavailability of an official/supervisor at district level to provide technical support
- Legislation not being fool proof
- No training on legislation application
- Lack of legislative power in the MoH
- No participatory approach in bringing in new legislative amendments
- Corruption within the system

The study gave the following conclusions:

- Presently, not all new legislation and amendments to legislation are brought to the notice of all frontline users of health/medical legislation.
- It appears that there is no formal system to enhance the uninterrupted dissemination of all relevant health legislation.
- Almost all users of legislation are facing difficulties in interrupting the legislation to a larger extent. In the present context, they do not have adequate in-service training opportunities, which will enable them to upgrade their competencies in using medical/health legislation.
- Some legislation cannot be considered as timely and up to date. They need to be amended in order to make them effective.

The study also recommended the following:[6]

- A system should be designed to enhance the dissemination of all relevant Health Legislation; the new and the old, along with relevant amendments to all users.
- All amendments to legislation should be brought to the notice of all frontline users regularly without delay.
- Adequate in-service training opportunities should be made available regularly for users of legislation.
- Important pieces of legislation should be periodically reviewed, and the necessary amendments should be made.

[6] JICA / MoH Survey No 30. (Supporting Document II)

5.5 ACCOUNTABILITY

(1) PROVINCIAL COUNCILS

Types of Accountability

A health worker with management functions, e.g., PHI, can use management audit as a tool to examine his achievements and shortfalls. A Provincial Director can do a medical audit to assess one's own competence as a manager in such functional areas as planning, organising, human resource management, public / human relations, etc. The main purpose of management audit is to review managerial strengths and weaknesses for assessing management efficiency in order to bring improvements in managerial practices.

Since management is getting the work done through harmonious working of people and efficient use of resources to achieve certain objectives, the key concerns of health service management are efficiency, equity, quality of care and sustainability.

The performance of key institutions in the health sector needs to be improved to enable them to meet the challenges they face.

According to the Ministry of Health draft consultation paper of December 2002, the provinces will be made more accountable to consumers. At the moment consumers still see the central government as responsible for all actions. If provinces are to continue to receive state finance to provide state services, they must be accountable in terms of how well they do this; accountable to their consumers, and accountable to government in terms of national policy, targets and value for money. Field activities are to be supported with stronger referral and information systems. Provincial Governing Boards should be established in all provincial health units.

Systems and Procedures

The performance of key institutions in the health sector needs to be improved to enable them to meet the challenges they face. Good governance principles – in particular accountability, transparency, predictability and the participation of consumers – should be adopted. Governing Boards should be established in all hospitals with a clear responsibility to hold managers accountable for the delivery of high quality services. Annual accounts should be produced showing the sources of funds and what they were spent on and formal mechanisms to assess consumer satisfaction should be established.

It is obvious that the Local Councils and local health authorities would in their functioning, require periodic assistance from external sources. Such assistance would be required in a wide range of areas linked to the improvement of their performance, including the following:

- Training of personnel;
- Systems improvement;
- Organisational restructuring;
- Appraisal of performance budget;
- Investigation and evaluation of measures to expand the sources of revenue; and
- Relationships with the Central and Regional levels of health.

There is currently no single source to which local health institutions could turn to for such services. The Department of Local Government and Ministry of Health have lacked the capacity to provide such

assistance. At times, international aid agencies have sought to provide such assistance, either directly or through consultancy arrangements, for areas that were perceived by them as being important.

Accountability to the population could be heightened through popular health committees at village and district level. These would both serve as means for popular accountability at the local level and as the main channel for community mobilisation and participation. This might also be accomplished by collaboration with the mass media, which may be most favorable when one needs to improve responsiveness of the system and educate people on better health-seeking behaviour, lifestyle and preventive measures.

One serious drawback in all the arrangements that have been used in the past is that they were not grounded in a continuing and ongoing programme of research and study into the multifaceted issues that were germane to the local governance scenario of Sri Lanka. No such comprehensive effort at research and study has been mounted. What Sri Lanka has, instead, are ad hoc inquiries and studies – reactive to problems that were encountered from time to time.

Provision of health services both public and private is a social contract promising quality diagnosis and care for the best possible results. Therefore, wherever there is health provision there should be accountability to the community about the actual performance and its effectiveness.

The political control of health budgets and votes has been credited to be the main factor that determined that the service provided would be equitable and acceptable. This public accountability should be maintained and strengthened. Accountability to the population could be heightened through popular health committees at village and district level. These would both serve as means for popular accountability at the local level and as the main channel for community mobilisation and participation.

Use of public funds implies public accountability not only for correct bookkeeping but also for the efficient use of these funds.

The MoH should define a quality assurance system applicable to both public and private services of which results should be published at least annually.

Accountability for quality care and responsiveness should not only be practiced by each facility and by the whole public and private sectors of health care. It should also be practiced by each provider. In Europe and North America, this is mostly done through self-regulation of the medical and nursing professions. In the USA and some European countries, the government provide a monitoring of individual providers and the civil court system can deal with cases of malpractice. The size and growing complexity of the Sri Lankan health sector demands that self-regulation of the profession and medical and nursing audits of services be instituted.

Social Accountability

Since the 1960 a strong governance movement has been growing inspired by strong democratic ideals as well as a strong need to develop better governance by governments and corporations. By the 1970s the World Bank has taken the lead in popularizing the governance ideals of transparency and social accountability, to wit:

“This discussion has proceeded on the basis that democratic institutions function best when they operate within a framework of accountability.”

The discussion on accountability, in so far as local governance is concerned, could be somewhat different from the general approach to this issue in earlier literature. These have tended to be pre-occupied with and to lay stress on accountability of local government institutions to agencies that are considered to be super-ordinate within the political and administrative system.

It is the premise of this discussion that the basic accountability of the proposed Local Councils / District and Divisional health Authorities would be to the immediate communities that they are intended to serve. Such accountability would cover three principal areas.

- The effectiveness and efficiency of the delivery of public goods and services to the community would be one such area. This would include such aspects as the range of goods and services that are delivered; the spatial coverage of such delivery; the quality of the provision; the cost-effectiveness of provision; and the efficiency of delivery.
- A second area would be that of financial accountability. This would cover several aspects. One such aspect would be the rational and optimal use of the financial resources that become available to the Council. Strict compliance with rules, regulations and procedures that have been accepted and laid down for the custody, handling and expenditure of the financial resources of the Council would be another.
- A third would be the scrupulous collection of all revenues and income that are due to the Council.
-

In health care the perceived responsiveness and quality of services are also parts of social accountability.

For the proper compliance with the fulfilment of accountability to the community several preconditions would need to be met.

- The first would be the observance of transparency in regard to the functioning of the Council and health services in all its aspects. For this to be achieved, documentation relating to the activities undertaken by the Council, under appropriate arrangements, should be easily accessible to the voters. The public should also have maximum access to the meetings and deliberations of the Council and its Committees so that they would be aware of the tenor and details of the discussions.
- A second would be the availability of institutional mechanisms that would facilitate interaction between the health facilities and the communities. Periodic meetings of the health authorities and its officials with individual citizens as well as citizens' organisations would be one such mechanism.[7] At such meetings, the staff of facilities and its officials would be subjected to questioning by the citizens. In addition, there could also be special interactive meetings when major programmes or investment proposals are to be initiated – so that the citizens would be fully briefed thereon and could introduce appropriate review mechanisms into the organisation of such programmes.
- The publication of an Annual Performance Report[8] by the health facilities would be a third mechanism for furthering the accountability of the Councils to their respective voters. The Performance Report should enable the citizens to assess the achievements of the Council against the goals and targets set. Prepared in a format and in languages that would be easily understood in the relevant community, such a report should reach all voters. It should also be the subject of discussion in one of the periodic meetings suggested above.
- The availability of local news media would be of considerable value in the dissemination of information on the functioning of the Council. Such media would also provide a useful forum for public review of its performance.
- The preceding discussion has focused attention on the accountability of the Local Councils and health authorities to their respective communities. Equally important is the accountability to the sources that provide financing for investment projects as well as recurrent expenses to the Councils. The accountability would naturally be greater where the dependence on external financing – whether as grants or loans – would be higher. The nature and processes of satisfying

[7] Such meetings being convened quarterly, on a regular basis, would serve the objective of keeping the interaction continuously alive.
[8] In order to ensure that such Reports are timely, they should be published no later than within three months of the end of the year under review.

such accountability would vary as between the different sources of funding.[9] What is relevant for the purposes of this discussion is that the Local Councils and health authorities strictly comply with these requirements. Such compliance should be reflected in the Annual Performance Report referred to above.

- This discussion would stress the importance of the voters of the community being aware of and having access to the documentation that constitutes the different accountability processes to all sources.

One serious drawback in all the arrangements that have been used in the past is that they were not grounded in a continuing and ongoing programme of research and study into the multifaceted issues that were germane to the local governance scenario of Sri Lanka. No such comprehensive effort at research and study has been mounted. What Sri Lanka has, instead, are ad hoc inquiries and studies – reactive to problems that were encountered from time to time.

The HMP Monitoring and Evaluation Unit should be such.

(2) CENTRAL MINISTRY OF HEALTH

Types of Accountability

As provinces assume real responsibilities for operating state services and are provided with the capacity and budget to do so, the role and functions of the Ministry of Health will go through a change. Central Government health sector functions will move towards providing guidance, setting standards, ensuring quality, exercising regulatory functions, and monitoring needs, allocations and value for money. This will require a significant restructuring of the Ministry of Health and a major change in their management programmes.

For the public service, the published Annual Health Bulletin is one channel of accountability, but it does not give comparative rates on a regional basis or by level of facility on which one could draw conclusions on the quality or performance of curative health service. It also does not include any information from the private sector. Moreover the circulation is quite limited and it has not been used routinely as a basis of debate in parliament or the mass media on the strengths and weaknesses of the health system.

Systems and Procedures

All managers and institutions should be held accountable for the state resources they use and the outputs achieved. A system of individual and institutional performance management should be introduced to facilitate this. Individual performance management should be based on establishing clear roles, responsibilities, agreed performance targets and lines of accountability. Promotion and payment systems should be linked to performance. Institutional performance management should be based on agreed plans for each institution and annual reports produced to account for the use of resources and results achieved. Guidelines on planning should be prepared and separate plans should be drawn up for every major institution.

The Ministry of Health should hold annual formal review meetings with each province to review achievements, to identify challenges and to agree on an action programme for the following year. Such principles should apply equally to provision and performance of non-medical support services, such as water supply, buildings, sewerage, communications, transport, and waste management.

[9] These sources could include agencies of the Central Government or Provincial Governments, and commercial banks.

5.6 MONITORING AND EVALUATION

(1) MONITORING AND EVALUATION

Monitoring and evaluation form an important component of the management process within the health care delivery system.

Performance monitoring involves periodically measuring a project's progress toward explicit short and long term objectives and giving feedback on the results to decision makers who can use the information in various ways to improve performance.

Certain steps are followed when monitoring implementation of health programmes within the division. The manual of management for Divisional Directors of Health gives the following steps to be used as a guide for monitoring.

1) Select appropriate indicators that could be used to monitor the required activities. In preventive health monitoring indicators are allocated into the following broad categories;

   - Indicators of health care provision,
   - Process indicators,
   - Impact indicators.

2) To collect relevant data / information as progress of activities, their outcome and resource utilization.

3) This goes hand in hand with the information system. Therefore strengthening the existing information system is also very necessary. But any additional information that is required for monitoring may have to be collected separately.

4) To analyze the data based on set indicators.

5) To assess the progress of activities and compare with the schedule in the work plan across both quantity and quality of services provided at all levels by comparing with the norms and standards set for such activities.

6) To take corrective action in case of deviation from the work plan and set standards.

Monitoring is a process of observations, checking and reporting of activities. The information could be collected through supervision, periodic reviews and data collected through a routine information system.

SUPERVISION uses monitoring data collected by the workers and analysed by them or the supervisor, supplemented by direct observation, participant observation, key informants and sometimes discussion groups of clients or workers to assess the quality of the process. Where needed it may investigate likely causal factors for patient dissatisfaction, conversely low utilization of services, or instead for lack of quality of the services (such as growth monitoring with little or no counselling).

It needs to move into corrective but supportive action, through modelling of the desired behaviour, procedures or gestures, face-to-face teaching, arranging for collective in-service training (if the mistake is quite common), by negotiating with concerned administrators to provide supplies, logistics, etc. and follow up the correction of support to the worker.

In Sri Lanka at present a well designed monitoring and evaluation system exist in the Maternal and Child Health program which has been in existence for over four decades and is inbuilt into the system. The staff has been trained in the usage of the information that is available and to take corrective action but even here it has become too routine and staff tends to ignore the necessity to improve the performance. This results from poor self evaluation and also at times inadequate supervision by the superiors.

Monitoring and supervision in Sri Lanka's curative services (primary through tertiary) and screening for deficiencies or diseases

Monitoring can play two different but complementary roles in curative care:

1) it serves to assure quality of care to the individual patient, whether an inpatient or an outpatient, by following vital signs, subjective well being, fitness, and looking out for complications and secondary effects of drugs as well as allergic reactions.

2) it can serve as a tool for quality assurance in a service unit, a facility, a district, a province or the nation.

At level of patient care and screening, General Practitioners, Surgeons, Anaesthetists, Nurses and Midwives as well as PHN, PHI and PHM practice monitoring. But it has been observed that the importance of close monitoring is not sufficiently recognised.

The following failures occur from time to time,

- Inadequate feedback between primary care level professionals and those of tertiary and secondary care institutions regarding the patients. The bed head ticket is the main record of the patient in the ward and it is the doctors who write on it. There is no separate section in it for note writing by nurses except when dispensing medicine.
- Inadequate screening of preventable diseases at OPD level.
- Loss to follow up of chronic diseases in OPD and clinics

Monitoring and performance planning

A performance plan (activities with clear sequencing and timeline) at each level with clear specification of inputs, hoped for outputs and outcome are the first requirement for meaningful monitoring.

The best of performance plans in health is only a wish list as long as the inputs do not start being put at disposal of the right person or team, quantitatively correct in a timely fashion (finances, physical infrastructure, personnel, supplies and equipment, technical guidelines). Once the inputs are in place, the organisation of the access to their use (who can request, release goods or assign people) and the processes of their use (adequacy of procedures, scientific validity of actions, technical soundness, equity and fairness), will determine whether outputs (managerial efficiency, effective coverage) are actually happening of expected volume and nature. Finally, when outputs are as planned one can start hoping for outcomes and wider impact.

At each of these stages of implementation, monitoring needs to be happening by the appropriate persons with agreed upon indicators and criteria at a specified frequency. Decision makers need to be alerted if the implementation is deviating and needs their attention and intervention to come back on track.

Monitoring in preventive/promotive and primary health care

The manager at Divisional level delegates field implementation of preventive/promotive services and PHC to individuals or teams that need to understand the objectives of the action, need to understand how to execute technically and how to monitor the context and themselves.

The manager delegates needed authority to execute and make corrective actions to keep on track. Nevertheless, the manager needs to monitor essential indicators of output and outcome that can inform her/him if there is an ongoing problem the team has been unable to correct. If so, he/she needs to do or order an investigation of the problem and correct its causes. Nevertheless, the manager is usually too far from the field to investigate these problems her/himself in a timely fashion.

Monitoring and supervision in preventive/ promotive and PH Care

The manager therefore delegates part of his responsibility for follow-up of the monitoring to a supervisor, who visits the field and raises the problems, apparent in the monitoring. The supervisor needs also to do direct observation of services to see whether there are other problems in service delivery and usually pursues them immediately or sets a time to do so. The supervisor does other qualitative investigations trying to understand different perspectives and root causes of the problems. These enquiries are done on the spot but over a limited time (group discussions, structured or not, key informants, case studies, participant observation) to better understand the nature of the problem and its causes as seen by different parties involved. The supervisor should not aim to blame anyone, but aim to improve the delivery with the help of everyone.

The supervisory qualitative investigations help to dig deep at the causes of the problems; for solutions one needs discussions with the workers and or community arriving at agreed upon tentative solutions and what their evaluation will be through monitoring or a special study, with a clear designation of who will do what and when.

If misunderstandings, lack of technical skills or social skills are involved, the supervisor needs to provide training either directly or indirectly to the staff. If there is a gap between the community and the workers, the supervisor should start building communication between the two and be sure to do a lot of active listening to the community and plan a follow-up until the community and the staff have built a good rapport.

If the problem is lack of availability or access to inputs or the timeliness of their availability, the supervisor may have to discuss with the top manager or others to create appropriate access. Accessibility of input is often a chronic problem in health Center and other peripheral facilities. Therefore, the supervisor has to work on lifting this obstacle permanently.

Efficient supervisions, using among other observations, the indicators from monitoring works on four complementary principles:

- Delegations of specific tasks, with commensurate authority to this responsibility, to tested and trustworthy workers;
- Optimal ignorance practiced by the managers/ and to a lesser degree the supervisors;
- Monitoring of essential indicators that will alarm the supervisor or if necessary the manager to seek more information, to better define the problem and its causes; and
- Capacity reinforcement by managers of supervisors and by supervisors of health workers.

Delegation is the basic tool, for plans cannot be implemented efficiently and effectively in a standard way everywhere, at all times in the same way. It demands that not only one has the responsibility to carry out the plan while monitoring the conditions, but one also has the authority to decide how to adapt to the circumstances. Some of the monitoring during hands-on implementation can be formalised, but a lot demands trust by the manager and demands from the worker common sense and enough self-confidence to use one's own senses and head and are empowered to give feedback to supervisors and managers.

Take for instance seasonal variation of availability of villagers for IEC, vaccination or even clinic attendance. One can see, one can understand. Does it should be reacted? If we don't we are like a machine without a monitor that keeps it on track.

It would seem in SL services there is little clear delegation, rather the energetic worker tries many initiatives to extend and find his limits; this could lead to inefficiency and low morale, and be potentially conflictual.

Optimal ignorance**:** industrial managers know that all information does cost money, time and effort to gather and to check for reliability. Flying blind is dangerous, but trying to know everything at all times about the population served, about the workers, about the activities may block the system full of unanalysed and unused information, which because of sheer volume also does not get transmitted.

It would seem to have happened to the MoH clinics and their attempted monitoring of PHI and PHM.

So there is a level where one knows and can follow essential indicators and can go deeper; if these indicators show there is a problem somewhere it should be based on conforming to a standard plan and norms or on good contextual planning.

For nursing services and general support services, there should be an HMIS and a clear definition of who will monitor and who can take action.

For nursing, clear delegation of who makes the nursing plan, who carries out what, clear procedures and direct supervision are probably the most important steps to keep on track.

Monitoring of inputs valid for all health services

Monitoring has therefore to be used by the manager from the very beginning of mobilisation of resources during procurement, mobilisation of budget, and recruitment of personnel. The volume, nature of resources and timing of inputs are the most important indicators at this beginning phase; they need to reflect what was planned, so the plan needs to specify them, and there need to be alarm levels predetermined or decided on the spot.

Let's take as example a small surgery that has decided to be part of the HC activities; the staff give their assurance that they will be able to deliver health care if they have the equipment. A small plan is made to assure that everywhere there be a set of instruments for minor surgery and a pressure cooker for sterilisation of the same. Tentatively we accept, as basic assumption, that the staff need only the equipment to get going on the activity.

For ten sets of basic surgical instruments, three quotations are done, the cheapest promising offer is chosen and they are delivered. As they are delivered, the procurement officer counts ten boxes. This is the first step in the monitoring of this procurement. Next, check the content of the boxes. However, your real interest is not this one procurement, your real interest is that minor surgery be done at HC level. After three months, you find no surgery performed. What do you hypothesize? Depending on your hypothesis, you should switch to supervision or refine further monitoring

During the workshops, there were consistent complaints about the timing, volume and quality of inputs and the lack of clear authority to district or facility to monitor inputs.

Monitoring of output

The most common form of monitoring in health services is output monitoring. However, it is often more output data collection rather than full monitoring of output.

To judge an output, you might use quantitative targets for coverage set in the original performance plan. This is hardly practical as those targets are either annual or even after a period of three to five years. So you might plot coverage on a time line and see whether it seems likely by extrapolation that you will reach your target. Normally the coverage is expressed as a percentage of at risk populations. Or in the very early phases, you might limit yourself to a numerator analysis.

There have seen good examples of such output monitoring at MoH clinics for PHM and PHU activities, but the data seem often transmitted with delay, so higher levels cannot monitor and therefore continues command-driven management.

All of these rates have the problem that full knowledge of the denominator is not always available. Therefore, sometimes estimates are used based on an average estimate or min and max estimates. For example, based on a 1995 survey the average birth rate of Laos was estimated to be 40/1,000, but since 2000, new surveys showed the max to be about 48/1,000 and the min 22/1,000.

The accuracy of the denominator is as important as the correctness of the numerator for comparisons between regions, but affects less time series over 5-10 years in a given region.

This problem will be more pronounced in Sri Lanka for minority groups and war zone.

Obviously, where there is no performance plan there will be no targets and output evaluation will have to be reduced to its most simple expression of a numerator analysis.

Monitoring of essential output indicators

Therefore, there needs be a clear decision which indicators and critical levels should be used in Sri Lanka for monitoring for management. This needs clear performance plans and a clear description as well of who will gather information, who will decide on corrective action The choice should depend on our objectives and our service delivery methods and the planning and management approach.

With that caveat that monitoring only makes sense where management is objective rather than command-driven and where plans are performance oriented, following are a few examples of indicators that have been proposed.

One is a WHO (Pacific region) list of service indicators; some are applicable to Sri Lankan services, some may not.

One is a monitoring list, used at integrated PHC facility in an HSR programme.

Monitoring outcome

In the above WHO list, some indicators are outcome indicators 53.69.70.71.73 which are outcome measures within the health centres or health facilities. The obvious drawback is that they do not tell us anything about what happens to the community, but they say something about quality of care. Even there are pitfalls as not all facilities see severe cases so fatality rates can be different because of different severity of cases seen. Therefore, their evolution over time helps to interpret their meaning, but

essentially careful observation and regular supervision and case studies will illuminate what is happening.

Other outcome data can be used similarly in the community, with the same provision that they should only be interpreted after visits, observation and verbal autopsies: still births, first month deaths of new born, maternal deaths, deaths during referral or of people referred but not in transport. The rates may be unimportant but the cases can be studied carefully to see what the mistakes were that possibly contributed to death. This exercise should be done by a very skilful and emphatic supervisor.

Deaths are a sensitive matter and people tend to feel guilty even if they are not; even so, we need to understand what could have been done better, so that we can improve people's health-seeking behaviour and workers' competence.

Epidemic notifications of diseases for which there are vaccinations available are also individual indicators of service failure. A service can determine that it will investigate each such case for exact reason of failure: whether failure of vaccination or failure to vaccinate. Investigation could be done when 5% or 10 % of children get the disease in a village, or alternatively only those due to failure of vaccination.

Last but not least where nutrition / growth surveillance programmes are ongoing, one can look at collective results and expressed as rates for monitoring the nutrition programme.

Here in Sri Lanka, for example, comparison of 1987, 1993 and 2000 collective results are very disappointing, as children seem to be stunted and wasted at fairly high rates. The birth weight stays low in an alarming 16% in facilities. The availability of Thriposha might attract the more marginalized population or there might be some other bias in these results. There is none seen of results of supervision or special studies to explain these figures, to find root causes and corrective action. Thus, no corrective action could be taken.

This brings home that HIS and monitoring should not be a spectator sport, even less delayed history writing. If people and their health are to benefit, it should be a very fascinating detective and action story.

Monitoring and evaluation is central to stewardship and implementation of the Health Master Plan. But in the present existing system within the health sector, only partial monitoring occurs.

The specific plans and arrangements for the creation of the overall system need to happen as early as possible.

The planning should be consensual at each level. Plans for central MoH should be based on agreements between the DDGs and DG, based on consultations between the DDGs and their directors. Similarly there should be a provincial consensus and a district consensus on what additional monitoring they wish to carry out.

1) Monitoring would mean a small number of indicators selected from the existing HIS system to be followed at all different levels of aggregation. However, peripheral levels and specific programmes may need or wish to follow more indicators.
   By whom and how should these indicators be chosen? Who should interpret and who can take action respectively at divisional, district and provincial level? How would feedback get to the peripheral workers? How would feedback and follow up action be documented?

2) All information costs should be known. It is likely that the original lists of indicators will be too generous. Who should study their use and cost? (university, Contractor, TA with MoH, Census bureau, or IPS?) When can a major revision be made of the lists added by whom?

3) Evaluation would probably best conducted once or twice a year. Should this be a responsibility of the HIS unit in the Ministry or should they contract a university or a consultants group?

4) If done well, monitoring contributes to the management and the efficiency and equity of services. Evaluation tends to make major contributions to improved planning and can also help to improve technical quality.
What mechanism would assure the use of the results? Should a statistician or a contractor do the analyses? Would the individual ministry departments want to do their own evaluation? How will the results be shared and become public? Reach peripheral units?

5) How can we assure that information from supervision is taken into account in monitoring and also used for feedback?
Efficient supervisions, using among other observations, the indicators from monitoring works on four complementary principles:

   - Delegations of specific tasks, with commensurate authority to this responsibility, to tested and trustworthy workers;
   - Optimal ignorance practiced by the managers/ and to a lesser degree the supervisors;
   - Monitoring of essential indicators that will alarm the supervisor or if necessary the manager to seek more information, to better define the problem and its causes; and
   - Capacity reinforcement by managers of supervisors and by supervisors of health workers.

6) Parliamentarians and provincial legislators maybe more motivated to support HMP if they receive meaningful monitoring reports especially on equity, maybe also efficiency and patient satisfaction. Below is a quotation from the equity gauge in South Africa:
"It also distinguishes between monitoring of policy and monitoring of the implementation of policy."

	National Legislators	Provincial Legislators
Policy	* Main Focus	
Implementation		* Main Focus

Figure 5.6.1 Responsibility of Policy Making and Policy Implementation

Parliamentarians operating at national level are primarily concerned with policy development and understanding of the effect of policies upon service delivery, while provincial legislators have a primary interest in monitoring implementation. Thus, national parliamentarians have an interest in data that will enable them to analyse the equity impact of policies like the National Health Act and the White Paper on Transformation. Provincial legislators' primary concern is with data that will enable them to assess whether or not policies are being implemented. This distinction implies that the equity gauge will need to furnish national politicians with data that help in the analysis of policy, while provincial legislators require analysis of data that explicitly monitor progress in implementation at as detailed a level as is possible.

National and provincial legislators highlighted, as a major concern, their need to have comprehensive and accurate data on resource allocation as well as greater insights to the actual budgeting process in order for them to be able to become involved in promoting equity through resource allocation. In addition, provincial legislators identified three broad areas in which they wish to be able to monitor implementation of policy. The three areas are:

a. Primary Health Care Provision

Data collected should help analyse whether there is a trend of increasing provision coupled with increasing coverage to those who are disadvantaged, including Africans, rural dwellers, women and children. The information should allow legislators to determine whether there is an improvement in the health status of these populations as well as whether infrastructural needs such as clean water and proper sanitation are being provided.

b. Promotion of intersectoral collaboration and interdepartmental cooperation in health care provision

Legislators view this as a crucial area in effecting transformation and moving towards equity, and identified a need for some analysis of progress.

c. Promotion of Healthy Environments

The last area identified by legislators includes both personal and environmental health education and promotion. A healthy society is seen as being central to survival and economic stability and hence of great concern to legislators.

Early on there should be a meeting and discussion with legislators in Sri Lanka to identify their areas of interest and find out whether they will participate in monitoring. This may be very important.

All management manuals of MoH Sri Lanka have a section on Monitoring and Evaluation or on the use of information. One of the most complete texts on this subject is included in the Manual of Management for Provincial Directors of 1996. It discusses principles of construction of a provincial HMIS, the choice of indicators for annual reporting and feedback into planning. In terms of monitoring compared to plans, it singles out input monitoring, even for this limited monitoring it does not specify who has the responsibility to do so or to whom feedback should go.

But the scheme for Provincial monitoring for planning has not been fully implemented, probably as it would really reach an optimal level only if comprehensive planning were instituted and devolved Moreover, as will be shown below, monitoring for management needs to be designed using both HMIS and supervision as sources of information.

Obviously, the current HMIS is the result of decades of accretion of data to be collected and records to be kept and the system needs an overhaul to permit a leaner HMIS. There is a need to clearly define each record and information and to choose data for their importance in continuity of patient care, planning or in management. There is an urgent need to give full attention to HMIS and monitoring as well as reporting and to timely electronic analysis and reporting.

The health information system in Sri Lanka dates back to the early 1940s. At that time, certain health and health-related information in respect of MCH/FP activities was collected by the Ministry of Health

(MoH). During the mid-fifties improvements were made to further strengthen the information system and a separate Medical Statistical Unit (MSU) was established within the MoH to undertake the collection and processing of health data. This division was responsible for collecting health data from all medical institutions and health units within the country.[10]

In addition, most specialized units implementing preventive health programmes (Family Health Bureau, Epidemiology Unit, Malaria Control Programme, National Sexually Transmitted Disease Control Programme, National Cancer Control Programme, Respiratory Disease Programme, Leprosy Control Programme, etc.) have developed their own health information systems to monitor progress of implementation. The health information system has been periodically reviewed and revised.

An information system to collect family planning data was introduced in the early 70s with the Family Health Bureau (FHB) given the responsibility for data collection, processing and analysis. Following a revision of the MCH information system in 1985, collection, processing and analysis of MCH data were also entrusted to the FHB.

(2) PROVINCIAL COUNCILS

Each province has a Provincial Director of Health Service (PDHS) who is responsible for provision of health care within the province.

The PDHS is supported by a Deputy Provincial Director of Health Service (DPDHS) who is in-charge of a health region/district.

The DPDHS is supported by a team comprising a Medical Officer of Health for Maternal and Child Care (MO/MCH), a Regional Epidemiologist (RE), 2-3 Health Education Officers, a Survey Statistical Officer (SSO) and a Programme Planning Officer (PPO).

Each health region/district is further subdivided into 7 to 15 health divisions with each division being managed by a Divisional Director of Health Services (DDHS) also referred to as Medical Officer of Health (MOH). Each health division has a network of medical institutions and ***health units*** that provide institutional and clinic-based maternal health, child health and family planning services.

These ***"Health Units"*** (clearly defined geographical areas congruent with administrative districts of the country) are managed by a DDHS/MOH and is supported by a team of public health personnel comprising Public Health Nursing Sisters (PHNS), Public Health Inspectors (PHI), Supervising Public Health Midwives (SPHM) and Public Health Midwives (PHM).[11]

[10] JICA / MoH Survey No. 11. (Supporting Document II)
[11] JICA / MoH Survey No. 11. (Supporting Document II)

5.7 COORDINATION WITH OTHER GOVERNMENT AGENCIES

(1) PROVINCIAL COUNCILS

Types

In the provincial stakeholders meetings, a group for health sector management in each province focused on the issue of devolution. The discussion with stakeholders gave the impression that the provincial level officials perceive the positive effects of devolution. They said that managerial autonomy has improved, decision making is quicker, and accountability to the community is enhanced; the only problem perceived by them is that the Central government bypasses the provinces in implementation or that the Central government intervenes unnecessarily. Divisional level officials seemed to have a different view on the devolution. They felt that funds and human resources are not adequate, so that the people's expectations have not been fulfilled by the services provided. Divisional level officials and people from other sectors felt differently about sectoral coordination, which was perceived by provincial level officials as having improved.

The table below shows perceived collaboration with other sectors by divisional officials. This is a qualitative statement; however, it shows the different views from the provincial officials who say the intersectoral collaboration improved since the devolution started.

Table 5.7.1 Perceived Collaboration with Other Sectors

Level	Organisation	Deficiency
National	National Health Development Committee	Functioning well
	National Health Council	Not functioning well from 1998
Provincial	MOH monthly conference	Poor participation from curative institutions
	Provincial Health Committee	Not functioning well
Division	Divisional Health Committee	Not functioning well
Community	Village Health Committee	Not functioning properly

Source: Provincial Stakeholders Meeting in Hambantota

The divisional level perceive the system is not yet fully decentralised, the funds and human resources are not enough, and provinces are unable to plan out their health delivery system due to unnecessary interference from the politicians.

Institutions and Human Resources

Intersectoral coordination for health and development can be at different levels.

1) International Level.

This may be cooperation between countries for the betterment of the health status. It may sometimes be through provision of human resources (such as the JICA Study Team), and even through areas of equipment, training and fellowships and grants for research, etc.

2) National Level

This can be categorized as inter-ministerial and intra-ministerial coordination.

The inter-ministerial level would be at the National Health Council which includes the Health Minister, Deputy Health Minister, and Ministers of other health-related ministries.

The intra-ministerial level would be coordination between the line ministry and provincial ministries. An example of this is the national Health Development Council chaired by the secretary / ministry of health and attended by the provincial health secretaries and directors.

3) Provincial Level

There may be differences in the strategies used on coordination of activities within different provinces. However, in each province there will be various committees and meetings chaired by the Chief Minister, Chief Secretary, Health Secretary, and the Provincial Director of Health Services respectively, where officials from different fields (e.g., Health, Agriculture, Social Services, etc.) get involved in coordinating their activities towards a common goal.

4) District Level

As in the Provincial Level, there are a number of committees at district level with representation from different disciplines. A good example of this is the District Coordinating Committee. The District Secretary plays a major role in coordinating activities, including that of health.

The DPDHS also plays a role in coordinating the activities of his own health staff (both field and institutional) as well as with other disciplines such as education, social services, etc. This also includes Non-Governmental Organisations.

5) Divisional Level

The DDHS/MOH plays a key role in coordinating the health activities in his area, as well as being an important member of the Divisional Secretary's team. The MOH/DDHS has to mobilise resources from other sources in addition to his own, through coordinating with other officials and non-governmental organisations.

6) Role of PDHS

In the case of health services, the PDHS plays a role within the province similar to that of the Director General of Health Services at national level He is responsible for the provision of comprehensive health care to the population within the province. As the resources within the health services are limited, he has to devise ways and means of mobilising the resources of other governmental and non-governmental organisations to cover this gap. As this coordinating mechanism extend down to the divisional level, the PDHS has the important role of motivating the other health officials in the province with regard to intersectoral coordination towards achieving maximum results with available limited resources.

(2) CENTRAL MINISTRY OF HEALTH

Types

Since improving the health status of the nation will not occur simply by improving health services, the Ministry of Health has at all times to coordinate with other governmental organisations in many of their activities. Health is affected by many factors and there is a need to ensure good intersectoral coordination.

This intersectoral approach to health development is a critical strategy to ensure sustained development of the quality of life. The main sectors with which the health sector would have interlinks are agriculture, fisheries, irrigation, livestock, industry, housing, education, information, social welfare, water supply and sanitation.

Systems and Procedures

Policy measures that have been drawn up in the 1992 Policy Draft Proposals regarding inter-sectoral co-ordination and co-operation are,

- To foster intersectoral action, adequate and appropriate co-operation between the Ministry of Health and other relevant Ministries, analogous bodies and non-governmental organisations to be brought about.
- Appropriate processes and procedures to be developed for joint planning and programming at all levels.
- Health objectives to be clearly identified in the plans and programmes of all health related sectors at national level.
- The sectoral approach to training to be replaced by that of a multi-sectoral orientation to development.
- A mechanism similar to National Health Council to be established at provincial level.

Even though these policies exist, in reality inter -sectoral co-ordination occur in a very haphazard manner. These processes should be more dynamic in order to achieve optimal collaboration and co-ordination. Over the last decade, a number of problems in the health sector were created unwittingly by other elite disciplines and development schemes. The health sector fought virtually a lone battle to fight diseases like malaria and environmental health problems. To instill a sense of ownership, the partners must be actively involved in the health project from the beginning.

Most health activities are community based. Media involvement and health education are necessary for community awareness and action.

The MoH has many sections, departments and units. There are no ready-made forums for them to debate on overlapping interests or to coordinate future plans, programmes and projects. This inevitably leads to overlaps and gaps and results in confusion in implementation whether in peripheral units or related departments.

It is hoped that the Ministry will develop clear forums and channels for thematic ongoing coordination, such as human resources development, Nutrition, Non-communicable diseases etc. There is also a need to develop team spirit and sharing of information between the DG and all DDGs, and each team headed by a DDG with his/her directors. Within The MoH sharing of information should be both a right and a duty, so that all decisions taken are based on all relevant facts known to someone in The Ministry of Health.

5.8 PUBLIC/PRIVATE PARTNERSHIP

(1) PROVINCIAL COUNCILS

Types

The private sector has been growing steadily. In 1990, there were 1,872 beds in private hospitals. The number increased to 2,305 in 1997. The number of Ayurvedic Practitioners increased from 13,284 to 15,076 during this period. There are approximately 800 full time, qualified private practitioners in allopathic medicine. In addition, a majority of government doctors do private practice in off-duty hours. However, this should not be seen as a form of partnership between the state and the private sector. In 1997, 204,000 admissions were reported from private hospitals, compared to 117,000 in 1990. The outpatient visits were 568,000 in 1990 and 1.617 million in 1997(1). A pattern of health utilising is emerging with the private sector providing mainly outpatient care and the public sector dominating the inpatient services.

The current health system in Sri Lanka where the state sector provides most of the major health services and the majority of health personnel in the country belonging to the state sector is a good thing as this would mean equality in quality and services provided. However, the private sector, even though it lacks the volume of human resources of the public sector, should provide a quality of service equal with the state sector.

A few base hospitals in the provinces operate private wards within the government hospitals. These include Kegalle Base Hospital, Kuliyapitiya Base Hospital, Kethumathi Maternity Home in Panadura and a few others.

Systems and Procedures

At present private medical facilities are few and far between in the provinces. Therefore, would it be feasible to incorporate separate private facilities within each government inpatient health facility in the provinces as a mode of income generation for the hospital? Nevertheless, in doing so, it would be important to do a feasibility study to find out whether the facilities would be utilised to the optimum by the people in the area. This would show which areas would adopt the system successfully and which area that it would fail. In areas where there are a majority of middle level income earners this should be a success as most people do not mind spending a certain amount to obtain a few necessary comforts such as a separate room where a bystander would be able to stay.

In this way the doctors and other paramedical staff who work in the government facility could also be assigned to work in the private health facilities and paid a separate allowance for such work, which would be an incentive for them. This would mean that they remain within the premises of the hospitals and could be mobilised for work within the government facilities if the need arises. This might also reduce individual private practice by doctors attached to hospitals. At present government hospitals have OPD services in the hospitals only up to 5.00 p.m. Only emergency services and admissions to wards are done after that time. Perhaps in the paying section these services could continue till later, with also dispensary services for the dispensation of drugs. In this way the government and private health facilities could work in partnership.

(2) CENTRAL MINISTRY OF HEALTH

Types

Within the central level there is at present a director in charge of private health sector development. But the main function of this directorate is training of paramedical staff within the national setup. Also this office has only the director, one PPA and one data entry operator.

Within the central level there is no other regulatory or supportive mechanism to monitor the quality and range of services within the private sector or any system where the private sector could call up the central level for supportive services.

Institutions and Human Resources

The role of the MoH and the Provincial Directors in the private health sector in terms of quality assurance, setting up of a regulatory framework, sharing information systems and resources, outsourcing clinical services and manpower training is almost non-existing in the country. The MoH and Provincial Directors have been neglecting their role in regulating the private sector to date, and nobody in the country knows about the precise situation of this sector. The MoH has been dependent on the self-regulatory mechanism of the private sectors so far. However, from the consumer protection point of view, this aspect is one of the most crucial issues in the assurance of quality services.

The MoH has not attempted to set up even a minimum information system from the private sector to get necessary information in order to analyze the national health status. Outsourcing of services has been looked into and is gradually happening in some areas of non-clinical services. However, cost-effectiveness of outsourcing clinical services has not been properly looked into so far.

Systems and Procedures

The fact that the private sector has been totally neglected so far by the central ministry may be due to the fact that they had their own problems to look after in the past: controlling communicable diseases, expanding family planning, combating nutritional deficiencies, etc. The concentrated and organised activities of the ministry in partnership with health personnel have resulted in improvement of the health indices of the country on par with many developed countries. Therefore, is it time now to concentrate on the quality of services given to the consumer? This would inevitably mean regulating and supporting the private health sector as it provides 60% of outpatient care as well as 10%-15% of inpatient care.

At present, private hospitals can be started by any company or body as a BOI project as they receive many tax concessions and other facilities through the BOI. Firstly, it would be necessary to convince the BOI that such projects or hospitals be approved by a separate national health council consisting of professional people within the health sector. It is also absolutely necessary to regulate the quality of services and the fees charged by the private hospitals. Certain individual private hospitals have their own insurance schemes to ensure that the person would enter that particular hospital when the need arises. Would it be more practical to propose a general insurance scheme that any individual could contribute to and go to any private hospital of their choice when the need arises? This would also mean equal utilisation of the beds in all the hospitals as if there were no available room in the particular hospital one wishes to be confined and the option exists that one could always be admitted to any other private hospital. This scheme could also pay for any investigation or procedure that might be necessary even if the patient is warded in a government institution.

Regulation of the qualifications and training of paramedical staff is also very important as of the doctors. All foreign qualified doctors have to sit for regulatory exam before they practice in this country. Similar procedures should be adopted in confirming the positions of all paramedical staff, be they work in the private sector or government sector. It may be necessary to set up a complaints bureau within the

ministry to entertain any complaints regarding the private sector and a separate team to investigate such matters. Peer review committees should also be held regularly with the private sector hospitals. Regulations should be enforced strictly to ensure the quality of services within the private sector. Primarily for all these functions to occur effectively the Private Sector Development Unit in the Ministry should be strengthened with more staff.

The Ministry should also think of involving the private health sector in the HDC and NHDC meetings and work in partnership towards the health development of the country.

5.9 INFORMATION GENERATION, DISSEMINATION AND UTILISATION

(1) IMPORTANCE OF HIS/GIS IN MASTER PLAN AND IN SYSTEM REFORM

Policy, management and clinical decisions in the health sector are unique in that they have impact on the life or quality of life of people. However, not all decisions in the health sector are based on accurate, up-to-date and complete information. At times, they are not even consistent with the existing information. In Sri Lanka, decisions are made and actions are taken according to a confluence of factors and information is simply one of them. Some of the non-informational considerations are the following (Figure 5.9.1): influence of stakeholders (e.g., donors, unions, peers, political parties, religious groups, special interest groups, media, and community); budget constraints; and experience. Decision-making based on information is at times less common at the lower administrative levels.

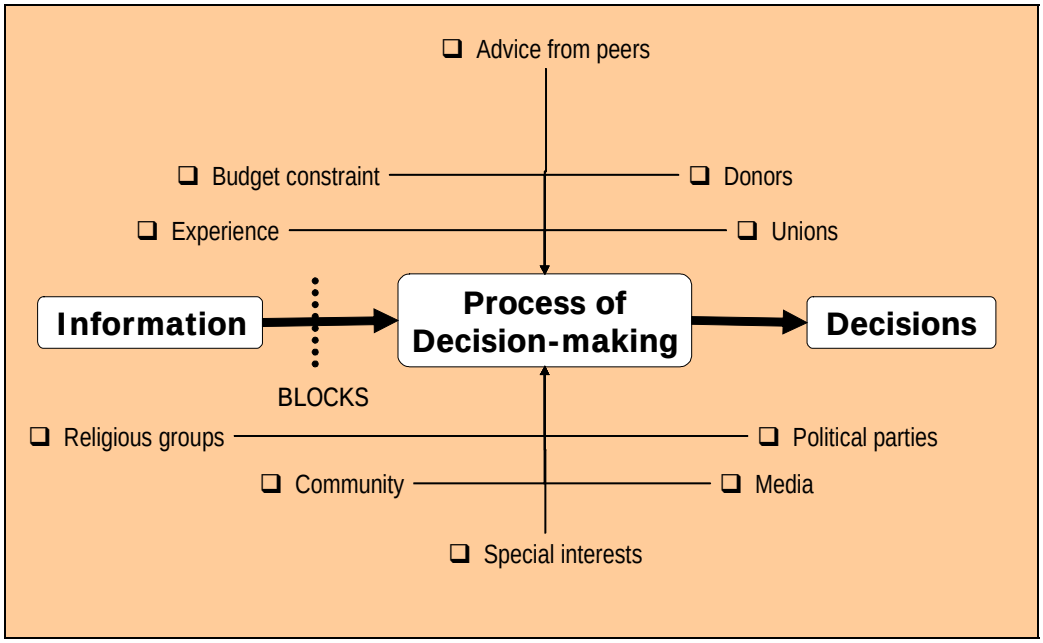


Figure 5.9.1 Non-informational Factors Influencing Decision-makers

Source: JICA Study Team

Decentralisation, one of the pillars of the health sector reform, implies transfer of decision-making responsibilities from the national to provincial and even divisional authorities. It requires involvement of more people in allocation of resources. With expanding demand for health services and rising cost of health care, optimum use of scarce resources becomes even more pressing. Herein lies the importance of providing decision-makers from the MoH central office to the divisional secretariat access to quality information. Herein lies the importance of strengthening the existing health information system (HIS).

(2) HIS FRAMEWORK

Definition of terms

1) HIS

Health information system is defined "as a set of components and procedures organised with the objective of generating information which will improve health care management decisions at all levels of the health system".[12]

2) Geographical Information System (GIS)

Geographical information system is "a set of elements that allows the computerized handling of geographically defined data, their entry, storage, analysis, and presentation".[13]

Components of HIS

The five components of HIS are the policy context, management structure, sub-systems, information process, and users. (Figure 5.9.2)

1) Policy context – This refers to policy instruments, which may be in the form of a policy, legislation, regulation, or plan, that are related to HIS development per se or to policies (e.g., decentralisation) that affect HIS development.

2) Management structure and resources – The management structure refers to the organisation responsible for the development of HIS. It includes the human resources, financial resources, hardware, and software that are used for planning and designing, operating, monitoring, and evaluating the entire HIS or its components.

3) Subsystems – As an entire system, HIS may be composed of several subsystems that are information systems by themselves and are independent from one another. They may be categorised into five: routine service reporting; epidemiological surveillance; special programmes reporting; administrative (e.g. finance, personnel, drugs and other supplies, research, training, and document management); and vital statistics.[14]

4) Information process – The information process is the set of activities that have to be undertaken to generate information. It includes data collection, transmission, processing, analysis, and reporting in a "usable" form.

[12] T. Lippeveld, R. Sauerborn and C. Bodart, *Design and Implementation of Health Information Systems* (France: World Health Organisation, 2000).
[13] J.R. Eastman et. al., *The GIS Handbook* (Washington, DC: USAID/ARTS/FARA/SARSA, 1993).
[14] T. Lippeveld, R. Sauerborn and C. Bodart, *op.cit.*

5) Users of information - The users of information are the people who make decisions and/or take actions. They are the policy-makers, planners, managers, and providers of health services whose decisions can influence directly or indirectly people's health.

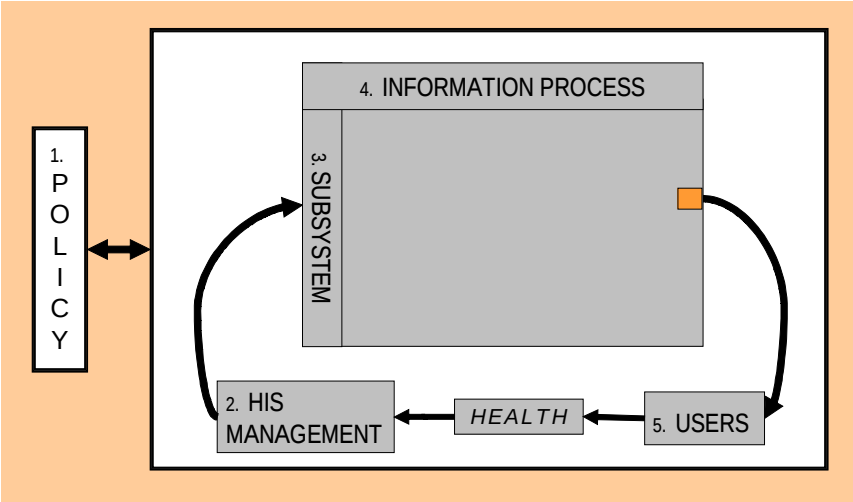


Figure 5.9.2 Health Information System Framework

(3) OBJECTIVE OF CHAPTER

The objectives of this chapter are three-fold:

1) to describe the HIS in Sri Lanka highlighting its five major components, namely, the policy context, management structure, subsystems, information process, and users;

2) to discuss the planning framework, including the identified issues, objectives, key directions, and some possible measures; and

3) to list the plans for the second phase of the Master Planning Study.

The discussion that follows was based primarily on review of existing documents, interviews of key informants, visits to health facilities, provincial/district and divisional planning workshops, and meetings with the MoH Counterpart Group for HIS. The results of the survey will be available in the Phase 2 of the Study, during which models will be developed and a seminar will be conducted on GIS.

(4) SITUATIONAL ANALYSIS

Policy context

What is the mandate for information generation by the government, in general, and by the MoH, in particular? On what grounds are health information systems reformed or developed? Does the national government have any plan to promote computerization in governance?

The national government promotes transparency in governance and free access to public information. However, it has yet to formulate a specific policy on management and use of public information, on involvement of the private sector, and on confidentiality issues.

The "Project Proposal to Develop a Management Information System for the Department of Health Services"[15] serves as the blueprint for strengthening the HIS from year 2001-2005. As the title implies, it is only for the Department of Health Services and excludes the two other agencies of the MoH – the State Pharmaceutical Corporation (SPC) and the State Pharmaceutical Manufacturing Corporation (SPMC).

The existing HIS has a mechanism for reporting of notifiable diseases. However, the MoH lacks the teeth to enforce it. There is still no legislation to compel or motivate compliance particularly of the private sector.

So why is information generated by the MoH? The MoH has an international obligation or commitment to report to the WHO and other international organisations. It has a local responsibility as well. It publishes the "National Health Bulletin" both for consumption within the ministry, other government entities and other stakeholders. Further analysis will be required to clarify the source, nature and justification for generating information.

The development of HIS must be driven both by its mandate and by other externalities. One of these externalities is the set of reforms in the area of governance. The decentralisation policy was adopted in 1992. Since then, however, the HIS has not been adapted yet so it will be responsive to the old and new decision-makers, to their new responsibilities and authorities. Another externality that should be considered is the rapid innovation in information technology. The five-year plan for the Department of Health Services incorporates application of local area networks to establish databases for the national, provincial, district, and hospitals with the ultimate aim of improving access to information. The question for further study here is the possibility of networking with other ministries not only for economic reasons but also for total sharing of information.

Management structure and resources

Preliminary findings revealed that, at the national level, the MoH has the personnel to manage its HIS. It has a medical statistician, analyst/programmers and officers trained in development and management of information systems. However, its HIS Unit has an office space too limited to accommodate all the HIS staff under one roof. As such, the Statistics Section is housed in a separate compound. There are other offices, such as the Family Health Bureau, Logistics and Human Resources, that collect and process information. However, these units "lack resources to provide consistent, accurate and timely information or answers to ad hoc enquiries".[16]

Under the financial support of the WHO, the MoH is in the process of modernizing its computer-based information/communication system with the provincial offices. However, no one among the HIS Unit personnel has the capacity yet to work with GIS and the office has no plotter. Only the Epidemiology Unit, Malaria Control and Filariasis Control use GIS.

At the provincial level, the design of information systems, monitoring of service provisions and submission of periodical reports to the national level and to the user level are part of the major functions of the Provincial Director Health Services (PDHS). Ideally, there should be an Information and Informatics Unit that is headed by the Provincial Statistical Officer or Statistical Survey Officer (or

[15] S. Senanayake, *Project Proposal to Develop a Management Information System for the Department of Health Services* (MoH, 2001).
[16] Ernst & Young, *Health Management Information System (HMIS) Study: Final Report* (Ministry of Health, Highways & Social Services,1996).

Information Technology Manager) for each province. Ideally, there should be close coordination between the Information Unit and the three other support units of the PDHS, namely, the Epidemiological Unit, Planning Unit and Health Education Unit. "However, manpower of the provincial units is not yet established fully."[17]

At the district and divisional levels, there is no specific unit, personnel, office space, equipment, or supplies appointed or allocated solely for HIS. As such, there is no budget earmarked for this purpose. The field staff who perform the various tasks related to data collection, compilation or consolidation had training on filling up the forms, had little training on making charts or tables and on data analysis, and had no training at all on report-writing and use of information they assist generate.

An inventory of resources, such as human, financial, hardware, and software (including availability, use and updating of manuals of procedures) for HIS is being conducted as part of the Study survey. Results will be available in the next Study phase.

Subsystems

There are at least five ways of categorising the subsystems of the MoH HIS.

- By the three major MoH agencies, the subsystems are as follows: Department of Health Services (DOHS), State Pharmaceutical Corporation (SPC), and State Pharmaceutical Manufacturing Corporation (SPMC).
- By type of institution, the subsystems are curative care institutions, preventive care institutions, training centres and research, and other special institutions (e.g., National Drug Quality Assurance Laboratory, Divisional Drugstores, National Quarantine Laboratories, Office of Judicial Medical Officer, Office of School Medical Officer, etc.).
- By type of health services and activities provided, the subsystems include curative, public health, and special campaigns.
- By type of resources required for the services and activities, then the MoH has human resources, equipment, buildings and beds, medicines and other supplies, and finance subsystems.
- The HIS may also be subdivided by administrative structure - national, provincial, district, and divisional subsystems.

Inter-relationships among the first four categories of subsystems are represented in Table 5.9.1. In general, the same table can be used at provincial, district and divisional levels.

In the 2001-2005 Development Plan, the Curative or Medical Subsystem will contain the following modules: indoor patients, OPD & clinic patients, operation theatre, accident & emergency, mental health, dental health, and nursing care. The modules under the Public Health Subsystem are as follows: MCH, epidemiology, occupational and estate health, food sanitation, health education, public health veterinary services (PHVS or anti-rabies), STD/AIDS, leprosy control, malaria control, filariasis control, respiratory diseases control, and cancer control.

[17] V. Rissanen, J. Fernando and D. Hettiarachchi, *Inception Report for the Technical Assistance of ADB: Management Information System Study* (Colombo: Ministry of Health and Women's Affairs and Asian Development Bank, 1994).

Table 5.9.1 Inter-relationships among HIS Subsystems in Sri Lanka

		DOHS				SPC	SPMC
		Institutions					
		Curative	Preventive	Training & Research	Special		
Services	Curative	+		+			
	Public Health		+	+			
	Special Campaigns	+	+	+	+		
Resources	Human Resources	+	+	+	+		
	Equipment	+	+	+	+		
	Buildings & Bed	+	+	+	+		
	Medicines & Other Supplies	+	+	+	+	+	+
	Finance	+	+	+	+		

Source: MoH-JICA Study Team

Table 5.9.2 lists the modules for the Human Resources, Finance and Logistics Subsystems. A Laboratory Subsystem is also proposed that will include the National Blood Transfusion Service (NBTS), other diagnostic services, and the Medical Research Institute. Note that the Logistics Subsystem includes the module for the National Drug Quality Assurance Laboratory. The last subsystem in the Development Plan is that for Health Administration which will be composed of geographical and demographic information as well as all the administrative information of all MoH institutions.

Table 5.9.2 Human Resources, Finance and Logistics Subsystems: Modules

Human Resources	Finance	Logistics
• Personal data • Training and examination • Cadre/job titles • Administration & educational institutes	• Budget • Expenditure • Bookkeeping • Staff loans & advanced accounts	• Transport • Buildings • Biomedical equipment • Non-medical equipment • Medical equipment • Medical supplies • National Drug Quality Assurance Laboratory (NDQAL)

Source : MoH-JICA Study Team

The various HIS subsystems and corresponding modules have varying degrees of maturity. The members of the MoH Working Group for HIS believes that the MCH and Filariasis Control modules are the most developed. The computerized Human Resources Subsystem (better known as the Human Resources Information System or HRIS) and the Curative Subsystem (or Hospitals Management Information System) are being pilot-tested currently.

In the next Study phase, a detailed comparative analysis will be conducted to identify the subsystems or modules that need the most support. It will describe the state of linkages, coordination or integration among the subsystems or modules. More importantly, options on unifying all the subsystems will be discussed with the view of facilitating access to information.

Information process

1) Data collection

   a) Data items – The MoH has yet to reach an agreement on the minimum and optimum set of indicators that will be included in the HIS. The types of data collected are mainly statistical data that may show historical trends rather than specific performance for policy-making and management. The limited management information that is available includes data on availability of resources and services as well as institutional morbidity and epidemiological trends. However, these information are generally untimely, unreliable and inadequate.[18]

   b) Automation - During the workshop, participants verbalized that one of the root causes of poor quality of information is the sheer volume of data being collected. Despite this, the majority of the subsystems are done manually. To date only five subsystems/modules are automated and they are those for MCH, Epidemiology, human resources (HRIS), drug management, and hospitals (Hospital Management Information System).

   c) Data source – There is no uniform source for vital statistics (e.g., number of births, deaths and population size).

2) Data consolidation, transmission, processing, and analysis – to be elaborated during the second phase of the Study.

   a) Databases are not centralised at all administrative levels. At the national level, different offices keep their own data.

   b) In general, people collecting data are not the ones responsible for data analysis.

3) Reporting, presentation or dissemination – to be elaborated during the second phase of the Study.

   a) Reports received at the divisional/district and provincial levels as reported during the workshop are shown in Figures 5.9.3 and 5.9.4, respectively.

   b) At the provincial level, the Provincial Directors of Health Services do not receive reports from teaching hospitals directly or even indirectly because these hospitals are under the purview of the national MoH. As such, it is "unaware of health related information within the hospitals although the diseases for which the patients are being treated originate in the province."[19]

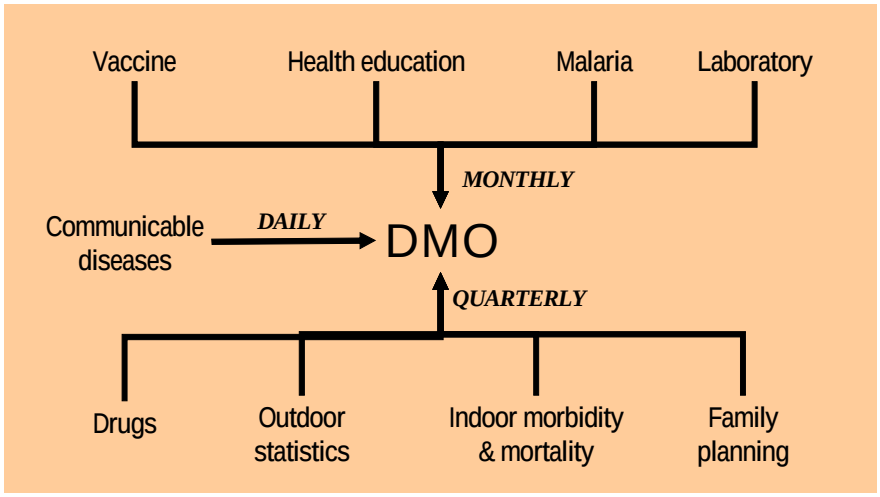
   c) At the national level, the Director General for Health does not receive reports routinely from some subsystems or modules (e.g,. special campaigns, MCH, HEB, central drugstores; JMO, MRI, BMES, NDQAL, and Training Institutes).

   d) Graphs and tables were observed to be have been displayed in all offices that were visited.

   e) Giving feedback is done but with some delays.

[18] Ernst and Young, *op.cit*.
[19] Ernst and Young, *op.cit*.

Curative Services



Public Health Services

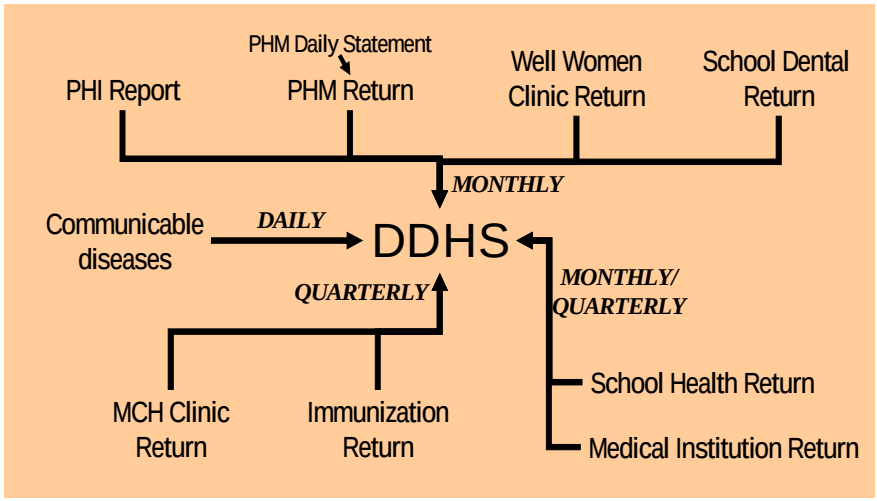


Figure 5.9.3 Reports at the Divisional/District Levels

Source: MoH-JICA Study Team

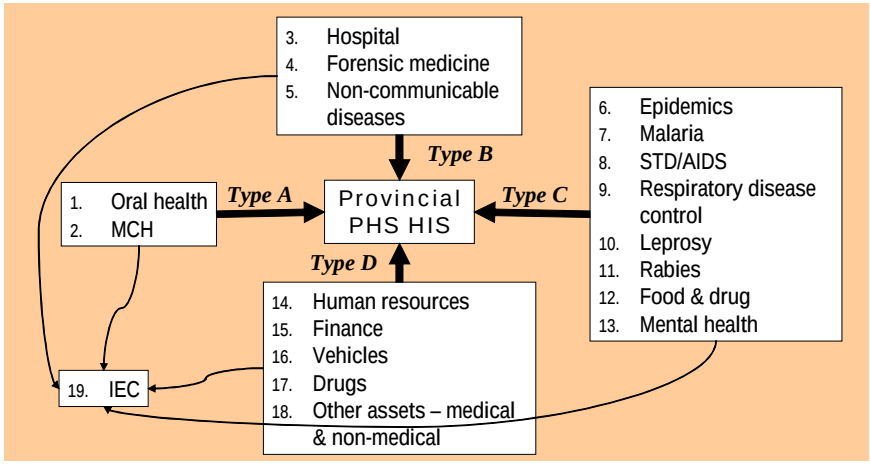


Figure 5.9.4 Reports at the Provincial Level

Source: MoH-JICA Study Team

The information generated by the existing information systems is incomplete and does not capture the entire picture of the health situation in the country. As a rule, the systems generate information only from the public sector. They do not include the following: for-profit private sector; not-for-profit private sector (e.g., missions, non-government organisations); and traditional medicine. The under-estimation may at times be crucial particularly if indeed the private sector provides about half of the health services, particularly outpatient ones. Even within the public sector, the overall coverage may be only 50% in some institutions although it may be as high as 90% in others.[20] Among the information collected from hospitals, only those about admitted patients are included in the HIS. There is no clinical data on OPD patients.

A. Non-communicable
   1. DM
   2. HT & IHD
   3. Mental health
   4. Suicide
   5. Renal diseases
   6. Disabilities

B. School health -
   1. No. of disabled

C. Environmental health
   1. No. of houses inspected

D. Immunization
   1. Details of adverse effects (abscess, fits, rashes)

E. PHM Daily Statement
   1. Elderly population
   2. Schoolchildren
   3. School leavers
   4. Families of overseas workers
   5. Newly married couples
   6. No. of pregnant mothers who left the area
   7. Gender-based violence
   8. Alcoholics & drug addicts
   9. Child abuse
   10. No. of unmarried couples using family planning methods
   11. No. referred to Well Women clinic

Figure 5.9.5 Information Gaps in the Current HIS: Divisional Public Health Services

Source : MoH-JICA Study Team

It seems the existing HIS does not generate all the essential information. On one hand, the returns are at times incomplete. On the other hand, there are items that were deemed important by some officials during a workshop but are not being collected or generated by any of the existing information systems. Examples of these data are the demographic data of patients seen at the OPD or clinics and those listed in Figure 5.9.5 for the Divisional Public Health Services.

Use and users

"The Department of Health Services need a comprehensive Management Information System (MIS) to allocate resources, to monitor programmes and care given, future planning, policy-making, education, research and for many other requirements".[21] This is the most explicit statement on the intended uses of information for the MoH. This implies that the intended users of information include the policy-makers, planners, managers, providers of services (or care givers), and researchers. In reality, however, the information generated is "used more for reporting and analysis than for direct management and planning."[22]

Although none of the documents that were reviewed reported on deficiencies regarding the use of health information, preliminary field visits and workshops revealed a possible oversight because the not-so-common use of information seems to be a major issue within the MoH. "The system has been

[20] Rissanen, Fernando and Hettiarachchi, *op.cit.*
[21] Senanayake, *op.cit.*
[22] Ernst & Young, *op.cit.*

designed in early 1960s and only Maternal and Child Health component has been revised in 1986. The system cannot serve the present demand of information as the requirement for information has changed today. Therefore to provide information to suit the present requirement using the current Information Technology a complete revision is urgently desired."[23] A hypothesis is even proposed that the problem gets worse at the lower administrative levels.

In the next Study phase, the intended users for each of the existing subsystem or module will be identified by reviewing operating manuals or rules and procedures. Then the information needs and appropriate indicators will be defined based on inputs from the HIS survey and MoH counterparts.

(5) ANALYSIS OF STRENGTHS AND PLANNING ISSUES

This section looks at the entire HIS recognizing though that there are peculiarities for every subsystem or module, exceptions to every major planning issue and alternatives to every hypothesised cause. A more detailed analysis of every subsystem and module will be attempted in the second phase of the Study.

What are the strengths of the HIS? What are the major planning issues for HIS? What are their causes? The first question is important to contextualise the development of the HIS. The second question builds on the first. It may be a set of unfinished agenda, a result of previous efforts or a response to new requirements for information. Nonetheless, it identifies and prioritises problems that the Master Plan is to address. The third question serves as a guide for formulating strategies, key directions or intervention measures.

Strengths, Opportunities and Threats

1) Strengths

   a) Experience is the major asset of the existing HIS. Personnel are accustomed to collecting, compiling and submitting data up to the central authorities. With experience come expertise and experts, particularly at the national level, in designing and managing HIS. With experience come lessons and wisdom. In the next phase, there will be discussion on this area.

   b) There are subsystems or modules that can serve as models for the improvement of others or the entire HIS in general.

   c) As far as the hardware is concerned, all the national and provincial health offices have computer systems albeit, often, not being used for HIS.

2) Opportunities – Sri Lanka is an island country. Its communication network is advancing rapidly. It has a growing pool of workforce skilled in information technology even in districts outside the capital. Its new leadership will continue to require information to demonstrate its performance. Its leadership is steadfast in its commitment to providing for the health of its people.

3) Threats – On one hand, the decade-old policy on decentralisation may be an opportunity because there will be more public officials who will be expected to demand information. On the other hand, if decentralisation is not designed properly, then there may be islands of local governments that may

[23] Senanayake, *op.cit.*

continue to collect health information but not necessarily share or submit them to the national government regularly as has happened in the Philippines.

Major Planning Issues

1) The existing policy framework for data collection and information generation has not accounted fully for reforms in governance such as decentralisation and promotion of public-private partnerships, reforms within the health sector and technological innovations.

2) Many of the existing subsystems and modules were designed independently from one another and have remained as such even in their implementation, thereby leading to some information not reaching key health officials (i.e., Director General for Health Services and Provincial Director of Health Services) and partly even to overloading of some staff responsible for collection.

3) The capacity of organisational units responsible for managing the HIS varies across subsystems, modules, areas and even administrative structures, with support for training and resources most needed at the lower levels.

4) Although maps are produced in many facilities, the use of GIS for planning and management to analyse spatial variations in health needs, equity in allocation of resources and utilisation of services has not been optimised such that even the national and provincial HIS units have not worked with it yet.

5) Although there is variability across institutions and areas, the quality of primary data generally suffers in completeness, timeliness and, at times, accuracy. There is hardly any system for monitoring & evaluation of the information system itself at the divisional, provincial or national levels.

6) In general, existing information is **seldom used** in formulating policies and in making management and clinical decisions.

Causes and effects of planning issues

The inter-relationships among the planning issues will be further elaborated in the next phase of the Study. Participants of provincial and divisional workshops conducted during the first phase identified the causes and effects of information being incomplete, inaccurate and tardy (Figures 5.9.6, 5.9.7 and 5.9.8).

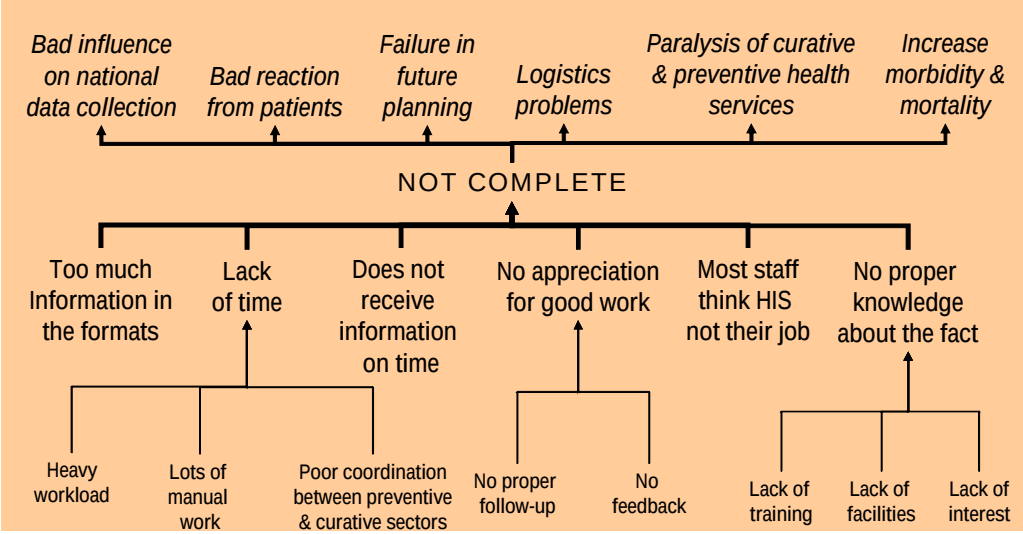


Figure 5.9.6 Causes and Effects of Information Being Not Complete

Source: MoH-JICA Study Team

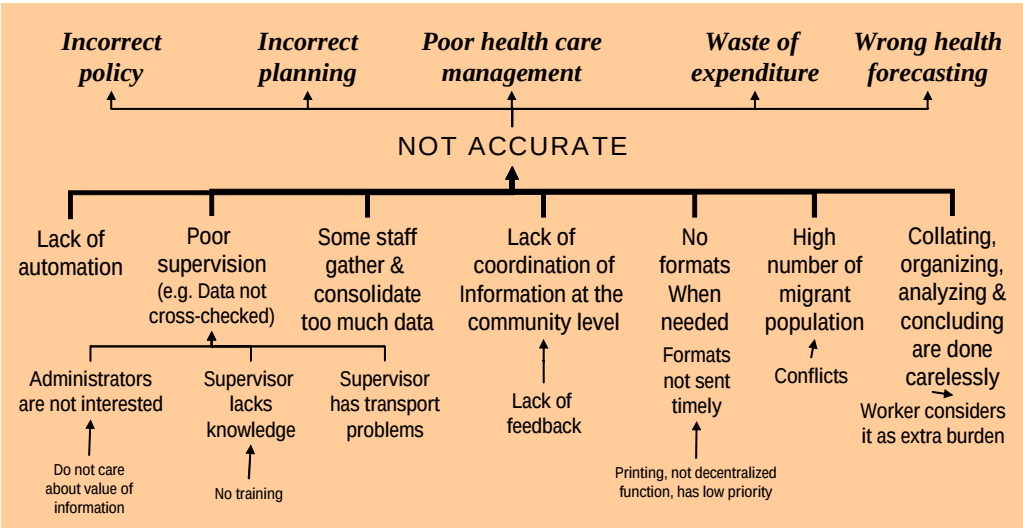


Figure 5.9.7 Causes and Effects of Information Being Short of Accuracy

Source: MoH-JICA Study Team

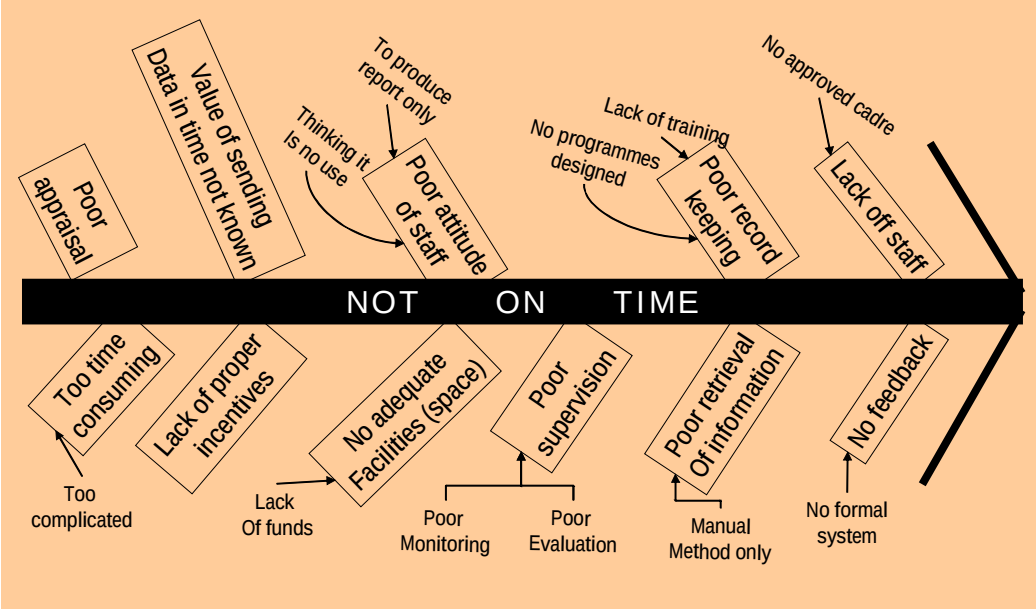


Figure 5.9.8 Causes and Effects of Information Being Not On Time

Source: MoH-JICA Study Team

(6) HEALTH INFORMATION SYSTEM/MONITORING AND EVALUATION

The health information system (HIS) is Sri Lanka is beset with six major challenges.

Policies not Updated

Policy for information generation has not accounted fully for reforms in governance, such as decentralisation and regulation of private sector, reforms in health sector and technological innovation.

The lack of updated guidelines or policy document on the development and management of health information is attributed to several factors. Decentralisation itself has not been fully implemented. The authority and responsibility to strengthen the information system is unclear. The resources to update and implement policies are limited. The business-as-usual mindset inhibits new initiatives and adoption of technological innovations such that policy areas needing reform are hardly identified.

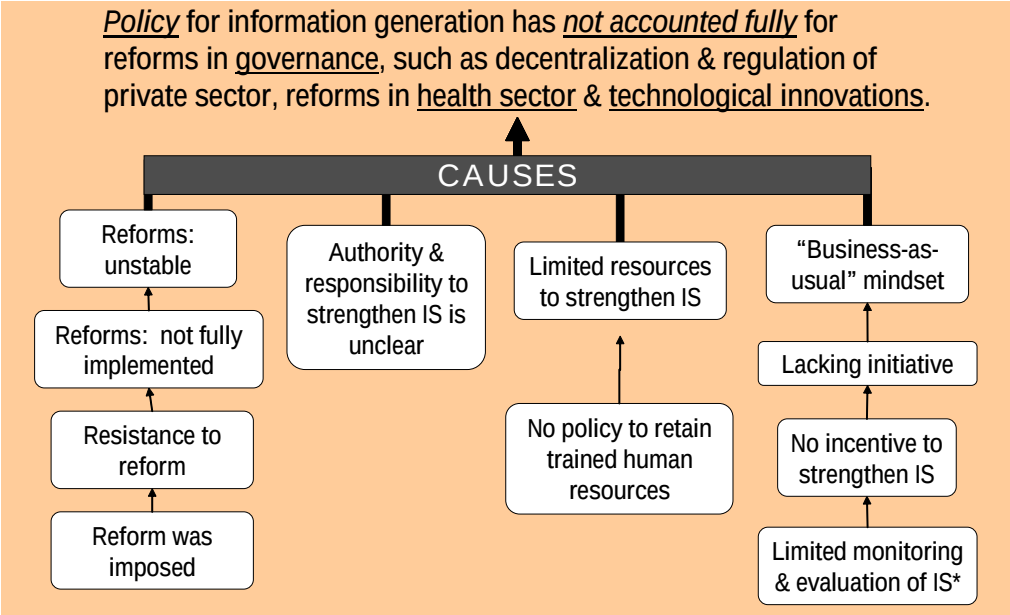


Figure 5.9.9 Causes of Policies Not Updated
Note: IS = Information System
Source: MoH-JICA Study Team

Lack of Coordination

Many of the existing subsystems and modules were designed independently and have remained as such even in their implementation.

The lack of coordination among officials who design and manage information systems is the result of an absence of clear coordination mechanisms, strong influence of external development partners and absence of a minimum data set.

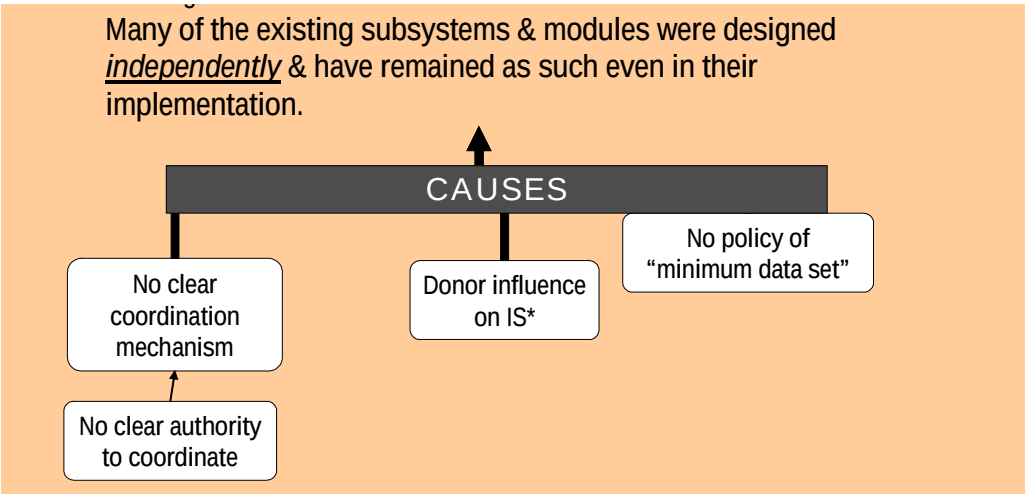


Figure 5.9.10 Causes of Lack of Coordination
Note: IS = Information System
Source: MoH-JICA Study Team

Uneven Management Capacity:

The capacity of organisational units responsible for managing the HIS is uneven across subsystems, modules, areas, and even administrative structures, with support for training and resources most needed at the lower levels.

The shortage of skilled staff is both in quantity and in quality. There is limited cadre particularly at the sub-national levels. Those trained have not been given opportunities to share technologies to others. Some have been transferred to other offices within the government; others pirated by the private sector or sought greener pasture overseas.

HIS has received limited logistical support because key officials do not regard it highly in as much as the information generated has not been useful. It has not demonstrated its capacity to generate income or more savings. Worse, some of the existing resources have not been used optimally.

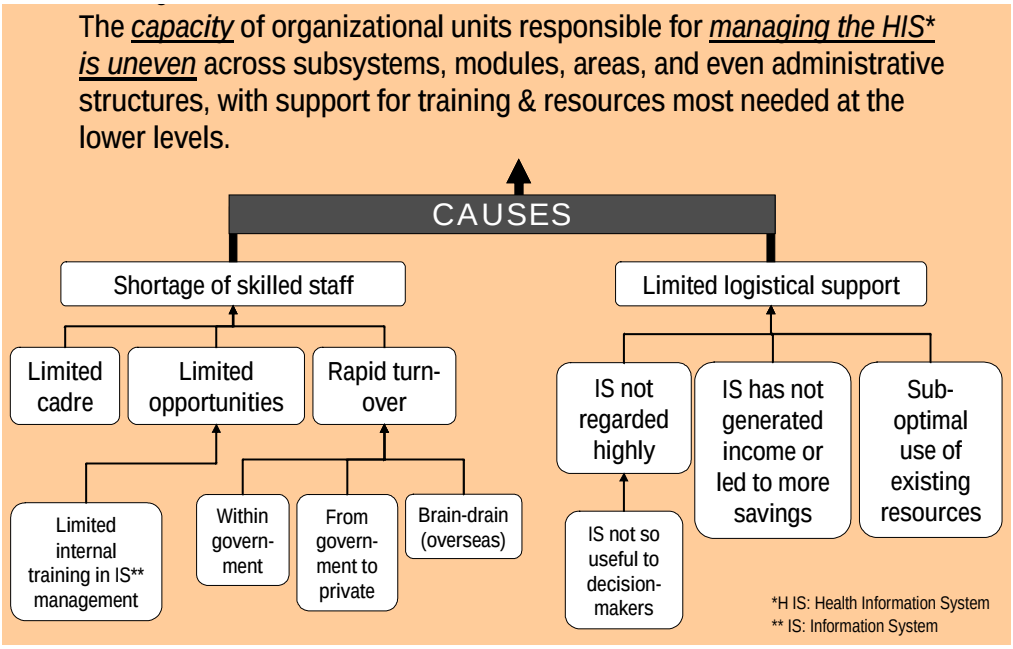


Figure 5.9.11 Causes of Uneven Management Capacity
Source: MoH-JICA Study Team

Poor Quality of Data

Although there is variability across institutions and areas, quality of primary data generally suffers in completeness, timeliness and, at times, accuracy.

Many of the existing information systems have built-in quality control mechanisms already. In general, though, quality standards are not enough. Some staff involved in the generation of information does not conform to existing standards. An analysis of the entire health sector is hampered by the lack of mechanism to collect data from the private sector.

The quality of data suffers also because many of those involved in the information process do not fully appreciate the value and/or uses of information collected. In fact, the collectors are not intended to be users of information. They are overloaded with their regular responsibilities and/or HIS-related tasks because of limited coordination among subsystems as described previously. Their records, reports and other output are seldom monitored and evaluated.

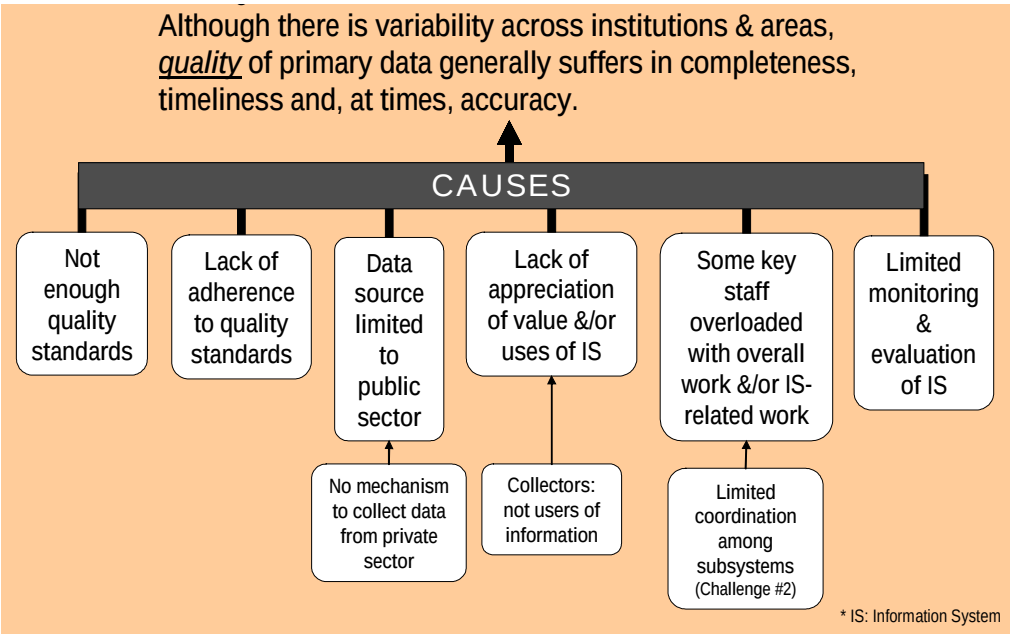


Figure 5.9.12 Causes of Poor Quality of Data

Source: MoH-JICA Study Team

Sub-optimal use of GIS & and other information technology

Although maps are produced in many facilities, the use of Geographical Information System (GIS) and other information technology for planning and management to analyse spatial variations in health needs, equity in allocation of resources and utilisation of services have not been optimised such that only the Epidemiology, Malaria Control and Filariasis Control have worked with it.

The most pressing issue is the limited institutional capacity in terms of both staff and logistics. Some officials were unaware of GIS, other information technology, and their potentials in facilitating their work. Others are aware but not convinced of the feasibility in adopting these technologies.

Inadequate Use of Information

In general, existing information is inadequately used in formulating policies, in making management and clinical decisions, and in monitoring and evaluation.

An analysis of the reasons for inadequate use of information revealed that the root causes are actually related to the five challenges previously described. There is no demand for information because: 1) using information is not part of the organisational culture, 2) there is no incentive on using information and 3) there is no disincentive on not using. Information useful to intended users is not available because of limited coordination among the HIS managers and the information users and because geographical information is not sufficient. A fundamental problem of limited trust on information persists because of limitations in data quality, institutional capacity and coordination among managers of HIS.

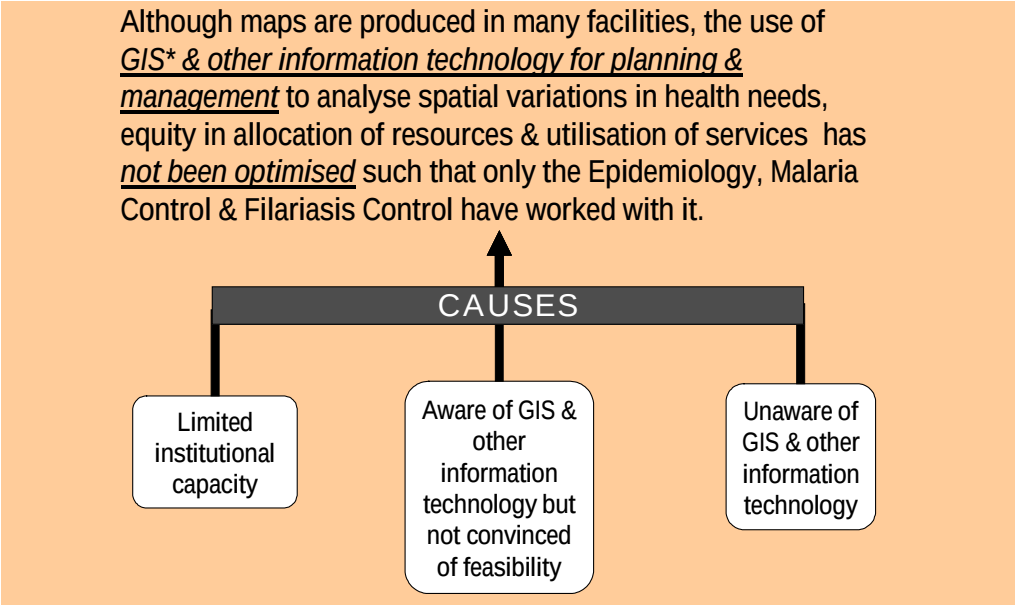


Figure 5.9.13 Causes of Sub-optimal Use of GIS & and Other Information Technology
Note: GIS = Geographic Information System
Source: MoH-JICA Study Team

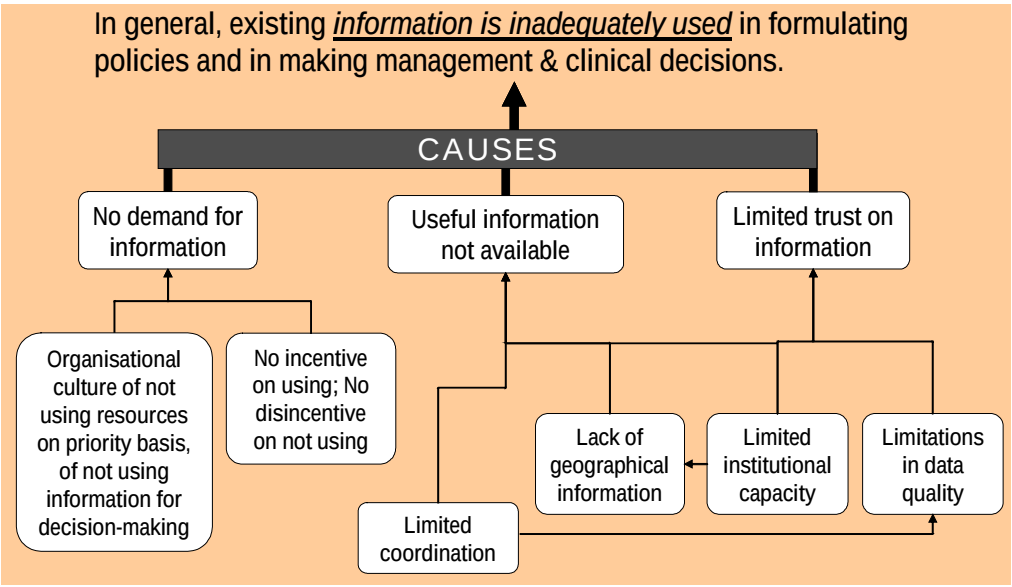


Figure 5.9.14 Causes of Inadequate Use of Information
Source: MoH-JICA Study Team

(7) VISION, OBJECTIVES, KEY DIRECTIONS AND POSSIBLE MEASURES

Vision, Objectives and Key Direction for HIS

The overall vision is the consistent use of quality information by policy-makers, planners, managers, and providers for improved patient care, enhanced client satisfaction as well as for affordable, efficient,

and equitable health services. Towards this end, the specific objectives are as follows. The key directions are strategies to achieve the objectives whereas possible measures are the activities for each of the key directions.

1) To **formulate updated overarching policies**, implementing guidelines and plans for generating and use of information and for furthering the development of HIS;

    a) To formulate, adopt, implement, monitor, and evaluate an overall policy, strategic plan and programme on management and use of health information as well as on computerisation in government

    b) To periodically review budgetary allocations by the government for strengthening of HIS

    c) To enact legislation, including a clause on incentives/disincentives and measures on ensuring confidentiality, on compulsory reporting of notifiable diseases by all sectors

    d) Implement the provisions on decentralisation policy by analysing its implication on the HIS and then carrying out the reforms

2) To **promote coordination** among offices responsible for health information subsystems and modules, **encourage networking** of their structure and resources, and **foster integration** of information process;

    a) To streamline management structure of HIS at all administrative levels

    b) To build capacity of human resources

    c) To foster financial sustainability

    d) To provide adequate hardware, such as office space and equipment for displaying and keeping records and reports

    e) To standardise the software including manuals of organisational rules, forms for records, reports and other presentation materials, and computer programmes with the ultimate objective of facilitating the information process while keeping them user-friendly, flexible and action-directed

    f) To promote appropriate use of GIS and other information technology for policy-making and management

3) To **further strengthen institutional capacity** at the national, provincial, district, and divisional levels in designing and managing (including monitoring & evaluation) information systems as well as in the **application of appropriate information technology such as GIS**;

4) To **further enhance quality of information**, principally its sufficiency, accuracy and timeliness, so that they may be more useful for their intended users;

    a) To reorient attitudes of health staff towards data collection, transmission, processing, analysis and reporting

b) To build consensus on quality standards

c) To streamline information flow and eliminate redundancies

d) To promote quality assurance

e) To expand the population and service coverage of HIS by including for-profit and not-for-profit private sector in information generation

5) To **popularise the use of information** initially among policy-makers and managers, and subsequently among direct providers of services with the view of promoting a culture of information.

a) To identify the intended users of existing information subsystems and modules and prioritise their information needs according to types of institutions or facilities and by defining the minimum, optimum and maximum according to stage of development and many other factors

b) To train intended users

c) To require use of information

d) To ensure sustainability on use of information

e) To improve access to information

(8) MONITORING AND EVALUATION

All management manuals of MoH Sri Lanka have a section on Monitoring and Evaluation or on the use of information.

One of the most complete texts on this subject is included in the Manual of Management for Provincial Directors of 1996. It discusses principles of construction of a provincial HMIS, the choice of indicators for annual reporting and feedback into planning. In terms of monitoring, it singles out input monitoring, compared to plans, even for this limited monitoring it does not specify who has the responsibility to do so or to whom feedback should go. ??(I don't know where compared to plans goes, whether the first part or the second part of the sentence.)

However, the scheme for provincial monitoring for planning has not been fully implemented, probably as it would really reach an optimal level only if comprehensive planning were instituted and devolved. Moreover, as will be shown below, monitoring for management needs to be designed using both HMIS and supervision as sources of information.

Obviously, the current HMIS is the result of decades of accretion of data to be collected and records to be kept and the system needs an overhaul to permit a leaner HMIS. There is a need to clearly define each record and information and to choose data for their importance in continuity of patient care, planning or in management. There is an urgent need to give full attention to HMIS and monitoring as well as reporting and to timely electronic analysis and reporting. A proposal to that effect was formulated in 2001 by the HIS unit.

There have been to our knowledge two reviews of the overall HMIS in Sri Lanka.

Ernst and Young (1996) gives a good review of what data one needs for management and planning of the support services but is less detailed on the direct services. It does not propose monitoring by provincial and lower levels but seems to assume it can be done from the central level. Given the need to combine quantitative (HMIS) and qualitative information (supervision) this seems highly impractical.

The second study on MIS is on Primary Care and Primary Health Care. It provides a good description of information flow and the high complexity of data gathered. It was supposed to be followed by a redesigning of the HMIS system reflecting a review of PHC policy and management.

Another study provided an assessment and design for a revised MCH-FP HMIS. Table 5.9.3 shows a summary of the assessment of gaps from information available to the Family Health Bureau to monitor or evaluate reproductive health.

A uniform MIS has been in place throughout the country for a period of over four decades. It has become an integral part of the MCH/FP Programme and all preventive health staff adhere to the instructions provided through the programme.

Table 5.9.3 Identification of Reproductive Health Areas with Major Gaps in the Information System

	RH Information	Category	Existing sources	Potential sources
1	Incidence of induced abortions	D	Few isolated studies, Estimates from NGOs and WHO	Govt. & Pvt. hospitals, Large scale studies, NGOs, Proxy measures
2	Pattern of sexual behaviour among youth & unmarried	D	Studies done by NGOs & individuals	Ministry of Youth Affairs & Sport, Small-scale studies, NGOs, Schools
3	Pattern of sexual behaviour among adolescents	D	Studies by NGOs & individuals, case reports	School health programme, Dept. of Education, NGOs, New RH curriculum
4	Incidence of sexually transmitted diseases	B	Central & regional STD clinics, STD/AIDS control campaign	STD & HIV/AIDS programme, GPs, Govt. & Pvt. hospitals
5	Incidence of reproductive organ malignancies	B	Regional & national cancer control programme, Cancer registry	Regional & national cancer hospitals, All Govt. & Pvt. hospitals
6	Prevalence of discriminations against women	E	Few isolated studies by NGOs & individuals, Police case reports	Dept. of Labour, NGOs, Social welfare Dept., Large scale studies
7	Reproductive health problems of female factory workers	C	Case reports, Dept. of Labour, Isolated studies, NGOs	Dept. of Labour, NGOs, FP clinics, Field level studies
8	Reproductive health problems of female Middle East expatriates	D	Few isolated studies, Bureau of Foreign Employments, Labour Dept.	Bureau of Foreign Employments, NGOs, Embassies in ME, Field level studies
9	Prevalence of un-met needs in family planning	B	Demographic health surveys, FP field studies, NGOs, Monographs on FP	Comprehensive field studies, PHMs data, NGOs, Data on induced abortions
10	Availability of 'essential and/or basic' obstetric care	B	Central & provincial health ministry	Same sources with further refinement of data and criteria
11	Peri-natal mortality rate per 100,000 live births	B	Registrar General Dept., Dept. of Census & Statistics	Same sources with further expansion & modification of the registration system
12	Screening of pregnant women for Hb level	D	PHMMs data, Family Health Bureau	Same sources with further expansion of services
13	Screening of pregnant women for positive VDRL testing	D	STD & HIV/AIDS campaign,	Same sources with further expansion of services
14	Incidence of low birth weight	B	Birth weight surveillance by the FHB, Special studies on LBW	Same sources with further expansion of services and quality of the data

Note: A - Available fulfilling all the criteria, B – Available fulfilling some of the criteria
C - Available with restrictions (limitations), D - Available with very poor quality
E - Not available in the present system

Source : MoH-JICA Study Team

5.10 RESEARCH AND RESEARCH MANAGEMENT

The role of health sector research should be emphasized more in the area of active promotion of evidence-based decision making at all levels of the health field to improve the health of the population. The main areas in urgent need of research are: health delivery system, health promotion, NCD, nutrition, indigenous medicine and health economy. The country has eminent academics and good research potential capacity. However, capacity strengthening in health and health-related research institutions should be looked into seriously in this country. Building national research capacity will be inevitable for leading the development of appropriate control strategies in the country as evidence-based decision-making. The mechanism of research sustainability including creation of suitable career structures, remuneration of researchers and the importance of building up suitable infrastructure for research to meet the increasing demand and competency should be discussed and planned as a national agenda.

Lack of a national consensual agenda for research and a willingness to mobilise national research capacity, principally from the MDPU, MRI, NIHS, FHB, and the Epidemiology Unit has resulted in even very basic questions of obvious utility being left unexplored. The National Research Council was established in 1992. However, there is no capacity to coordinate research activities. The NRC needs to be strengthened as a focal point of coordination of research activities.

(1) ENHR

Research should drive health services development In Sri Lanka. Some NGOs, Universities and consultant groups have done Health Services Research (HSR). Unfortunately, research has not been very instrumental in Sri Lanka in health development. Too many research studies reflected rather narrow professional interests, done in the context of degree programmes and some may have been donor driven.

Historically, the WHO has drawn attention on the need for quality assurance since the early 80s. The International Society for Quality in Health Care has extended and intensified this effort since 1993. Sri Lanka has participated in this effort. The Rockefeller Foundation initially supported NIHS. Then IDRC was supporting NIHS in capacity creation for health services research. UNICEF and the WHO have provided ongoing support for applied research and capacity creation.

The Manuals for Management for Provincial Directors have a whole chapter on HSR and one on Audit. Pilot efforts that have been conducted will be discussed later on, including how this experience could be expanded to contribute to HSR.

Between 1976-1995 NIHS was the focal point for research capacity building, but 95% of trainees were MD students preparing a thesis. NIHS having until recently full responsibility for services in Kalutura had been designed to be a field laboratory for operations and action research. So far, it has been unable to fulfil that dream. There has been a lack of senior researchers and full access to enough research funds; there is also confusion about the nature of the research to be done and how the agenda is going to be set. Both the training and the service sections of NIHS feel uneasy about research to be done on their work by a third unit. It is a good case study of how only consensual research agenda leads to full understanding and collaboration rather than being perceived as a threat. In an attempt to increase relevance and overcome these barriers between service delivery and research, the ministry became in 1996 the focal point and a DDG for Education, Training, and Research.

The country has eminent academics, a good research capacity, several research institutes, but for lack of a national consensual agenda on research and a willingness to mobilise national research capacity, wherever it is. In MoH it seems to be principally in MDPU, Epidemiology, NIHS, MRI and FHB, and outside of MoH, in IPS, academia and in some provinces. The actual HSR is limited in scope and relevance, even very basic questions of obvious utility have been left unexplored. Moreover, the relevant research done has no clear mechanism to give feedback to relevant decision and policy makers; publication in one of the 21 existing medical journals may reach only a small number of people. Presentation at the SLAAS conference is favoured by some, but is unlikely to reach many people in MoH.

Two steps have recently been taken towards solving these problems. An annotated bibliography of health, 1995-2000, has been published and the National Council for Health Research has been established and activated. So one can hope this is the start of a more planned approach to the stimulation of research relevant to health care delivery and health promotion and prevention as well as the encouragement to make evidence-based decisions.

Since 1990, a group of concerned individuals and donors has also launched the concept of "Essential National Health Research (ENHR). The methodology espoused by ENHR would seem eminently relevant to Sri Lanka to try to stimulate, organise and manage the efforts in HSR.

ENHR was launched in 1990 as it was realized research in health was not used for health development in most developing countries even if they had relatively strong academic traditions like Sri Lanka. Three organizing principles of ENHR have been formulated:

- Participation - resulting in consensus building among all interested parties at all stages of the research process;
- Inclusive approach - drawing on all types of health research to generate knowledge that contributes to health development; drawing on all existing individual and institutional research capacities and reinforcing capacities where needed; and
- Coordination and management at national level under MoH control in specialised Unit with technical assistance capacity.

ENHR should provide a systematic approach to ensure that health research is effective, by:

- Making health research an essential tool for decision-making at all levels from health providers to MoH;
- Building and strengthening innovative research coordinating mechanisms;
- Setting national and sub-national priorities for health research;
- Building research and user capacity;
- Evaluating health research and its supporting mechanisms;
- Promoting involvement of all stakeholders in health research; and
- Improving communication between researchers and users of research, making findings public property, guaranteeing access to data and analyses, disseminating findings across a wide range of stakeholders.

Since 1993, it has an organisational permanent support in COHRED, the Council on Health Research for Development.[24]

[24] COHRED receives currently financial support from:
- Ministry of Foreign Affairs (the Netherlands)
- Norwegian Agency for Development Cooperation (NORAD, Norway)

ENHR relies on consensual agenda setting for a nation, assembling and where needed reinforcing capacity for research and evidence-based planning of health services including health promotion.

ENHR can use qualitative as well as quantitative methodology, be participatory or not, be based on any scientific discipline; it is in fact multidisciplinary.

The major ENHR studies would be:

- Evaluation of ongoing or new programmes,
- Audit,
- Operations research,
- Action research /Piloting of alternative options, and
- Analytical epidemiology of emerging problems or diseases not responding to current preventive or promotive measures.

Evaluation of ongoing or planned programmes

In day-to-day language, evaluation means to estimate the value of something or somebody.

In health care programmes and projects, it is mostly used for mid-term and final evaluations of projects, comparing the performance plan with the actual performance, on input, process and output and where applicable on outcome.

But there is no conceptual reason why government health plans should not undergo periodic evaluation (maybe once or twice in a plan period). Such evaluation should involve all stakeholders based on agreed upon indicators and possibly time-bound targets. Evaluation would complement monitoring and cannot substitute for it.

There should probably not be an over-reliance on targets as those tend to invite fudging of data and or undesirable behaviour with clients.

To use evaluation in government programmes would start to build the need for detailed integrated and coherent performance plans, rather than separate plans for building, equipment and human resources. It would permit an overview of capital cost and consequent recurrent costs as well as hoped for benefits. Separate plans make it hard to judge the rationale for budgets and make implementation a disjointed exercise with very low efficiency. The lack of evaluation also makes it impossible for health teams to be collectively accountable to society for the performance of the programme.

Indeed these evaluations should be in the public domain. Responsible supervisors and providers and civic society as well as researchers should have access to the analysed and raw data, rendered anonymous to preserve patient confidentiality. The analysis should not be limited to descriptive service data, but should include real descriptions of the patterns of supervision and monitoring, the special studies undertaken or to be undertaken to clarify new ways of organising and expected or unexpected good or bad results and advice on the next phase.

Evaluation can also be done at facility level and geographical Zone or at overall national level for particular programmes, especially for nutrition and emerging diseases where health education and behavioural change are essential (It is not not reassured that the best approaches are being followed). It is essential that Evaluation like monitoring needs to be service driven.

In addition, Evaluation needs a clear definition where you can find the necessary data (HIS, Civil authority, special survey, special observation, etc.) and it needs a budget assigned as well as a unit designated to carry it out and provide results within a specified period useful for planning. In other words, the Evaluation needs to be planned in close coordination with the performance plan and may benefit from being part and parcel of it.

Annex 1 shows an example of evaluation indicators for a provincial programme of health system reform.

The principles and methods of Audits are described in Chapter 13 of the Manual for Management by Provincial Directors. There is need to investigate more in depth what examples exist of applications and how they were or were not put to good use by the existing management structure. It would be very important to start operationalising these.

(2) AUDIT

Audit means to control conformity to rules retrospectively and is included in the Provincial Health Management Manual, 1997.

In an audit, the evaluation is against "best practice" or norms the health providers agree to, or MoH-specific guidelines for technical tasks.

Audit of a service in its medical and or nursing aspects, verifies the scientific validity and shares results with workers, authorities and general public as part of accountability of a facility or a service.

Audit of services could be done at regular intervals, combined with corrective action or if the problems detected are many or difficult followed with action research.

(3) OPERATIONS RESEARCH

When supervision and monitoring show consistent problems with the process of health care delivery or its support services locally or nationally, it is usually high time to do quantitative measurements of what is happening as well as do scientifically careful direct observation, to try to come to a clearer picture of what in the organisation of patient flow, in job descriptions, schedules, etc. may need adjustment and then on a pilot basis try the innovations.

These innovations need again to be carefully observed and evaluated and, if not satisfactory, modified further, until the innovations seem to be satisfactory. Then, if called for, they can be scaled up and re-evaluated using similar indicators and methodology. This approach to corrective management is called operations research.

Any good private service, any good manager will do some operations research. There is no need to be very sophisticated; there is a need to target consensually the right problems that hamper efficiency, patient cost or satisfaction or effectiveness.

Some of the problems identified in this situation analysis of Sri Lanka could best be solved with prudent operations research. It is not aware of any ongoing OR in MoH, the provinces or the universities, so some capacity creation may be needed. COHRED has a three-volume course available on its website that could inspire a TOT. WHO Pacific region also published manuals in 1991, but they tend to be less applied in their methodology.

(4) ACTION RESEARCH/ PILOT SCHEMES

Action research is called for whenever providers and or clients agree on what is not optimal and on how to correct problems.

Based on available information a hypothesis is formulated on how to change service delivery in order to reach improvement in which criteria at what acceptable cost.

During the project as innovations are introduced more qualitative and quantitative data are gathered, decision making is documented and progressively based on evidence implementation is redirected. The **"proof of the pudding is in the eating".**

This needs to be fully transparent and participatory research.

(5) SPECIAL STUDIES, INCLUDING STUDIES OF ANALYTICAL EPIDEMIOLOGY, CLINICAL CASE STUDIES OF NEW SYNDROMES OR DISEASES, SEEKING CONTRIBUTING FACTORS.

Census bureau, MRI, MDPU, universities, and some private groups have capacity to do these studies, but without a national agenda of priority ENHR research, it is scattered all over the landscape.

There might be a possibility to invite universities to mobilise theses on these agreed upon subjects and if need be accompany this with capacity reinforcement for the same.

Analytical Epidemiology is particularly appropriate of emerging problems or diseases not responding to current preventive or promotive measures.

Candidates in Sri Lanka are Low birth weight, Diabetes, Hypertension, Intestinal Diseases, Respiratory Diseases.

It needs as next step action research to actually improve health development.

Annex 1: Example of Evaluation

List of indicators for evaluation of service performance plan for a province developing a health system reform programme. Numeric targets depend on the performance plan and will be attained after a fixed period.

HOSPITALS

Structure Indicators:

1. Number of hospitals renovated or built : 2 (1DH; 1PH)

2. Number of hospitals equipped : 2 (1DH; 1PH)

3. Number of hospitals with vehicles : 1 ambulance for provincial hospital

4. Number of health workers, working in the provincial hospital, trained on health and clinical management:

Lab techniques	2
Anaesthetist	2
Radiology	2
Surgery of Gyneco-obstetric	1
Surgery	2
Internal medicine	2
Intensive care for adult	1
Intensive care for children	1
Dentistry	1
Otorinolaryngology	1
Ophthalmology	1
Ultrasound use	1

5. Number of the provincial hospital based workers trained on the job description of nurse 28 persons

6. Number of health workers, working in the district hospital, trained on health and clinical management

Lab technician	1
Internal medicine	1
Paediatric	1
Surgery	1

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CHAPTER 6

NORTH AND EAST PROVINCES

6 NORTH AND EAST PROVINCES

This chapter is based on the publication of the WHO entitled "Health System and Health Needs of the North-East Sri Lanka"[1], which was a result of a rapid assessment organised in April 2002. This assessment has provided some useful information that was hitherto not available.

The North-East Province is composed of the Districts of Jaffna, Kilinochchi, Mannar, Mullaitivu, Vavuniya in the Northern Province and Ampara, Batticaloa & Trincomalee in the Eastern Province. Geographically, the bulk of the districts span the entire North Eastern coastal area of the Island. Most of the area falls within the Arid Zone of the Agro-Ecological division of the country. The socio-economic and political scenario in each of the district is of varying nature.

The civil strife in the Northern and Eastern Provinces of Sri Lanka raged almost 20 years and intensified during the last ten years resulting in the mass displacement of over half a million people. Normal life of the majority population residing in the North and East provinces has also been affected by the conflict. It is estimated that around 600,000 people are currently displaced and more than 800,000 have been receiving long-term welfare assistance. The scenario for provision of health services is further complicated as some areas are regarded as 'cleared' and is under government control and some are 'un-cleared' being controlled by the Liberation Tigers of Tamil Elam (LTTE).

Although the Government health services provision and some infrastructure facilities exist in the conflict-affected areas, the delivery system lacks adequate facilities in terms of infrastructure, equipment and staff or personnel, especially at the primary care level, to provide adequate health services for the resident population and Internally Displaced Persons (IDP), in addition to those in border districts who too are affected by the conflict. The international agencies that have been providing both curative and preventive services in the cleared and un-cleared areas are: MSF - France, MSF-Holland, MEMISSA, SCF –UK, SCF –Norway, FORUT, ICRC, ZOA, WUSC.

6.1 HEALTH OUTCOMES

The Sri Lankan Public Health Services has been a model for a developing country's health care worldwide. The country achieved remarkable health status indicators with less expenditure on health than many other countries with nearly more than 10 times its income level. Life expectancy at birth at present is 75.4 years for women and 70.7 for men, maternal mortality is 23/100,000 live births, infant mortality is 15.4, neonatal mortality of 12.9, and child mortality of 0.9/1,000. The population growth rate is 1.7. The immunisation coverage is 95% – 99%[2]. Health care of some sort is available within 1.4 km from most homes; in addition, free state-provided allopathic health care is available within 4.8 km on average.

However, the scenario in the conflict-affected areas of the North - East is different. The health status has deteriorated very badly and the ***main risk areas*** identified are:

[1] World Health Organization, *Health System and Health Needs of the North-East Sri Lanka* (August 2002).
[2] Annual Health Bulletin. 2000.

1) Increase in the virulent form of malaria, i.e., Plasmodium Falciparum infection due to interruption of vector control programme. More than 50% of the reported malaria cases are from these areas (62% in 1998, 58.4% in 1999 and 50% in 2000).
2) Increase in the incidence of Acute Respiratory Infections (ARI) and Diarrhoeal Diseases due to inadequate shelter, damage / disruption to water and sanitation systems and unsanitary conditions of the welfare centres where the displaced are crowded in.
3) The worsening of the maternal and child health status especially nutritional status of the children and mothers due to food shortage, deterioration of Public Health Services and the effect of the prevailing conflict war situation on the mental state of the people.
4) The psychological trauma associated with war, conflict and violence and the associated displacement, disintegration of families and communities together with the loss of property, kith and kin.
5) Disability due to war injuries identified as a problem but the disaggregated information giving the details of the war-affected persons is not available.
6) The available data on leading causes of hospitalisation and deaths in the districts are not reliable. Further information is only from some hospitals that have reported and relates to inpatient morbidity and mortality only, and hence does not indicate the actual disease pattern in the area. An assessment could be made on the utilisation of the inpatient services from the hospitals' reports, but the information from them could not be used for interpretation of disease pattern in the areas. However, it is observed that the malaria and injuries figures are high in Jaffna; Malaria comes up on top in Vanni. It is also observed that diarrhoea admissions are relatively less in the North while it is one of the leading diseases for hospitalisation in the East.

A ***mental health needs*** assessment (MSF-H 1999, 2000) concentrating on those living in the 'welfare centres' that had been suffering from the combined effects of trauma and poverty in the District of Vavuniya had shown:

- high numbers of attempted suicides, alcohol abuse, domestic violence, and feelings of grief, suspicion and 'learnt helplessness',
- a breakdown in normal social support networks;
- appalling living conditions and lack of services;
- total absence of psychosocial support services;
- 97% had lost their homes and other property;
- 87% had constant feeling of insecurity or being unsafe;
- 63% had suicidal thoughts; and
- 66% had bad memories of displacement, death of a family member, witnessing people being burnt alive in their homes, etc.

Prior to 1980, Jaffna District had the best health status indicators compared to the other parts of the country while the rest of the districts of North and East had comparable status to the National average. The National surveys conducted after 1981 did not cover the districts in the ***North and East*** but current data (from GTZ IFSP Trincomalee and UNICEF Colombo) suggest that the ***indicators show a fall of 25% to 50% from the Sri Lankan National average*** (Table 6.1.1).

Table 6.1.1 Selected Health Status Indicators

Indicator	Sri Lanka	North-East Province
Children's Diarrhoeal Disease rate ***	4.0%	9%
Under-weight (0-5 years)	37.6%*	50% **
Wasting	15.6% *	26% **
Stunting	23.8% *	27% **
Maternal Malnutrition		48% (24% severe)**
Low Birth Weight (LBW) ***	16.7%	20%
Home Deliveries ***	4.0%	45% (in Batticaloa)

Note: *** per 100,000 population

Source: *1993 DHS Survey, **GTZ IFSP 1999 and ***Annual Health Bulletin 2000)

The studies done in Jaffna district have shown that the IMR and MMR levels in the war-affected areas have increased. The ***IMR*** of 11/1,000 live births in 1985 almost tripled at ***30/1,000 live births in 2000***, while the Sri Lankan figure fell to 15.4 in 1998 from 24.2 in 1985. The ***MMR*** that had been 51/100,000 in 1980 for both Sri Lanka and Jaffna went down to 23 in 1996 for Sri Lanka but rose to ***80 in Jaffna***.

The ***nutritional status has deteriorated sharply***. Jaffna district had the lowest malnutrition level in the 1975/76 National Survey; however, in a study done in Jaffna in 1992, wasting was 18.9% (Sivarajah N.,1993). The same picture was seen in the study conducted by the MSF team (David Becker & Michelle Kelly, 2000). The wasting among the children of 6 to 17 months was seen to be very high at 30.7%.

Malaria remains a major problem in the North-East province. In spite of the inadequate diagnostic facilities available, ***50% to 62% of reported malaria cases (there may be more) of the country*** are from these areas. Ninety-two percent (***92%) of malaria deaths*** too are also from these districts. This situation is due to difficulties in case detection, treatment and control programmes (Annual Health Bulletin 1998, 2000).

Containing the health risks is an issue due to problems in recruitment and also in retaining qualified personnel in addition to obtaining medical equipment, pharmaceuticals and other support facilities like vehicles, telephones and improvements necessary for the infrastructure including maintenance needed to run an efficient service. The deterioration in health services concerns both primary and preventive health care and also secondary and tertiary curative care. Added to this, the available health information is not reliable. The birth and death registration is unreliable due to the war situation. The factors that influence health outcomes are discussed in the succeeding sections.

6.2 HEALTH SERVICE PROVISION

(1) ORGANISATIONS

There are a few local and many International NGOs, which are providing health services; they complement a great deal the scarce government programme, but the service coverage is reported to be unsatisfactory and even poor or lacking in some of the affected areas. The health services provision and organisation in the uncleared landmine areas are said to be running in the best possible manner by making use of the limited resources.

In the absence of qualified team members, the services of the voluntary health workers had been solicited to deliver the services. This practice had been in existence for several decades in the country and still exists in the North- East to a large extent.

However, in the North-East the absence of MOHs, basic facilities and support is impeding the delivery of preventive care especially in areas where the geographical extent to be covered is large. The available positions are given in Table 6.3.1.

Gramodhaya Health Centres (Village Health Centres), or GHC in short, are few in numbers in the North-East province. It is a community clinic run together with the Public Health Midwife quarters to provide the elements of the preventive care package to the mother and child at large and rest of the family in turn. Traditionally, the midwife had been working from her home but this is not the case any more. Accommodation has become a problem in the rural areas and it has worsened because of the conflict situation.

The responsibility of the provision of services lies with the Provincial Ministry of Health Services except for the teaching hospitals that are controlled by the central Ministry of Health. The Provincial Council of the North-East does not have political membership and is governed by the Departments headed by the Secretary in charge. The Provincial Director is the departmental head in the Province assisted by the Deputy Provincial Directors in each of the districts.

(2) HUMAN RESOURCES

The acute shortage of all categories of health staff has hampered delivery of health services in the region. The shortage of skilled personnel is seen to be more acute than for other categories. However the deficiency varies from district to district and within a district from un cleared areas to areas controlled by the Government and also between urban and rural areas.

Approved cadre and availability of selected category of health staff are given below in Table 6.2.1.

Table 6.2.1 Cadre Position of Selected Staff in the North-East Province

Category	Cadre	Vacancy	Remarks
Medical Specialists	103	86	Including Teaching hospitals
Medical Officers *	414	96	Inclusive of MOHs, MO (MCH), RE
Dental Surgeons*	80	22	Inclusive of Specialists
RMO/AMO*	261	113	
Nursing Officers*	1191	536	Including Matrons
Pharmacists*	139	59	
Public Health Nursing Officers	65	60	
Public Health Inspectors	383	112	Including Supervisory Staff
Midwives*	1231	619	- do -
Medical Lab. Technologists	59	22	

Note: Excluding the Teaching Hospitals

Source: Statistical Handbook NEP 2000, Information on Specialist Services 2000, MoH

Although many doctors graduate each year from the six medical schools, the shortage and maldistribution of doctors is not peculiar to the North & East. There seems to be maldistribution of doctors even in other parts of the country. Whilst this can be somewhat related to a lack of a clear policy in deployment of health staff, the situation is exacerbated in the North & East. Other factors that have influenced the availability of Human resource in this region are: a feeling of insecurity due to the conflict situation that prevailed, the lack of a basic facilities such as accommodation, communication, transport. Lack of special incentives to work in difficult areas is also seen as an influential factor in deterring staff deployment in these areas. Lack of other infrastructure such as proper schooling facilities, water supply, electricity, access to other goods and services has created a relatively unfavorable social environment for the placement of professional staff in these areas. Lack of modern health facilities and medical equipment and hence the lack of sufficient postgraduate training environment has often been sited as a reason for Graduates from this area not taking up posts in the North & East.

The total health staff required in the NEP, on the basis of currently approved cadre (excluding the teaching hospitals) is 9,597. (source : Health Ministry Report, NEP) The vacancies are mainly in the skilled staff categories. There are two training centres in the NEP. These are in Jaffna and Batticaloa. The Ministry of Health, Colombo is responsible for selection of trainees to these two institutes. The practice of calling for application for paramedical trainees, island wide for admission to training centres in the N & E has not been effective due to language and social barriers. The medium of instruction in the two training centres is Tamil. It is necessary to train suitable candidates from the N & E itself to fill the existing vacancies. However in Sri Lanka the minimum education requirements to enter regular paramedical training programmes , is GCE Advanced level. This seems to be unrealistic in the North & East due to gross lack of Advanced level qualified candidates. Table. 6.2.2. Annual output of Nurses and PHMS from Training Centres of Jaffna and Batticaloa

Table 6.2.2 Annual Output of Nurses and PHMS from Training Centres of Jaffna and Batticaloa

YEAR	BATTICALOA		JAFFNA	
	NURSE	PHM	NURSE	PHM
1996	17	Nil	Nil	Nil
1997	Nil	30	Nil	Nil
1998	66	21	27	04
1999	11	91	Nil	Nil
2000	152	Nil	33	23

Source: Annual Health Bulletin 1998, 2000, Schools of Nursing – Jaffna & Batticaloa

The shortage of regular health staff had been furnished to some extent through a large health volunteer work force. Health volunteers have been trained by different nongovernmental organizations during the past two decades. Although they could not perform the work of highly skilled categories of staff they have performed and continue to carry out a range of community health services and support services in curative care institutions. Health volunteers have been paid an allowance for their services by the organizations that provided their training and placement. With the ceasefire in operation many NGOs that engaged services of volunteers are leaving the country. This has posed a serious problem for the continuation of services of trained volunteers. A valid solution might be to recognize their existence by including these volunteers in to regular paramedical training programmes in order to fill the existing vacancies in the health sector. The main set back seems to be the lack of minimum educational requirement to undergo formal paramedical training (GCE Advanced level qualification)among most of these volunteers. A rapid assessment of the volunteer profile is required in determining possibilities and ways and means of absorbing the volunteer workforce into the health sector.

(3) FACILITIES AND SERVICES

Curative Care Institutions

Hospitals in the North-East are dilapidated and deteriorating for want of maintenance. A few are destroyed, too. Most buildings are 50 to 80 years old. In addition, most hospitals lack adequate water supply, sewerage system, basic diagnostic and treatment equipments and supplies. There has been very little investment in the secondary curative care facilities since 1980 until very recently. There have been some investment by foreign donors in a few hospitals such as the Jaffna hospital, Puthukudiyirupu and Mallavi Hospitals in Mullaitivu District, and the Kiliveddy, Nilaveli and Kuchchaveli Hospitals in Trincomalee District, to mention a few, to cater to the needs of the patients. The government too has started some projects. The priority in the government inputs is mainly seen in putting up administration blocks catering to the needs of the staff whereas patient care is receiving less priority. This has affected the service provision as seen in the Vavuniya district where there is an influx of patients from the uncleared areas and the IDPs. The facilities at Vavuniya are heavily utilised at present as the hospital is the main referral centre for five districts, namely, part of Anuradhapura, Vavuniya, Mullaitivu, Kilinochchi and Mannar, serving a population of more than 600,000. Similar situation is seen in Trincomalee, Batticaloa and Kalmunai Hospitals where the influx of IDPs has created an additional burden to these hospitals.

The lack of private nursing homes, clinics and pharmacies affects the patients and also makes doctors reluctant to serve in these areas especially in the Vanni Districts and Jaffna. Another area that could be advanced is to give low interest loans to encourage investment in private medical facilities in the N-E Province.

Under the Health Reforms Programme it has been proposed to upgrade selected hospitals as District General Hospitals or Base Hospitals with the norms set for these hospitals on a National Policy Guidelines. The hospitals selected in the North-East are listed in the Table 6.2.3.

Table 6.2.3 Hospitals selected for upgrading under the Health Reforms Programme in North-East Province

District	Hospitals	Status
Vavuniya	Vavuniya	Work in Progress
Trincomalee	Trincomalee	- do -
	Kantalai	- do -
Mannar	Mannar	Not commenced
Batticaloa	Valaichenai	- do -
Ampara	Ampara	Work in Progress
Jaffna	Point Pedro	Not commenced
Kilinochchi	Kilinochchi	- do -
Mullaitivu	Mullaitivu	- do -

Preventive Health Care Institutions

The Public Health Services that was a model to other countries has been declining because most MOHs posts are vacant in the North-East Province (Table 6.2.4). Furthermore, the available ones do not have an office of their own and do not have vehicles. The provision of an office and quarters in specific identified areas can facilitate delivery of the preventive health services.

Table 6.2.4 Preventive Health Service Facilities

DISTRICT	No.	MOH Area	MOH Available or Not	Office	Quarters	Vehicle	Priority
Mannar	1	Mannar	Yes	No	Yes	No	1
	2	Murunkan	No	No	No	No	2
	3	Adampan	No	No	No	No	
	4	Nanattan	No	No	No	No	
	5	Musali	No	No	No	No	
	6	Talaimannar (Port Health)	No	No	No	No	
Vavuniya	1	Vavuniya South Tamil	Yes	Yes	Yes	Yes	
	2	Vavuniya South Sinhala	Yes	*No	No	*No	
	3	Vengala Cheddikulam **	No	No	No	Yes	1
	4	Vavuniya North (Nedunkerni)	No	No	No	No	2
Trincomalee	1	Trincomalee	Yes	Yes	Yes	Yes	
	2	Kantalai	Yes	Yes	Yes	Yes	
	3	Muthur	Yes	Yes	No	Yes	
	4	Mahadivulwewa	No	No	No	No	
	5	Kinniya	No	Yes	No	Yes	
	6	Gomarankadawela	No	No	No	No	
	7	Thampalakamam	Yes	No	No	No	1
	8	Padavisiripura	No	No	No	No	
	9	Seruwila	Yes	No	No	No	
	10	Kuchchaveli	Yes	No	No	No	2
Batticaloa	1	Batticaloa	Yes (3)	Yes	No	Yes	
	2	Kaluwanchikudi	Yes	Yes	No	No	
	3	Valaichenai	No	Yes	No	No	
	4	Chenkalady	Yes	Yes	No	No	
	5	Kattankudi	Yes	Yes	No	No	
	6	Vakarai	No	No	No	No	1
	7	Araipattu	No	No	No	No	
	8	Eravur	No	No	No	No	2
	9	Vavanativu	No	No	No	No	

DISTRICT	No.	MOH Area	MOH Available or Not	Office	Quarters	Vehicle	Priority
Mullaitivu	1	Mullaitivu	Acting	No	No	No	1
	2	Mallavi	Acting	No	No	No	2
Kilinochchi	1	Kilinochchi	No	No	No	No	1
	2	Poonakari	No	No	No	No	2
Ampara	1	Ampara	Yes	Yes	Yes	Yes	
	2	Dehiathakandiya	Yes	Yes	Yes	Yes	
	3	Mahaoya	Yes	Yes	Yes	Yes	
	4	Uhana	Yes	No	No	Yes	
	5	Lahugala	Yes	No	No	No	
	6	Padiathalawa	Yes	No	No	No	
	7	Damana	Yes	No	No	No	
Kalmunai	1	Kalmunai Tamil Division	Yes	No	No	Yes	1
	2	Kalmunai Muslim Division	Yes	Yes	No	Yes	
	3	Thirukovil	Yes	Yes	No	No	
	4	Akkaraipattu	Yes	Yes	No	Yes	
	5	Addalaichenai	Yes	No	No	Yes	2
	6	Alayadivembu	Yes	Yes	No	Yes	
	7	Sammanthurai	Yes	Yes	No	Yes	
	8	Ninthavur	Yes	No	No	No	
	9	Karaitivu	Yes	Yes	No	No	
	10	Pothuvil	Yes	Yes	No	No	
Jaffna	1	Jaffna (MC)	No	Yes	No	Yes	
	2	Manipay	Yes	No	No	No	
	3	Point –Pedro	No	Yes	No	No	
	4	Kopay	Acting	No	No	No	
	5	Tellipallai	No	No	No	No	
	6	Kayts	No	No	No	No	
	7	Chavakhchchri	No	No	No	No	

Note: * functioning at MOH Vavuniya; ** New complex identified for ADB funding

6.3 VULNERABLE GROUPS

(1) DISPLACED PEOPLE

The displaced are of different categories. The available data on displaced persons is given in Table 6.3.1. The very fortunate lot have migrated or found asylum in other countries. Some have migrated internally down south to other parts of the country where there is no conflict and are living on their own or with relatives and friends. Within the conflict-affected area, too, some of the displaced live with their relations and friends, but many had been living in the 'welfare centres'. It is the less fortunate among those displaced who live in the 'welfare centres'. With the peace talk and settlement of the conflict on the horizon most of the families would be resettled in their own place, yet there remains families that had been displaced over and over since 1977 and are landless who had to be relocated. Presently, some of these families are being relocated in new settlements according to set needs and priorities.

Table 6.3.1 Displaced People in the North and East Provinces

District	District Population who are Displaced (Number)			District Population (Percentage)		
	In welfare centres	Outside welfare centres	Total	In welfare Centers	Outside welfare Centers	Total
Mannar	23,274	7,047	50,321	24%	27%	51 %
Vavuniya	16763	53,812	75,605	9%	29%	41 %
Trincomalee	3,186	11,631	14,817	1%	4%	5 %
Batticaloa	1,535	34,572	36,107	0%	7%	7 %
Ampara	5364	1,294	6,658	1%	0%	1 %
Other districts	NA	NA	540,471	24%	27%	
Total displaced			723,979	2%	5%	27 %
% of Sri Lanka Population						4 %

Source: UNHCR Vavuniya, NEP Statistical Hand book 2000

(2) PHYSICALLY-CHALLENGED PEOPLE

In the North and East Provinces in 2001 (Figure 6.3.1), Jaffna accounted for most of disabled persons (27%), followed by Ampara and Batticaloa (18% each), and Trincomalee (15%). On the other side of the spectrum, Mullaitivu has the least share of the disabled persons (3%), then Vavuniya (5%), Kilinochchi (6%), and Mannar (8%).

Four of ten disabled have leg/hand disabilities. The other types of disabilities in descending order are: blindness (17%), mental handicap (15%), muteness (13%), deafness (10%), and physical handicap (7%). The data is not disaggregated according to cause.

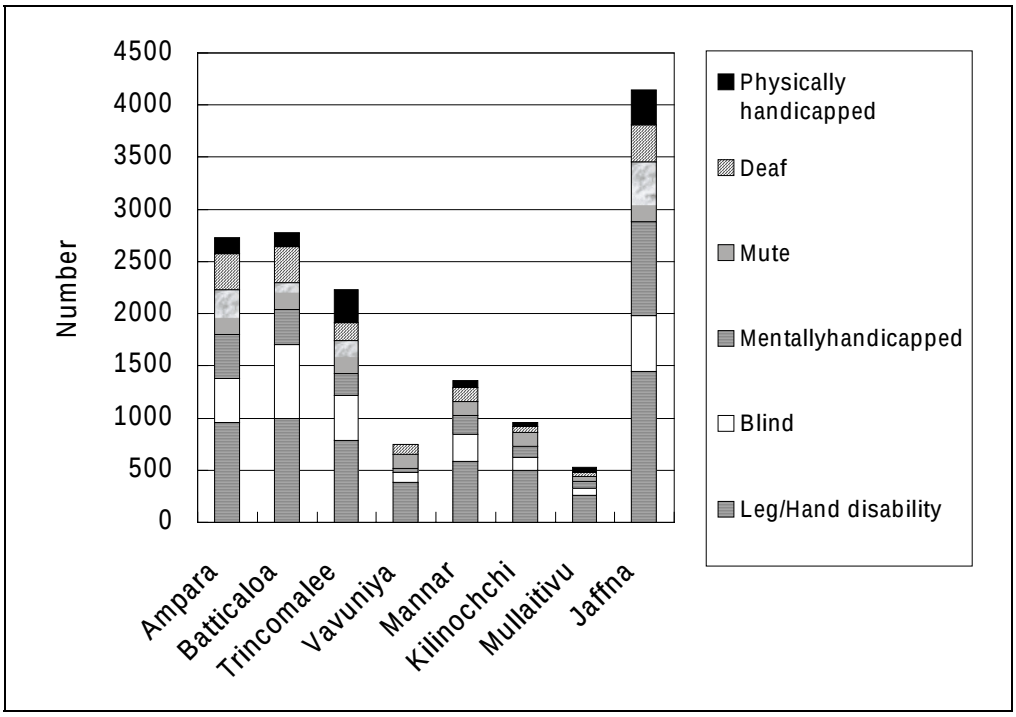


Figure 6.3.1 Disabled Persons in Northern and Eastern Provinces, 2001

Source: WHO. Health System and Health Needs of the North-East Sri Lanka. 2002. [original source of data is the Department of Social Services, NEP]

6.4 PLANNING CHALLENGES

The inadequate and low-quality public health services in the conflict affected-areas are due to a shortage of staff, equipment and supplies along with reduction of management capacity. These problems are better explained by the following conditions existing in the public health services in Sri Lanka.

One, Sri Lanka's health gains in the past were associated with improved accessibility to a range of basic public health services provided by dedicated primary health care workers such as public health midwives. However, there has been an ***imbalance in the provision of services***, even at the better times between urban and rural, rich versus poor that have contributed to inequities in health care. The worst effects of these inequalities are now seen in the affected districts.

Two, the devolution of health administration to provinces was meant to correct the problems of inequity but, unfortunately, it has not produced the expected results due to ***unclear division of responsibilities*** between the centre and the provinces, to the ***lack of commitment and capacity to operationalise*** the devolved functions.

Three, amongst the disease challenges faced are the ***resurgence of malaria, anaemia*** among lactating and pregnant mothers, and ***malnutrition*** among children under five years of age. In addition, health system failures have ***worsened the situation for the poor and those returning IDPs***.

Four, contaminated water supplies, low standards of hygiene and sanitation, food insecurity and ***easy spread of communicable diseases*** especially among the displaced have added to the deterioration of the health condition.

Five, accessibility to ***specialised care*** has been a problem but a greater challenge is the provision of ***basic health services to IDPs and to remote populations***.

Six, it is a transition period for both the public and the health workers from a period of war to one of peace and adjustments would be difficult. Rapid ***development of infrastructure facilities*** together with ***training and guidance for the health workers*** is required to support them to adapt to the changing situation.

Seven, the ***breakdown in the health information system*** is a major challenge and has made it difficult to quantify the various conditions and trends over the last few years. In fact data from North and East show heavy under reporting.

Eight, women seem to bear the greatest burden in the family especially in families where the breadwinner has either died or been disabled as a result of the conflict. Gender issues are yet another challenge. ***Targeting and improving the condition of women in communities where they return as well as facilitation of family reunion*** have to be addressed.

Nine, ***all concerned sectors*** including NGOs and donor community have to tackle the immediate issue of providing ***basic health services*** and catering to ***new needs and demands*** of the people in the affected areas.

Ten, development of a ***sustainable health system that is more responsive*** to the people in the province stands as the greatest challenge under the present circumstance of uneasy peace.

CHAPTER 7

ASSESSMENT OF THE HEALTH SYSTEM

7 ASSESSMENT OF THE HEALTH SYSTEM

In the previous chapters, the following components of the health system were examined: external environment; health system activities; management of resources; and stewardship. A brief chapter was devoted to highlighting the special situations in the northern and eastern provinces.

In this chapter, the focus will not be the individual parts but the totality of the health system. The health system will be taken as a unit; at times, though, the unit refers primarily to the government sector. Although some would disagree, the system is presumed to work in unison towards common goals. Furthermore, the discussion assumes there is consensus on the goals.

The common goals of the health system are reflected in the vision[1] of the Ministry of Health:

> Vision: To contribute to social and economical development of Sri Lanka by achieving the highest attainable health status through promotive, preventive, curative and rehabilitative services of high quality made available and accessible to people in Sri Lanka

Health attainment is the foremost goal. Provision of quality services is another one. Making services available and accessible to people in Sri Lanka may be interpreted as representing the aim of the system for achieving equity. The vision seems silent on two other system goals that were included in the World Health Report 2000 (WHR 2000) – responsiveness and system performance or efficiency.

In this chapter, the assessment will be limited to how the entire system and not specific programmes has improved:

1) Health outcome;
2) Equity;
3) Efficiency;
4) Quality and safety; and
5) Responsiveness and Client-satisfaction.

The basic approach in the assessment includes a comparison of the levels in Sri Lanka with those of other countries. The WHR 2000 is the basic reference. It provides the estimates for 191 member states. In the discussion, though, Sri Lanka will be compared mainly with countries from South-Asia. A review of the per capita health expenditure revealed that India, Bhutan, Pakistan, and Bangladesh rank within plus or minus six points compared to that of Sri Lanka (Table 7.1). Even if they are ranked several steps lower and higher than Sri Lanka, Maldives and Nepal are still included in the comparison but the reader should always bear in mind that these countries spend much more or less, respectively, than the health investment of Sri Lanka.

[1] Ministry of Health, *Progress and Performance Report* (2002).

Table 7.1. Health Expenditure per Capita: Rank of Twenty-Five Selected Countries

Countries	Health Expenditure per Capita in US$	Countries	Health Expenditure per Capita in US$
United States of America	1	Papua New Guinea	137
Japan	13	**Sri Lanka**	**138**
United Kingdom	26	China	139
Singapore	38	Cambodia	140
Thailand	64	Mauritania	141
Russian Federation	75	Pakistan	142
Maldives	76	Senegal	143
Malaysia	93	Bangladesh	144
Vanuatu	132	Nepal	170
India	133	Afghanistan	184
Solomon Islands	134	Madagascar	190
Bhutan	135	Somalia	191
Myanmar	136		

Source: World Health Report 2000

As appropriate, the cross-country analyses reported by other authors are cited in this chapter as well. Together with the WHR 2000, they provide the backdrop by which the situation in Sri Lanka is examined. They can inspire; they can challenge. They can further unify stakeholders toward a common goal. However, they may also lead to complacency if the system is happy with the status quo or immobility if the performances of other countries are simply overwhelming.

Hence, this chapter often starts with the situation of Sri Lanka vis-à-vis those of other countries. Always it goes beyond that. It looks at the internal conditions by comparing historical trends. It explores differences across geo-political boundaries and population groups. The interpretation of the differences is the crux of the assessment. Nonetheless, the differences are highlighted primarily not to find fault in the system but to determine the strengths, define possible areas for improvement, and identify potential planning priorities. At the end of the chapter, the major planning implications of the assessment are described.

7.1 HEALTH OUTCOMES

The fundamental goal of a health system is to improve the health status of its people. It is the traditional objective and it will always be the foremost one. It may fail in achieving other objectives but its people and government will hold it accountable for its health. What is health? How does one assess improvements in health? Is there a single indicator that could be used to reflect the impact of a broad spectrum of activities of the health sector towards better health? Considering the dependency of health on various health-related sectors, could improvement (or lack of it) in health status be rightfully and solely be attributed to the health sector?

In this section, the traditional vital indicators and contemporary ones advocated by the WHO are employed to reflect the evolving nature of health, goals of health system and measurements of both. Specifically, they are the population, birth and death rates, life expectancy and equality of child survival. They are meant to measure not the individual programmes, conditions or diseases[2] but the outcome of improvements in their entirety. To avoid the issue of attribution, the concept of health system, which includes all the players, whose activities are geared towards better health is the subject of this chapter, and not the sector.

(1) POPULATION

Inter-Country Comparison

From 1990 to 1999, Sri Lanka had the lowest total fertility rate of 2.1 that contributed to the lowest population annual growth rate of 1% in the region (Table 7.1.1). The burden on the productive age group is lowest as reflected by the dependency ratio. On the other hand, it had the highest elderly population. As described in Chapter 8, the population is ageing rapidly such that by year 2000 the percentage of elderly jumped to 10% already and by 2025 will be 20%.

Table 7.1.1 Basic Population Indicators of South Asia, 1990-1999

	Member State	Total population	Annual growth rate	Dependency ratio		Population aged 60+ years		Total fertility rate	
		(000)	(%)	(per 100)		(%)		(%)	
		1999	1990-1999	1990	1999	1990	1999	1990	1999
1	Bangladesh	126 947	1.7	90	64	4.9	5.1	4.3	3.0
2	Bhutan	2 064	2.2	85	88	6.0	6.2	5.8	5.4
3	India	998 056	1.8	69	63	6.9	7.5	3.8	3.0
4	Maldives	278	2.9	99	89	5.4	5.4	6.4	5.2
5	Pakistan	152 331	2.8	85	83	4.7	4.9	5.8	4.9
6	Nepal	23 385	2.5	87	82	5.7	5.5	5.3	4.3
7	Sri Lanka	18 639	1.0	61	50	8.0	9.5	2.4	2.1

Source: World Health Report 2000.

Trends in Sri Lanka

The 130-year census data from 1871 showed three phases in the population trends (Figure 7.1.1). Phase I, from the onset until 1946, is characterised by a slow increase. Phase II is the rapid growth period that lasted until the early 70s. Since then, the increase in population has started to slow down.

[2] Refer to Chapter 8 for discussions on causes of consultations, admissions and future trends in demography and epidemiology.

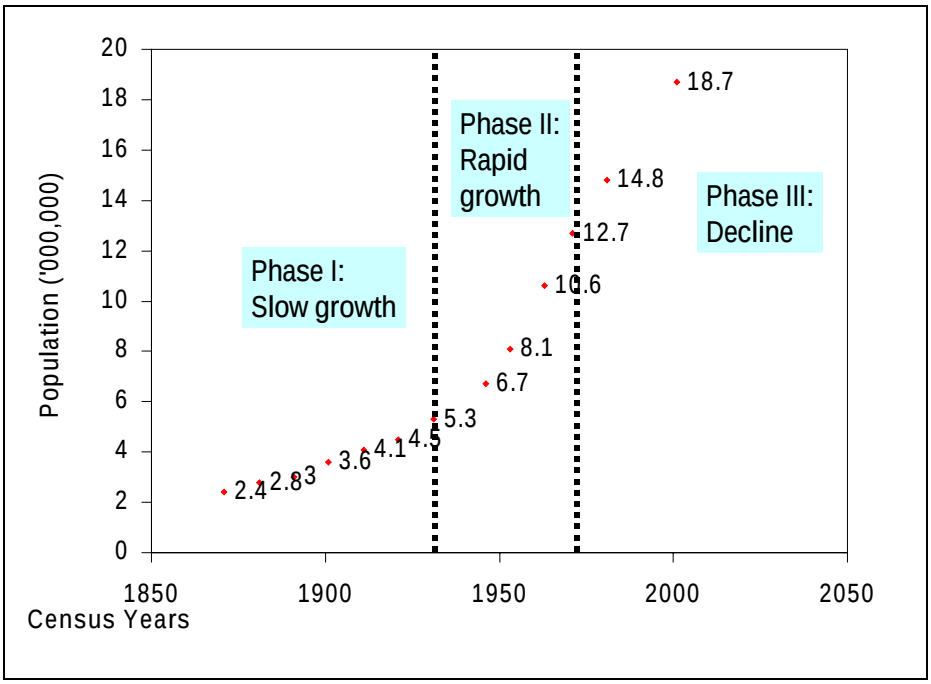


Figure 7.1.1 Three Phases of Population Growth, 1871-2001

Source: Data is from the Department of Census and Statistics, Statistics Abstract 2001.

As expected, the population explosion concentrated in highly urbanised centres such as Colombo and Gampaha, followed by seven other districts, namely, Kalutara, Galle, Matara, Kurunegala, Kegalle, Nuwara-Eliya, and Kandy (Figure 7.1.2). The population in the following five districts did not rise significantly: Kilinochchi, Mullaitivu, Mannar, Vavuniya, and Monaragala.

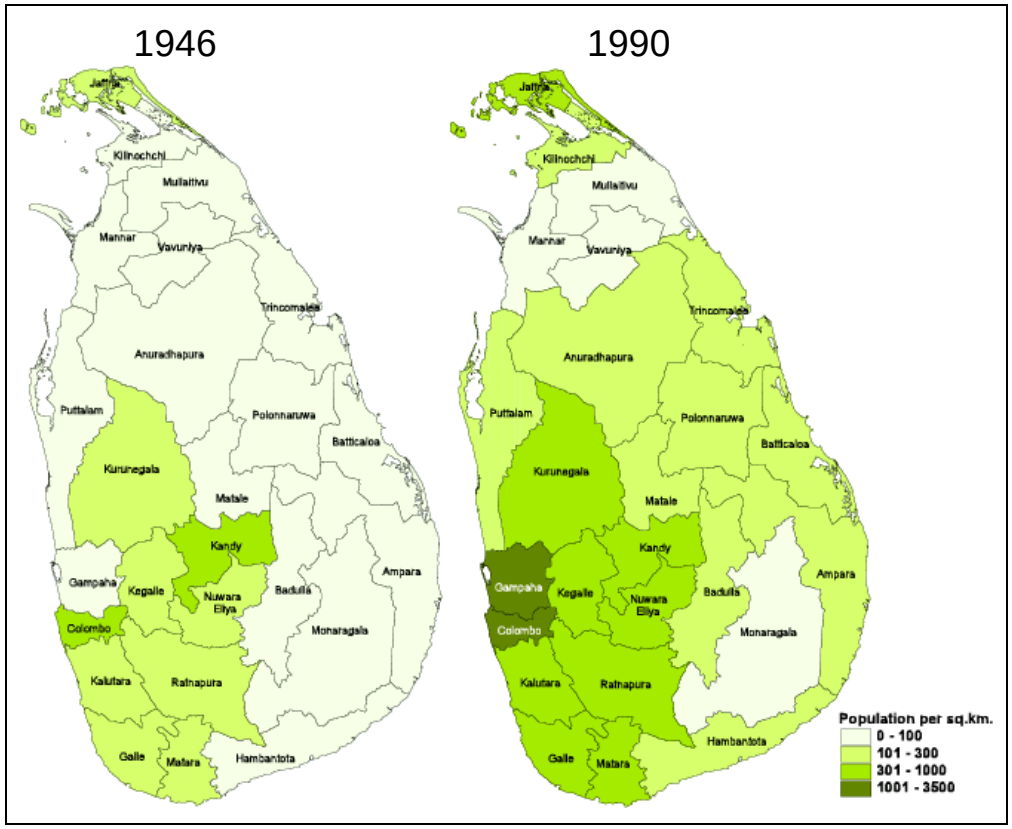


Figure 7.1.2 Population Density by District, 1946 and 1990

Source: Department of Census and Statistics, Demographic Survey 1994.

(2) BIRTH AND DEATH RATES

Crude Rates

The population increase in Sri Lanka was not merely a baby boom phenomenon. During the rapid growth phase, the crude birth rates were also on the decline. As such, the population boom was partly because fewer people were dying relatively. Figure 7.1.3 graphically demonstrates that while the crude birth rates were decreasing arithmetically by about 4 to 5 per 100 population, the crude death rates were in fact declining faster exponentially.

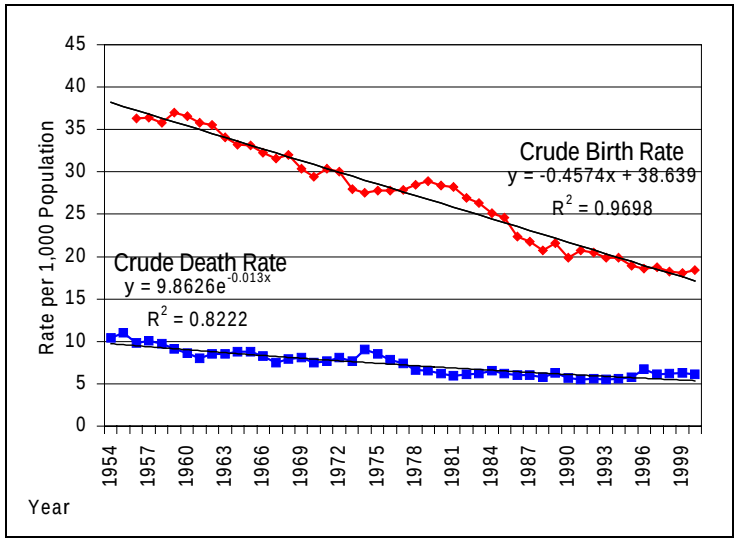


Figure 7.1.3 Crude Birth and Death Rates, 1954-2000.

Source: Data is from the Department of Census and Statistics, Statistics Abstract 2001.

What are the causes of deaths? Based on reports to the Registrar General Office, which is said to represent 98% of the actual deaths, the common causes[3] in 1996 can be categorised into four according to the rates (Figure 7.1.4):

- Group A (Death Rate= 72-122 per 100,000 population): Diseases of cardiovascular system; Homicide and other violence;
- Group B (R=12-71): Infectious and parasitic diseases; Neoplasm (benign and malignant); Accidents;
- Group C (R=11-31): Diseases of nervous system; Suicide; Congenital abnormalities, immaturity and birth trauma; Diseases of respiratory system; Diseases of GIT; and
- Group D (R=10 or less): Endocrine and metabolic disorders; Diseases of genito-urinary system; Nutritional deficiences and diseases of blood; Diseases of musculo-skeletal system, skin and subcutaneous tissue; Maternal deaths.

[3] Refer to Chapter 8 for further discussion on communicable and non-communicable causes of deaths.

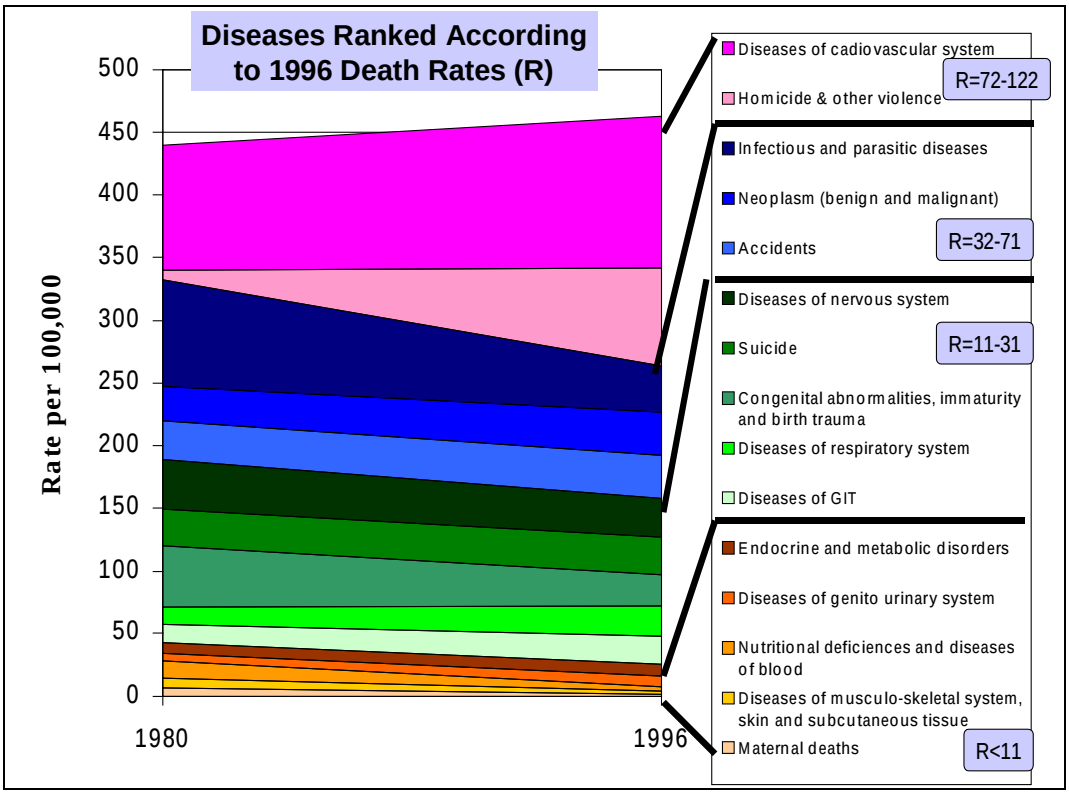


Figure 7.1.4 Common Causes of Deaths Categorised According to Death Rates in 1996

Source of Data: Registrar General Office.

Another way of classifying the common causes of deaths is according to the change in the rates between 1980 and 1996 (Figure 7.1.5). Based on this, the causes can be categorised into three:

- Group I (Significant Increase): Homicide & other violence; Diseases of cardiovascular system; Diseases of respiratory system; Diseases of GIT; Neoplasm (benign and malignant);
- Group II (Minimal Increase): Diseases of genito-urinary system; Accidents; Endocrine and metabolic disorders; Suicide; and
- Group III (Decrease): Infectious and parasitic diseases; Congenital abnormalities, immaturity and birth trauma; Nutritional deficiences and diseases of blood; Diseases of nervous system; Maternal deaths; Diseases of musculo-skeletal system, skin and subcutaneous tissue.

If the two criteria are employed, then it seems that the top five important causes of deaths are as follows:

1) Homicides and other violence;
2) Diseases of the cardiovascular system;
3) Neoplasms (either benign or malignant);
4) Diseases of the respiratory system; and
5) Accidents.

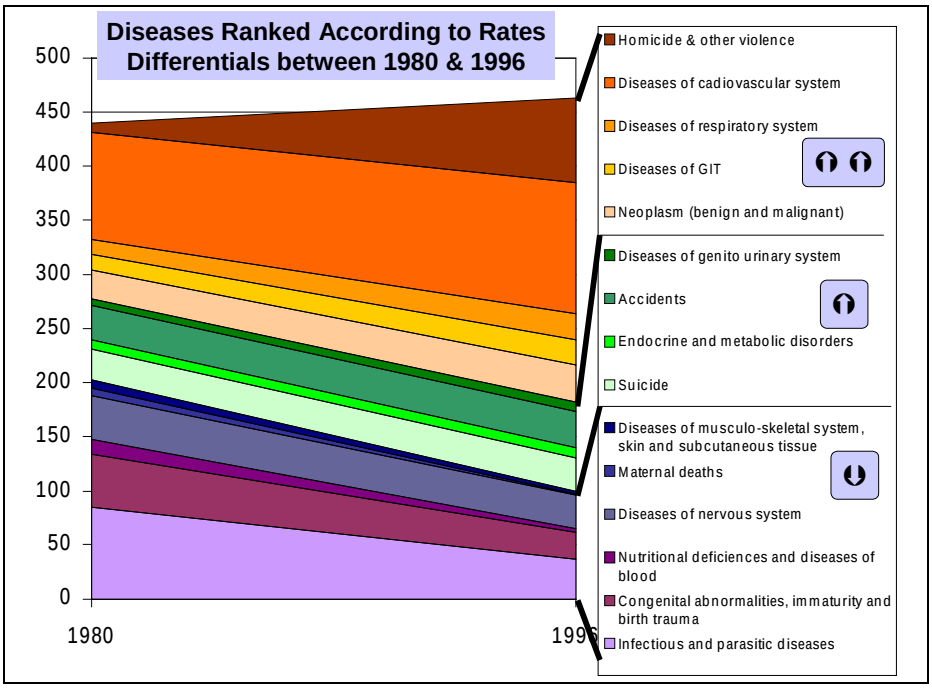


Figure 7.1.5 Common Causes of Deaths Categorised According to Differences in Death Rates between 1980 and 1996

Source of Data: Registrar General Office.

Gender- and Age-Specific Death Rates

1) Males are Worse Off

From 1935 to 1996, two patterns were observed in the gender-specific death rates (Figure 7.1.6). A shift in trends transpired sometime in the late 50s or early 60s. Prior to this period, the probability of women dying is higher. Afterwards, though, the males started to be at a disadvantage. The gender gap persists to widen. For every 10 thousand population, only 8 more men than women died in 1965; but 41 more men than women died in 1996.

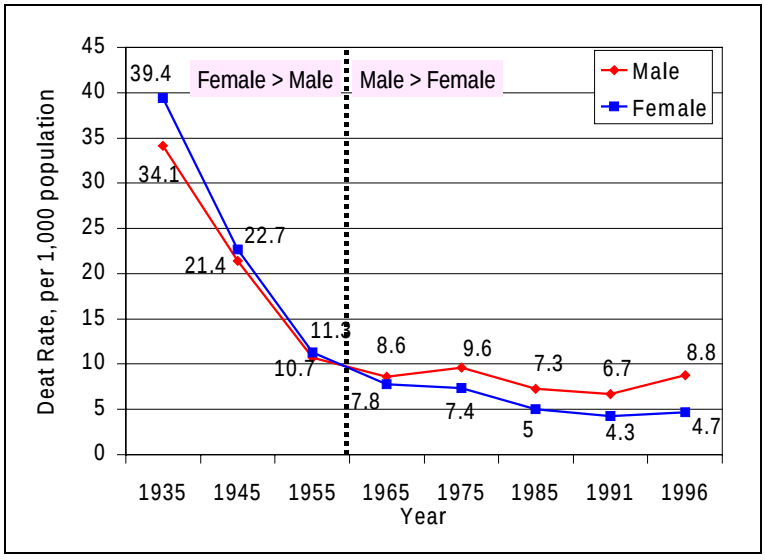


Figure 7.1.6 Gender-Specific Death Rates, 1935-1996.

Source: Data is from the Registrar General Office.

2) Older Generations are Worst Off

In 1935, the age-specific death rates between the youngest and the oldest generations were about the same (Figure 7.1.7). Afterwards, the difference in the rates has widened such that by1996 those who are older than 54 years have a risk eight times higher than who are under the age of five years old. In fact, while the under-fives ranked first previously, they later ranked 6th next to the following age groups: older than 54, 45-54, 20-24, 35-44, and 25-34. This trend may reflect the ageing of the population, which, in turn, reflects successes in the control of preventable deaths especially from communicable diseases, low IMR, and longer life expectancy.

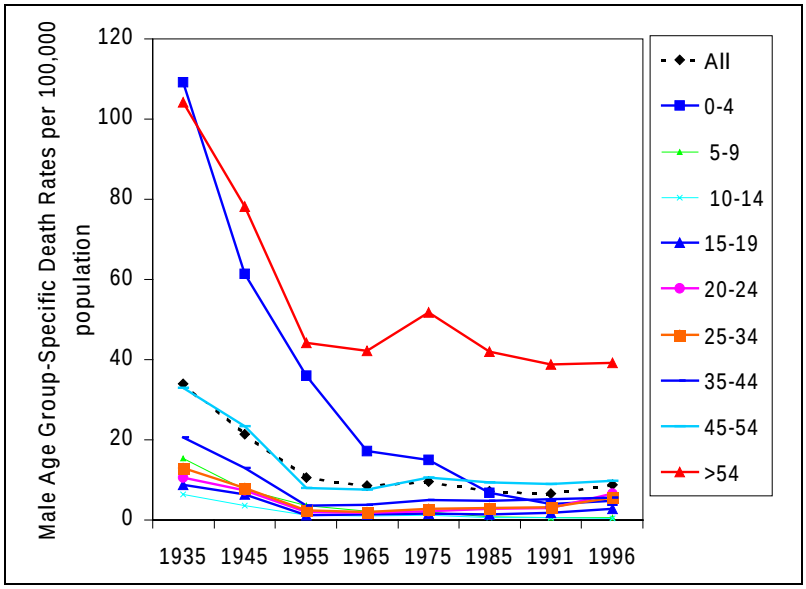


Figure 7.1.7 Age-Specific Death Rates for Males, 1935-1996

Source: Data is from the Registrar General Office.

Among females, the risk of dying of the eldest age group is seven times than those of the youngest age group (Figure 7.1.8). Unlike their male counterparts, the female under-fives have death rate that is second to the eldest population. The generally higher mortality rates among men, particularly the adults, can explain this phenomenon.

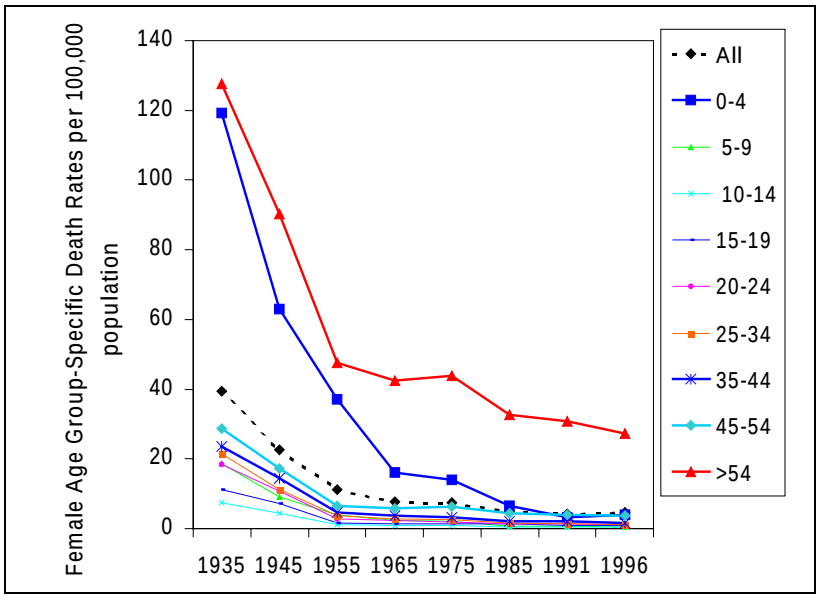


Figure 7.1.8 Age-Specific Death Rates for Females, 1935-1996

Source: Data is from the Registrar General Office.

Deaths within the age group of 45-54 could be interpreted in some ways as premature. What are the common causes? Figure 7.1.9 shows at least three patterns. The top two causes in 1991 and 1996 are cardiovascular diseases. Pneumonia, diabetes and septicaemia complete the top five. While gastro-intestinal infection ranked 2nd in 1980, since then its death rate has been declining such that it ranked 7th only by 1996. Could other infectious causes of deaths (i.e., pneumonia and septicaemia) follow the same pattern in the future? Could deaths due to them be prevented?

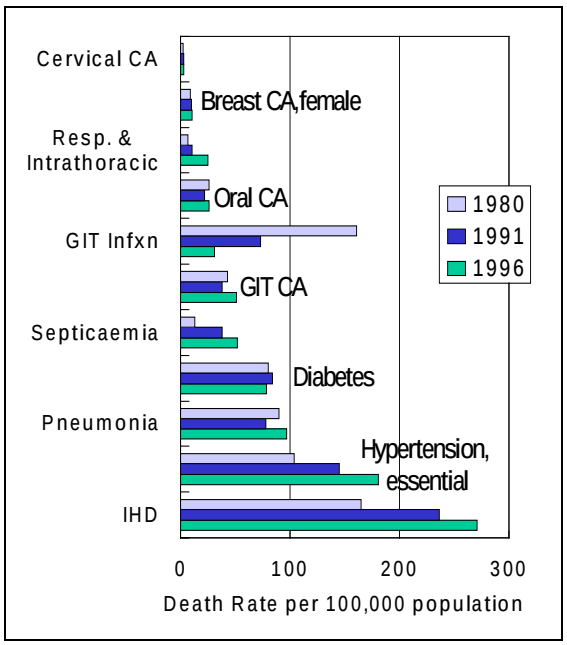


Figure 7.1.9 Death Rates for 45-64 Years Old per 100 Thousand, 1980, 1991 & 1996

Source: Data is from the Registrar General Office

The age group that has the third, fourth and fifth highest mortality rate is the 20-24, 35-44, and 25-34 years old, respectively. Once more, most of these deaths could be interpreted as untimely. Figure 7.1.4 shows that homicides and other violence was the second most common cause overall in 1996. Figure 7.1.5 documents the biggest jump between the 1980 and 1996 death rates was with homicides and other violence. An examination of the age distribution of homicides and other violence reveals that, whereas in 1980 the elderly were the most common victims, in recent years, the young adults or those in their most productive years are at substantially higher risks.

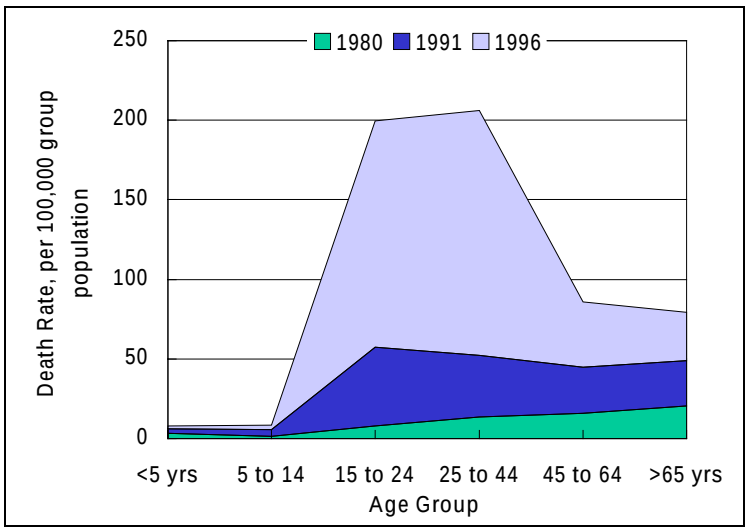


Figure 7.1.10 Age-Specific Death Rates for Homicides and Other Violence, 1980, 1991 & 1996

Source: Data is from the Registrar General Office.

3) Maternal Mortality Rate

The risk of dying due to the process of pregnancy, childbirth and puerperium were reduced to a significantly low level of 5 per 10,000 live births almost two decades ago (Figure 7.1.11). Further decline in its latest level of 2 is a challenge. Should Sri Lanka aim for Zero-Tolerance to maternal deaths? What is needed to achieve that level? Is this a better use of resources?

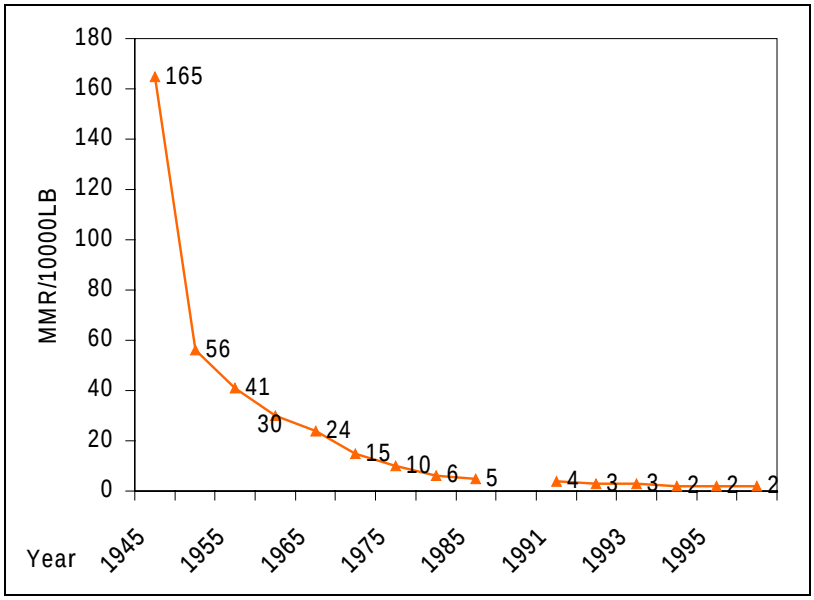


Figure 7.1.11 Maternal Mortality Rates, 1935-1996

Source of Data: Annual Health Bulletin 2000.

Infant Mortality Rate[4]

4) Lowest in the Region

Compared to other South-Asian countries, even to Thailand, Indonesia and Myanmar, Sri Lanka has the lowest infant mortality rate (Figure 7.1.12).

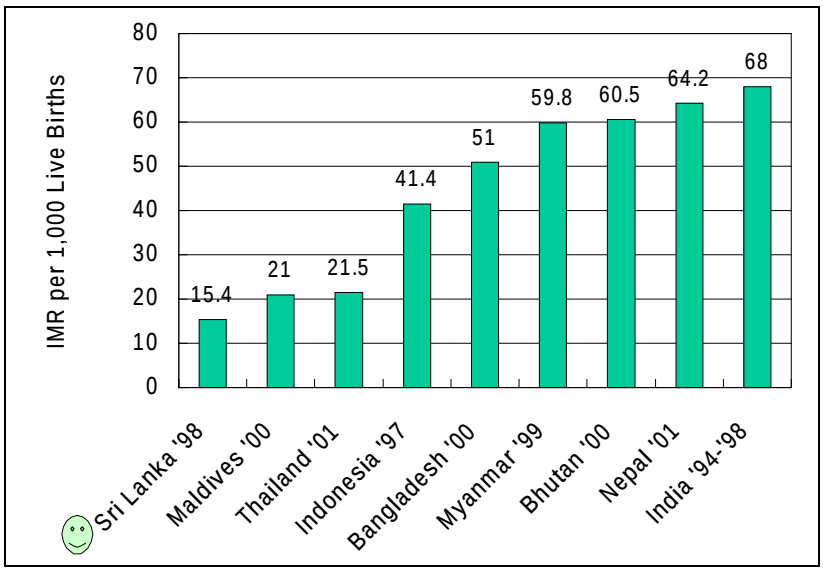


Figure 7.1.12 Infant Mortality Rates in South Asia

Source: SEARO.

[4] Although technically it is also an age-specific rate, the IMR is discussed as a separate subsection.

5) Three Phases of Decline in National IMR

The downward trend in the IMR has been significant. Its most rapid reduction was seen in the 40s up to the early 50s (Figure 7.1.13). The moderate decline followed until the IMR reached about 24 per 1,000 live births in 1985. Since then, it still maintains its trend such that by 2001 it was reported to be 12 already.

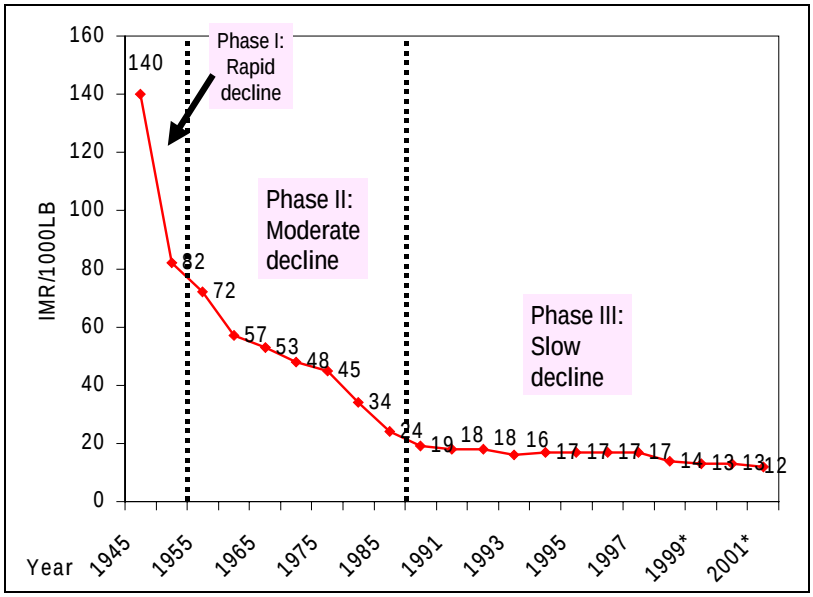


Figure 7.1.13 Trends in Infant Mortality Rates, 1945-2001

Source: Annual Health Bulletin 2001

6) Pockets of High IMR: Estates & 12.5% of Divisional Secretary Areas

There are pockets of high IMR in Sri Lanka. Aside from variations among districts as discussed in Chapter 8, there are significant differences across geographical sectors, too. Children in the estates seem to be consistently worst off in both 1993 and 2000. The proportion of reduction in IMR is only 22% while it was 28% for either the rural and urban sectors. By year 2000, the IMR of estate sector was two to three times that of those in other areas in Sri Lanka. It was two times that of Maldives and almost similar to that of Indonesia (Figure 7.1.14).

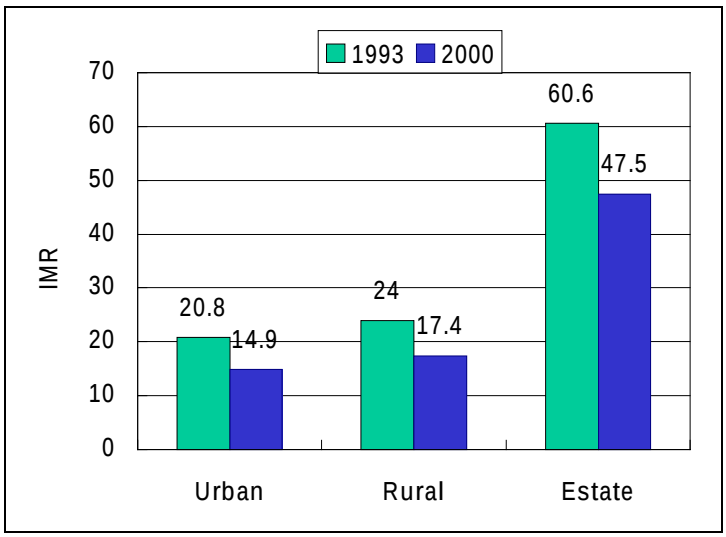
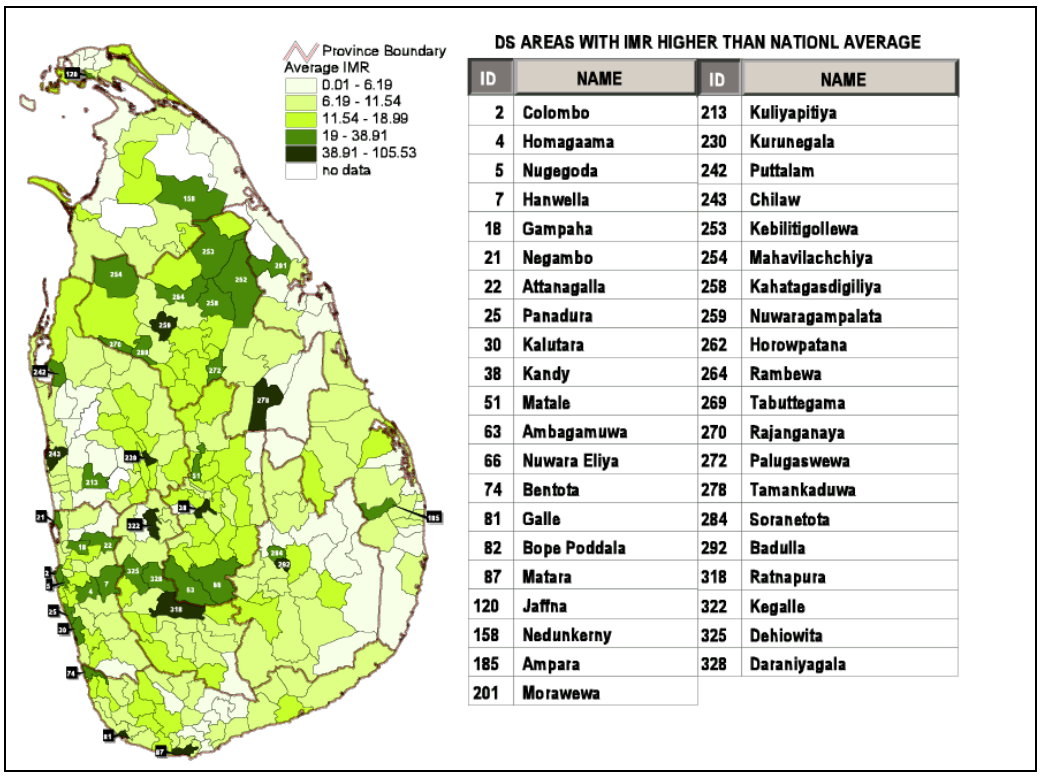


Figure 7.1.14 Infant Mortality Rates in Urban, Rural & Estate Areas, 1993 & 2000

Source: Annual Health Bulletin 2001.

The specific pockets of worst off localities with poor IMR are in 41 Divisional Secretary Areas (Figure 7.1.15). They represent about one in every eight DSAs in the country.



DS AREAS WITH IMR HIGHER THAN NATIONL AVERAGE

ID	NAME	ID	NAME
2	Colombo	213	Kuliyapitiya
4	Homagaama	230	Kurunegala
5	Nugegoda	242	Puttalam
7	Hanwella	243	Chilaw
18	Gampaha	253	Kebilitigollewa
21	Negambo	254	Mahavilachchiya
22	Attanagalla	258	Kahatagasdigiliya
25	Panadura	259	Nuwaragampalata
30	Kalutara	262	Horowpatana
38	Kandy	264	Rambewa
51	Matale	269	Tabuttegama
63	Ambagamuwa	270	Rajanganaya
66	Nuwara Eliya	272	Palugaswewa
74	Bentota	278	Tamankaduwa
81	Galle	284	Soranetota
82	Bope Poddala	292	Badulla
87	Matara	318	Ratnapura
120	Jaffna	322	Kegalle
158	Nedunkerny	325	Dehiowita
185	Ampara	328	Daraniyagala
201	Morawewa		

Figure 7.1.15 Infant Mortality Rates by Divisional Secretary Areas, 1994-1996

Source: Annual Health Bulletin 2000.

7) 76% of Infant Deaths are due to Neonatal Deaths

The key to the further reduction of IMR is in the prevention of deaths during the first four weeks of a child's life. Figure 7.1.16 demonstrates that whereas neonatal deaths account only for 54% of infant deaths in 1945, by 1996 the percentage rose to 76% already. Since 1991, the neonatal mortality rates have remained mostly in the 13 per 1,000 live births level. There is hardly any progress in this area.

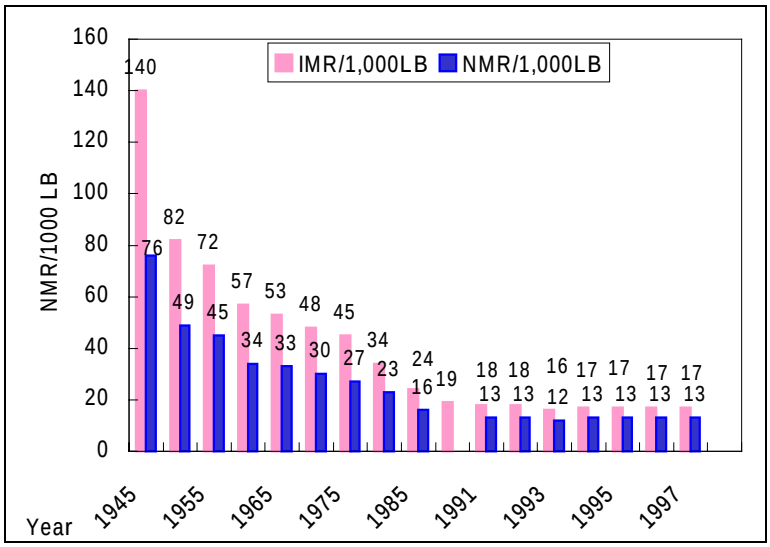


Figure 7.1.16 Infant Mortality Rates by Divisional Secretary Areas, 1994-1996

Source: Annual Health Bulletin 2000.

8) Some IMR Risk Factors

Like in experiences in other countries, infants in Sri Lanka who are at higher risk are those with mothers who gave birth at relatively young or older age and have had no or limited schooling (Figure 7.1.17). The IMR seems to be higher also among infants who are first born, born after their mothers have had four or more pregnancies, and born within less than two years after the previous one (Figure 7.1.18).

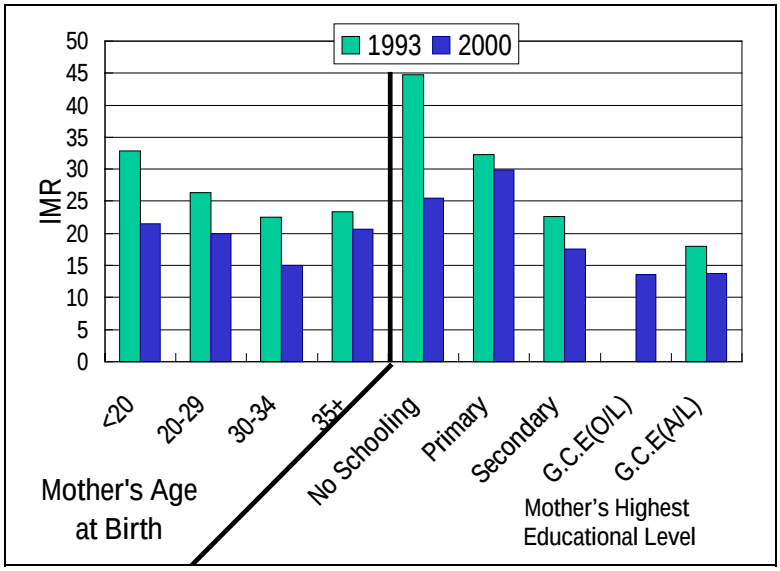


Figure 7.1.17 Infant Mortality Rate & Mother's Age & Schooling

Source: Annual Health Bulletin 2000.

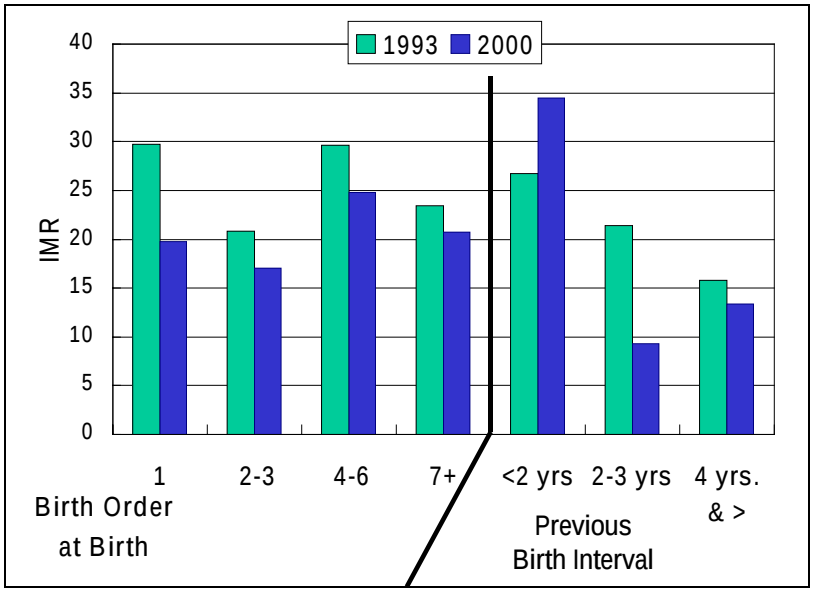


Figure 7.1.18 Infant Mortality Rate and Birth Spacing

Source: Annual Health Bulletin 2000.

(3) LIFE EXPECTANCY AND EQUALITY OF CHILD SURVIVAL

Two relatively new indicators are used in this sub-section. The traditional life expectancy has been modified by the WHO to account for a person's quality of life. The proposed indicator is called

disability-adjusted life expectancy (DALE). Equality of child survival, the second indicator being advocated by the WHO, is a derivative of under-five mortality rate but it is also an attempt to capture another equally important concept, that is, providing similar opportunities for all children. It is invariably an indicator of equity but is presented in this section together with DALE because of their close linkage. Figure 7.1.19 shows that the ranks of a state with respect to DALE and equality of child survival change in the same direction and more or less the same degree.

Out of 191 member states of the WHO, Sri Lanka ranks 76th when it comes to the disability-adjusted life expectancy (DALE) and 80th to reducing the probability of dying of children under the age of five. It is far ahead of Maldives, the country in South Asia with the second best DALE with a rank of 130, and Bangladesh, the country with a rank of 125 that is the second best equality of health outcome indicator in the region. Sri Lanka's ranks for both indicators are half of the ranks of its worst off neighbours. Nepal is ranked 142 for DALE and Pakistan 183 for equality of child survival.

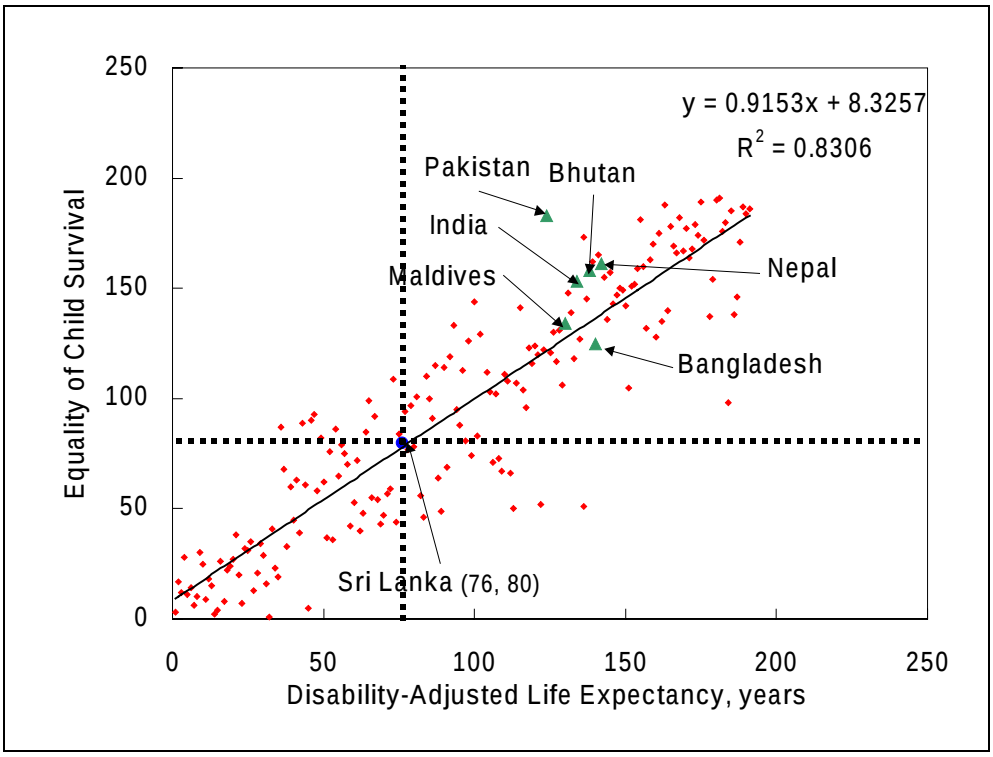
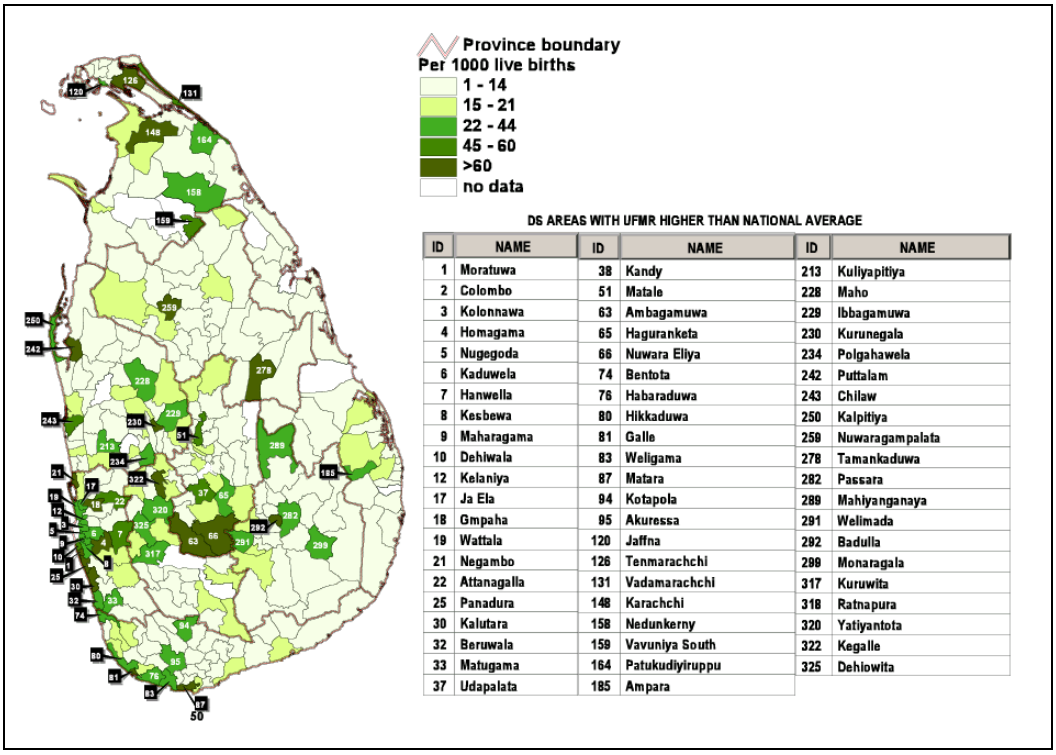


Figure 7.1.19 Disability-Adjusted Life Expectancy and Equality of Child Survival in WHO Member States, 1997 estimates

Source: WHO, WHR 2000.

Although Sri Lanka has achieved significant gains when improving health of children under the age of five years, certain areas in the country have been left behind. About one out of every five Divisional Secretary Areas (DSAs) has under-five mortality rates higher than the national average (Figure 7.1.20). Interestingly, 29 DSAs have both IMR and UFMR that are worse and these are the following: Colombo, Homagawa, Nugegoda, Hanwella, Gampaha, Negambo, Attanagalla, Panadura, Kalutara, Kandy, Matale, Ambagamuwa, Nuwara Eliya, Bentota, Galle, Matara, Jaffna, Nedunkerny, Ampara, Kuliyapitiya, Kurunegala, Puttalam, Chilaw, Nuwaragamapalata, Tamankaduwa, Badulla, Ratnapua, Kegalle, and Dehiowita.



DS AREAS WITH UFMR HIGHER THAN NATIONAL AVERAGE

ID	NAME	ID	NAME	ID	NAME
1	Moratuwa	38	Kandy	213	Kuliyapitiya
2	Colombo	51	Matale	228	Maho
3	Kolonnawa	63	Ambagamuwa	229	Ibbagamuwa
4	Homagama	65	Haguranketa	230	Kurunegala
5	Nugegoda	66	Nuwara Eliya	234	Polgahawela
6	Kaduwela	74	Bentota	242	Puttalam
7	Hanwella	76	Habaraduwa	243	Chilaw
8	Kesbewa	80	Hikkaduwa	250	Kalpitiya
9	Maharagama	81	Galle	259	Nuwaragampalata
10	Dehiwala	83	Weligama	278	Tamankaduwa
12	Kelaniya	87	Matara	282	Passara
17	Ja Ela	94	Kotapola	289	Mahiyanganaya
18	Gmpaha	95	Akuressa	291	Welimada
19	Wattala	120	Jaffna	292	Badulla
21	Negambo	126	Tenmarachchi	299	Monaragala
22	Attanagalla	131	Vadamarachchi	317	Kuruwita
25	Panadura	148	Karachchi	318	Ratnapura
30	Kalutara	158	Nedunkerny	320	Yatiyantota
32	Beruwala	159	Vavuniya South	322	Kegalle
33	Matugama	164	Patukudiyiruppu	325	Dehiowita
37	Udapalata	185	Ampara		

Figure 7.1.20 Under-Five Mortality Rates by Divisional Secretary Areas 1994-1996

Source: Annual Health Bulletin 2000.

7.2 EQUITY IN HEALTH

What is equity in health? "Equity is essentially about fairness, and implies that the most vulnerable and needy groups within a society require access to greater resources than those communities that are more robust. In relation to health, such an approach is intended to improve the health of the most vulnerable at a faster rate than those whose health status is 'better', thereby reducing the gap."[5] In this concept, the three operational terms are fairness, access to greater resources for special groups and reducing the gap.

Equity is an ethical principle; it is closely related to human rights principles. Why should health systems then be concerned with equity? Equity in health is important because "inequities in health systematically put groups of people who are already socially disadvantaged (for example, by virtue of being poor, female, and/or members of a disenfranchised racial, ethnic, or religious group) at further disadvantage with respect to their health; health is essential to well-being and to overcoming other effects of social disadvantage".[6]

In the Health Master Plan Study, three sub-types of equity are considered:

- Equity in the burden of disease/condition (or health outcome);
- Equity in the burden of financing; and
- Equity in accessing and utilising health resources (i.e., health services, facilities, human resources, drugs).

Equity in health outcome has been elaborated already in the previous section focusing on equity across gender, age, and geographical areas. This section examines the remaining two sub-types.

When it comes to equity in the burden of disease/condition and equity in benefits, the three operational terms mentioned in the first paragraph of this section apply directly. Because there are some groups that are disadvantaged when it comes to having poorer health status and access to benefits, the situation demands fairness for what are due them and providing them better access so as to reduce the gaps. However, the equity concept needs re-translation when it comes to the burden of financing. In this case, the gold standard is not minimising the differences among groups; instead; the concept of equity implies that payment for health should be according to people's ability to pay.

(1) EQUITY IN THE BURDEN OF FINANCING

Overall Fairness in Financing: 4th of 7 South-Asian Countries

The per capita total health expenditure of Sri Lanka ($77 at international dollars) is relatively comparable to that of India ($84), Bhutan ($82), Pakistan ($71) and Bangladesh ($79) as shown in Figure 7.2.1. However, it is a lot lower than that of Maldives ($248) and higher than that of Nepal ($41). The total health expenditure is 3.0% of the GDP, which is the lowest in South Asia.

Among South-Asian countries, Sri Lanka ranks only fourth when it comes to equitably distributing the burden of financing across households. It is ahead of Bhutan and Nepal only. It is worthy to note at this juncture that Dorabawila et al. from the Institute of Policy Studies of Sri Lanka raised some concerns about fairness in financing as a narrow concept of equity and reliability of household surveys in

[5] The Equity Gauge: An Approach to Monitoring Equity in Health and Health Care in Developing Countries. Report of a Meeting held in South Africa, August 7 to 20, 2000.
[6] P. Braveman, and S. Gruskin, *Defining Equity in Health, Journal of Epidemiology and Community Health* (2003), 57(4), 254-8.

generating data for inter-country comparisons.[7] Inasmuch as equity in health outcomes are discussed in the previous section and equity in access or use of services and resources are in the next subsection, there is still room for using the concept of fairness in financing as one of the indicators for assessing equity in health. The findings of the WHO is definitely not the final verdict but may serve as the starting point for further deliberation, research and action to promote the various dimensions of equity.

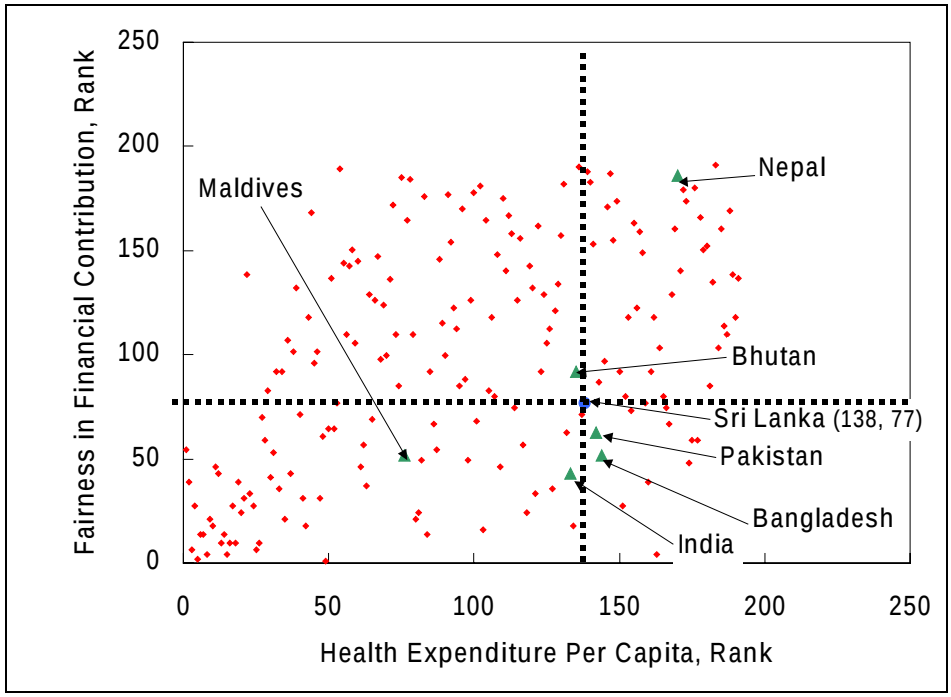


Figure 7.2.1 Equity in Financing among 191 WHO Member States, Estimates for 1997

Source: World Health Report 2000.

Another study on Equity in Financing was conducted by the Institute of Policy Studies and reported by Somanathan.[8] It supported the findings of the WHO that indeed Bangladesh is more progressive than Sri Lanka when it comes to the total payments for health care (Figure 7.2.2). A word of caution is in order. The rankings of some Asian countries based on the Kakwani index for progressivity is different from those in the WHR 2000 (Table 7.2.1). Indeed there is a need to come up with a consensus on the concept and measurement of equity. It is also possible that, because equity is primarily an ethical principle, divergence in analytical approaches is inevitable.

[7] T. Dorabawila, et.al., *WHO Fairness in Financing Study: Estimates for Sri Lanka 1995/96 using WHO Methodology* (Institute of Policy Studies of Sri Lanka, February 2001).

[8] A. Somanathan, *Equity Performance of Asian Health Systems in Financing: Incorporating Equity Analysis into National Health Accounts*.

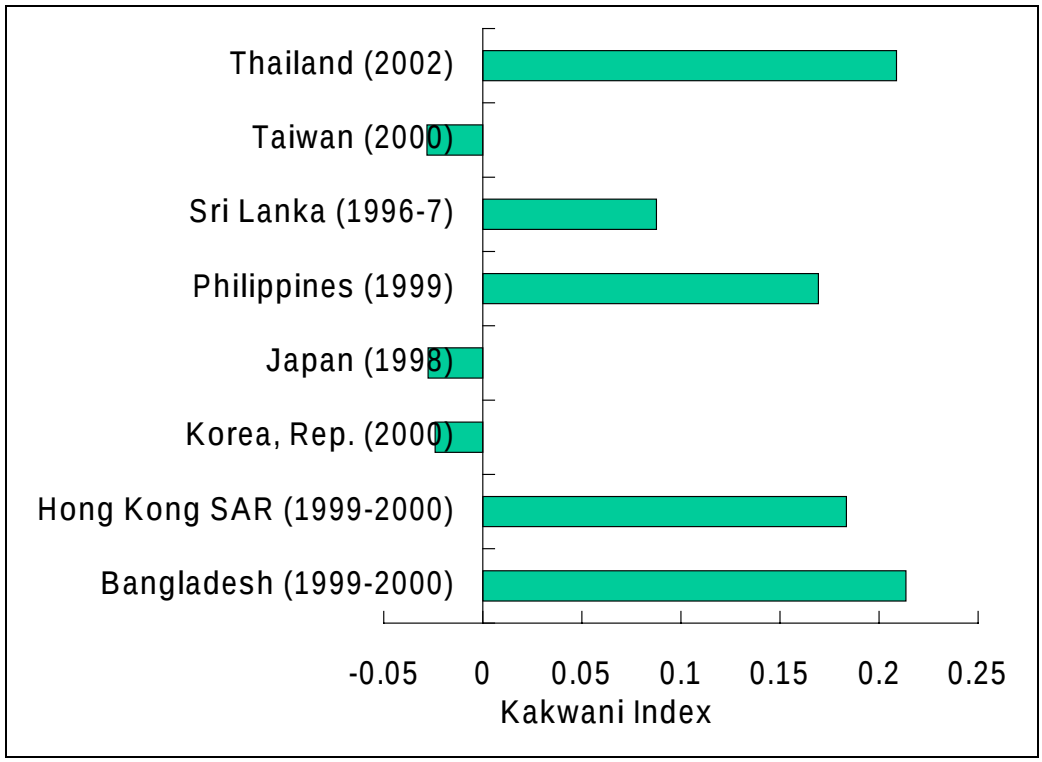


Figure 7.2.2 Equity in Financing among Some Asian Territories/States

Source: Somanathan, A. *Equity Performance of Asian Health Systems in Financing*: Incorporating Equity Analysis into National Health Accounts.

Table 7.2.1 Comparison of Ranking of Some Asian Territories/States according to Equity in Health Financing

Territories/States	World Health Report 2000 (ranking compared to 191 member states)	Institute of Policy Studies of Sri Lanka (Figure in parenthesis is the Kakwani Index)
Bangladesh	51.5	1 (0.2133)
Hong Kong SAR		3 (0.1833)
Korea	53	6 (-0.0239)
Japan	9.5	7 (-0.0278)
Philippines	129	4 (0.1695)
Sri Lanka	77	5 (0.0879)
Taiwan		8 (-0.0284)
Thailand	129	2 (0.2086)

Source: WHO, WHR 2000 and Somanathan, A. Equity Performance of Asian Health Systems in Financing: Incorporating Equity Analysis into National Health Accounts.

Equity in Government Financing

The government, through taxes, is estimated to have financed close to half (49%) of the total health expenditure in 1997 (Figure 7.2.3). If that is the case, therefore, then two questions arise. Is the government taxation system equitable? Has spending for health been equitable?

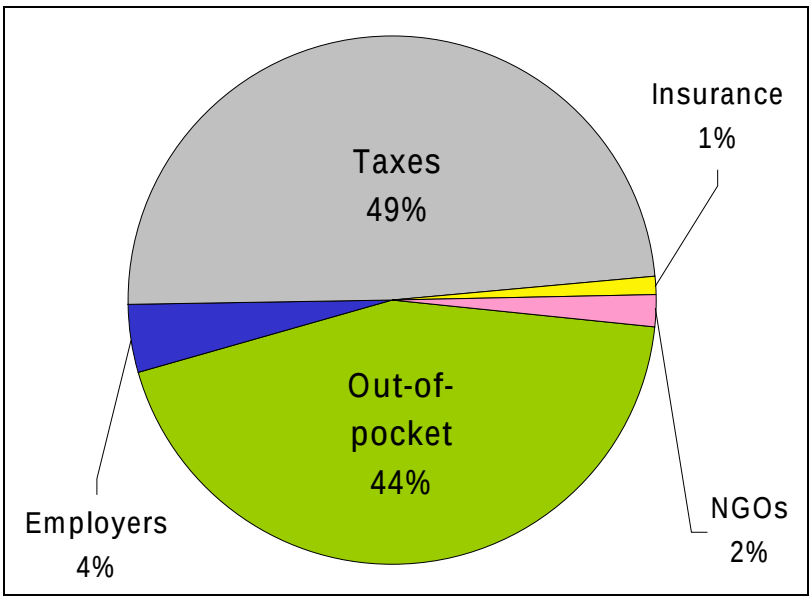


Figure 7.2.3 Share of National Health Expenditure, 1997

Source: Ravi Ranan-Eliya, Presentation during Health Financing Seminar organised by the MoH and JICA, 7-8 March 2003.

1) Resource Generation: Direct Taxation is the Most Progressive; only 17% of Taxes for Health Services were from Direct Taxes in 1995/96

Somanathan's analysis of the progressivity of five payment schemes revealed several interesting points (Figure 7.2.4). Direct taxes are always and the most progressive among all categories. Indirect taxes in Sri Lanka and Japan are regressive. Social insurance is not always progressive as in the cases of Taiwan, Japan and South Korea, where it was abandoned in 2002. When they operate, private insurance can be progressive. Except in Taiwan and Japan, direct payments are not necessarily regressive.

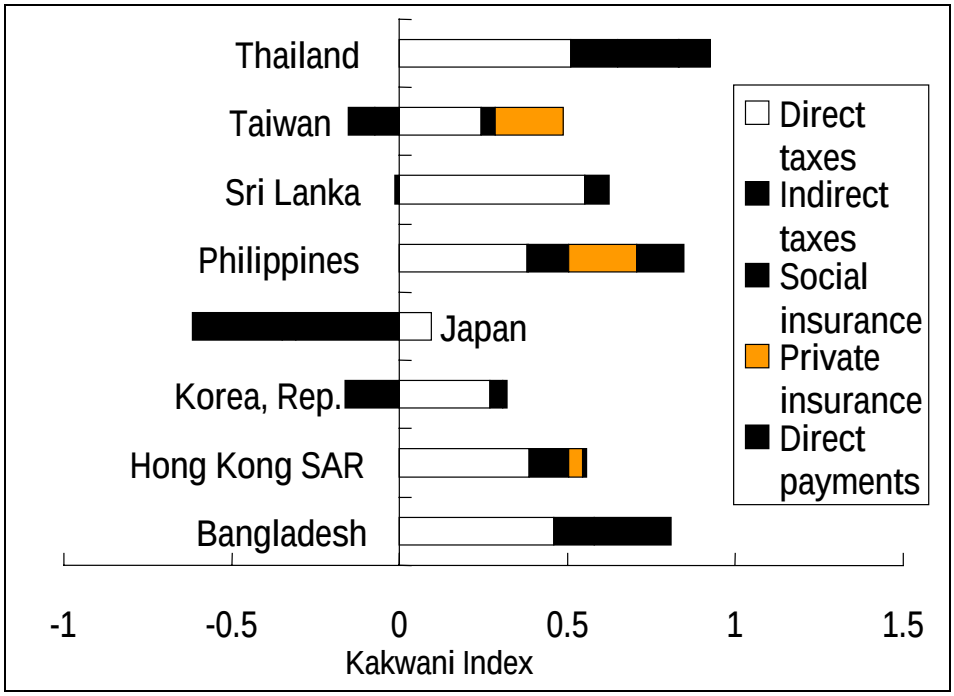


Figure 7.2.4 Comparison of Progressivity of Payment Schemes in Some Asian Territories/States

Source: Somanathan, A. Equity Performance of Asian Health Systems in Financing: Incorporating Equity Analysis into National Health Accounts.

Figure 7.2.5 is another representation of the taxation system in Sri Lanka. It shows the tax payments in terms of rupees and not as a share of payment. In 1995/96, 42% of all taxes, or Rs. 53.5 billion were generated from sales taxes, 14.2 from capital tax, 12.2 from tobacco taxes, 7.4 from income tax, and 5.9 from liquor tax. The richest decile paid 72% of the capital tax and 81% of the income tax. Ninety-five percent (95%) of the income tax and 91% of the capital tax were contributed by the top three richest deciles. On the other hand, the richest decile only paid a third of the sales and liquor taxes as well as a fifth only of the tobacco taxes.

Considering the results of Somanathan's study that direct taxes are consistently the most progressive among the payment schemes and indirect taxes in Sri Lanka are regressive, and of the Sri Lanka Health Income and Expenditure Survey that only 17% of the total taxes used for health services are from direct taxes and 57% are from indirect taxes, one may surmise, therefore, that indeed there seems to be room for further improving fairness in financing health in Sri Lanka.

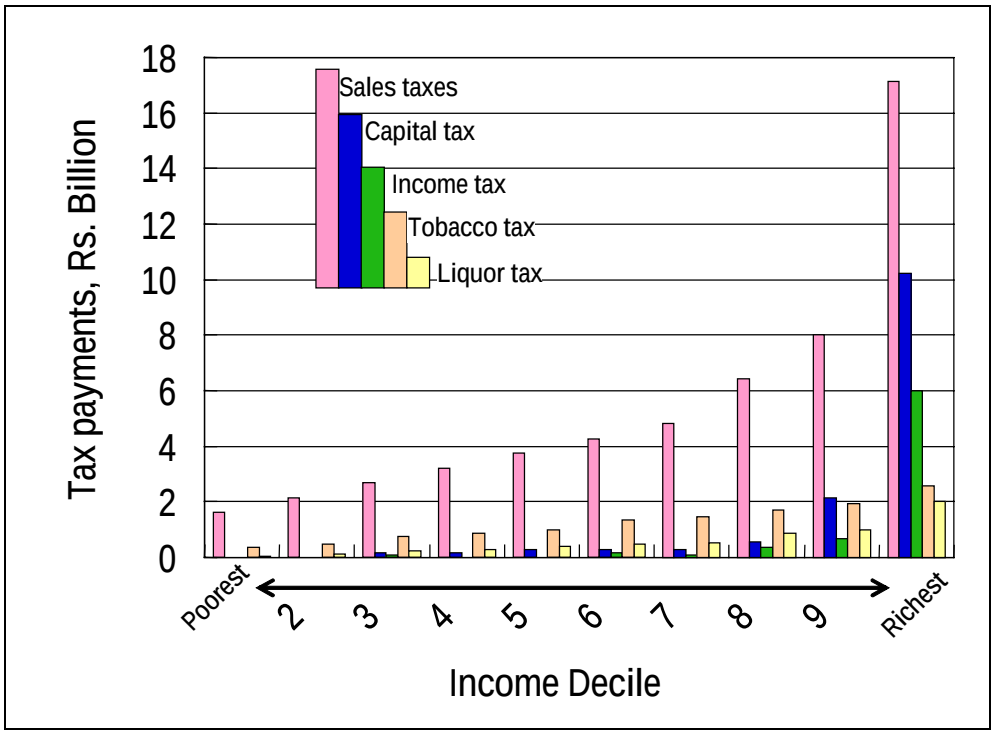


Figure 7.2.5 Share of Tax Payments by Income Decile

Source: Sri Lanka Household Income and Expenditure Survey 1995/96.

2) Are Government Subsidies Shifting Away from being Pro-Poor?

Figure 7.2.6 depicts the contrast between a pro-poor and pro-rich policy among selected countries. On one side are the countries that subsidises the poorest decile more than the richest decile and these are Sri Lanka in 1991, Jamaica and Malaysia. On the other side are the countries that spend more for the richest deciles and these are Brazil, Ghana, Indonesia, Vietnam, and Kenya.

Has Sri Lanka been consistently pro-poor since 1991 until the present? Has there been a re-allocation of subsidy? There has been no single study yet or a set of comparable studies that could help shed light on this issue. Nevertheless, Hsiao cited the studies of Alailima and Mohideen in 1983 to derive the incidence of public health spending in 1979. He used the 1991 World Bank-sponsored Household Health Expenditure Survey to estimate the 1992 figures. He estimated the 1996/97 incidence of government spending based on Consumer Finance Survey for that period. These estimates are reflected in Figure 7.2.7. Even if they are only indicative in

nature, could these estimates reflect a shift in the way government allocates its resources from being highly pro-poor to one that tends to be equity-neutral?

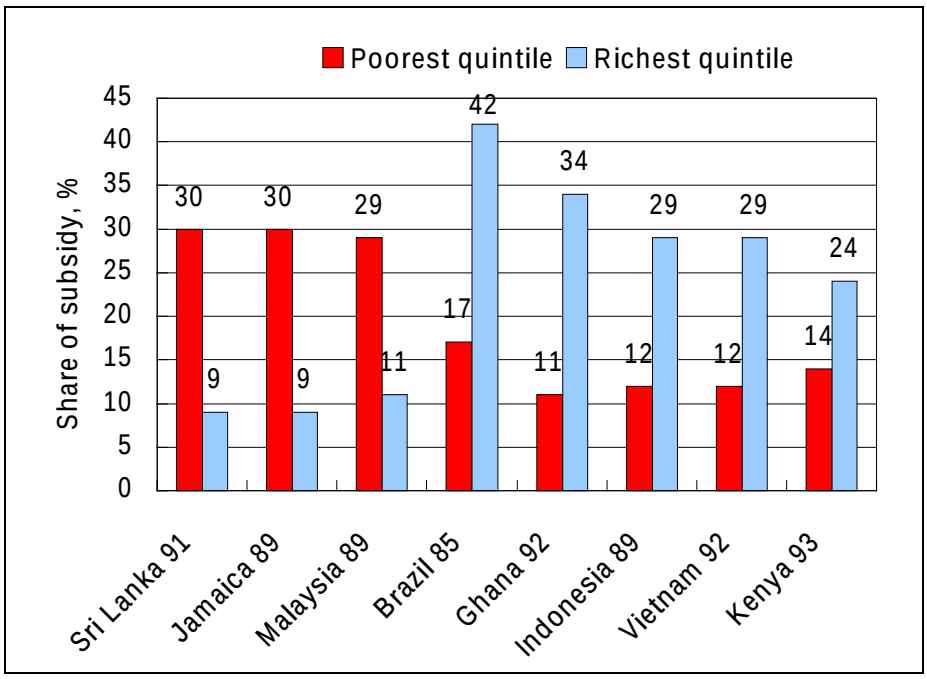


Figure 7.2.6 Share of Government Spending for Health in Selected Countries

Source: Hsiao, William with IPS Health Policy Programme, A Preliminary Assessment of Sri Lanka's Health Sector and Steps Forward, Cambridge: Harvard University, 2000.

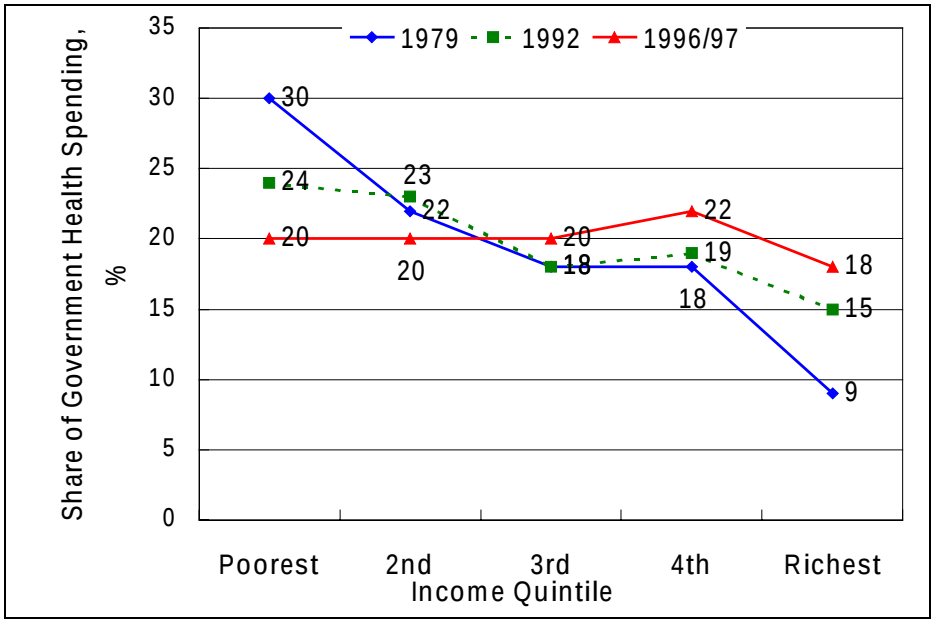


Figure 7.2.7 Shifting Trends in Shares of Government Spending for Health in Sri Lanka, 1979, 1992, 1996/7

Source: Hsiao, William with IPS Health Policy Programme, A Preliminary Assessment of Sri Lanka's Health Sector and Steps Forward, Cambridge: Harvard University, 2000.

3) Subsidising the Richest Urbanites and the Middle Classes in Rural & Estate Areas

Akin and Hutchinson[9] analysed government subsidy for curative services in 2000 (Figure 7.2.8). They seemed to have documented several interesting patterns. For one, overall, the middle quintiles appear to have benefited from the shift of government subsidy from the poorest quintile. This is more prominent particularly in the estate sector. While the richest quintile received the lowest subsidy overall and in other sectors, this is not the case in the urban areas. In fact, while in 1979 the poorest received 30% and the richest 9%, the scale tilted to the opposite direction in 2000 such that 32% of subsidy went to the richest and 13.4% to the poorest urbanites. Another loser in this area appears to be the middlemost quintile.

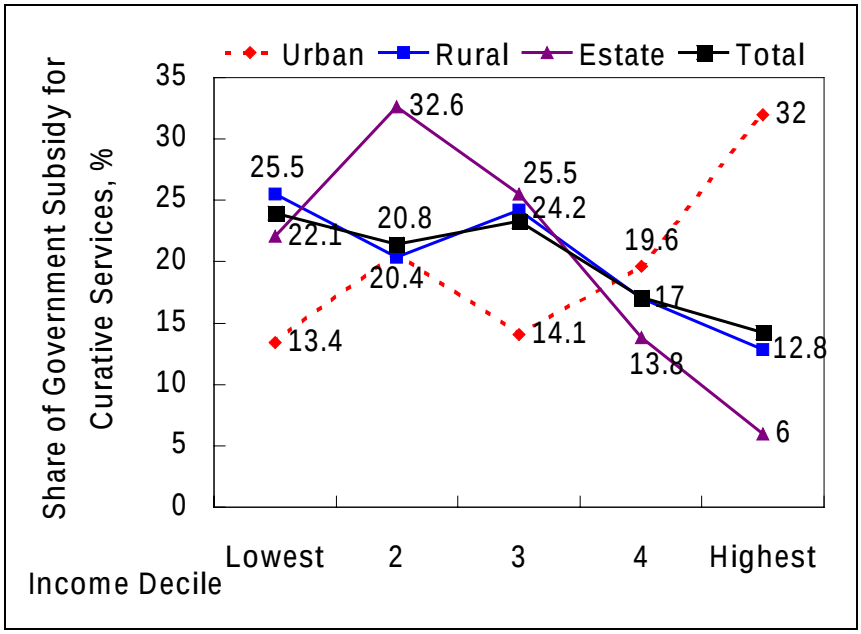


Figure 7.2.8 Share of Government Subsidy Based on Quintile Distribution of Curative Care Visits in Urban, Rural and Estate Areas 2000

Source: Akin, JS and PL Hutchinson. 2003. "Benefit-Incidence Analysis of Government Health Inputs in Sri Lanka, 1992 and 2000", Draft Report. .

4) Three Patterns in Distribution of Subsidy by Province

The provinces can be classified into three according to the distribution of government subsidies among income quintiles documented by Akin and Hutchinson. Type A provinces are essentially progressive and they include Central, Southern and Sabaragamuwa (Figure 7.2.9). The major beneficiaries of government subsidies in Type B provinces (i.e., North-Central, North-Western & Uva) are those in the middle class (Figure 7.2.10). The rich quintiles benefited the most in North-Eastern and most especially in Western provinces (Figure 7.2.11).

[9] J.S. Akin, and PL Hutchinson, *Benefit-Incidence Analysis of Government Health Inputs in Sri Lanka, 1992 and 2000: Draft Report* (Department of Economics, University of North Carolina at Chapel Hill and Department of International Health and Development School of Public Health and Tropical Medicine, Tulane University, 2003).

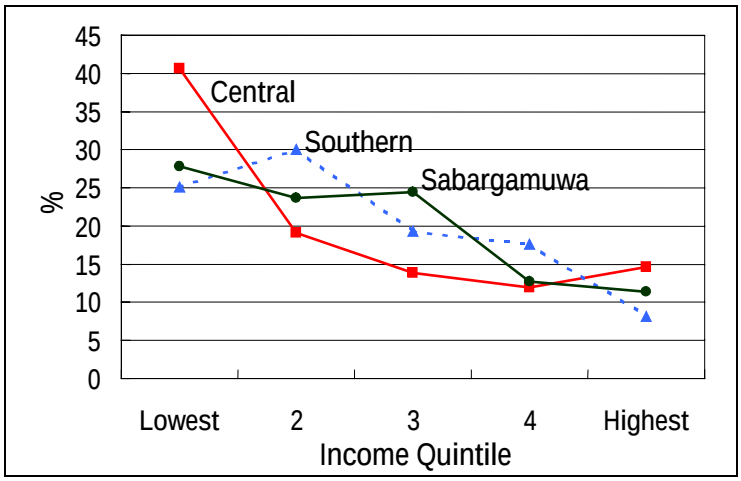


Figure 7.2.9 Type A - Share of Government Subsidy Based on Quintile Distribution of Curative Care Visits by Province, 2000

Source: Akin, JS and PL Hutchinson. 2003.

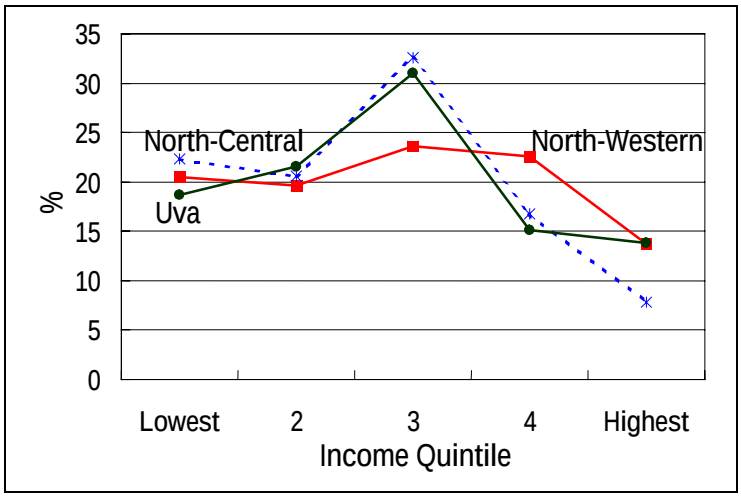


Figure 7.2.10 Type B - Share of Government Subsidy Based on Quintile Distribution of Curative Care Visits by Province, 2000

Source: Akin, JS and PL Hutchinson. 2003.

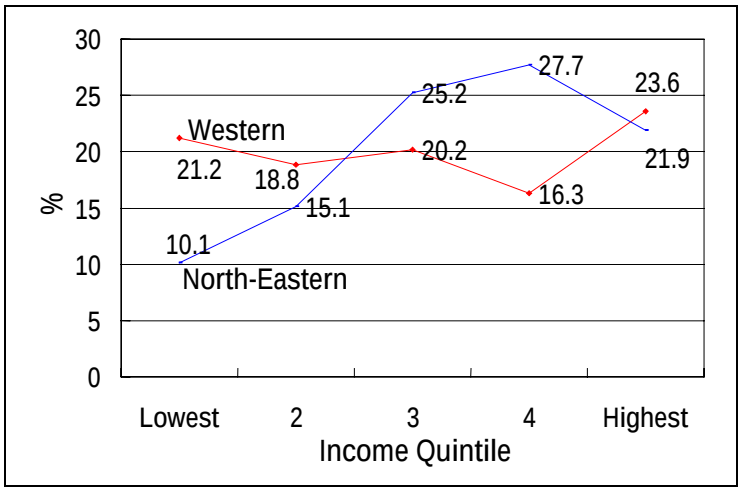


Figure 7.2.11 Type C - Share of Government Subsidy Based on Quintile Distribution of Curative Care Visits by Province, 2000

Source: Akin, JS and PL Hutchinson. 2003.

5) Poorest Quintile is the Biggest Loser

The Sri Lanka National Health Accounts data for 1996/97 seems to demonstrate also that the middle- and high-income groups receive comparable subsidies from the government (Figure 7.2.12). For inpatient services, in fact, the second highest quintile received the most from the government. If indeed the poorest quintile received 30% in 1979, then it is the biggest loser 17 years hence.

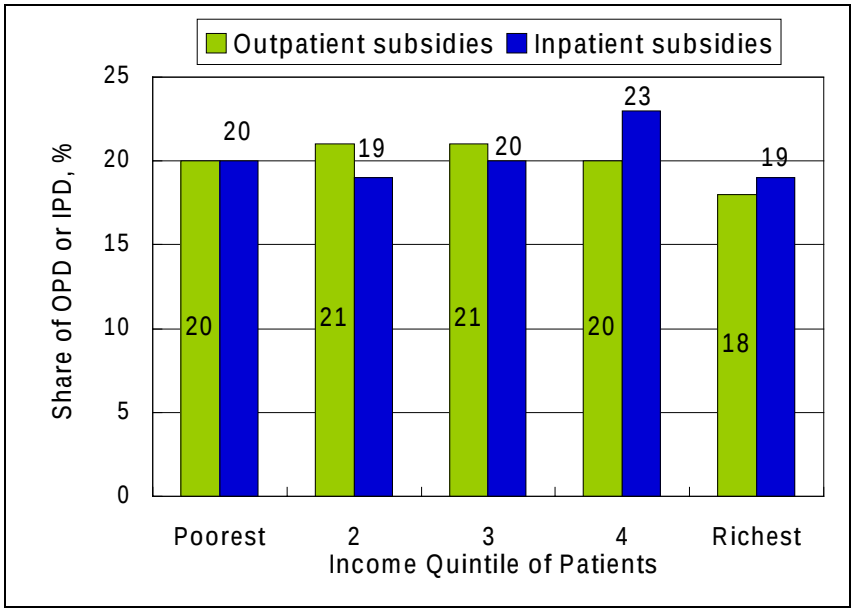


Figure 7.2.12 Distribution of Government Health Subsidies by Income Quintile

Source: Ravi Ranan-Eliya, Health Financing Seminar, MoH and JICA, 7-8 March 2003.

Equity in Household Financing or Out-of-Pocket Spending

1) Out-of-Pocket Spending is Not Highly Progressive

As described earlier, out-of-pocket mode of payment accounted for 44% of the total health expenditure in 1997. Compared to other forms of taxes, it is more progressive than generating revenue from tobacco and sales taxes (Figure 7.2.13). However, it is less progressive than using income, capital,[10] alcohol and motor taxes.

[10] Although not shown in the graph, the capital tax more or less simulates the progressivity of income tax.

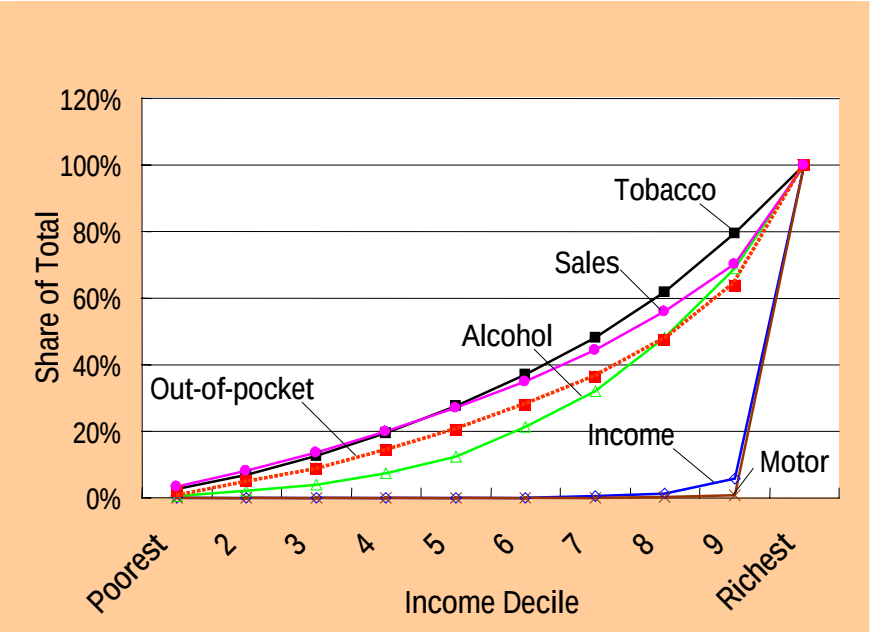


Figure 7.2.13 Progressivity of Out-of-Pocket Payments vs. Some Taxes in Sri Lanka, 1997

Source: Ravi Ranan-Eliya, Health Financing Seminar, MoH and JICA, March 7-8, 2003.

2) Out-of-Pocket for User Charges and Pay-Beds at SJGH

Households financing are also used to pay for user fees or pay-beds in some government hospitals. In Sri Lanka, the Sri Jayawardenapura General Hospital (SJGH) introduced user charges from all patients since it was established in 1984. Aside from its cost-recovery scheme being unable to generate even half of its total operating cost, the use of out-of-pocket expense in this situation may be working in favour of the rich. Figure 7.2.14 depicts the upward trends in the number of patients belonging to the top two richest income groups. The downward trend in the number of exempted patients may be because these patients are categorised as having monthly income of less than 1,500 rupees. However, it could also be because the poorest of the poor are actually being marginalised in the SJGH.

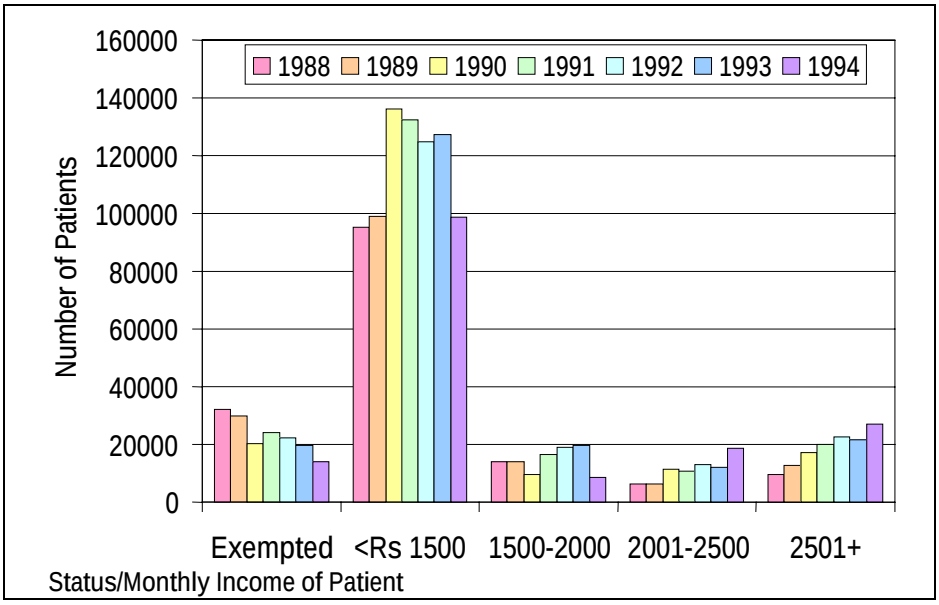


Figure 7.2.14 Number of Patients Admitted by Income Level, 1988-1994

Source: The University of Birminghan, The Role of Government in Adjusting Economies – Sri Lanka Reforming the Health Sector: Does Government Have the Capacity?

(2) EQUITY IN ACCESSING OR UTILISING SERVICES AND RESOURCES

Equity in Accessing Physical Facilities: Best in SEARO

Although there are differences in bed and facility to population ratio among districts (section 4.4), although there is no formal referral system that can facilitate transfer of patients and specimens to appropriate level of health facilities (section 3.7), physical access to health facilities in Sri Lanka is practically not a problem. The establishment of an extensive transportation network (section 2.1) and a number of health facilities (section 4.4) throughout the island support equity in access to physical facilities. In fact, Sri Lanka has the highest bed per population ratio not only in South-Asia but also among members of the SEARO (Figure 7.2.15).

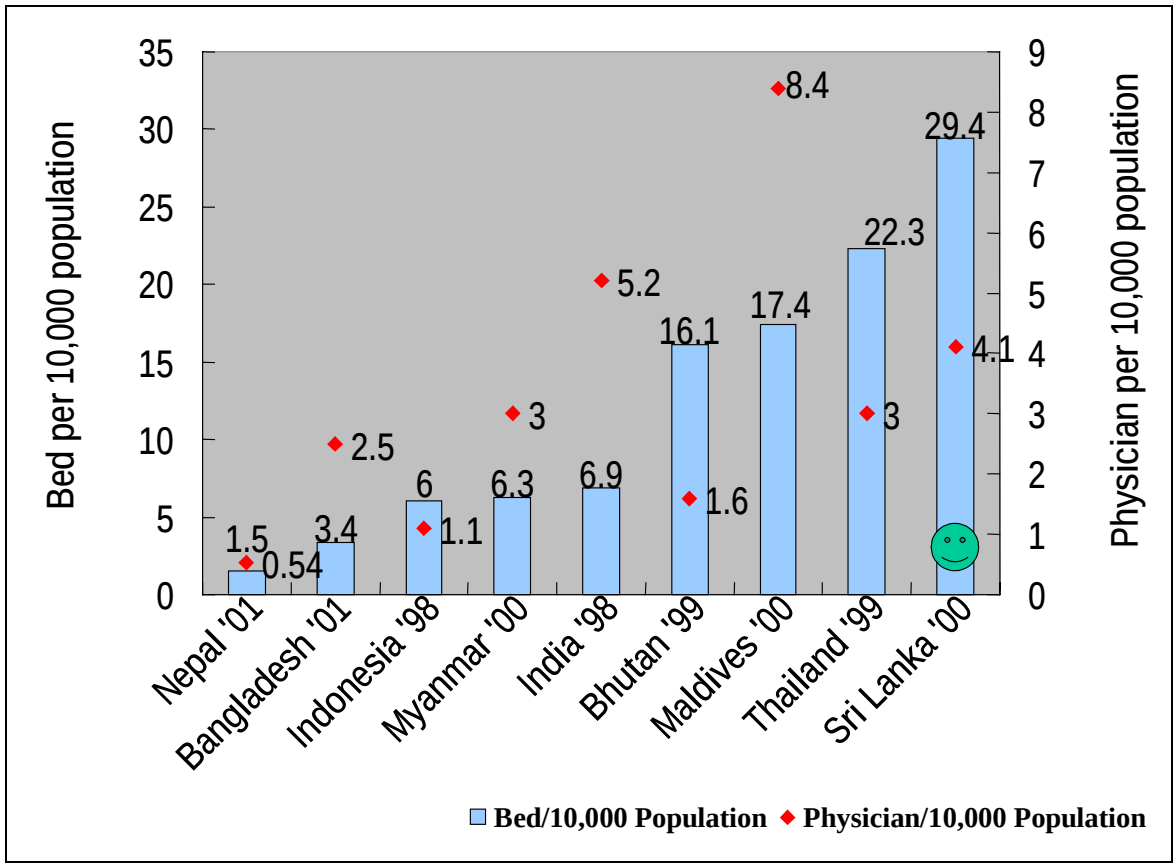


Figure 7.2.15 Bed and Physician per 10,000 Population in Sri Lanka and other Asian Countries
Source: SEARO

Equity in Accessing Human Resources: Limited mainly by Mal-distribution and partly by Inadequacies

Equity of access to human resources for health – herein lies a possible area for improvement. As Figure 7.2.15 illustrates, the physician per population ratio in Sri Lanka ranks third only next to Maldives and India. For a discussion on the mal-distribution of human resources, refer to section 4.1. In general, there seems to be limited equity among districts in the availability of all types of cadres. The differences among districts in the ratio of public health midwives to population seem to be the smallest. Nevertheless, this cadre is in short supply in Jaffna, Kilinochchi, Mullaitivu, Mannar, and Vavuniya (Figure 7.2.16).

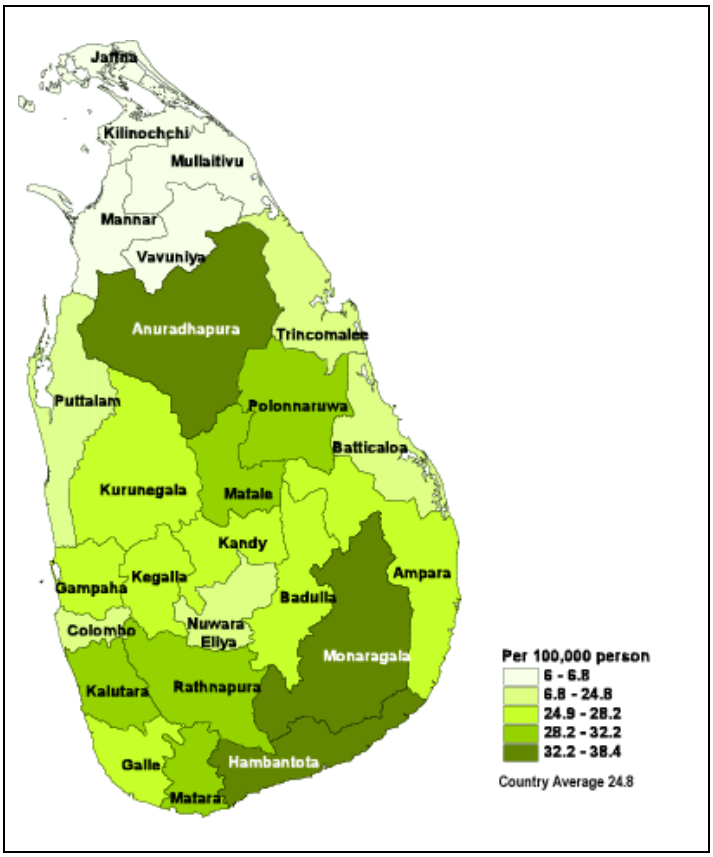


Figure 7.2.16 Public Health Midwives Per 100,000 Population by District, 2000
Source: Annual Health Bulletin 2000.

Equity in Utilising Services

Figure 7.2.17 can be interpreted in many ways. For one it reflects the health-seeking behaviours at a certain point in time. On the other hand, it may also provide the probabilities that these behaviours will be exhibited in the future. Nonetheless, it shows that the poor more than the rich do access government health facilities whether for outpatient or inpatient services. This finding is supported by that of the MoH-JICA Study No.1.11.

The KAP Survey had a sample of households with an average monthly income of Rs. 5,393 for all, Rs. 6,702 for urban, Rs. 5,383 for rural and Rs. 3,171 for the estate sector. The income levels of households that sought treatment from public allopathic sector are relatively lower than the levels of households who sought private allopathic treatment. While a household that used public allopathic outpatient care earned a monthly income of Rs. 4,674, this figure stands at Rs. 6,754, against 6,080, and 8,023 respectively for those who seek allopathic treatment from private outpatient providers, from private inpatient care and private outpatient care from public doctors. In the urban sector, the households that sought Ayurvedic treatment appear to be belonging to high-income brackets.

All these observations do imply that affordability of health services do influence utilisation. More importantly, they imply that the government health facilities do provide access to services for those who want and for those who can hardly afford.

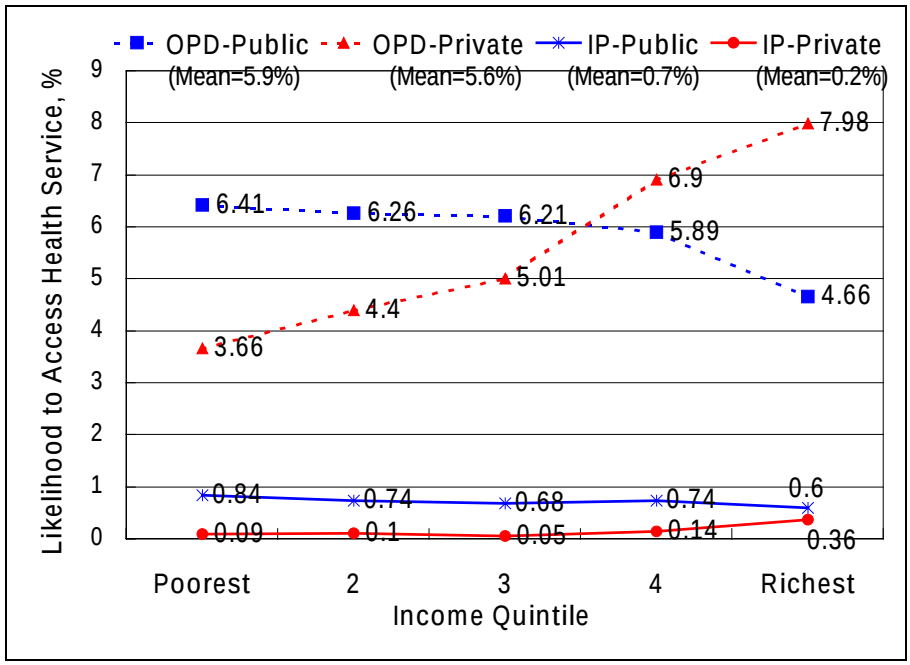


Figure 7.2.17 Likelihood to Access Health Services by Income Quintile, 1997

Source: Institute of Policy Studies of Sri Lanka

7.3 EFFICIENCY

The Harvard School of Public Health Professor Marc J. Roberts defines efficiency as the state of "using resources in the best possible way to achieve goals"[11]. He differentiated two types of efficiency: producing outputs at minimum costs (technical efficiency) and producing the right outputs to achieve the goals (allocative efficiency). The former type emphasises how things should be produced to meet a given objective (e.g. what is the least cost method of undertaking blood tests) while the latter what things are worthwhile to produce (e.g. should a screening programme be undertaken, how often should a test be undertaken). While achieving technical efficiency is mainly dependent on managers of health systems, that of allocative efficiency is more difficult because it is dependent on planners, regulators, financiers, and payers particularly when they are the potential losers.

Should assessment of a health system include efficiency? Should efficiency be incorporated in the vision of the Ministry of Health? Should it be one of the intermediate outcomes as proposed by Prof. Roberts because of its usefulness for planners and managers and because it is causally important in achieving philosophically important goals? Should efficiency be one of the major indicators of the implementation of the Health Master Plan?

In the British Journal of Medicine, Dr. Loewy expressed succinctly one of the root causes for some health professionals, politicians and policy-makers in Sri Lanka and other countries not being comfortable in using efficiency for evaluation of a health system, in general, and health programmes or interventions, in particular:

> "A physician who changes his or her way of practicing because of costs rather than purely medical considerations has indeed embarked on the "slippery slope" of compromised ethics and waffled priorities."[12]

Some health practitioners may be purists, meaning, they do espouse Loewy's assertion of pure medical considerations. In reality, however, many non-medical factors influence the practice of medicine in ensuring the health of individuals and groups of individuals. They include values and preferences of patients, interests of families, costs (time, suffering and finance) to every one in society, and competing interests for the time of health providers themselves.

Because health needs change, health expectations are insatiable, the options to respond to the needs and expectations are at times numerous and many of the options are beneficial, resources for health are not unlimited, therefore, choice cannot be avoided and making decisions are inevitable. Herein lies the importance of assessing the efficiency of health systems, institutions and interventions or programmes in Sri Lanka - when there are competing needs for resources and comparison are essential.

In this section, the assessment of efficiency will be in the three major areas:

- Intra-governmental health institutions;
- Inter-sector - Public vs. Private sectors; and
- Inter-country.

Although there are many production units in the Sri Lankan health system, the discussion will primarily focus on outpatient and inpatient services because mainly of constraints in information availability. The

[11] Roberts, Marc J. Intermediate Outcomes. Presentation for the Flagship Programme – Health Sector Reform and Sustainable Development. Washington: World Bank Institute. January 2003.
[12] Loewy, Erich H. New England Medical Journal. (1980). 302 (12): 697.

existing body of literature on efficiency often does not include information on preventive and promotive services as well as on laboratory services.

(1) INTRA-GOVERNMENT COMPARISON[13]

Outpatient Visits: Highest Mean Unit Cost in Teaching Hospital

Among government health facilities in the four districts (Colombo, Galle, Matale, and Polonnaruwa) surveyed in 1992, the lower level health facilities in general seem to cost less in providing OPD services (Figure 7.3.1). The average cost at the only provincial hospital in the survey, though, is lower than that at base hospitals. OPD visits in MH and Central Dispensaries are a little more expensive than in peripheral units and rural hospitals.

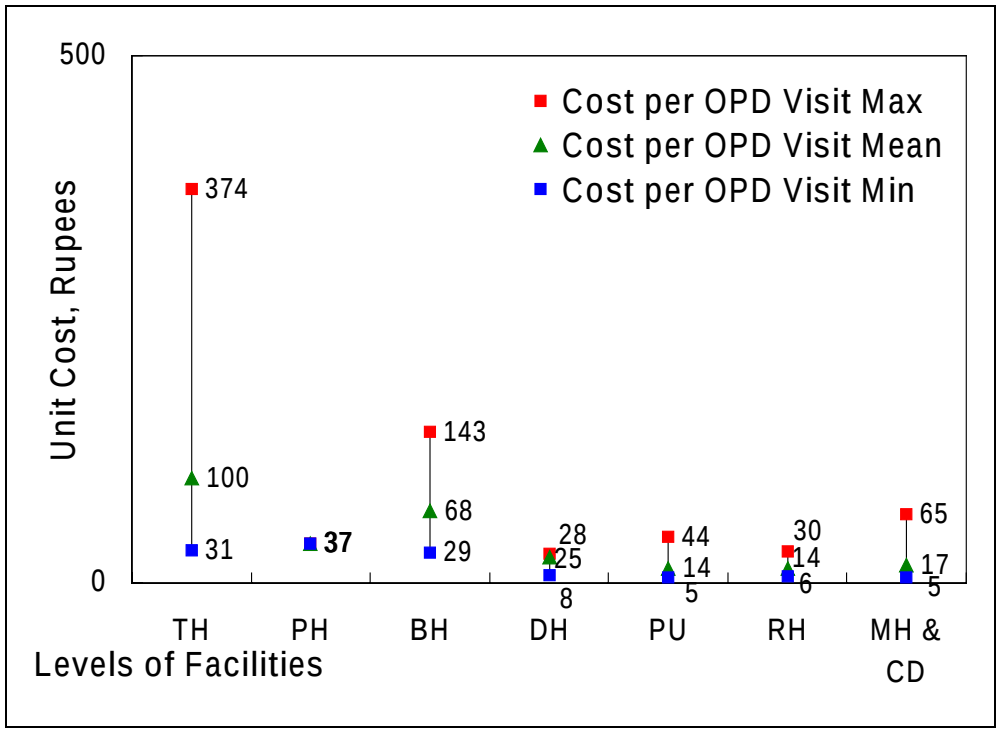


Figure 7.3.1 Mean, Maximum and Minimum Unit Costs of OPD Visits in Public Sector Facilities at Different Levels in Four Districts, 1992

Note: OPD=Out-Patient Department; TH=Teaching Hospital, PH=Provincial Hospital, BH=Base Hospital, DH=District Hospital, PU=Peripheral Unit, RH=Rural Hospital, MH&CD= Maternity Home & Central Dispensary

Source : Hsiao, William with IPS Health Policy Programme. A Preliminary Assessment of Sri Lanka Health Sector and Steps Forward. Cambridge: Harvard University. 2000.

The range in the cost per OPD visit varies remarkably. Among teaching hospitals, the difference between the most and least expensive is 343 Rs., base hospitals is 114 Rs, and maternity homes and central dispensaries is 60 Rs. On the contrary, the costs of OPD visits to district hospitals vary minimally by 20 Rs only, peripheral units by 39 Rs and rural hospitals by 24 Rs. The disparity in the cost within the same level of health facility could be attributed partly to the nature of diseases or conditions seen but it could also be a reflection of relative efficiency.

Outpatient Visits: Rate Per District Population Generally Higher in Lower Level Facilities

[13] For discussion on government/public and private allocation of financial resources, refer to Section 4.5. Analysis of efficiency in the management of public health programmes is not included in this section because of insufficient information.

Figure 7.3.2 reflects the rates of OPD visits to different health facilities in all the districts in Sri Lanka. It shows at least five important points regarding the performance among different levels of health institutions.

One, among the 7 districts where a teaching hospital is the highest-level health facility, only Colombo has a teaching hospital with the highest rate of OPD visit compared to other levels of facilities. The base hospitals have the highest rates in Gampaha and district hospitals in Kandy, Galle, Batticaloa, Kurunegala, and Jaffna.

Two, among six districts with provincial hospital being the highest-level facility, only Polonnaruwa has this facility with the highest rate for OPD visit. Despite the presence of provincial hospitals in Kalutara, Matara, Badulla, and Ratnapura, patients gravitated toward district hospitals. In Anuradhapura, the rural hospitals were the ones most frequently visited for consultation.

Three, among the 10 districts with base hospital as the highest-level health facility, seven (i.e. Matale, Mannar, Vavuniya, Ampara, Puttalam, Kegalle, and Trincomalee) have these hospitals as the most often visited by patients. People in Nuwara-Eliya, Hambantota and Moneragala sought OPD treatment mainly from district hospitals.

Four, the highest-level facility in Kilinochi and Mullativu is a district hospital, which also has the highest rates of OPD visits. Although it has a base hospital, rural hospital, maternity home and central dispensary, Vavuniya does not have a district hospital.

Five, if the rate of OPD visits is to be one of the measures of performance and, consequently, of efficiency, then it seems the highest-level health facilities within districts do not necessarily attract the most number of patients. In fact, the district hospitals account for many of the OPD visits in 14 out of 25 districts. If one considers both the district and rural hospitals, then **the number of districts with primary level facilities as the one with the best performance in terms of OPD visit will be 15 out of the 25 districts**.

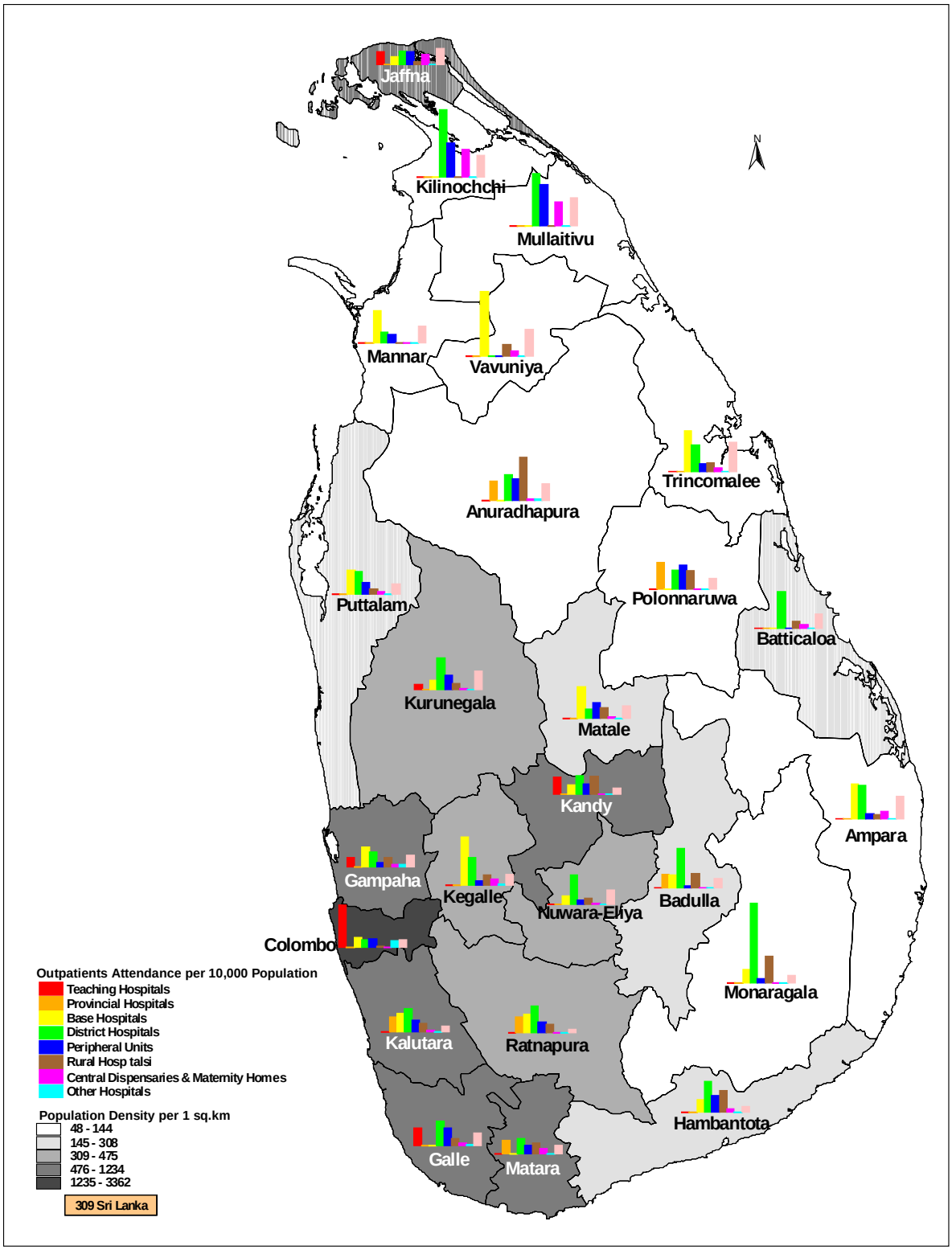


Figure 7.3.2 Out-Patient Department Attendance or Consultations Per Population by Level of Facility and District, 2000

Source: Annual Health Bulletin 2000.

Care of Inpatients: Higher Mean Unit Costs in Teaching Hospitals, Maternity Homes & Central Dispensaries

The average cost of taking care of an inpatient is cheapest in base hospitals, which have the second highest average number of inpatients (Figure 7.3.3). Peripheral units, rural hospitals and district hospitals appear to be cost-efficient, too, even if the average number of inpatients is low.

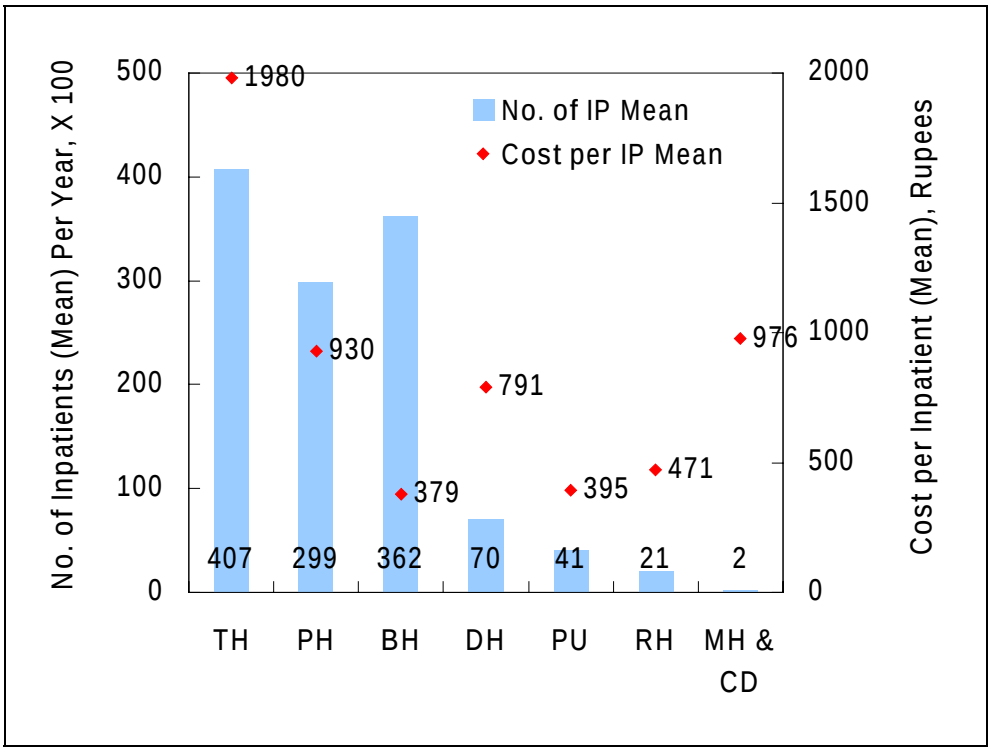


Figure 7.3.3 Mean Number of Inpatients Per Year and Cost Per Inpatient in Public Sector Facilities at Different Levels in Four Districts, 1992

Note: IP=In-patient; TH=Teaching Hospital, PH=Provincial Hospital, BH=Base Hospital, DH=District Hospital, PU=Peripheral Unit, RH=Rural Hospital, MH&CD= Maternity Home & Central Dispensary

Source: Hsiao, William with IPS Health Policy Programme. A Preliminary Assessment of Sri Lanka Health Sector and Steps Forward. Cambridge: Harvard University. 2000.

At the other end of the efficiency scale are the teaching hospitals, maternity homes and central dispensaries, and provincial hospitals. The high number of inpatients was not enough to offset the high cost to maintain teaching and provincial hospitals. The financial burden of taking care of two hundred inpatients on the average per year at maternity homes and central dispensaries is two and a half times than if these patients were confined in base hospitals. While patients admitted at lower-level facilities could generally be admitted at higher-level facilities, the converse is not always true. As such, if the higher financial burden in teaching hospitals could be due to more complicated cases that could not be taken cared of adequately in lower-level facilities; then the cost could be justified. However, if there are many simple cases that occupy teaching hospital beds, then that is debatable. Unfortunately, a study on appropriateness of admissions has yet to be done in Sri Lanka.

Comparing the performance within specific levels of health facilities, Figure 7.3.4 depicts a wide range in the average number of inpatients per year at teaching hospitals only where the maximum recorded is 139,100 and the minimum being 1,800. Some peripheral units, rural hospitals, maternity homes and central dispensaries had no inpatients.

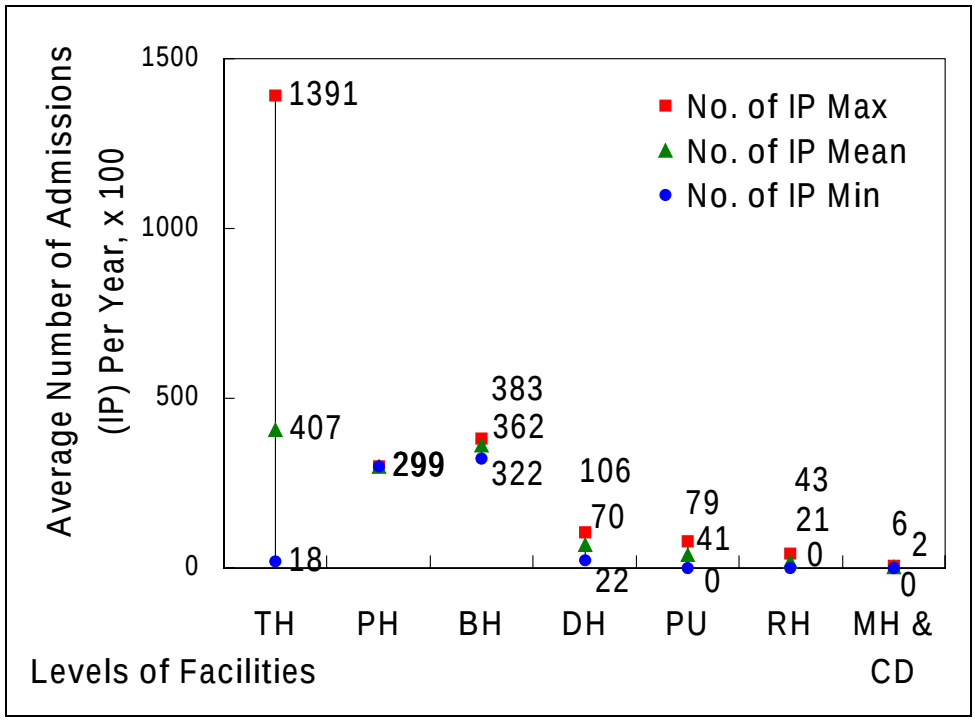


Figure 7.3.4 Mean, Maximum and Minimum Number of Inpatients Per Year in Public Sector Facilities at Different Levels in Four Districts, 1992

Note: IP=In-patient; TH=Teaching Hospital, PH=Provincial Hospital, BH=Base Hospital, DH=District Hospital, PU=Peripheral Unit, RH=Rural Hospital, MH&CD= Maternity Home & Central Dispensary

Source: Hsiao, William with IPS Health Policy Programme. A Preliminary Assessment of Sri Lanka Health Sector and Steps Forward. Cambridge: Harvard University. 2000.

While the range in the number of inpatients did not vary much among health facilities belonging to the same level, this is not the case with respect to the cost per inpatient. In teaching hospitals, district hospitals, maternity homes and central dispensaries, the differences between the maximum and minimum unit costs (Figure 7.3.5) are 4052, 6314 and 1586 Rs, respectively. Although the unit cost per inpatient can be used as a rough index of efficiency, one word of caution is in order. In Sri Lanka, the standard package of services per level of health facility has yet to be established. To date, there is variation in the capabilities in terms of bed capacity (Table 4.4.1) as well as in the availability of human resources and services that can be provided even among health facilities belonging to the same level. This variation may partly account for the wide ranges in unit costs.

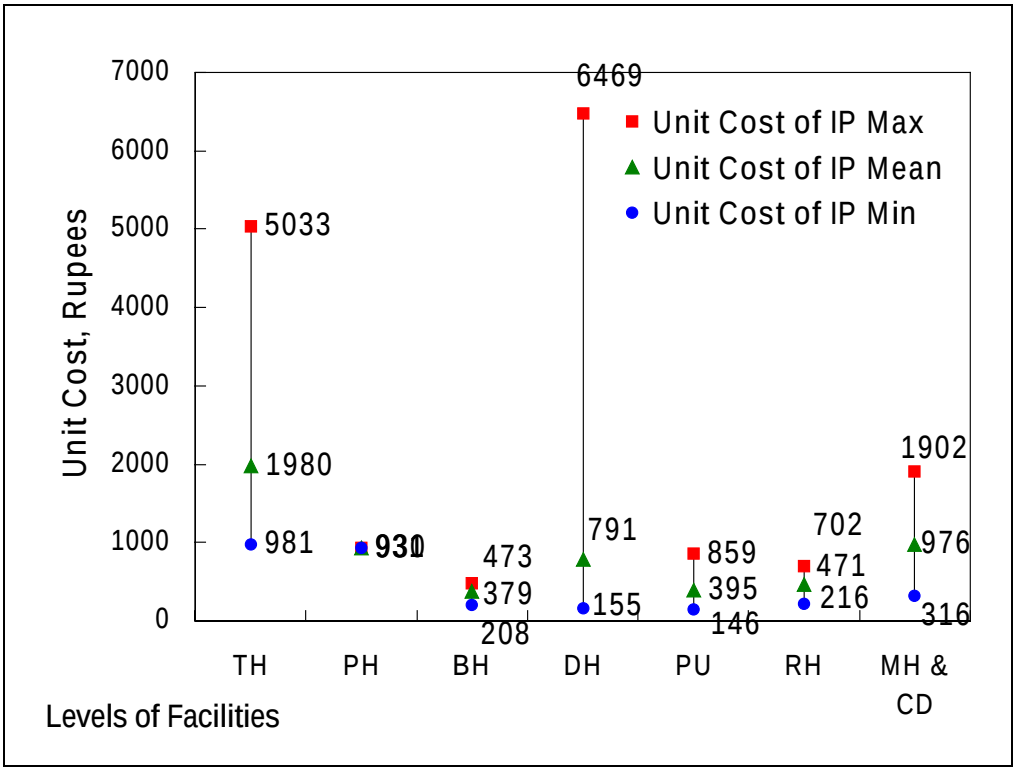


Figure 7.3.5 Mean, Maximum and Minimum Cost Per Inpatient in Public Sector Facilities at Different Levels in Four Districts, 1992

Note: IP=In-patient; TH=Teaching Hospital, PH=Provincial Hospital, BH=Base Hospital, DH=District Hospital, PU=Peripheral Unit, RH=Rural Hospital, MH&CD= Maternity Home & Central Dispensary

Source: Hsiao, William with IPS Health Policy Programme. *A Preliminary Assessment of Sri Lanka Health Sector and Steps Forward.* Cambridge: Harvard University. 2000.

The bed-occupancy rate and cost per bed-day occupied are other indicators of efficiency in the care of inpatients. Among government health facilities, bed-occupancy rate is lowest among lower-level health facilities (Figure 7.3.6). What is the optimal bed occupancy rate? "In acute hospitals, an optimal average bed occupancy rate lies in the region of 80-85%; rates much below 80% are clearly inefficient, while average rates over 90% give rise to an increasing probability that, on any given day, the hospital in question may have insufficient beds available to meet random daily fluctuations in demand for care."[14] In this regard, none among the levels of hospitals in Sri Lanka has achieved the optimal level. Nonetheless, base and district hospitals deserve special mention. They have very high occupancy rate and the lowest cost per bed-day occupied.

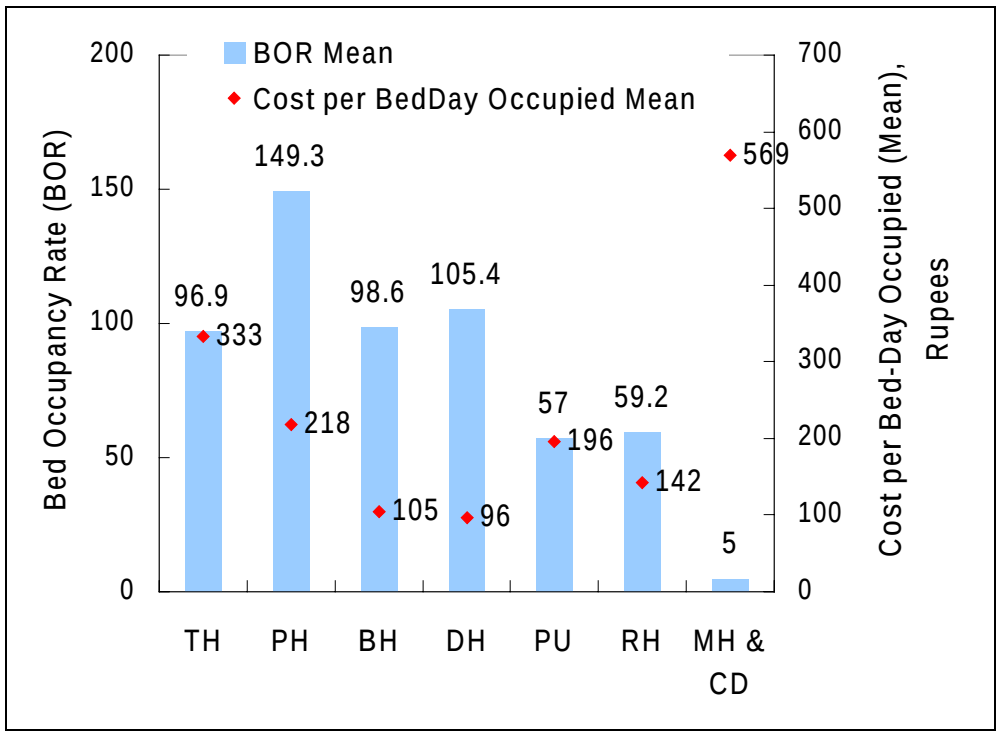


Figure 7.3.6 Mean Bed Occupancy Rate and Mean Cost Per Bed-Day Occupied in Public Sector Facilities at Different Levels in Four Districts, 1992

Note: TH=Teaching Hospital, PH=Provincial Hospital, BH=Base Hospital, DH=District Hospital, PU=Peripheral Unit, RH=Rural Hospital, MH&CD= Maternity Home & Central Dispensary

Source: Hsiao, William with IPS Health Policy Programme. *A Preliminary Assessment of Sri Lanka Health Sector and Steps Forward.* Cambridge: Harvard University. 2000.

[14] Hensher, M. Financing Health Systems through Efficiency Gains. Working Paper for the Commission on Macroeconomics and Health. South Africa. July 8 2001.

Considering both the cost per inpatient and cost per bed-day occupied, which health facilities are better off than others? Figure 7.3.7 essentially demonstrates the **relative cost-efficiency of managing inpatients in base hospitals, peripheral units, rural hospitals, and district hospitals**. Interestingly, district hospitals turned out to be the cheapest when it comes to cost per bed-day occupied although it ranked 4th only in terms of cost per inpatient. The extreme value (maximum of Rs. 6,469 and minimum of Rs. 155) in the cost per inpatient in district hospitals might have pulled its mean (Rs. 791) higher than the means of other health facilities. While the mean cost per bed-day occupied in district hospitals is Rs. 96, the maximum is Rs. 187 and the range is only Rs. 156.

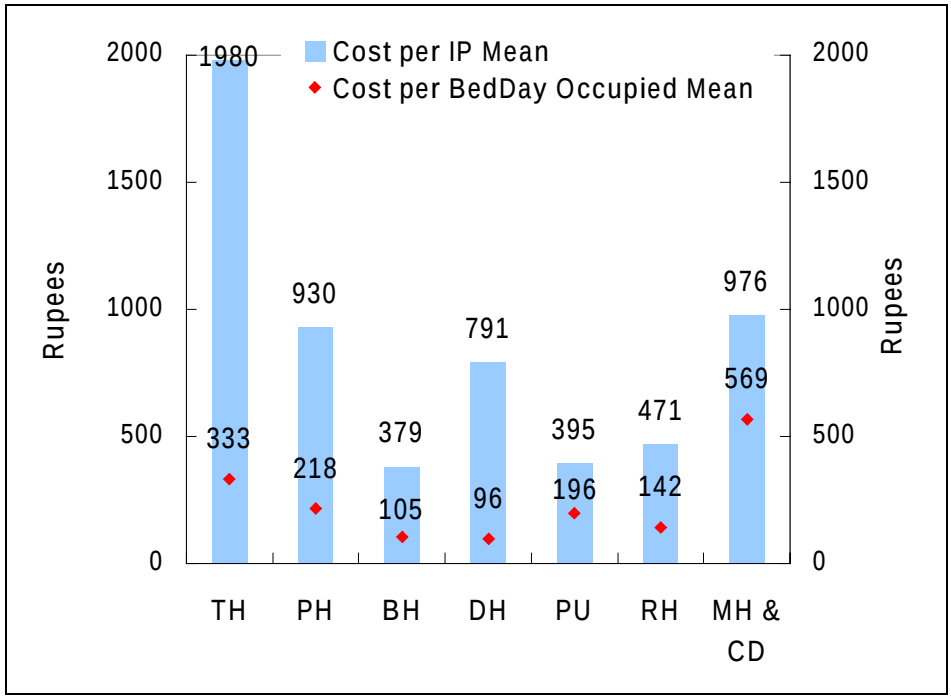


Figure 7.3.7 Mean Cost Per Inpatient and Mean Cost Per Bed-Day Occupied in Public Sector Facilities at Different Levels in Four Districts, 1992

Note: IP=In-patient; TH=Teaching Hospital, PH=Provincial Hospital, BH=Base Hospital, DH=District Hospital, PU=Peripheral Unit, RH=Rural Hospital, MH&CD= Maternity Home & Central Dispensary

Source: Hsiao, William with IPS Health Policy Programme. *A Preliminary Assessment of Sri Lanka Health Sector and Steps Forward.* Cambridge: Harvard University. 2000.

Is the Autonomous Hospital More Efficient than a Non-Autonomous One?

Does providing autonomy to government hospital improve efficiency? The comparative study[15] between the SJGH, an autonomous hospital, and the Peradeniya Teaching Hospital, a non-autonomous hospital, shows consistent results (Figure 7.3.8). The staff and total expenditure per in-patient day are higher in the autonomous hospital. For every 1 rupee used as salary in the non-autonomous hospital in 1995, a rupee and a half (1.6 exactly) was spent in the autonomous hospital. When all the expenditure are considered, then the cost of supporting one inpatient day in the autonomous hospital is more than twice (2.3 times) than that in non-autonomous hospital. The productivity performances of nurses and doctors seem to indicate more favorable situation in non-autonomous hospital, too. One inpatient day per nurse and another one per doctor in autonomous hospital were outmatched by fifty percent and seventy per cent more, respectively, in non-autonomous hospital.

Using the expenditure and productivity indicators, the study of SJGH and PTH seem to indicate a better efficiency in the non-autonomous hospital. However, it deferred making definitive conclusion. Further investigation is required that will include a review of other non-autonomous hospitals comparable to SJGH and will employ other efficiency indicators.

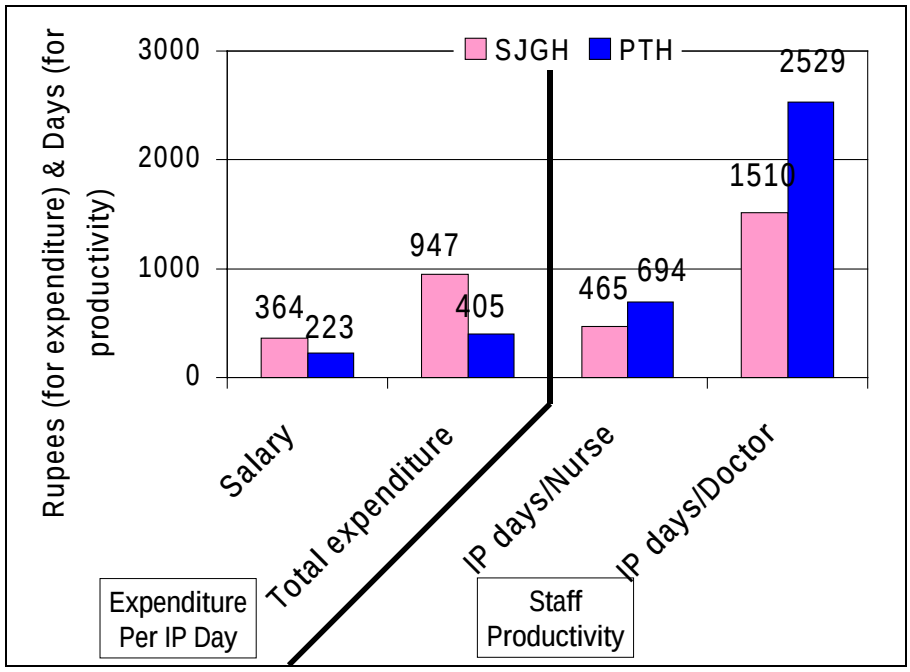


Figure 7.3.8 Expenditure per IP Day and Staff Productivitiy: Comparison between Autonomous (SJGH) and Non-Autonomous Hospital (PTH), 1995

Source: University of Birmingham, The Role of Government in Adjusting Economies: Sri Lanka Reforming the Health Sector – Does Government Have the Capacity?

[15] The University of Birmingham, The Role of Government in Adjusting Economies: Sri Lanka Reforming the Health Sector – Does Government Have the Capacity?

(2) INTER-SECTOR COMPARISON

Outpatient Visits: Private Sector is Essentially More Costly (Except in Somanathan's Calculation of Complex Facilities)

Somanathan analysed the 1992 unit cost (limited to recurrent cost only) of public and private health facilities and compared her findings with those of Griffin et al. Both studies were based on the 1992 Facility Health Survey. Somanathan calculated the unit costs of facilities that were considered as either complex or basic using Griffin's definition and her own. The third category of facilities refers to those providing outpatient services only. However, Somanathan suggested disregarding the costs of this category for the private sector as they are "severely under reported"[16]. As such, the following discussion is limited to two categories of facilities only – complex and basic.

All the calculations showed consistent results for basic facilities – private are more expensive than public (Figure 7.3.9). A private patient paid seven times more than his counterpart in the public sector according to Somanathan's Study, four times more if Griffin et al.'s classification is used, and two times more if Griffin's study is the basis. The differences in the results can be attributed to differences in definitions of complex and basic facilities as well as to categorization of facilities.

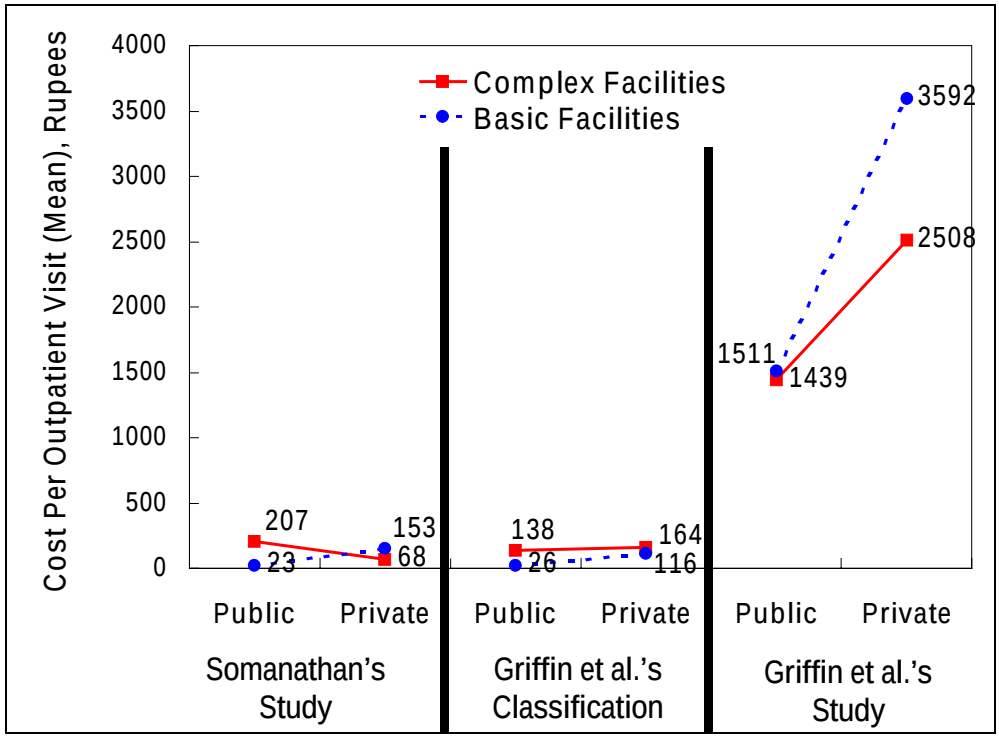


Figure 7.3.9 Mean Cost Per Outpatient Visit: Public vs. Private Facilities, 1992

Source: Somanathan, A. Unit Cost Analysis of Public and Private Health Facilities in Sri Lanka in 1992. Institute of Policy Studies of Sri Lanka. 1998.

When it comes to complex facilities, though, the results are mixed. Somanathan found the cost per OPD visit in private facilities was only a third of that in public facilities. On the contrary, Griffin et al. found the private facilities to be more expensive.

[16] Somanathan, A. Unit Cost Analysis of Public and Private Health Facilities in Sri Lanka in 1992. Institute of Policy Studies of Sri Lanka. 1998.

In-Patient Care: Private Sector is Essentially More Costly (Except in Griffin's Study of Cost Per Bed-Day Occupied of Basic Facilities)

Indicators used for comparing admissions included cost per inpatient, per bed-day occupied and per bed-day available (Figure 7.3.10A to Figure 7.3.10B. They all point to the private sector as more costly than the public sector. The only exception to this trend is in the cost per bed-day occupied in basic facilities as reported by Griffin et al (Figure 7.3.10B).

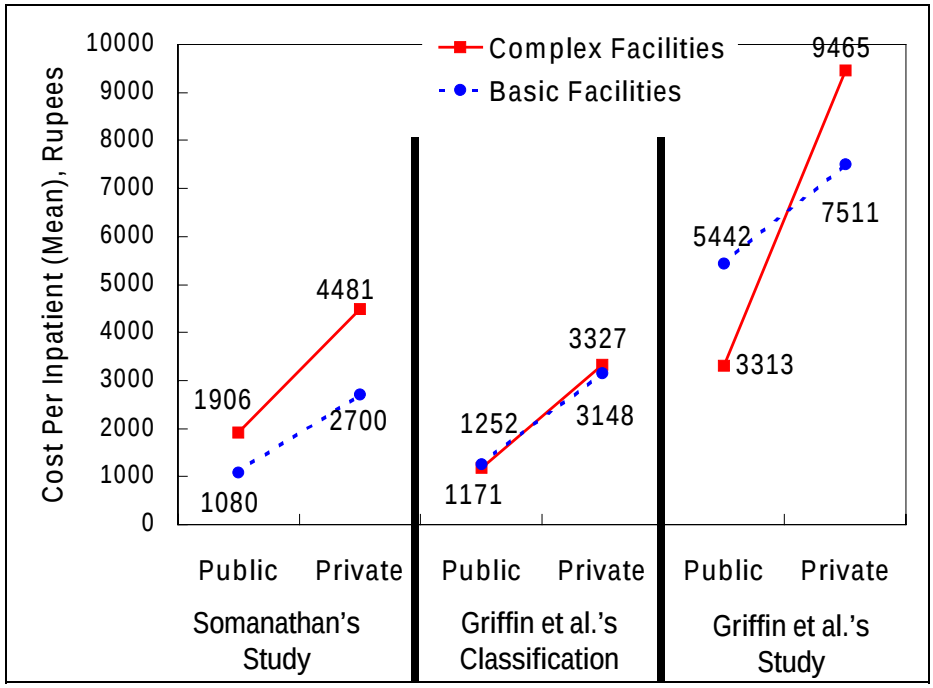


Figure 7.3.10A Mean Cost Per In-Patient or Admission: Public vs. Private Facilities, 1992

Source of Data: Somanathan, A. Unit Cost Analysis of Public and Private Health Facilities in Sri Lanka in 1992. Institute of Policy Studies of Sri Lanka. 1998.

By how much are the costs of private sector more expensive? An analysis of the proportions of costs between private and public revealed the following ranges:

- 1.4 - 2.5 for the Cost of Admission to Basic Facilities;
- 2.4 - 2.9 for the Cost of Admission to Complex Facilities;
- 0.98 - 1.7 for the Cost per Bed-Day Occupied in Basic Facilities;
- 3.4 - 4.4 for the Cost per Bed-Day Occupied in Complex Facilities;
- 2.4 - 5.0 for the Cost per Bed-Day Available in Basic Facilities; and
- 3.2 - 4.9 for the Cost per Bed-Day Available in Complex Facilities.

Further interpretation of the cost analysis studies is limited because of several reasons. For one, the raw data included only the recurrent cost. Another issue pertains to methodology. Should cost analysis exclude mark-ups so that the fundamental productivity or efficiency will be the only ones compared? How does one explain the unexpected finding in Griffin et al.'s study - the public sector is a little bit more costly than the private sector when it comes to the cost per bed-day occupied in basic facilities? Could this be simply attributed to misclassification of facilities or was it due to differences in the costing techniques that appeared to have been corrected by Somanathan in her re-calculation using Griffin's original classification?

Finally, one begs the question – so what if the private sector is more expensive. Isn't gaining profit inherent in this sector? The relevant issue for planning and policy-formulation is not whether one sector is generally more costly but in which specific expenditure item is one sector more efficient. For example, if the private complex facilities are more cost-efficient, considering other things being equal,

in the laboratory testing of malaria, then will the entire health system be benefited if this test is outsourced to these facilities? On the other hand, if the public complex facilities are documented to be more cost-efficient, considering other things such as quality being equal, in the treatment of severe forms of malaria, then should these public facilities be designated as referral centres? As such, for results of future comparison of the efficiency of public and private facilities to be relevant for policy-makers and planners, cost analysis of more specific items may be recommended.

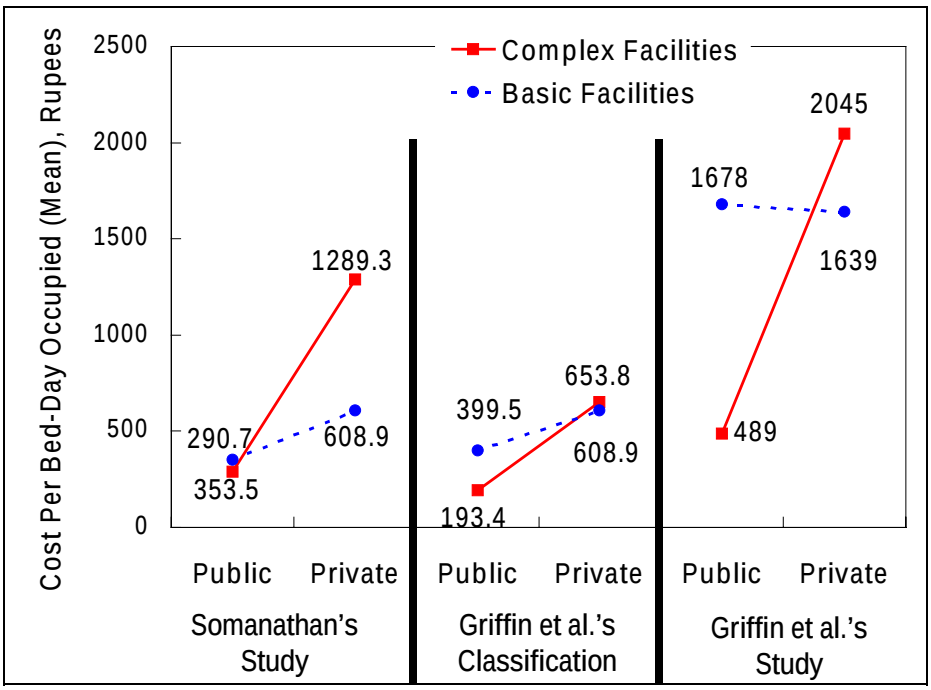


Figure 7.3.10B Mean Cost Per Bed-Day Occupied: Public vs. Private Facilities, 1992

Source: Somanathan, A. Unit Cost Analysis of Public and Private Health Facilities in Sri Lanka in 1992. Institute of Policy Studies of Sri Lanka. 1998.

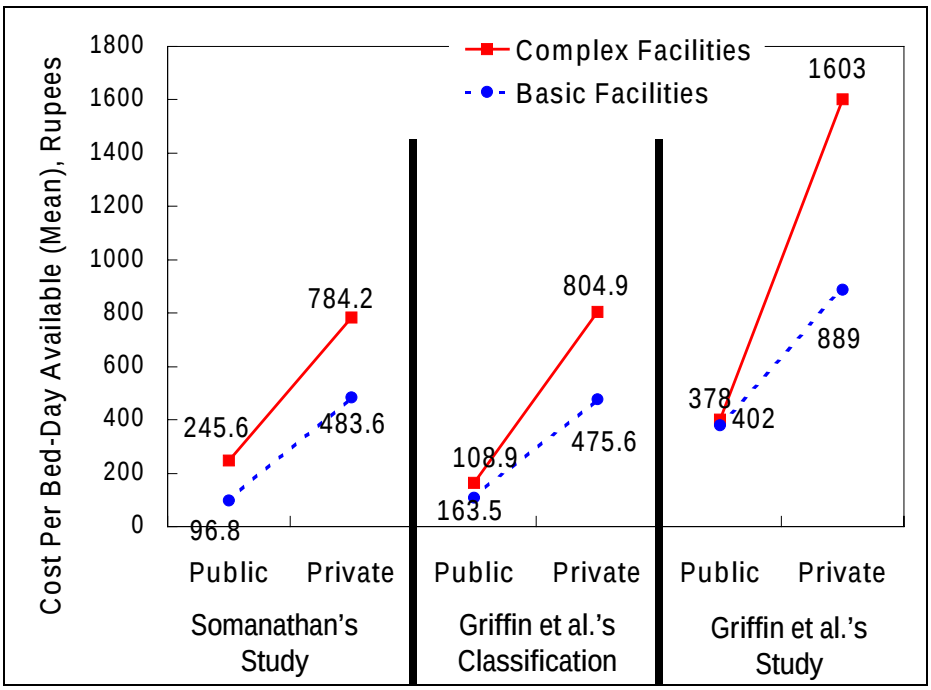


Figure 7.3.10C Mean Cost Per Bed-Day Available: Public vs. Private Facilities, 1992

Source of Data: Somanathan, A. Unit Cost Analysis of Public and Private Health Facilities in Sri Lanka in 1992. Institute of Policy Studies of Sri Lanka. 1998.

(3) INTER-COUNTRY COMPARISON

Macro-Efficiency

1) The Second Highest Spender Per Capita in South Asia

As a share of the GDP, the total health expenditure in Sri Lanka has been the smallest in South Asia from 1996 to 2000 (Figure 7.3.11). It ranges from 3.2 to 3.6% of the GDP. In 1995, Bhutan had the lowest share but since then, it has caught up. Maldives consistently spends the most in terms of share of the GDP.

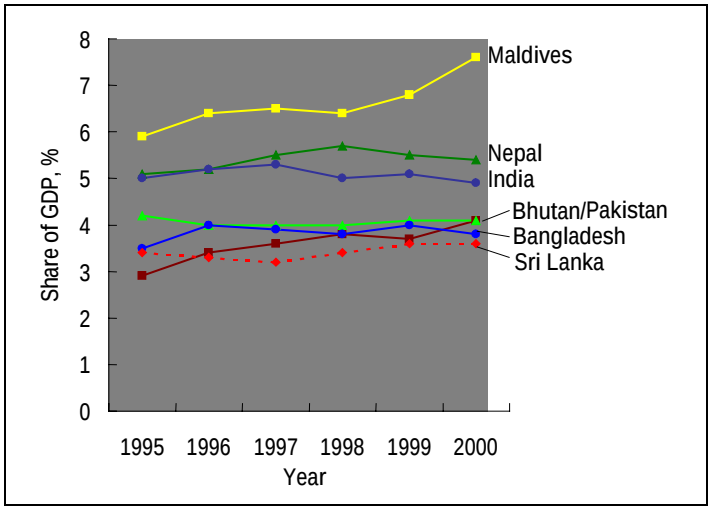


Figure 7.3.11 Total Health Expenditures as Percentage of GDP, 1995-2000

Source: WHR 2002

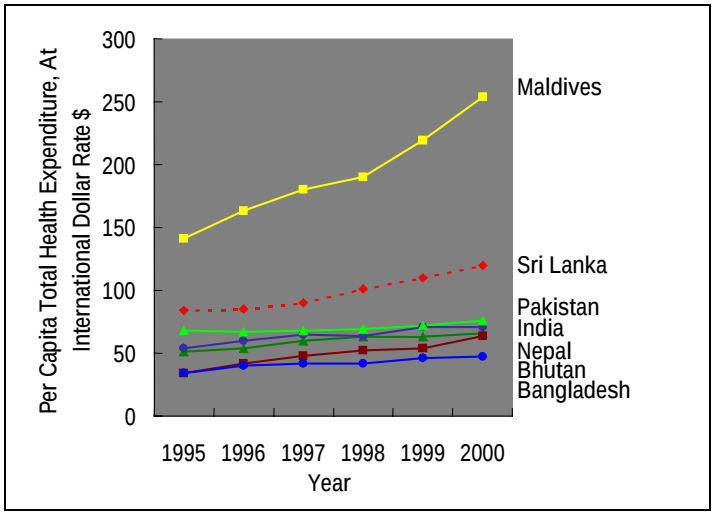


Figure 7.3.12 Per Capita Total Health Expenditure at International Dollar Rate, 1995-2000

Source: WHR 2002

While Sri Lanka seems to be the lowest spender in terms of the share of GDP, this has not been the case when one examines the total health expenditure on a per capita basis. In fact, it becomes the second highest spender next only to Maldives (Figure 7.3.12).

2) Overall Health System Performance: The Best in the Region

The World Health Report 2000 employed the overall health system performance as the efficiency index. While it ranked 136th in terms of per capita health expenditure, Sri Lanka ranked 76th, making it a part of the top 40%, when it comes to the overall health system performance (Figure 7.3.13). Among the countries with the same health expenditure, it is the most efficient. It is number one in South Asia. Bangladesh is the second in the region but ranks 88th, far behind Sri Lanka. Although ranks of India and Pakistan are close to that of Sri Lanka in terms of per capita health expenditure, their efficiency levels are 112th and 122nd compared to all the other 191 member-states of the WHO.

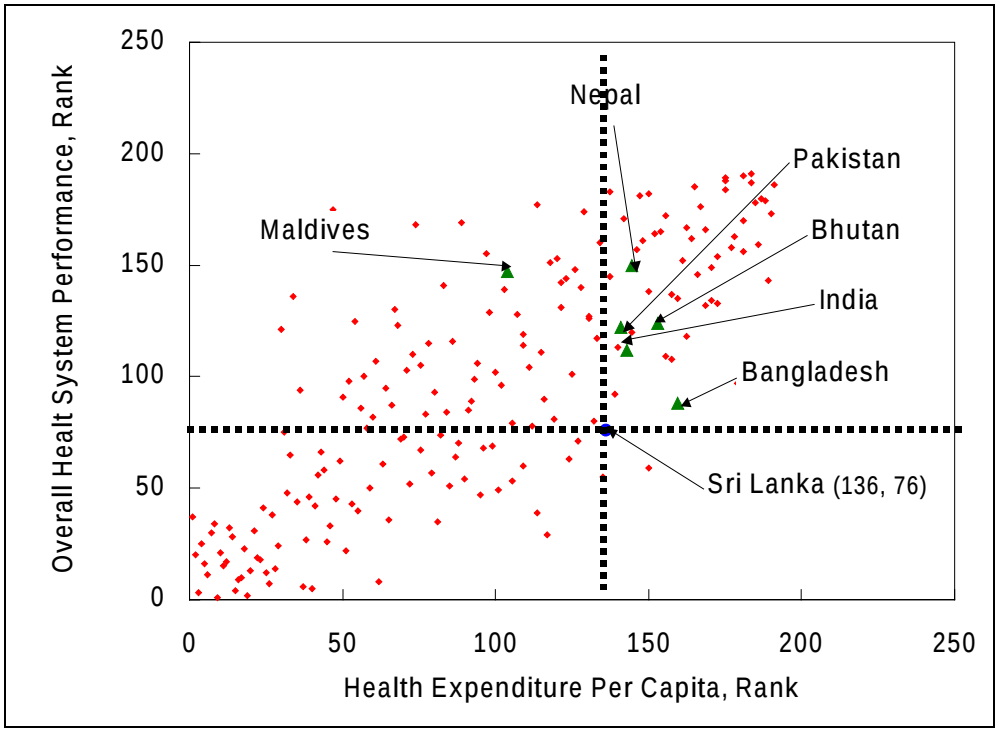


Figure 7.3.13 Overall Health System Performance, 2000.
Source of Data: WHR. 2000.

Micro-Efficiency

Although some economists are of the opinion that "inter-country comparisons of unit costs are unlikely to yield meaningful conclusions" [17], planners and policy-makers may find a description of micro-efficiency of the health system in Sri Lanka useful such as for external benchmarking. The discussion that follows was based on Rannan-Eliya's transformation of unit costs into unit costs as a percentage of per capita GNP[18]. Although the selection include countries outside of South Asia, which is the primary focus of inter-country comparison for reasons explained in the introduction to this chapter, that situation is primarily influenced by data availability and not by faulty design.

3) Out-Patient Visits: Generally More Expensive in Complex Hospitals

Figure 7.3.14 shows that the cost of outpatient visit is consistently higher in complex facilities than in intermediate or basic ones. As a percentage of per capita GNP, the cost of outpatient visit between 1991 and 1997 in other hospitals of Sri Lanka has remained stable while in complex hospitals has reduced remarkably from 1 to 0.3%. The corresponding percentages for facilities in Bangladesh appear to be considerably higher.

[17] Hensher, Martin. Financing Health Systems through Efficiency Gains. Working Paper for the Commission on Macroeconomics and Health. South Africa. 8th July 2001.
[18] Rannan-Eliya, Ravi. Strategies for Improving the Health of the Poor –The Sri Lankan Experience. Institute of Policy Studies of Sri Lanka. 2001.

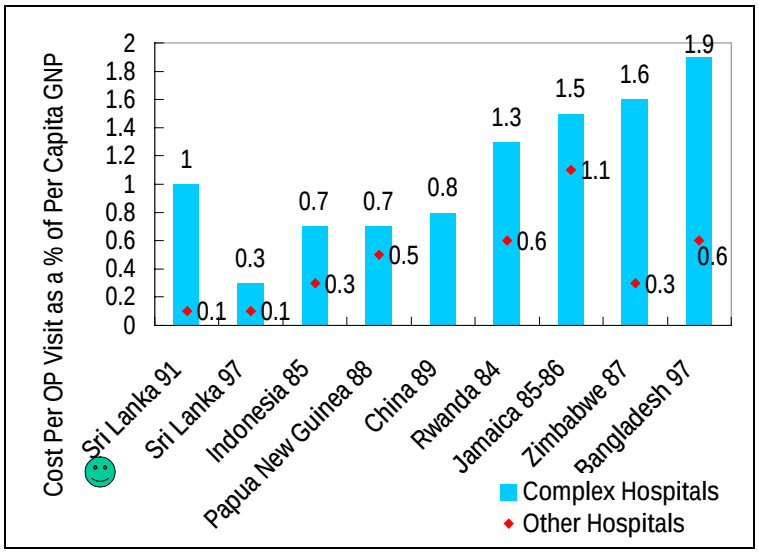


Figure 7.3.14 Per Outpatient Visit Unit Costs as a Percentage of Per Capita GNP for Selected Countries: Complex vs. Intermediate & Basic Hospitals

Note: Data not available for "Other Hospitals" in China

Source: Rannan-Eliya, R. Strategies for Improving the Health of the Poor – The Sri Lankan Experience. Institute of Policy Studies of Sri Lanka. 2001.

4) In-Patient Care: Financial Burden on the Sri Lankan National Economy is the or one of the Lowest

Three indicators for the cost of inpatient care were used for comparison: cost per admission, cost per inpatient day and cost per bed. Regardless of the indicator, Figure 7.3.15A to Figure 7.3.15C show consistent trend. The financial burden of caring for inpatients in complex hospitals on the national economy is lowest in Sri Lanka among the selected countries. The cost in maintaining a hospital bed in Sri Lanka is 30% more expensive or even more than fourfold than the per capita GNP (Figure 7.3.15C). This requires further investigation although the situation is worst in other countries.

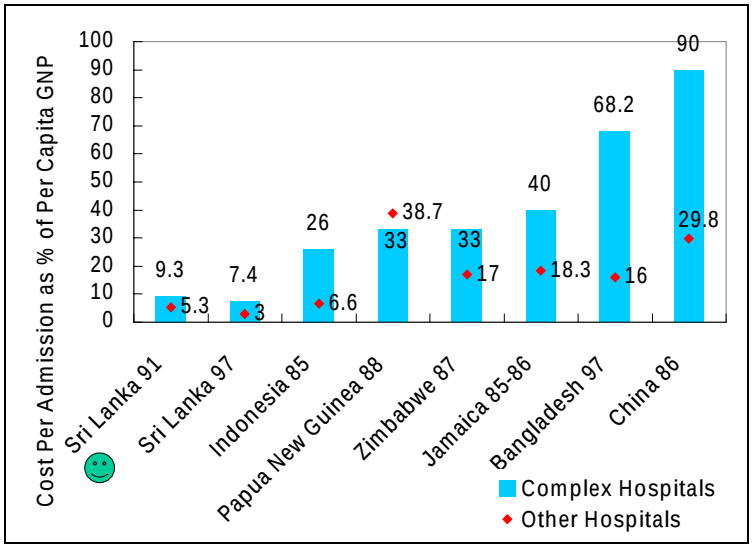


Figure 7.3.15A Costs Per Admission as a Percentage of Per Capita GNP for Selected Countries: Complex vs. Intermediate & Basic Hospitals

Source: Rannan-Eliya, R. Strategies for Improving the Health of the Poor – The Sri Lankan Experience. Institute of Policy Studies of Sri Lanka. 2001.

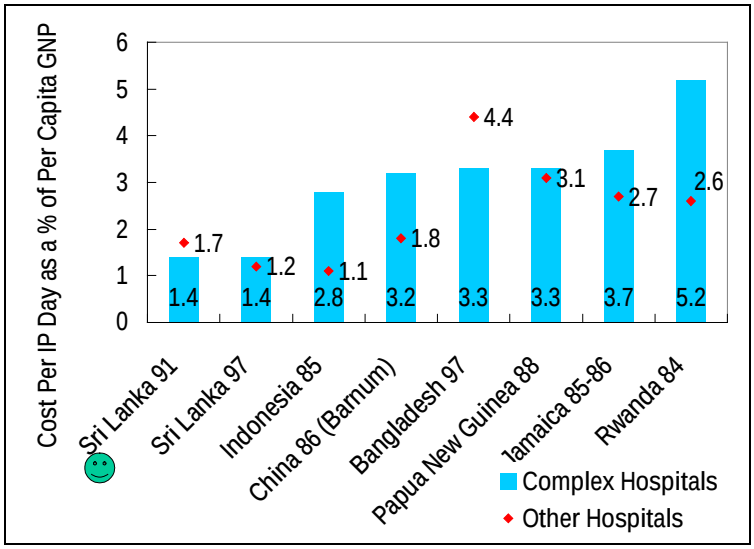


Figure 7.3.15B Costs Per Patient Day as a Percentage of Per Capita GNP for Selected Countries: Complex vs. Intermediate & Basic Hospitals

Note: IP = In-Patient

Source: Rannan-Eliya, R. Strategies for Improving the Health of the Poor – The Sri Lankan Experience. Institute of Policy Studies of Sri Lanka. 2001.

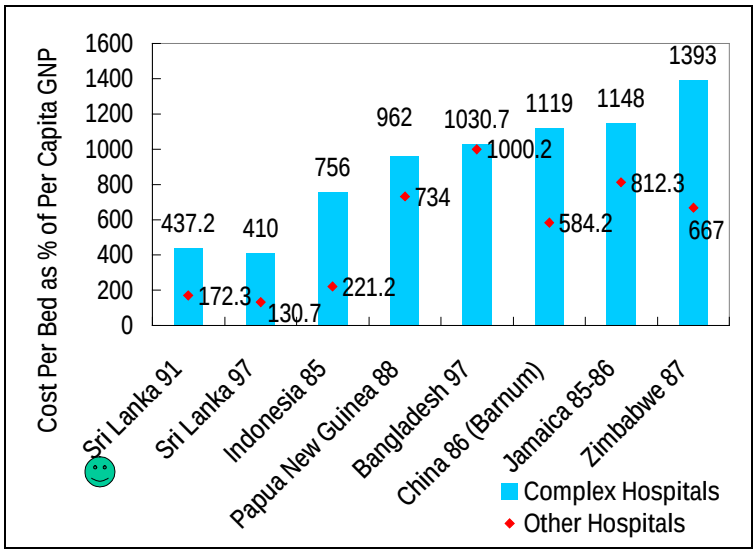


Figure 7.3.15C Costs Per Bed as a Percentage of Per Capita GNP for Selected Countries: Complex vs. Intermediate & Basic Hospitals

Source: Rannan-Eliya, R. Strategies for Improving the Health of the Poor – The Sri Lankan Experience. Institute of Policy Studies of Sri Lanka. 2001.

5) Staff Productivity: High Number of Bed-Days Per Staff while Maintaining Reasonable Number of Physicians per Bed

Though information is limited to hospital setting, Figure 7.3.16 shows that the Sri Lankan staff were responsible for the highest number of inpatient bed-days while maintaining a reasonable number of key staff. Sri Lanka physicians were responsible for five beds on the average compared to 10 beds in Bangladesh. The high number of inpatient bed-days was not because patients were kept for a long time in the hospitals. In fact, Sri Lanka has the shortest length of hospital stay

(Figure 7.3.17). As such, each staff in Sri Lanka actually took care of more inpatients compared to their counterparts in the selected countries.

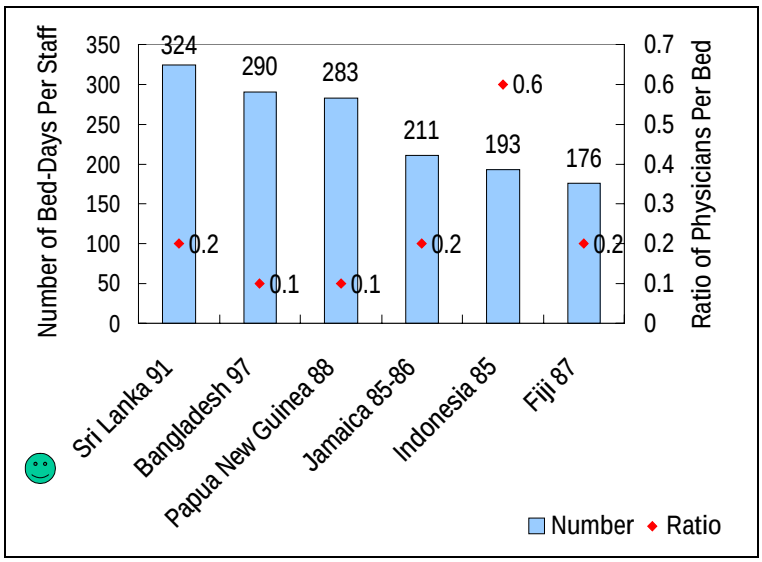


Figure 7.3.16 Productivity (Number of Bed-Days Per Staff and Ratio of the Numbers of Physician and Bed) for Selected Countries: Complex vs. Intermediate & Basic Hospitals

Source: Source of Data: Hsiao, William with IPS Health Policy Programme. A Preliminary Assessment of Sri Lanka Health Sector and Steps Forward. Cambridge: Harvard University. 2000. (Hsiao cited the original source to be Barnum and Kutzin (1993) and IPS database as reported in Rannan-Eliya and Somanathan (1999).)

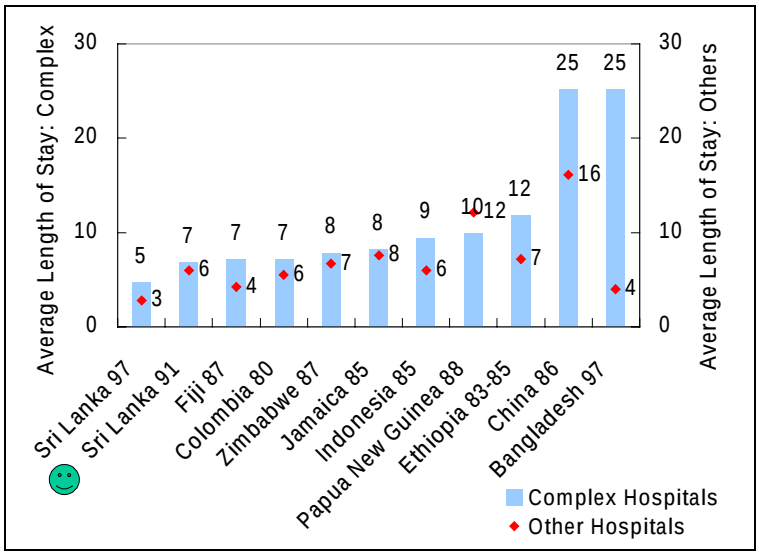


Figure 7.3.17 Average Length of Stay in Selected Countries: Complex vs. Intermediate & Basic Hospitals

Source: Rannan-Eliya, R. Strategies for Improving the Health of the Poor – The Sri Lankan Experience. Institute of Policy Studies of Sri Lanka. 2001.

6) Hospital Efficiency in Sri Lanka: Not Optimum

Bed occupancy rate is one of the commonly used general indicators for hospital efficiency. The management goal is not maximization but optimisation of this indicator. Using 80-85% as the optimum level[19], only the complex hospitals Papua New Guinea in 1988 and Fiji in 1987 were

[19] Hensher, M. *Financing Health Systems through Efficiency Gains*. Working Paper for the Commission on Macroeconomics and Health. South Africa. July 8 2001.

efficient (Figure 7.3.18). Not a single intermediate or basic hospital was efficient. Either in 1991 or in 1997, the bed occupancy rates in Sri Lanka for complex hospitals were above and for other types of hospital were below the optimum level.

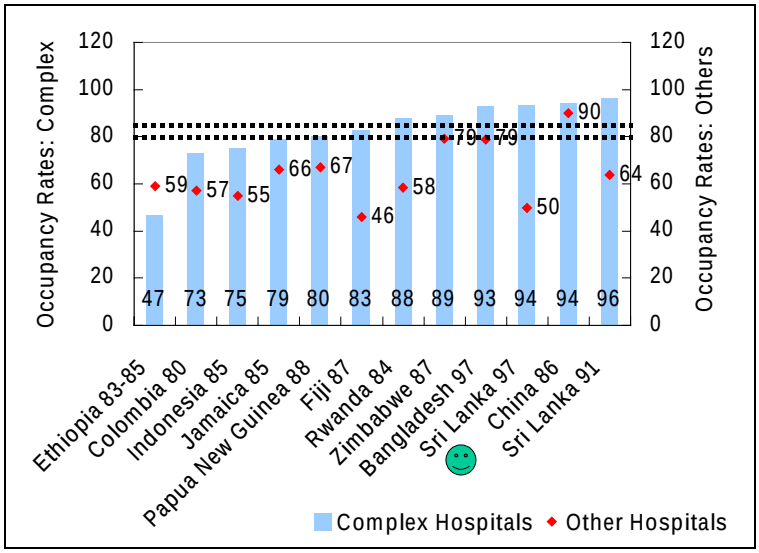


Figure 7.3.18 Bed Occupancy Rates for Selected Countries: Complex vs. Intermediate & Basic Hospitals

Source: Rannan-Eliya, R. Strategies for Improving the Health of the Poor – The Sri Lankan Experience. Institute of Policy Studies of Sri Lanka. 2001.

7.4 SATISFACTION, RESPONSIVENESS & QUALITY

This section deals with three closely linked issues:

- Satisfaction of clients;
- Responsiveness of health system; and
- Quality and safety.

The relationship is such that the last two issues contribute to achieving the first one. Clients would hardly be satisfied if the health system is not responsive to their needs and the services do not meet even their minimum quality threshold.

(1) SATISFACTION OF CLIENTS

Compared to Other Government Services: Health Services followed Electricity and Services provided by Law/Police Institutions

In Sri Lanka, the government has been responsible for providing basic services, many of which have been free or subsidized. Figure 7.4.1 depicts the results of a nationwide (except Northern Province) opinion poll in 1995 by the Institute of Policy Studies of Sri Lanka and the Research International. Among the eleven services included in the survey, none was rated satisfactorily by more than 60% of the respondents. Electricity (57%) and services provided by law/police authorities (53%) were the only ones that reached the 50% level.

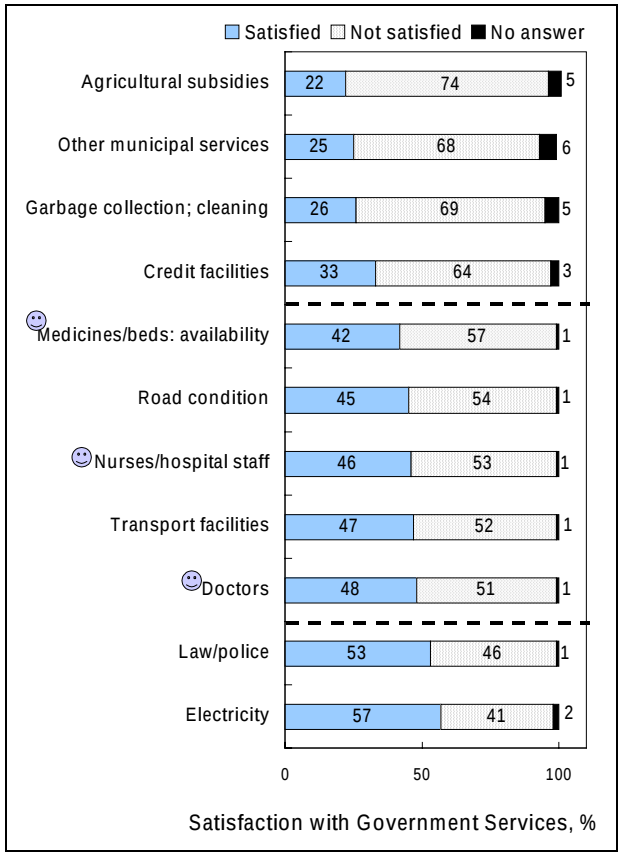


Figure 7.4.1 Comparison of Public's Satisfaction with Some Government Services, 1995

Source: Opinion poll of 3,500 persons in the sample by Research International in March 1995 [cited in: Hsiao, William with IPS Health Policy Programme. A Preliminary Assessment of Sri Lanka Health Sector and Steps Forward. Cambridge: Harvard University. 2000.]

Only between four or five out of ten respondents were satisfied with services from doctors, nurses and other hospital staff as well as with the availability of medicines and hospital beds. The level of people's perception of services from these health staff appears to be comparable to their perception of transport facilities and road conditions.

When it comes to services that affect the health of communities, the survey revealed a low satisfactory rating for garbage collection and cleaning with only one of four respondents being satisfied.

When flipping coins, the chance of getting heads is fifty percent. Should the satisfaction threshold for government services be any thing lower? Specifically for health services, shouldn't the cut-off be higher than chance?

Compared with Other Providers: Government Health Institutions Elicited the Lowest Level of Dissatisfaction

In another 1995 opinion poll conducted by the Research International, respondents were asked to rate their satisfaction with health services from government facilities vis-à-vis those from private providers. The satisfaction level seemed to have rocketed up to more than the 50% level. In fact, 73% of them were either satisfied or very satisfied (Figure 7.4.2).

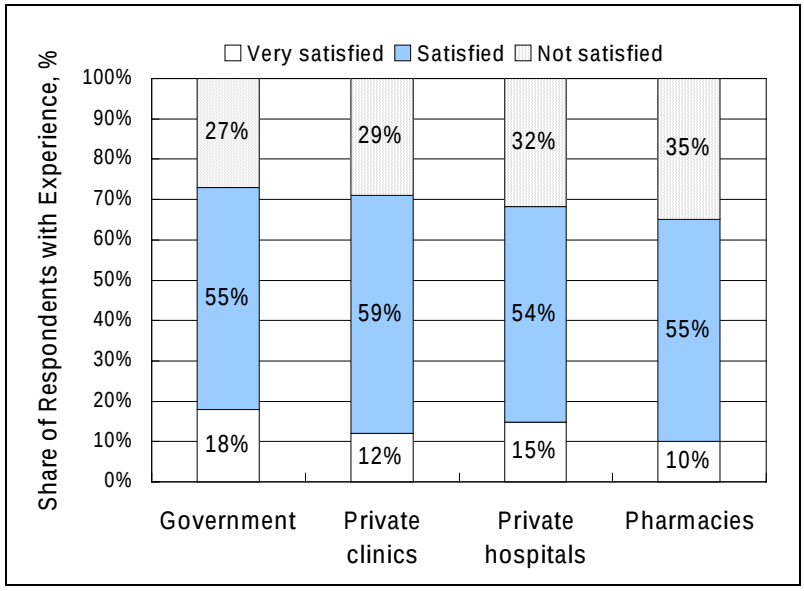


Figure 7.4.2 Comparison of Clients' Satisfaction with Health Services from Government and Private Providers, 1995

Note: Graph reflects the per cent after adjusting for experience. The trends for shares with and without experience are similar.

Source: Opinion poll with 2,312 interviewees by IPS Health Policy Programme and Research International in March 1995 [cited in: Hsiao, William with IPS Health Policy Programme. A Preliminary Assessment of Sri Lanka Health Sector and Steps Forward. Cambridge: Harvard University. 2000.]

Across all types of health providers, about three to four of ten respondents were dissatisfied. In terms of percentage, the differences among dissatisfaction levels may appear to be small. However, the Chi-Square test revealed that these differences are significant (p=0.000). In other words, dissatisfaction appears to be associated with the source of health services. The dissatisfaction rate was lowest among those who have experience with government health facilities.

The higher dissatisfaction with private facilities was observed mainly among respondents who are poorer and have lower educational attainment[20]. On the contrary, the dissatisfaction with public

[20] Hsiao, William with IPS Health Policy Programme. A Preliminary Assessment of Sri Lanka Health Sector and Steps

facilities was strongly a phenomenon among the richest (38%) than the very poor (21%) respondents. **Many factors influence client satisfaction. In this respect, it seems the respondents' financial capacity is one of them.**

(2) RESPONSIVENESS OF THE HEALTH SYSTEM

In South Asia, Sri Lanka is the Most Responsive to Non-Medical Needs

One of the three health system goals in the WHO framework for health system performance is responding to people's non-medical expectations. It has six components:

- Dignity - being treated as a person not a patient;
- Autonomy - being able to choose care providers and type of treatment;
- Prompt attention – speedy access to care;
- Quality of basic amenities – cleanliness, etc.;
- Confidentiality; and
- Access to social care support.

In South Asia, Sri Lanka ranks (101 out of 191 member states) second only to Maldives (ranks 98.5) in terms of the level of responsiveness. However, with respect to the distribution of responsiveness, it is way ahead of Maldives as the former ranks 77.5 while the latter ranks 101.5. These suggest that the health care system in **Sri Lanka is the most empowering and accords the highest respect for human dignity in the region.**

Despite its status within the region, Sri Lanka needs further improvement so that its global standing can be advanced. To identify the specific areas within each component that require attention, the MoH has participated in the WHO-sponsored Responsiveness Survey. Data-collection has been completed. Results of the Survey are not yet available.

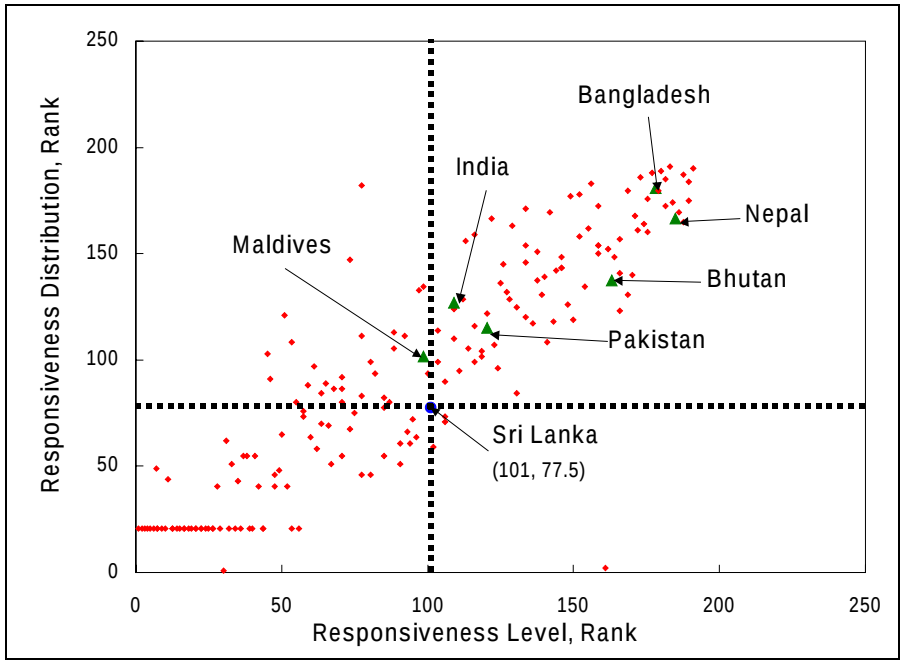


Figure 7.4.3 Responsiveness of Health Systems in 191 Member States of the World Health Organization

Source: WHR 2000

Forward. Cambridge: Harvard University. 2000.

The six components of responsiveness has been criticized for being applicable only to clinical or hospital setting. As such, there is a need to include components appropriate for public health or community situations.

Responsiveness to Health Needs: For Further Study

Another dimension of responsiveness is that with respect to medical needs. The fundamental question here is whether the health system as a whole and its organic components are and can be responsive to the present and future health events, concerns and priorities. The system may have been effective in its role in the control of diseases in the past. However, its previous performance is not a guarantee for its ability to successfully address the current and impending needs.

Is the health system organised, manned and equipped to face the challenges of a rapidly greying society? Are resources, training and systems available to simultaneously and strategically manage the entire spectrum of health problems – continuing, emerging and re-emerging, evolving, and emergencies? Are the policies, plans and programmes as well as the quality standards, clinical guidelines or protocols updated? These are but some of the questions that need to be answered to fully assess the responsiveness of the health system, its responsiveness to health needs. These will require further studies.

(3) QUALITY AND SAFETY

Quality and Safety: A Broad Domain

The health system is multi-dimensional. It has many products and production units. As such, an assessment of its quality necessitates a look at all its dimensions. Figure 7.4.4 highlights most of the important issues, many of which are discussed in different sections of this Supporting Document I. Specifically, quality issues related to training and specialization of as well as logistical support for human resources are incorporated in Chapter 4, accreditation in Chapter 5, integration and standardization of services in Chapter 3, and outcome evaluation partly in Chapter 5. The perspective of the clients on services is in this chapter on client-satisfaction and its behavioural manifestation in Chapter 2. The quality of basic amenities in health facilities is a component of the WHO Responsiveness to non-medical needs.

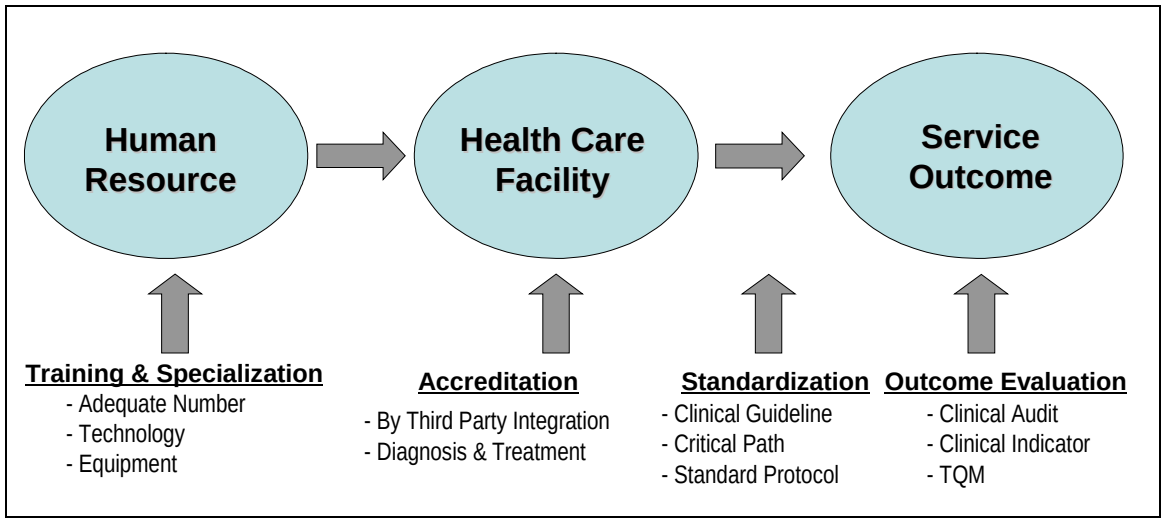


Figure 7.4.4 Quality and Safety: The Major Components

Source: MoH-JICA Study Team

Hospital Deaths: Could it be a Quality Indicator?

Health outcome was discussed in the initial section of this chapter. Could health outcome, mortality in general, be used as one of the quality indicators? Could hospital deaths reflect some or the entire spectrum of quality and safety in government health facilities? If yes, then where are the areas for improvement? What can one infer from the hospital data?

One, data on hospital deaths aggregated at the district level showed hardly any association with the volume of in-patients (Figure 7.4.5). Does this imply that quality can still be achieved even with a number of patients? Considering all things (e.g. ratio, skills and commitment of staff, availability of appropriate and functional technology) being equal, does it mean that poor service can also be observed even when there are few patients?

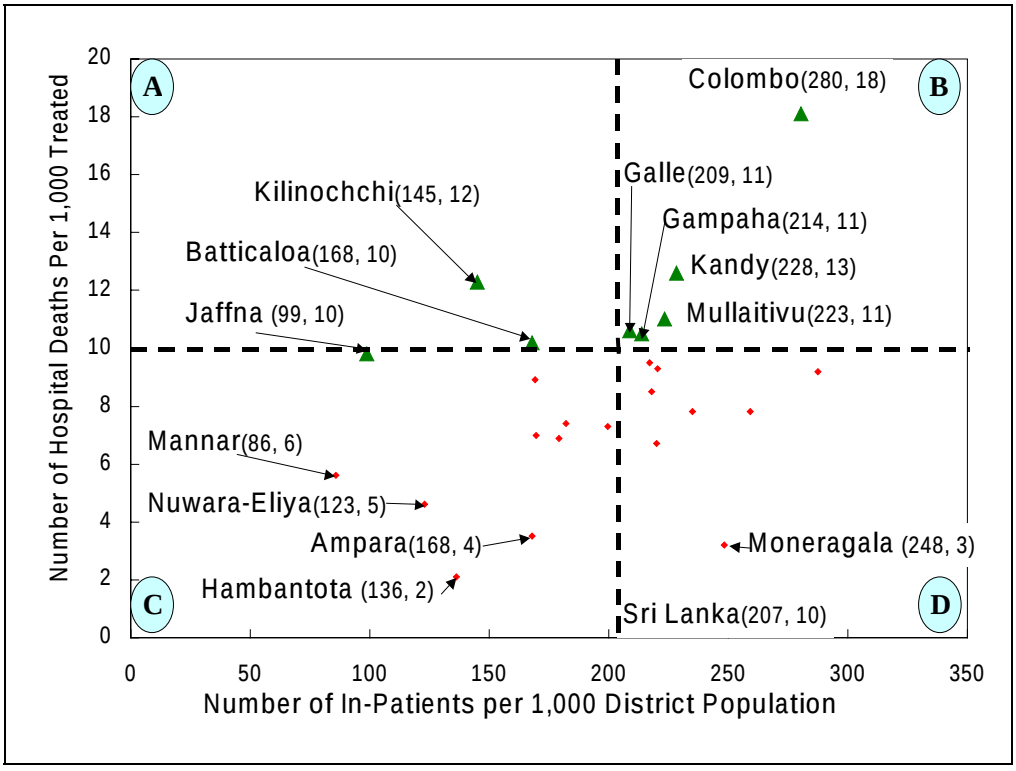


Figure 7.4.5 Plot of Rates of In-Patients against Hospital Deaths: District-Aggregated Data, 2000

Note: A, B, C and D refer to quadrants that were formed to divide the districts by using the national rates of 207 in-patients and 10 hospital deaths as cut-off marks.

Source: MoH. Annual Health Bulletin. 2000.

Two, the eight districts with hospital death rates equal to or greater than the national rate are, in descending order: Colombo (18 per thousand); Kandy (13); Kilinochchi (12); Mullativu, Galle and Gampaha (11 for each); Batticaloa and Jaffna (10 for each). Six of these districts have teaching hospitals located within their geographical boundaries. If teaching hospitals were the apex of the hierarchy of facilities, if they have the best of the facilities and brightest of the health professionals, why then would the rates be the highest? Could there be factors that confound the issue of quality in these districts?

Three, the three districts with the lowest hospital death rates are Hambantota (2 per thousand treated), Moneragala (3) and Ampara (4). Overall, is Moneragala the best district considering, because of or despite, it has the 4th heaviest volumes of in-patients relative to its population? In contrast, the in-patient rates for the other districts are lower than the national rate. By achieving both low mortality and high volume, can Moneragala serve as a paragon of service with quality? Hence, could it serve as an internal benchmark?

Four, when the data are disaggregated by level of government health facilities, higher hospital death rates appear to be associated with higher-level facilities (Figure 7.4.6). The "Other Hospitals" refer to special or specialists hospitals that may explain the highest mean of 25.1 per thousand treated. There are no deaths reported in central dispensaries and maternity homes as the system dictates referral of severe or difficult cases to higher levels. Once more, this begs the question – why is the probability of dying in higher-level facilities high? Is this an issue of quality of care within the teaching hospitals, for example? Is this an issue of quality of the referral system among the various units such that patients are not immediately or appropriately transferred? Is this an issue of poor quality of management in lower-level facilities? If the rate of referral is not significant in some districts, could this be an issue of quality of public health education programmes in encouraging early consultation? Could it be a simple problem of the nature of diseases that are being handled in higher-level facilities – that they are more difficult to diagnose and manage, they are at an advanced stage and, at times, that they are terminal cases?

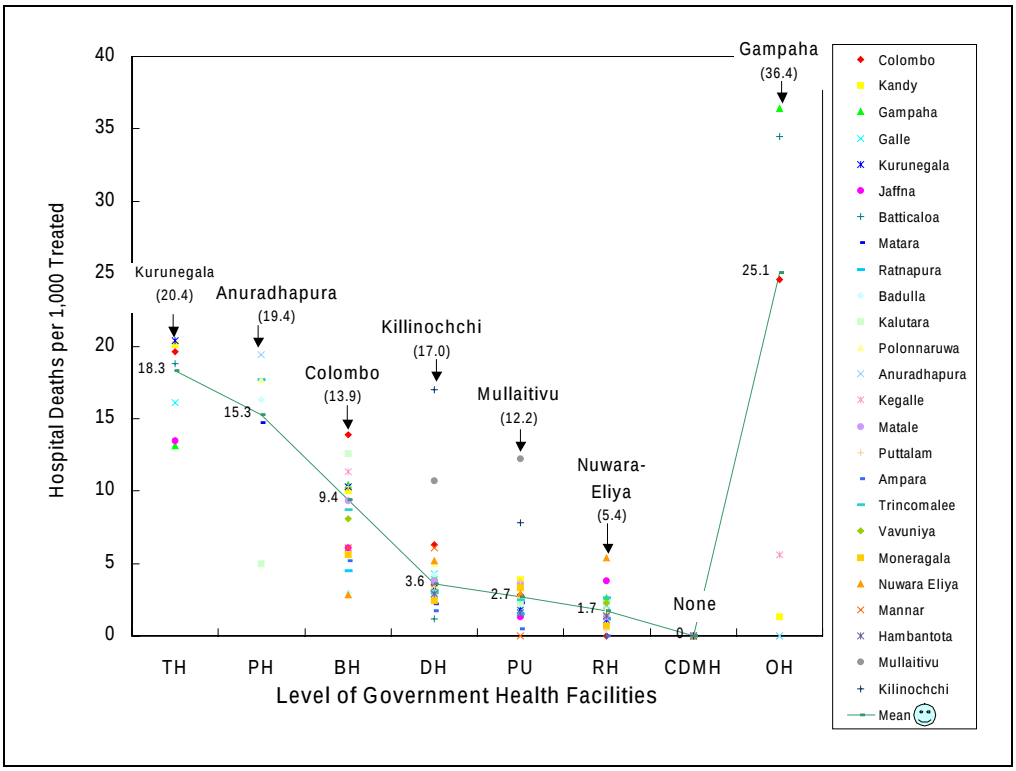


Figure 7.4.6 Distribution of Hospital Death Rates across Levels of Government Health Facilities, 2000.
Source: MoH. Annual Health Bulletin. 2000.

Finally, Kilinochchi, Mullaitivu and Hambantota are the three districts in Sri Lanka that have only the district hospital as the highest-level government facility. Their hospital death rates are on opposite poles. On one hand, Kilinochchi and Mullaitivu have death rates above the national average of 10 per thousand treated. On the other hand, Hambantota has the lowest among all the 25 districts. Like the four preceding observations regarding hospital deaths, this phenomenon requires further investigation. Why are the death rates in Mulllativu peripheral unit and Killinochchi district hospital the highest in Sri Lanka in their respective categories?

Based on the above discussion, hospital death rate may serve as an indicator of quality but it cannot stand on its own. It has to be interpreted within a context because death by itself is a phenomenon due to many quantifiable and non-quantifiable factors. Furthermore, because quality is a broad domain, it will be difficult to have a single indicator that will be specific and sensitive at the same time. Hence, when death rate is measured for purposes of health systems assessment, other attributes of hospital services have to be considered. When adopted, its interpretation has to account for the other components of quality.

Better Quality in Autonomous Hospital

The University of Birmingham observed that the autonomous hospital SJGH was better off than the non-autonomous hospital Peredeniya Teaching Hospital in terms of the cleanliness of toilet, maintenance of equipment and surgical theatres, availability of higher quality drugs and minimizing shortages of those in the essential list, and staff input.[21] It noted that the overall cleanliness of buildings in both hospitals were good or very good. It attributed the merits of the autonomous hospital to "greater management autonomy, for example freedom and flexibility to procure supplies and drugs, and SJGH's ability to charge fees and retain revenue, which in itself decentralises financial authority to the hospital".

In closing, the approach of this chapter in compartmentalizing the assessment of the health systems into its individual goals is a technique to simplify data-collection, analysis and reporting. Indicators used for one goal may serve the purpose of another goal. Without labouring the issue, the point is that these goals are highly inter-related. Which one is the most important? Some policy analysts and planners pit the domains of health outcomes, equity, efficiency, client-satisfaction, responsiveness, and quality against one another. During the course of the HMP Study, participants were at times challenged to come up with priorities, be they priority health problems, priority planning issues or concerns, priority policies, priority objectives, priority programmes, priority projects and many others. To facilitate the process, different techniques were employed such as problem-tree and objective-tree analysis, economic studies, scenario building, workshops, seminars, discussion groups among experts and the MoH leadership, flowcharting, and scoring system. One theme stood out during those activities – the health system is complex. Its priorities cannot be reduced to simplistic models wherein one and only one goal is the answer. Its priorities 10 years ago need not be the same as today and 10 years hence fundamentally because if they are the same then it has accomplished nothing.

[21] The University of Birmingham. The Role of Government in Adjusting Economies: Sri Lanka Reforming the Health Sector – Does Government Have the Capacity? 1997.

CHAPTER 8

FUTURE HEALTH NEEDS

8 FUTURE HEALTH NEEDS

INTRODUCTION

Health needs result from the interplay between professionally recognised needs and felt needs of the people, mediated by what the supply of services is and what the perceived cost and effectiveness of the services are.

Professionally recognised needs are known through studies of epidemiological and demographical patterns. The volume and nature of effective demand are determined, first, by **demographic characteristics,** such as total population having access to the facility and its age structure.[1] In Sri Lanka, falling level of fertility and considerable net emigration particularly during the 1970s has accelerated the ageing of the population. The current elderly population of over 60 is projected to increase from 7% to 14% in two decades. With rapid ageing rate of the society, Sri Lanka is going to face a new set of challenges in providing quality and efficient health care services to its people.

Second is the prevailing epidemiology. Together demography and epidemiology create the pool of professionally recognised needs. Looking at the current situation of diseases, according to the morbidity statistics, cardiovascular diseases, cancer, mental illness, accidents, suicides and homicides are on the increase and will continue into the 21st century. Malaria, Tuberculosis, Filariasis, and Respiratory illnesses are still public health problems but their mortality rate is declining over years. HIV infections and AIDS, Hepatitis B, Japanese Encephalitis and Dengue Haemorrhagic Fever (DHF) are challenging situations. Elimination of poliomyelitis and eradication of neonatal tetanus will be achieved by the end of the next decade.

Third are the **felt needs** and the degree of **active health-seeking behaviour** of the population. This is discussed in Chapter 2. This chapter,l discusses the demographic perspective, the epidemiological perspective and the potential financial constraints.

[1] Access in most cultures is very uneven by distance (the more people are normally mobile for markets and work and the cheaper and more convenient transport are, the longer the critical distance), most people will not use easily facilities more than two hours from home. Financial accessibility to care plays a role in delayed care as well as denied care and it relates to total cost to patient such as lost wages, transport cost, any fees and purchases of supplies and drugs. That is one of the main reasons why poor people utilize public health care less than people with more resources and why the diseases of poverty are underrepresented in the effective demand. These problems are more fully discussed in Chapter 2.

8.1 DEMOGRAPHIC PERSPECTIVE

Planning for the health sector requires an understanding of the target population to be served. Will the demographic dynamics in Sri Lanka during the next 10-20 years be similar to that in the past decades? Will the new demographic profile require fundamental changes in service delivery and financing systems? What will happen if the existing systems are not adapted? Can these systems afford to maintain the status quo?

The objectives of this section are to identify the main features of the population within the next 10-20 years and to describe the implications of these features on planning for the health sector.

(1) ASSUMPTIONS AND METHODOLOGY

Historical trends exist in population dynamics that can serve as the basis for making projections. The major determinants of the population dynamics are fertility, mortality and net migration.

Three projections were attempted: the first is based on a scenario of slow economic growth; the second on moderate economic growth; and the third is based on rapid economic growth. The different economic growth leads to different assumptions about fertility, mortality and net migration (Table 8.1.1) and therefore different population projections.

Table 8.1.1 Assumptions for Population Projections for Sri Lanka 2005-2025, under Different Economic Scenarios

Demographic variables	Economic Growth		
	Slow	Moderate	Rapid
Fertility	Slow decline	Moderate decline	Rapid decline
Mortality	Slow decline	Moderate decline	Rapid decline
Migration (Out migration)	Slow decline	Moderate decline	Rapid decline

Source: Population Division, Ministry of Health, 2002

For the Health Master Plan Study,[2] the Population Division of the MoH was requested to make projections for three scenarios using census data, including the preliminary report of the 2001 census. It assumed the fertility rate (Table 8.1.2) would continue to decline until sometime 2020-2025 when a reversal is expected. It further assumed that females would live 6-7 years longer than males (Table 8.1.3) with the gender gap a little more pronounced during better economic years. Its figures on net migration (Table 8.1.4) are negatively influenced by improvement in domestic conditions when fewer people are expected to seek greener pastures overseas. The success of the peace process between the Government and the LTTE will encourage returnees as well.

[2] The Census Department has population projections that were based on 1981 data. Although it conducted another census in 2001, data processing has yet to be finalized. Accordingly, revised projections will be made available only a year later.

Table 8.1.2 Projected Total Fertility Rates for Sri Lanka 2000-2025

Period	Total Fertility Rate		
	Slow Decline (P1)	Moderate decline (P2)	Rapid decline (P3)
2000-2005	2.00	1.95	1.90
2005-2010	1.90	1.85	1.80
2010-2015	1.80	1.75	1.70
2015-2020	1.75	1.70	1.60
2020-2025	1.80	1.75	1.65

Source: Population Division, Ministry of Health, 2002.

Table 8.1.3 Life Expectancy in Years at Birth

Period	Economic Growth					
	Slow		Moderate		Rapid	
	Male	Female	Male	Female	Male	Female
2000-2005	67.3	74.0	68.3	75.0	68.4	75.7
2005-2010	68.5	75.0	69.1	75.7	69.6	76.4
2010-2015	69.3	75.7	69.8	76.4	70.4	77.1
2015-2020	70.0	76.4	70.6	77.1	70.4	77.8
2020-2025	70.5	77.1	71.0	77.8	71.3	78.0

Source: Population Division, Ministry of Health, 2002.

Table 8.1.4 Annual Net Migration 2000-2025

Period	Economic Growth		
	Slow	Moderate	Rapid
2000-2005	-30,000	-25,000	-20,000
2005-2010	-25,000	-15,000	-15,000
2010-2015	-20,000	-15,000	-10,000
2015-2020	-15,000	-7,000	-7,000
2020-2025	-15,000	-7,000	-5,000

Source: Population Division, Ministry of Health, 2002.

(2) DEMOGRAPHIC TRENDS AND PROJECTIONS

The Three Projections

In general, the population projections (Table 8.1.5 and Figure 8.1.1) do not vary significantly because of the minimal variations in the total fertility foreseeable because it has reached already very low levels and the small variations in mortality rate. The most likely scenario is the one with moderate economic growth.

Table 8.1.5 Total Projected Population (000s)

Year	Economic growth		
	Slow	Moderate	Rapid
2000	18,811	18,811	18,811
2005	19,686	19,688	19,677
2010	20,492	20,488	20,458
2015	21,130	21,115	21,075
2020	21,597	21,578	21,475
2025	21,971	21,937	21,763

Source: Population Division, MoH

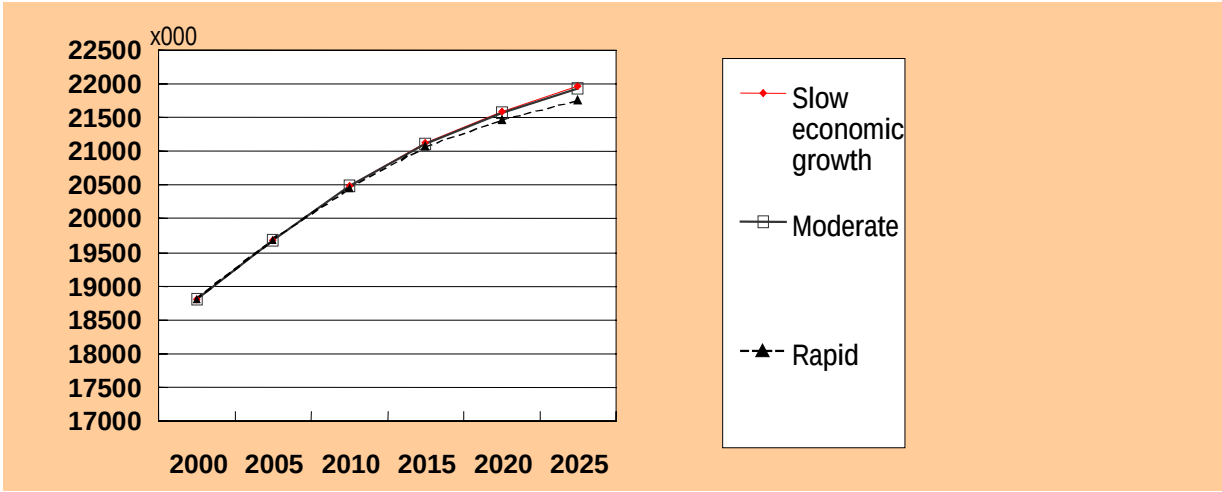


Figure 8.1.1 Projected Total Population
Source: Population Division, MoH

Growth Trend

Growth trend of total population from 1871-2025 follows an S-curve (Figure 8.1.2). The estimated population in 2000 was 18.8 million. It was projected to grow by 1.7 million by 2010 and another 1.1 million by 2020.

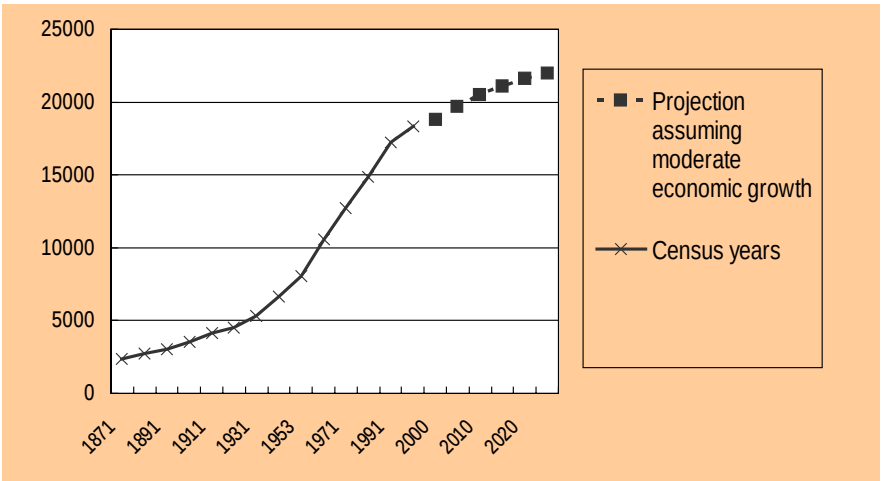


Figure 8.1.2 Total Populations: Census & Projected
Sources: Statistical Abstract of the DSR SL 1999, Department of Census & Statistics, Ministry of Finance & Planning; Population Division, MoH

Ageing

The ageing of the population is exemplified by a shift in the median age from 29 years old in year 2000 to 35 in 2015. This is rapid compared to other countries. Doubling of the elderly population (aged 60 and over) from 7% will take 2 decades in Sri Lanka while it took about 12 decades in France and will take 8 decades in the United States (Figure 8.1.3).

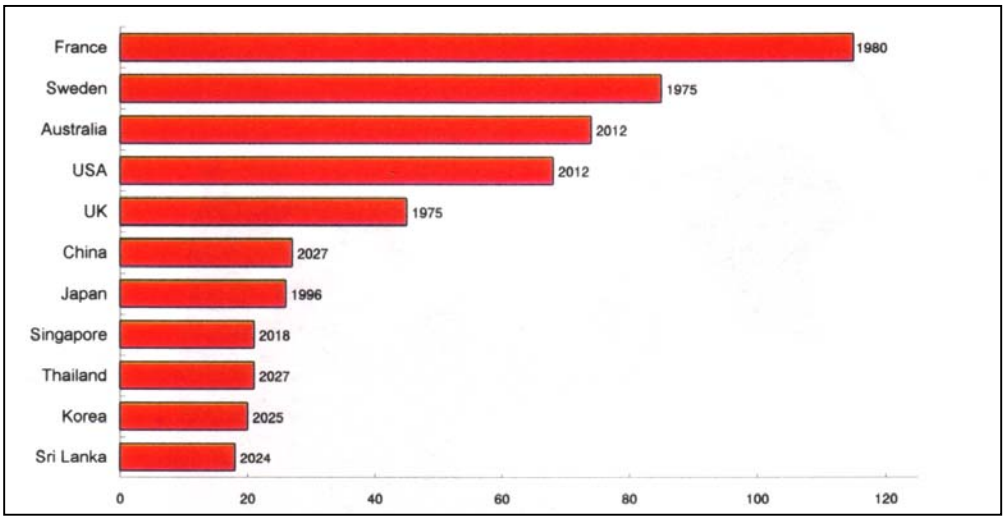


Figure 8.1.3 Ageing Rapidity

Source: Rannan-Eliya, et. al., *Responses to Population Ageing: A Review of International Experience* (1997), 11.

Elderly

In 2000, 1 out of every 10 people in Sri Lanka was estimated to be elderly (over 60 years old). This proportion will grow by one unit every five years such that it will be 1 of 9 in 2005, 1 of 8 in 2010, 1 of 7 in 2015, 1 of 6 in 2020, 1 of 5 in 2025.

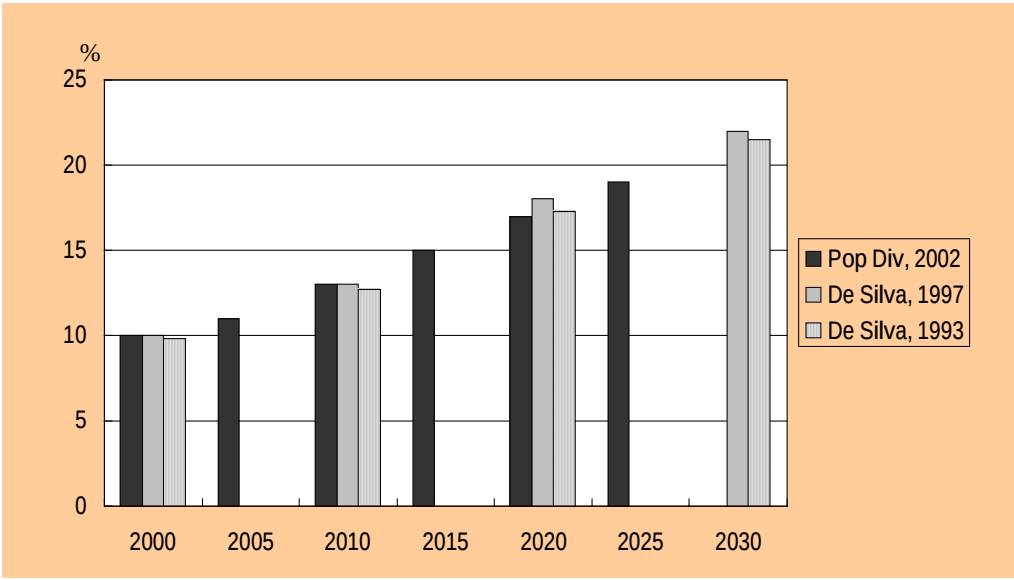


Figure 8.1.4 60 & Older: Projected

Moreover, Figure 8.1.5 shows that the fastest growing groups proportionately are the very old.

Children

The children under five years of age will decline by one percent every 10 years such that it will be 8% of the total population in 2000, 7% in 2010 and 6% in 2020. In terms of absolute number, 1.6 million children younger than five years old were estimated in 2000 (Figure 8.1.5). This number will be reduced by 100 thousand in 2010, by equivalent amounts in 2015 and 2020, when there will be only 1.3 million children younger than five years old.

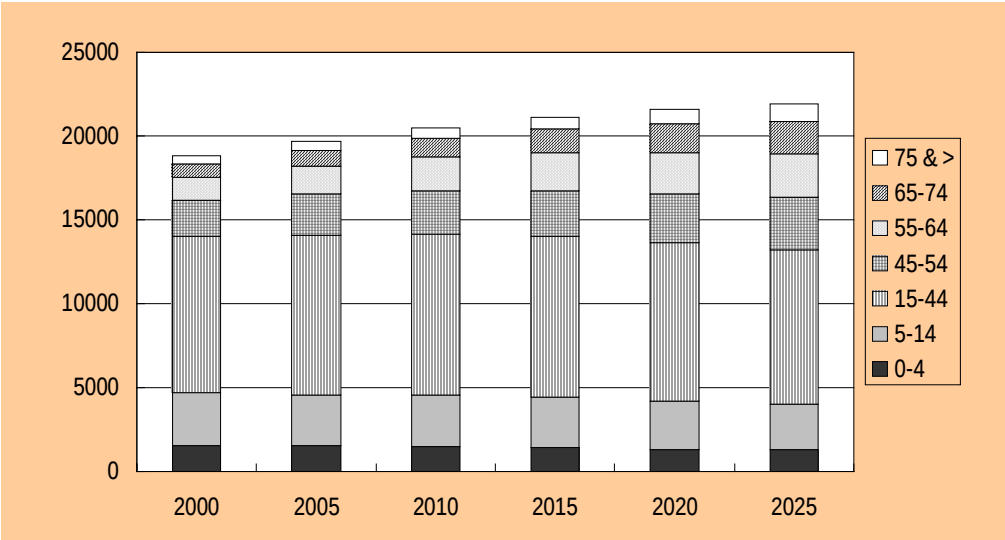


Figure 8.1.5 Population Age Structure in Absolute Values Assuming Moderate Growth

Source: Population Division, MOH

(3) PLANNING QUESTIONS

Health Services

What bearing will the demographic scenario in the next 10 to 20 years have as far as the health service delivery and financing systems are concerned?

Under-five care and maternity services will have to be delivered maintaining roughly the present volume.

There will be a strong demand for curative, rehabilitative and palliative services for the growing number of elderly. How can we avoid chronic problems of an ageing population overwhelming the services? Where should they be channelled? What new programmes should be initiated in the community to respond to the health and welfare needs of elderly?

What preventive and promotive programmes should be targeted towards the younger population, now 30-59 year old, who will become elderly in the next 1-3 decades? What are the preventive activities to be launched for these adults? What can be done for the unborn, the mother and the under five years old ones to avoid low birth weight and malnutrition, which are early life risk factors for non-communicable diseases in later life?

HMP will try to deal with all these questions.

Human Resources for Health

Does the existing workforce have the necessary skills to provide health and welfare services for the elderly? For preventive services of NCD among adults? For focussed malnutrition prevention in the antenatal period, in under fives? Is there a need to revise the existing curriculum for doctors and for all the other health-related professional courses? Is the present cadre appropriate in its composition for the ageing society? Is there a need to provide external technical assistance in assessing the needs and developing programmes for the silver community? What about the widespread need for health promotion with younger adults?

Medical Supplies and Equipment

Once the elderly are initiated to maintenance drugs to manage specific health conditions, then the therapy is for their lifetime more often than not. What measures should then be adopted to ensure that the prescribed essential medicines for the elderly will be available and, more importantly in the long run, affordable?

Some elderly require devices to maintain a certain level of quality of life. Others need special diagnostic and therapeutic equipment in the hospitals and/or at home. How equipped are the health facilities to support the needs of a greying society? What should be done in the short, medium and long terms to ensure that the health system is not caught flat-footed?

Health Finance

If the existing system of financing, resource allocation and use are to continue in the next 10 to 20 years, will there be sufficient funds to cover the increase in population over 45 years old? For the new services or programmes, capacity-building activities, medical supplies and equipment for the elderly?

Health Facilities Network

What will be the systems delivering services for the elderly? What will be the linkage among the service providers in the private and public sectors, and in allopathic and indigenous systems?

8.2 EPIDEMIOLOGICAL PROJECTIONS

The objective of this section is to estimate future epidemiological trends and demand for services, based on what is known about past epidemiological trends and the demographic projections discussed above and draw the consequences for the curative, preventive and promotive options.

(1) ASSUMPTIONS AND METHODOLOGY

The analysis makes two major assumptions. One, past epidemiological trends are likely to continue or even accelerate unless the Ministry of Health actively intervenes and mobilizes the communities and households. Two, epidemiological time trends affect different age groups differently.

There were three sources of mortality data. The Medical Statistics Unit that publishes the Annual Health Bulletin, the Registrar General Office (Office of Census) and the Cancer Registry of the National Centre for Cancer Control. The first source reports only the deaths in government IPD while the second source has a broader base, which includes deaths that occur in private health facilities and in the communities. The Cancer registry reflects both detected morbidity and mortality, due to any type of Cancer.

As for morbidity picture in the country, the incidence or prevalence of diseases could only be inferred from a triangulation of data from various sources: The Medical Statistics Unit reports the causes of hospital admissions only. However, it does not do so for consultations and its collection system is limited to government health facilities only. The KAP 2002 done in the context of the Master Plan Study has a cross sectional picture of morbidity over one month. The Cancer registry contains all Cancer cases.

As the private sector grows and as more people avail themselves of services from this sector, data from the Medical Statistics Unit become more incomplete and the picture of the epidemiological time trends become harder to understand. For this reason, the MoH-JICA Study Team commissioned in 2002 a household survey on Knowledge, Attitudes and Practices (KAP) of urban, rural and estate residents on ill health. The respondents were asked to recall the events one month prior to the interview; for acute diseases the picture is obviously incomplete as most of them are seasonal. But the survey provides a scenario of the chronic illnesses common at the community level and types of conditions that are brought to health facilities. Another study, entitled “Cost Analysis of Patients Management, In- and Out-Patient Department, 1996”; (PLS. CHECK THE TITLE OF THIS STUDY. IT IS STATED DIFFERENTLY IN OTHER PAGES) reflects the types of diseases that are often handled in government OPD. From these two special studies, one may infer the burden of diseases on outpatient services.

(2) EPIDEMIOLOGICAL TRENDS AND PROJECTIONS

Diseases and Consultations

One month prior to the KAP 2002 Survey, over 17% of the people reportedly fell ill. Almost 90% of the complaints could be attributed to only 12 conditions ranked in descending order (Table 8.2.1): 1) Acute Respiratory Tract Infection; 2) Hypertension; 3) Arthritis; 4) Asthma; 5) Diabetes; 6) Heart Failure; 7) Accidents; 8) Mental Illness; 9) Stroke; 10) Cancer; 11) Cataract; and 12) Food Poisoning. Among all of these, only the first is absolutely communicable and the last could be communicable in origin. All the others are non-communicable in nature.

Even if there is no one-to-one correspondence between the ranking of diseases that afflict urban and rural residents, it seems that the difference is not very significant. The ranking of diseases for estate residents though looks quite different. While diabetes is among the top five in urban and rural areas, it is one of the bottom for dwellers in the estates. Mental illness is the least concern in the estates but it is not for the others. As this relies on self-reported illness biases come from people's health-seeking behaviour, their ability to understand the exact nature of their disease and the diagnostic skills and communication by the practitioners visited.

Even so, the differences observed could probably also be partly attributed to disparities in lifestyle and life conditions.

Table 8.2.1 Leading Diseases by Sector

Disease	Percentage of Patients											
	Urban n =2,500			Rural n =7,980			Estate n =1,564			Total=11,644		
	%	Rank	Prevalence Rate	%	Rank	Prevalence Rate	%	Rank	Prevalence Rate	%	Rank	Prevalence Rate
*Acute Respiratory tract infection	24.50	1	3.64	27.6	1	3.93	10.60	5	1.55	25.10	1	3.62
Hypertension	15.60	3	2.36	12.5	3	1.78	15.90	2	2.32	13.6	2	1.96
Arthritis	5.80	5	0.88	12.7	2	1.80	8.80	4	1.29	10.80	3	1.55
Asthma	8.50	4	1.28	8.6	4	1.22	18.20	1	2.66	9.50	4	1.37
Diabetes	17.20	2	2.60	6.5	5	0.93	1.20	11	0.17	8.40	5	1.21
Heart Failure	5.60	6	0.84	6.1	6	0.86	11.80	3	1.72	6.50	6	0.94
Accidents	4.00	7	0.60	4.9	7	0.69	5.30	6	0.77	4.70	7	0.68
Mental Illness	2.10	8	0.32	3.8	8	0.54	1.80	12	0.26	3.20	8	0.46
Stroke	1.60	10	0.24	2.4	9	0.34	2.90	9	0.43	2.30	9	0.33
Cancer	1.90	9	0.28	2.1	10	0.30	2.40	10	0.34	2.10	10	0.30
Cataracts	0.50	11	0.08	1.8	11	0.25	4.70	7	0.69	1.80	11	0.26
Food Poisoning	0.50	12	0.08	1.7	12	0.24	3.50	8	0.52	1.60	12	0.23
Total 1-12	87.8%		13.2	90.7%		12.88	87.1%		12.72	89.6%		12.91

Note: *ARTI = Self-reported Influenza or Viral Fever or ARTI

Source: MoH-JICA Study Team KAP Survey, 2002

How many of those who get sick enter the formal health service delivery system? Of the 1,897 patients who responded to the KAP 2002 Survey, 28.99% did self-treatment as the first remedial measure for illness. In other words, only seven of 10 sought any consultation.

At the OPD of government hospitals, the overwhelming (five out of every ten patients) cause for consultation is related to diseases of the respiratory system (Table 8.2.2). This finding is consistent with the KAP Survey as acute respiratory tract infection is the most common condition reported. Although the "Cost Analysis of Patients Management, In and Out Patient Department" ??study did not provide disaggregated data, it is most likely that the bulk of respiratory diseases include asthma, chronic bronchitis and influenza. There seem to be gender trend, too. Whereas there were more men who consulted for injury and wounds, there were, however, more women who did for diseases of the musculo-skeletal system and diseases of the skin and subcutaneous tissue.

Table 8.2.2 Broad Disease Categories as Causes for Outpatient Consultation

Broad Disease Groups	Total		Male		Female	
	No.	%	No.	%	No.	%
Diseases of the respiratory system	899	45.0	358	46.6	541	43.9
Diseases of the musculo-skeletal system	288	14.4	88	11.5	200	16.2
Infections and parasitic diseases	207	10.4	67	8.7	140	11.4
Injury and wounds	165	8.3	97	12.6	68	5.5
Diseases of the digestive system	144	7.2	60	7.8	84	6.8
Diseases of skin and subcutaneous tissue	114	5.7	98	12.8	199	16.2
Others	183	9.2				
All causes	2000	100.0	768	100.0	1232	100.0

Source: 'Cost Analysis of Patients Management, In and Outpatient Department', 1996. ??

1) Causes of Admissions to Government Health Facilities

The seventeen[3] common causes of admissions to government hospitals from 1975-2000, in descending order, are as follows (Figures 8.2.1 and 8.2.2): Asthma, Abortions, Intestinal Infectious Diseases, Hypertensive Diseases, Diseases of the Liver, Ischaemic Heart Diseases, Malaria, Diabetes Mellitus, Anaemia, Measles, Tuberculosis, Viral Hepatitis, Nutritional Deficiencies, Septicaemia, Helminthiasis, Whooping Cough, and Rabies. Among the communicable diseases, only Measles and Septicaemia exhibit an upward trend. On the contrary, for most of the non-communicable diseases the number of admissions is increasing, with the exception of Abortions, Anaemia and Nutritional Deficiencies.

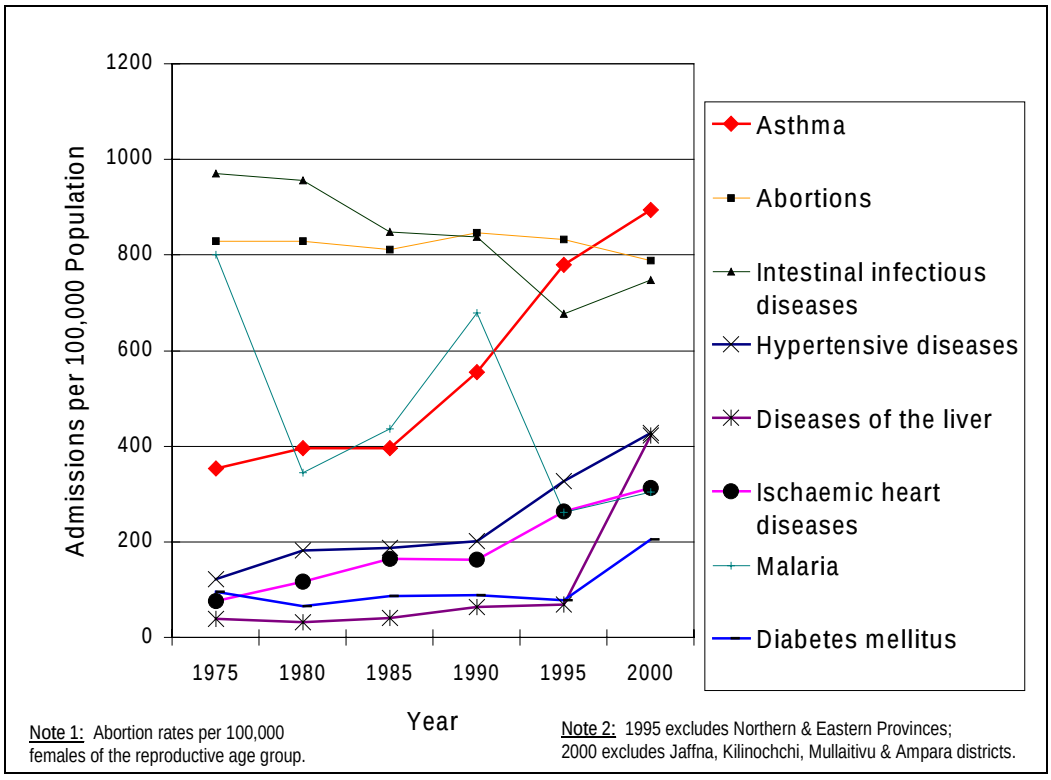


Figure 8.2.1 Causes of Admissions to Government Health Facilities (cont'd)

Source: Annual Health Bulletin 2000

[3] Data reported on the Annual Health Bulletin did not include those for Traumatic Injuries or Accidents, Neoplasm and Poisoning.

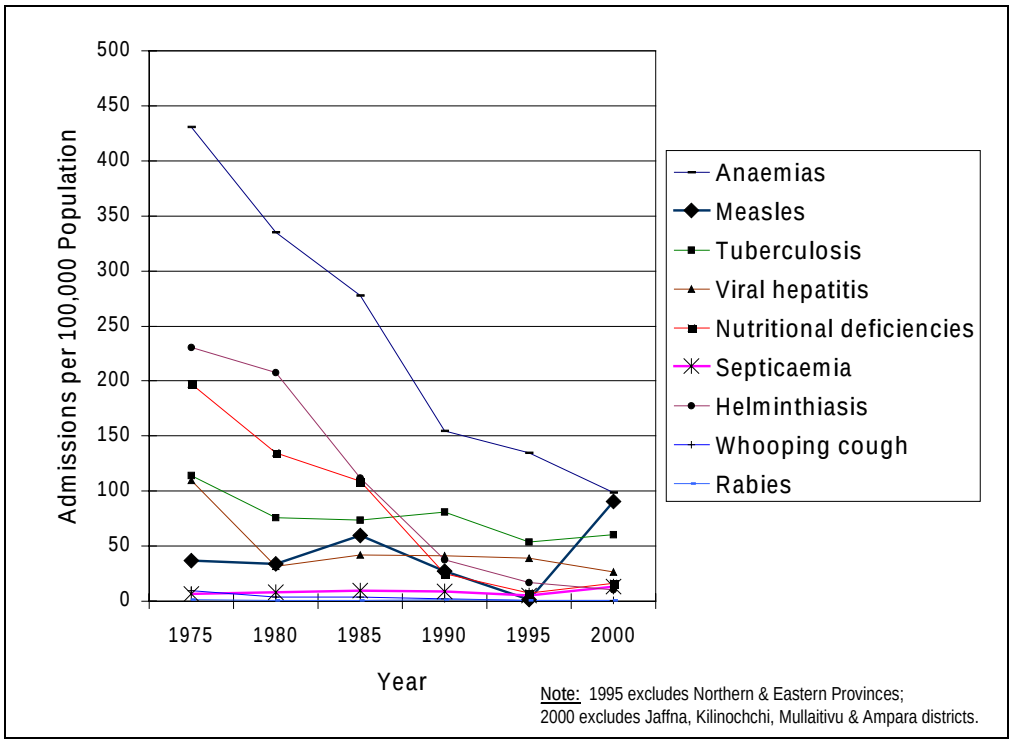


Figure 8.2.2 Causes of Admissions to Government Health Facilities

Source: Annual Health Bulletin 2000

While the admission rate for the selected communicable diseases combined is 1,300 per hundred thousand people, which for all selected non-communicable diseases is about 3,200 in year 2000. Putting it differently, for every person admitted for communicable diseases, there are three times more for non-communicable diseases. If the data for traumatic injuries, neoplasm and poisoning are included in the analysis, then the burden of non-communicable diseases on the health sector is clearly even heavier. If the upward trends of most non-communicable diseases were factored in, then hospital admissions would be more skewed. Assuming the current trends and socio-economic conditions will continue, then the admission rates by 2010 (Figure 8.2.3) will double at least for hypertensive diseases and ischaemic heart diseases. It will increase by 1.5 times for traumatic injuries and poisoning. By 2020, the burden of some diseases will double; others will triple like diabetes mellitus, whereas that of neoplasm will quadruple.

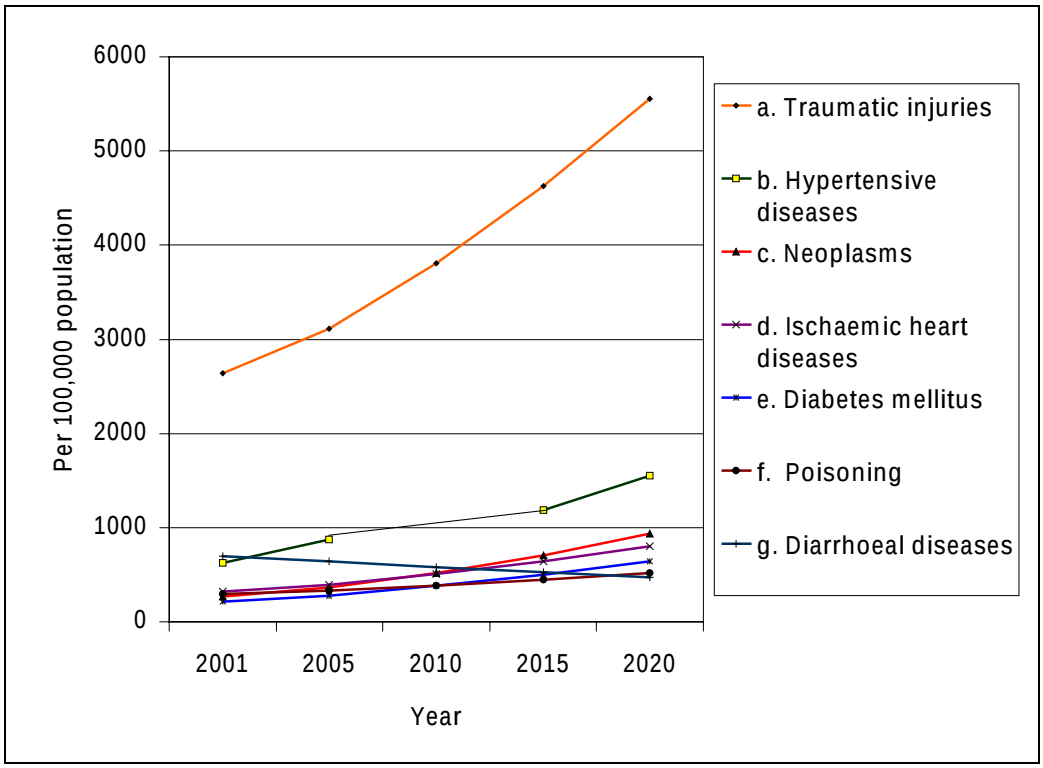


Figure 8.2.3 Projected Admissions to Government Health Facilities in Sri Lanka 2001-2020

Note: The Quadratic Trend Model was employed for projecting admission rates for Traumatic Injuries, Hypertensive Diseases, Neoplasms, and Ischaemic Heart Diseases, whereas it was the Growth Curve Model that best fit the trends for Poisoning and Diarrhoeal Diseases.

Source: Historical data from Medical Statistics Unit while projections by MoH-JICA Study Team

2) Trends of Each Disease

a. Diabetes Mellitus

Increasing trends of diabetes mellitus (DM) are generally seen in all provinces. Interestingly, in Western Province (WP), the number of diabetes cases reaches 4.3/1,000 in 2020, whereas for North-Central Province (NCP) and Sabaragamuwa Province this is more than 8.0/1,000 in 2020. This indicates that diabetes is no longer a health problem only in urban dominant areas, but also in the rural areas, too. This needs special attention by the health planners.

If there will be some effective measures taken up immediately, this caseload could be reduced to 3.4/1,000 in 2010 and 5.3/1,000 in 2020. Similarly, in the absence of any strategic intervention, this may increase to 7.5/1,000 in 2020.

b. Hypertensive Diseases

Similar to diabetes, hypertensive diseases continue similar projection pattern in both at national and provincial levels. By 2010 and 2020, respectively 11.8/1,000 and 15.2/1,000 cases will be expected in the country. In worst scenario this will be 9.4/1,000 and 18.2/1,,000 in 2010 and 2020, and in favourable scenario only 8.1/1000 in 2010 and 12.7/1,000 in 2020. Hypertensive Diseases will be an increasing health issue in all parts of the country, particularly in NCP (16.9/1,000 in 2010 and 31.3/1,000 in 2020) and Sabaragamuwa provinces (12.8/1,000 in 2010 ad 24.9/1,000 in 2020). This is as expected, as diabetes and hypertensive diseases are closely related each other.

c. Ischaemic Heart Diseases

An upward trend in incidence of ischaemic heart diseases (IHD) is seen in most provinces for the projected years. It will increase from 3.9/1,000 in 2010 to nearly 8.0/1,000 in 2020 in the country. In worst scenario, this increase is nearly three-fold. Again, IHD will be increasing in lesser rates in WP (3.6/1,000 in 2001 to 5.1/1,000 and 6.6/1,000 by 2010 and 2020) compared with Southern Province (SP), North-western Province (NWP) and Sabaragamuwa. It shows that in these provinces, an increase of three-fold or more is seen for the given review period from 2001 to 2020.

d. Neoplasms

Neoplasm will increase nearly three-fold in the country from 2001 to 2020. An effective strategic intervention may lead to decrease these numbers by 2020 in to the 7.8/1,000, whereas it is expected 9.4/1,000 if the present trend is continued. The WP will have the highest rate of 5.6/1,000 in 2001 to 13.6/1,000 in 2010 and subsequently 27.2/1,000 in 2020. However, this result must be interpreted very cautiously. The main referral hospital for Neoplasm is located in WP (Colombo) and these results are reflected in this referral pattern (bias).

e. Traumatic Injuries

There will be a two-fold increase of Traumatic Injuries in the country from 2001 (26.3/1,000) to 55.6/1,000 in 2020. This is very likely, as there are increasing numbers of road traffic accidents in the country. Also, this will be a result of changing socio-economic structures in the country. This will even worsen to 40.6/1,000 in 2010 and 63.9/1,000 in 2020 in absence of effective programme activities in future. As there are many missing and incomplete data in all the provinces, the Study is unable to make any projection by province.

f. Poisoning and Toxic Effects

Similar to the Traumatic Injuries, Poisoning and Toxic Effects are increasing in the country. The projected rates for 2010 and 2020 are 3.8/1,000 and 5.2/1,000, respectively. As this is necessarily modifiable health issue, there is an urgent intervention to control this situation, where thousands of lives might be lost with unnecessary cost to the country. In favourable conditions, this will decrease to 3.5/1,000 in 2010 and 4.1/1,000 in 2020. However, in absence of active programme to control this situation, it might be increased to 4.2/1,000 in 2010 and 6.2/1,000 in 2020.

g. Malaria

The past trend for malaria made it difficult to fit a time series model. However, it looks like increasing in future.

h. Tuberculosis

Similar to Malaria, the Study is unable to make any projection due the limitation of data.

i. Diarrhoeal Diseases

Diarrhoeal Diseases will be decreased in the country in next two decades. It will drop from 699.4/1,000 in 2001 to 581.3/1,000 in 2010 and finally to 473.4/1,000 by 2020. With the improvement of socio-economic factor, particularly sanitary conditions, and with high literacy, this will be a more realistic projection. In such a situation this will drop to 523/1,000 in 2010 to 378.8/1,000 in 2020.

j. Diseases of the Respiratory System

Though several attempts were made to fit a time series model into the Respiratory Diseases data, it was not successful, as the past trend of 20 years (observations) is largely inadequate to assume a reasonable rend. This limitation is discussed elsewhere in this report.

(2) MORTALITY

Mortality Trends

Analysis of the number of people reported to have died in 1980 and 1996 (Figure 8.2.4) indicates an upswing on the death rates per hundred thousand people towards the latter year. This is mainly due to increased numbers of homicide cases, which is nine times more in 1996 than in1980.

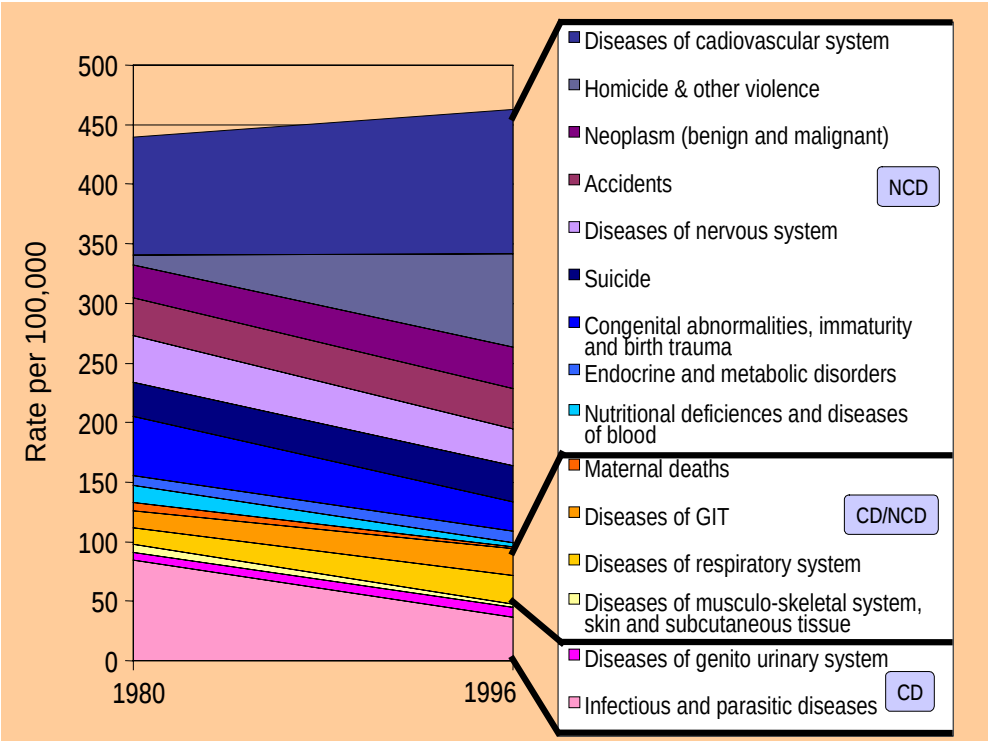


Figure 8.2.4 Causes of Mortalities by Diseases Grouped According to Communicable (CD) or Non-communicable Diseases (NCD), 1980 and 1996

Source: Registrar General Office

Through the years, cardiovascular diseases have remained as the number one cause of death among the population in Sri Lanka. With a nine-fold increase in rate, homicide and other violence ranked second in 1996. Infectious and other parasitic diseases dropped to third place when its rate of 85 per hundred thousand in 1980 was reduced by more than half to 36. Many of the other causes of deaths are non-communicable diseases.

While the Registrar General Office reports possibly reflect the overall situation in the country, the burden of mortality on the health system could be reflected more by reports on deaths in government hospitals. According to the Medical Statistics Unit, the top 17 causes of hospital deaths in descending order are (Figures 8.2.5 and 8.2.6): Ischaemic Heart Diseases; Diseases of the Liver; Septicaemia, Asthma; Diabetes Mellitus; Hypertensive Diseases; Tuberculosis; Intestinal Infectious Diseases;

Anaemia; Malaria; Rabies; Abortions; Viral Hepatitis; Nutritional Deficiencies; Helminthiasis; Whooping Cough; and Measles. Increasing trends are shown by the top five causes and Rabies; thereby implying that these conditions will more likely continue to demand more from the health sector assuming no major intervention is undertaken. The other causes of hospital deaths are on the decline.

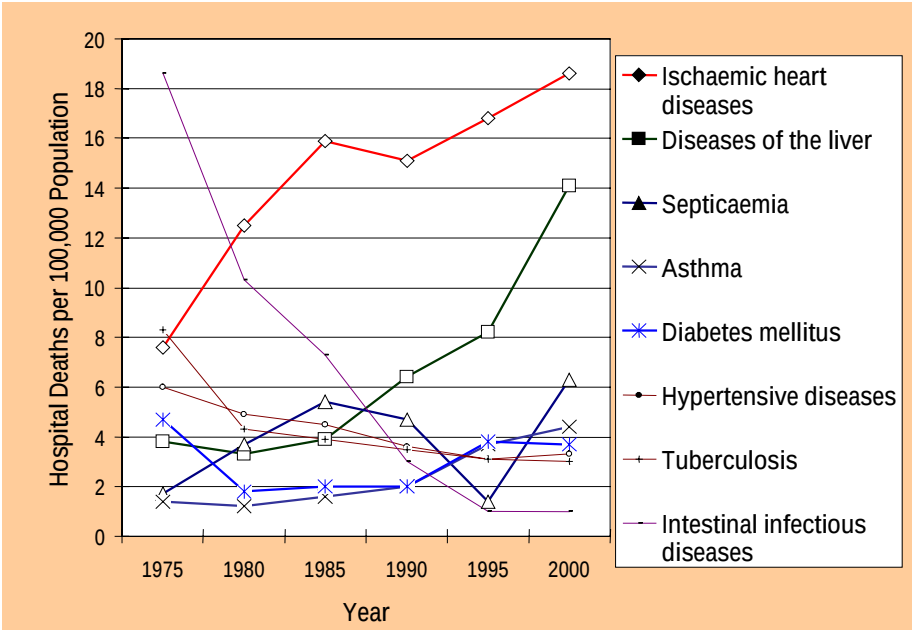


Figure 8.2.5 Causes of Deaths at Government Health Facilities (cont'd)

Source: Annual Health Bulletin 2000

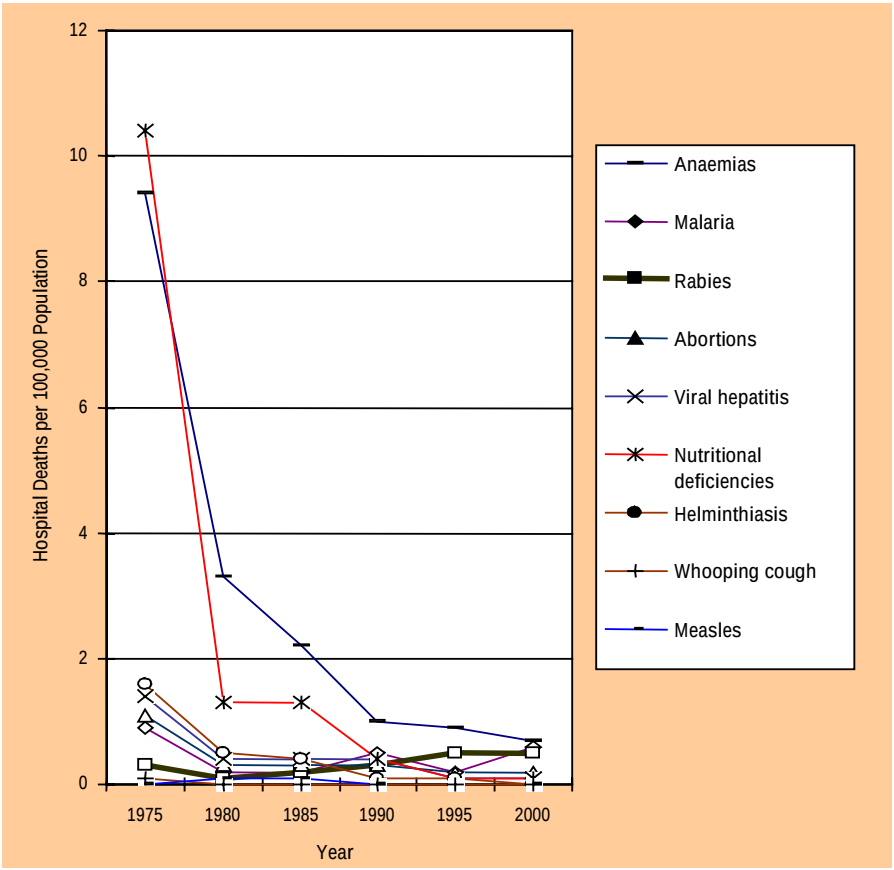


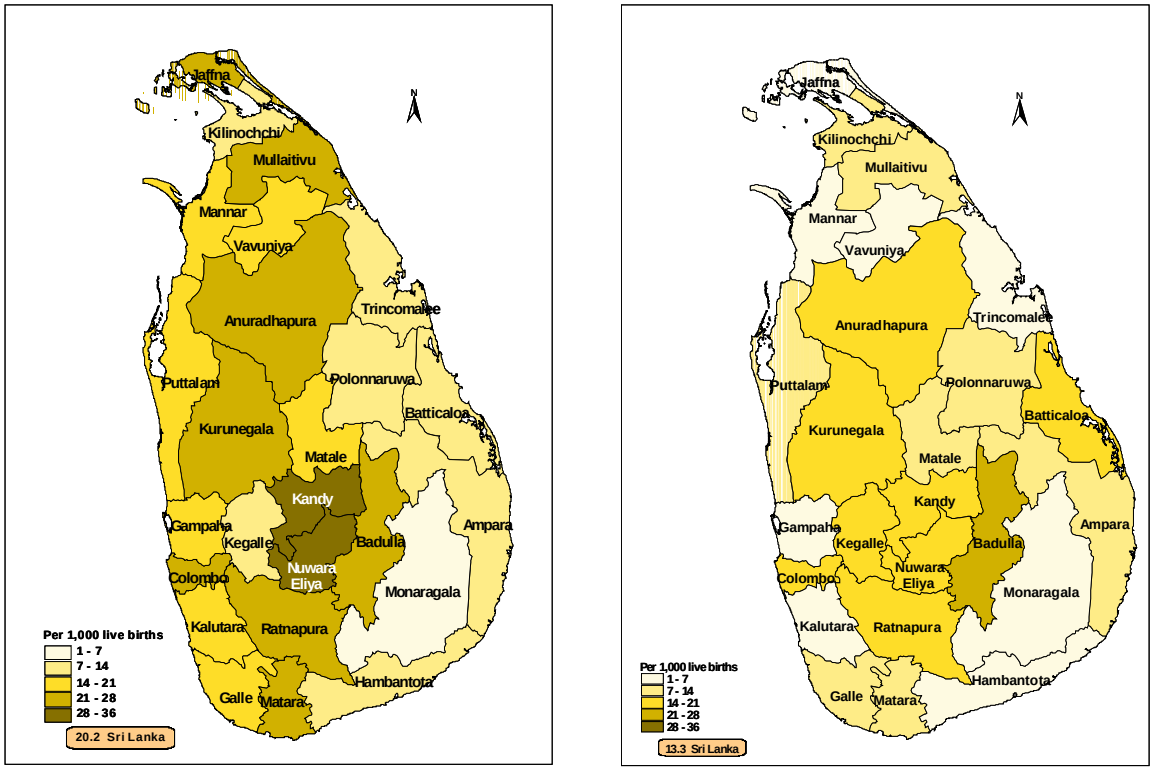
Figure 8.2.6 Causes of Deaths at Government Health Facilities

Source: Annual Health Bulletin 2000

Geographical Variation of Infant Mortality and Maternal Mortality

The geographical variation on the burden of disease is demonstrated by infant mortality rate (Figure 8.2.7) and maternal mortality rates (Figure 8.2.8) reported by the Annual Health Bulletin, MoH and Statistical Abstract, Dept. of Census and Statistics. Suffice it to say that, at this stage, there seems to be significant decline in the IMR in every district over 10 years except some northern districts. However, there are differences that necessitate further analyses. Those districts that have higher IMR are Anuradhapura, Kurunegala, Kandy, Kegalle Nuwaraeliya, Ratnapura, Colombo, Galle, Badulla and Batticaloa. For over 10 years, maternal mortality rate also shows improvement but the north and east districts have shown slight increase of MMR.

Epidemiological patterns of specific diseases will be correlated with geographical boundaries. Explanations for these patterns will also be investigated. A cursory review of the mortality rates below indicate relatively better conditions in most districts in the Eastern districts in terms of infant mortality but not in terms of maternal death. According to the figure, Monaragala has better indicators, which is something contrary to expectations and may indicate underreporting or overestimation of the denominator or both.



IMR 1988 IMR 1997

Figure 8.2.7 Infant Mortality Rates by District -1988 and 1997

Source: Statistical Abstract 2001, Dept. of Census and Statistics, Annual Health Bulletin 2000, MoH.

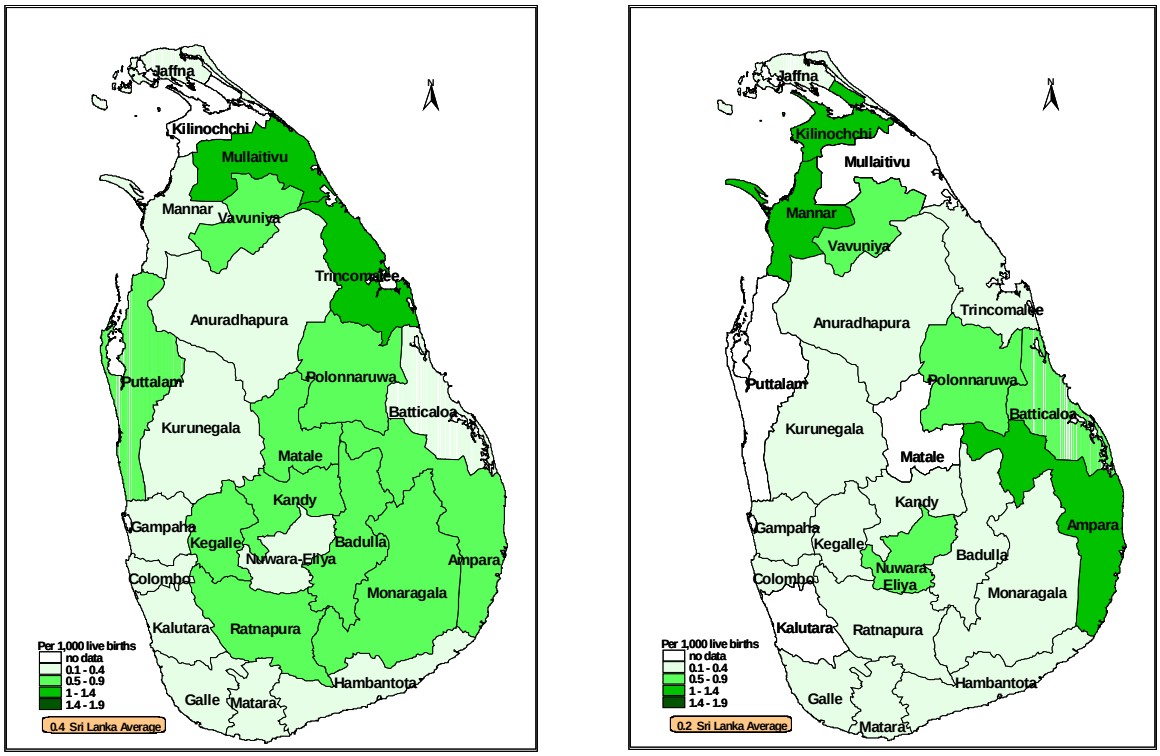


Figure 8.2.8 Maternal Mortality Rate by Province 1996

Source: Statistical Abstract 2001, Dept. of Census and Statistics, Annual Health Bulletin 2000, MoH.

Mortality Rates by Different Age Groups

Emerging conditions and diseases such as homicides, accidents and suicides are increasing in the last 20 years. In spite of a relative decline of mortality by accidents and suicides in young age, statistics show an increase in middle and old age as shown in Figure 8.2.9. A striking phenomenon is the surge of homicides in the young-age group in recent years.

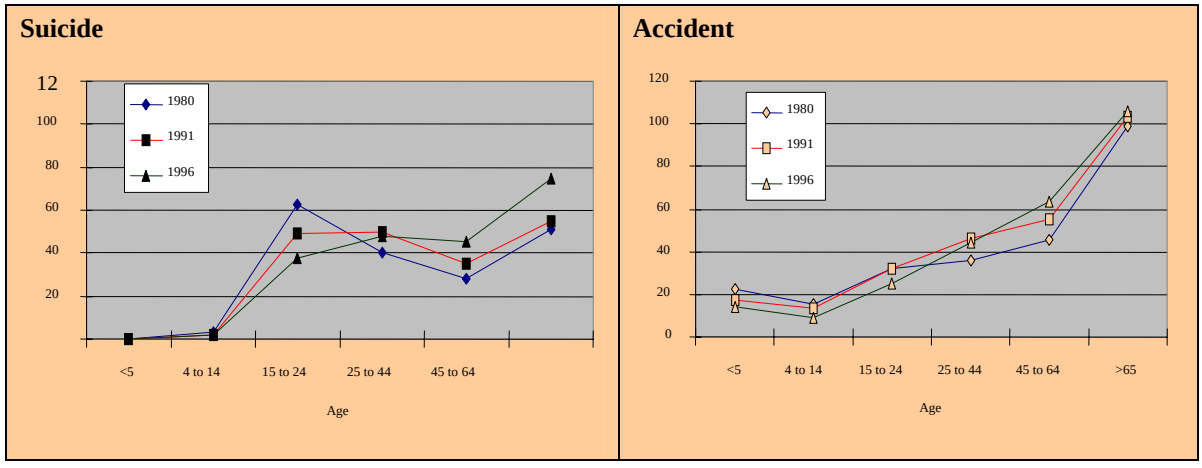


Figure 8.2.9 Trend in Rates of Suicides and Accidents by Age Group

Source: Sri Lankan Govt. Registrar General, Vital Statistics 1980-1995.

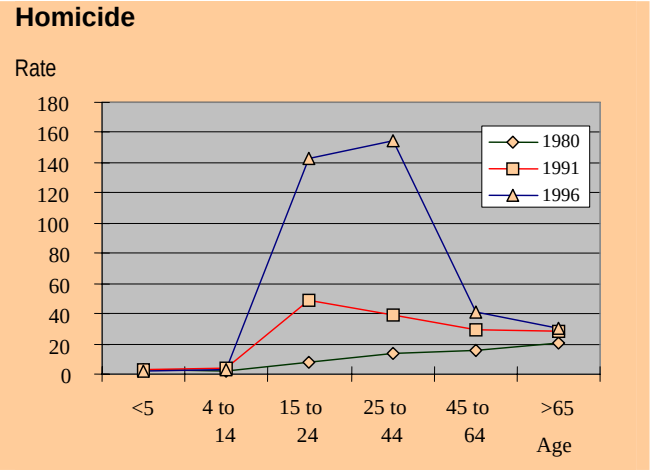


Figure 8.2.10 Trends in Rates of Homicides by Age Group

Source: Sri Lankan Govt. Registrar General, Vital Statistics 1980-1995.

(3) IMPLICATIONS ON PLANNING

Although the overall health status of the people in Sri Lanka has considerably improved to a level better than many countries with similar economic condition, there are signs and symptoms that warn local planners and policy-makers against complacency.

Non-Communicable Diseases Control

The increasing trends in rates of hospital admission and deaths primarily due to non-communicable diseases might easily overrun the gains during the past decades. Considering that these conditions often require long-term medications and other therapies, doing nothing or adopting a business-as-usual attitude is not a planning option. If primary prevention were to be implemented, it might show a slowing down of the increase. However, most likely, even with successful primary prevention a real decrease is at least 15-20 years away. This means secondary and tertiary prevention need to be intensified soon to limit the damage done by non-communicable diseases and the quality of curative care needs would have to be strengthened to assure early detection in situations where secondary prevention has potentially the greatest impact.

Strengthening Surveillance System

Many communicable diseases that used to burden the health system have been controlled so that they do not serve as public health hazards anymore. As causes of admissions and deaths, many have been on the decline. If the trends of measles and septicaemia are to serve as examples, then any communicable disease may re-emerge at any time unless they are well understood by the population and workers or fully eradicated which is not possible for many, or they are well controlled which is possible for a few, or their outbreak consistently monitored. Herein lies the importance of keeping vigilant. Herein lies the critical role of maintaining a functional information and surveillance system with an expanded coverage that includes the public and private sectors as well as inpatient and outpatient activities.

Improvement of Hospital Services

If the rates of hospital deaths vis-à-vis admissions reflect even partly the quality of services the government health sector provides, then improvement in the management and delivery of hospital services need to be addressed in the Health Master Plan. The hospital admission and death rates seem to run similar trends (Figure 8.2.11), though not exactly, for some communicable diseases (e.g.,

Septicaemia, Tuberculosis and Malaria) and for some non-communicable ones (e.g., Asthma and Diseases of the Liver). Among the diseases analysed, there is at least one exception when an increase in hospital admission rate was accompanied by a decrease in its hospital death rate. This was the case for measles (Figure 8.2.12). Improvement of health services, therefore, may include:

1) Consolidating promotive, preventive and curative actions towards managing the causes of child and maternal morbidities and mortalities;
2) Promoting healthy lifestyles among adolescents, young adults and families of patients with non-communicable diseases;
3) Attaining more equity of health outcomes among provinces and districts;
4) Investigating the increase in septicaemia as to whether it is due to antibiotic resistance or so far belatedly recognised meliodosis, streptococcus and staphylococcus and or its link with diabetes and alcohol, HIV and malnutrition as well as taking immediate interventions;
5) Providing emergency services, in and outside of health facilities, and ICU service; and
6) Fighting the major factors that contribute to the climbing death rates related to Homicides, Accidents and Suicides (Note: the factors include alcohol, drugs, sleep deprivation on the part of drivers, ignorance or carelessness with poisons, problems related to road design/condition and observance of traffic regulations, and absence of criminal charges for driving under the influence of drugs/alcohol).

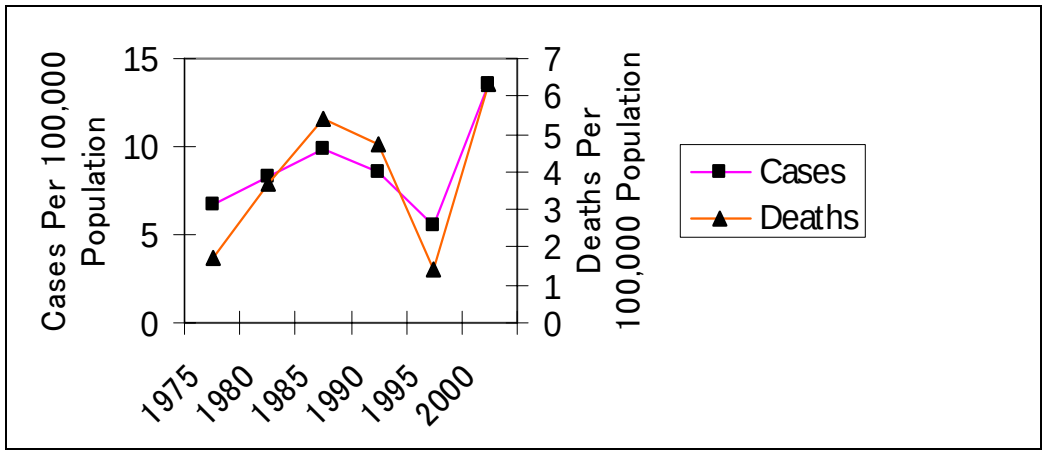


Figure 8.2.11 Hospital Admissions and Death Rates: Septicaemia

Source: JICA Study Team

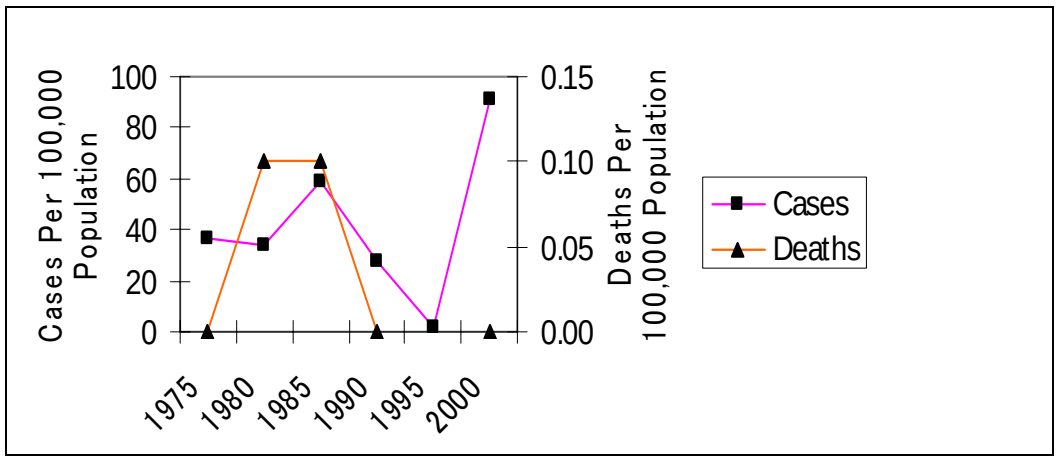


Figure 8.2.12 Hospital Admissions and Death Rates: Measles

Source: JICA Study Team

Improvement of Health Information System

The analysis of epidemiological trends demonstrated the need for improving the health information system to provide policy-makers, planners, managers, and service providers with useful information. Whatever the reasons were in the past, excluding information on consultations must be reconsidered in health services. Moreover, the MoH should look at other sources of information especially the Registrar General's data and special studies such as DHS as part of its patrimony and assure there is proper collaboration for timely analysis and dissemination of data.

Using New Measures of Burden of Diseases

Finally, the traditional health indicators of morbidity and mortality remain important within the context Sri Lanka. However, there seems to be a need to use other measures of burden of disease particularly once a country has achieved a high state of health such that appreciable amelioration in traditional indicators would take a considerable amount of resources, including time, or would be more dependent on actions taken by non-health sectors. One wanting to include disability as an indicator unfortunately would face difficulty, mainly because the existing information system has not yet been designed to capture such burden, or at least age-specific morbidity and mortality for leading non-communicable diseases and some important communicable diseases.

Figure 8.2.13 shows major burden of disease in developing countries with low child and low adult mortality.

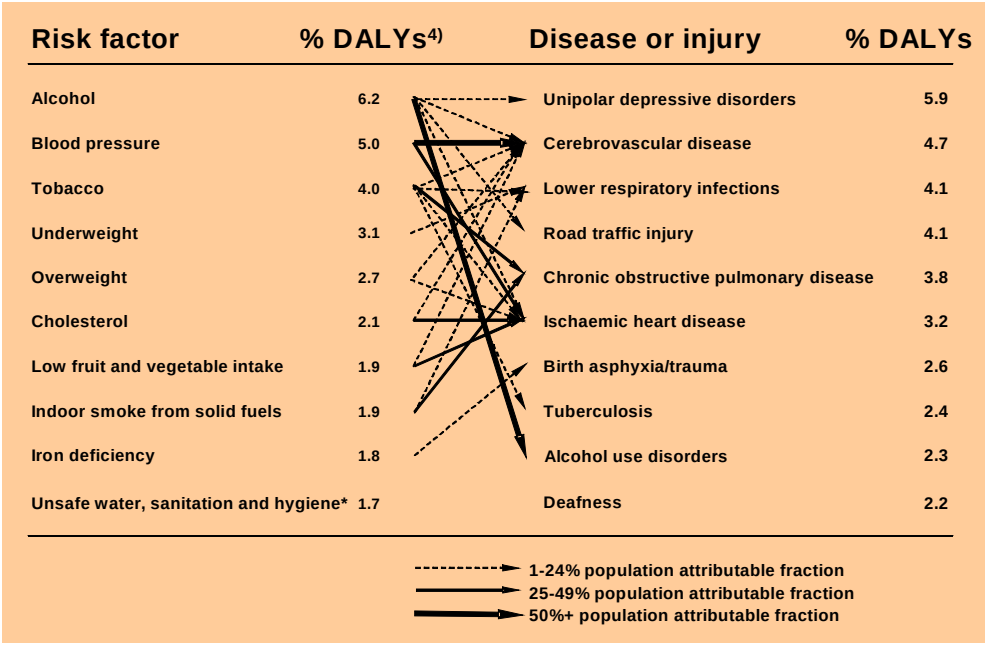


Figure 8.2.13 Major Burden of Disease for Developing Countries with Low Child and Low Adult Mortality (AMR-B, EMR-B, SEAR-B, WPR-B)

Note: Unsafe water, sanitation, and hygiene disease burden is from Diarrhoeal Diseases. The selected risk factors cause diseases in addition to those relationships illustrated, and additional risk factors are also important in the aetiology of the diseases illustrated.

Source: World Health Report 2002.

Alcohol, Hypertension, Tobacco, Overweight and Cholesterol are the highest risks that create the major burden of diseases. According to a WHO study on ageing, there is a critical window for the exposure of risk factors in the early stage of life to cause degenerative diseases at later age, proven by recent epidemiological data of life-course approach. So the appropriate preventive intervention in different age groups has to be designed to fit to these evolving diseases.

8.3 SERVICE PROVISION TRANSITION

(1) MAJOR FEATURES OF HEALTH TRANSITION IN SRI LANKA

1) The population is ageing rapidly such that the proportion of elderly will shift from one out of every 10 people in 2000 to one of eight in 2010 and one of five in 2025.
2) The number of children under five years of age (estimated in 2000 to be one and six million) will be reduced slightly by one hundred thousand in 2010, by another equivalent amounts in 2015 and 2020, when there will only be 1.3 million.
3) The burden of infectious and parasitic diseases on people's health has declined by nine percentage points of the total causes of deaths reported to/by the Registrar General Office from 14% in 1980 to 5% in 1996 (the latest available data) and the death rate per 100,000 population has reduced considerably from 85 to 36.
4) Non-communicable diseases continue to predominate as causes of deaths reported to/by the Registrar General Office. Cardiovascular diseases are consistently number one overall from 1980 (16%) to 1996 (18%). Homicide as well as other violence is the number two in 1996. They show an alarming jump from 1% in 1980 to 12% in 1996 or from a rate of 8 to 78 per hundred thousand people. Neoplasm, accidents, diseases of the nervous system, and suicides are each responsible for 5% of the causes of deaths.
5) The mix of communicable and non-communicable diseases is verified when one looks at the top 10 causes of hospital admissions in 2000 and in descending order they are Asthma, Abortions, Intestinal Infectious Diseases, Hypertensive Diseases, Diseases of the Liver, Ischaemic Heart Diseases, Malaria, Diabetes Mellitus, Anaemia, and Measles.
6) The mounting burden of non-communicable conditions on people's health is supported further by the fact that among the top 17 causes of hospital deaths in 2000, many of the conditions that have demonstrated declining trends are communicable in nature whereas those that have shown increasing trends are non-communicable. Since 1975, those that are waning in importance are Abortions, Intestinal Infectious Diseases, Malaria, Anaemia, Tuberculosis, Viral Hepatitis, Nutritional Deficiencies, Helminthiasis, Whooping Cough, and Rabies. Those that are escalating are Hypertensive Diseases, Diseases of the Liver, Ischaemic Heart Diseases, Diabetes Mellitus, Measles, and Septicaemia.

(2) CHANGES IN SERVICE PROVISION

Considering the changing demographic and epidemiological conditions, the need for reforming the delivery of health services becomes apparent. Several considerations are proposed.

Prioritise diseases and carry out strategic interventions

Modern medicine as practiced nowadays in Sri Lanka is still very much within the infectious paradigm that a disease has one etiological pathological agent, a favourable personal terrain and a predisposing environment. Given diagnostic limitations most treatments result from a probabilistic guess of the aetiological agent or a broad spectrum pharmaceutical supplemented with symptomatic treatment, often also with vitamins to shore up the terrain. This is relatively successful in most infectious diseases, but it is an inadequate paradigm for non-communicable diseases: which are multifactorial in origin and evolve through metabolic deviant mechanism that weakens the body in specific ways.

1) Non-Communicable Diseases and Strategic Interventions

Many non-communicable diseases because of shared causation and metabolic pathways also should be detected in early stages in an integrated way and have also shared secondary prevention.

a. Life-Course Approach to NCD Prevention

This understanding of the nature of the non-communicable disease problem follow **a life-course approach to NCD prevention.** As Figure 8.3.1 demonstrates, it should cover the risks at all ages. For the child and infant risks it is necessary to do so in collaboration with MCH and Nutrition programmes**.**

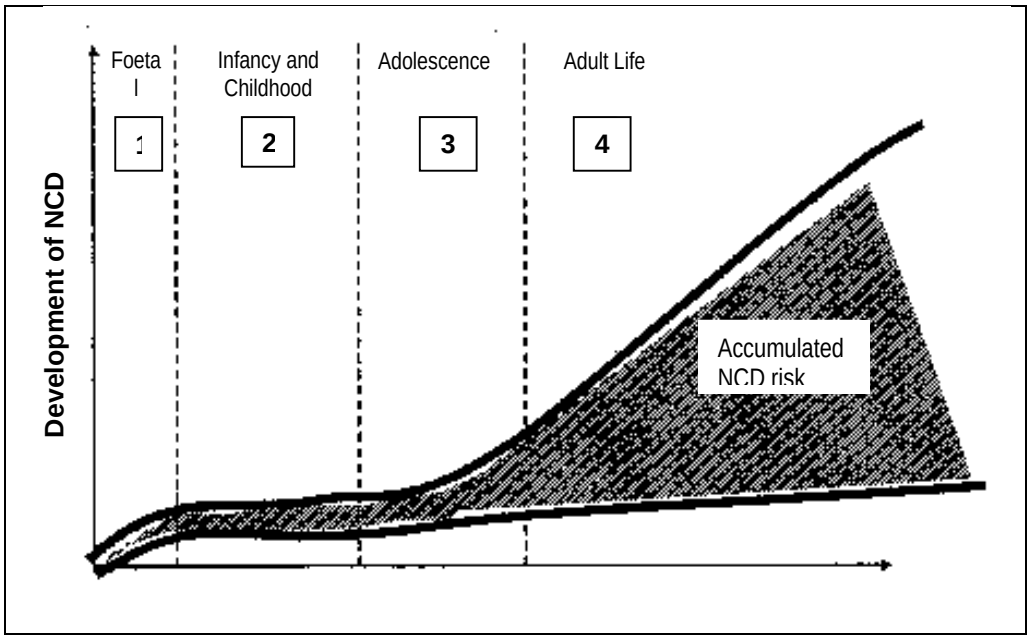


Figure 8.3.1 A Life-Course Approach to NCD Prevention

b. NCD interventions

During **foetal life** the maternal nutritional status, the foetal growth and the socio-economic status at birth are major risk factors. The antenatal care programmes will try to deal with the maternal nutritional status during **infancy and childhood** such as non-exclusive breastfeeding, infectious diseases, unhealthy diets (over and under-nutrition), lack of physical activity, obesity and poverty. The interventions will come mostly through the MCH programmes.

During **adolescence** unhealthy diets, lack of physical activity, obesity, tobacco and alcohol are the risk factors; interventions will mostly come through school health programmes.

During adult life, risk factors are lack of physical activity, obesity, alcohol, tobacco, high saturated fat diets, trans-fatty acids, lack of fiber and antioxidants in food, stress. But adopting a healthier lifestyle could lead to loss of social status or status dissonance, etc.

Primary prevention against these risk factors will come both in health promotion that is population based and in focussed programmes addressing family risks of families of patients. NCD prevention should seek to cover all the common adult factors mentioned here as well as some specific to developed or urban communities, such as physical inactivity and illicit drugs. Informed

community participation and change in lifestyle and values, more equity in society and good health services can influence most of these factors.

2) Homicides and Suicides and interventions

The Registrar General's reports show that homicides (3rd highest in the world) and suicides (7th highest in the world) are a serious problem in Sri Lanka. Both will probably decrease in incidence under the influence of the above prevention programme or at least slow down their growth when alcohol and drug abuse is curbed. National correlates of homicides and suicides need to be studied and acted upon.

Further possible interventions is a campaign to block the sudden surge of homicides and other violence particularly among the productive age groups of 15-24 and 25-44 years that have death rates of more than 140 per 100,000 population in 1996 whereas the age group of 45-64 has the next highest rate of only about 40; the average rate is 55/100.000. This makes Sri Lanka the third highest country only surpassed by South Africa and Columbia, far ahead of the USA with 6.1/100,000, or New York with 16.8/100,000 but resembling its capital Washington with 69/100,000. India is reported to have a 38/100,000 in 1999 and declining.

Attempted homicides and suicides or major violence should lead to counselling. Improved societal equity in access to basic needs and crucial resources such as education will also contribute to decrease these incidences of violence. There is a need to open dialogue on the ferocity of the present competitive spirit and the need to cultivate cooperation, tolerance, mutual assistance and stress-coping mechanisms. Concomitantly, the health services will have to beef up the emergency services with first aid relays, as too many die in transport or due to delayed care in ill-equipped or understaffed hospitals

3) Accidental injury and Road accidents, Mental health, and Oral health and interventions

The other subcomponents under Non-communicable diseases such as accidental injury and Road accidents, mental health and oral health will benefit too from the integrated prevention programme but will have to tackle other risk factors specific to their groupings in the same spirit.

Improve quality and safety of services

The rates of hospital deaths due to Septicaemia, Tuberculosis, Malaria, Asthma, and Liver have increased with the rates of admissions from 1975 to 2000, implying that the hospitalisation hardly improve the chances of survival during the same period.

Such an ambitious strategy of disease management will ask very careful research consensus building on best practices in OPD/general practice, specialist clinics and IPD. Quality and safety will ask for increased specificity and sensitivity of diagnosis; therefore, better diagnostic procedures of both the episode and the underlying conditions, and better early detection of chronic communicable and non-communicable diseases, will ask for relevant personnel and supplies.

Rationalise health services network

It will be responsive to the changing demands of a society that is ageing and in which non-communicable diseases prevails, the cost of providing services for chronic conditions is expected to be high, and the competition for public expenditure is stiff.

Responding to Disparities

Although the national indicators show higher health outcome attainments, some districts/provinces/communities are worst off or simply exhibit different trends. It is now necessary to respond to health status discrepancies across geographical areas and socio-economic groups.

Forge functional public-private and public-public partnerships for health

Putting a break to the onslaught of homicides and other violence requires interventions partly in health facilities but primarily before they are referred.

Provision of quality essential drugs and equipment

Concomitant with the changing demands for services is the changing requirement for drugs and equipment.

Improvement in the delivery of health services will have to be balanced with financial constraints exacerbated by the growing demand in terms of volume and cost. Efforts would have to be directed towards strengthening human resources and organization for health, administration and management as well as ensuring community participation and satisfaction. Central to all of these efforts would be resolving some cross-cutting issues such as strategies toward implementation of decentralization policy as well as optimising resource mobilisation, allocation and utilisation. In other words, a comprehensive approach is advised for a durable enhancement of service provision.

(3) ESTIMATES OF HOSPITAL BEDS NECESSARY BY 2015

Assumptions and Methodology

Facility development for IPD will need to take careful account of population growth, and growing number of aged patients with chronic diseases. Following four methods will be adopted to estimate the volume of demands for inpatient facility in 2015.

Method 1: To estimate the total number of beds needed in 2015 by using the same rate of bed: 29 per 10,000 population as in 2002 and thus assuming unchanged health services and demand, and bed occupancy but the necessity to adjust to population growth, assuming constant average duration at 3.8 days.

Method 2: To estimate whether the increased demand due to population growth under 1) can be absorbed assuming a change in bed occupancy at district and lower levels, by expanding both their functions and capabilities, counter-referral and by avoiding frivolous one night hospitalisation by having better OPD.

Method 3: To estimate the beds in 2015 by using the same rate of annual hospital admission: **206 per 1,000 population**, same rate of bed occupancy, average duration of 5.5 days as prevails in developed countries, which have a load of chronic diseases.

Method 4: On the assumption that the nation's health conditions will be improved and OPD will be better able to deal with diagnostic tests, a lower rate could be expected of annual hospital admission (e.g., **154 per 1,000 population**), or one out of 6.5 population, but with 5.5 days duration and an average of 80% occupancy.

Results

Results are summarized in Table 8.3.1. Method 1 gives an estimate of an increase of another 8,600 beds needed. The 15% increase during 13 years is only an adaptation to population growth to maintain the current level till 2015. It implies no reorganisation of care. This gap might conceivably lead to more investment in private hospitals.

In Method 2, no increase of number of beds may be needed, but presupposes decentralisation of services and better functioning of the network.

Method 3 leads to an enormous gap of 35% increase needed in the same period, which seems almost unattainable. It would only prevail if the same admission rate prevails with longer duration (5.5 days equal to national hospitals and most developed countries would prevail).

Method 4 shows no increase would be needed, if and when prevention is done in an effective way and OPD care is good.

Result of Method 1 seems more moderate than Method 3, but it does not indicate any change in health conditions of the population in future. On the other hand, Methods 2 and 4 show an interesting result.

It makes clear that the government does not need to increase bed capacity if either rationalisation of the network is successful with better utilization of district level facilities, or if the government can successfully lower the incidence rate of hospitalisation from 207 out of 1,000 population to 154, or from 1 out of 5 to 1 out of 6.5 with a bed occupancy of at least 75% is achieved.

Table 8.3.1 Estimation of Hospital Bed Demand in Public Sector in 2015

	Index	Government hospital beds in 2002 (a)	Population Estimation in 2015 (middle)	Estimated beds demand in 2015 (b)	Gap between (a) and (b)
Method 1	31.1 beds per 10,000 pop.	59,635	21,937,000	68,224	+8.600
Method 2	206 admissions, 80% utilization also of district			57.200	2435
Method 3	206 admissions per 1,000 pop., 75% utilization.			80,500	+21,000
Method 4	154 admissions per 1,000 pop.			59,889	Almost 0

Source: JICA Study Team

Discussion on Major Characteristics of the Health System

Compared with other South Asian countries, Sri Lanka comes out ahead in availability of hospital beds, but this does not match with the level of doctor-population ratio or the share level of health expenditure to GDP.

Future demand of hospital beds will very much depend on the rationalisation of the network and the OPDs. And the ability to lower the number of hospitalisations to maybe 154 can be assessed as more achievable and it must be much more desirable in terms of the Master Plan's goal of a Healthier Nation and more efficient delivery methods.

Then the next question comes: How will the country be able to decrease the hospital admission rate in the population? Suggestions that come to mind are: to strengthen preventive and promotive activities to cope with emerging NCDs, to improve the way hospitals operate after office hours to decrease unnecessary admissions, to set up standard admission and discharge criteria, or to review all the clinical procedures to shorten the duration of stay and strengthen the function of OPD.

Given the bed strength in Sri Lanka is enough to meet its population's need for the moment, what does put so many higher-level hospitals under heavy burden both from outpatients and from inpatients? To answer this question, there is a need to review the way of hospital utilisation and the way of hospital bed distribution among many categories of government hospitals. Table 8.3.2 shows the performance of different types of hospitals.

Table 8.3.2 Relative Share of Utilisation by Facility Type, 2000

Facility type	Share of beds (%)	Share of admissions (%)	Bed occupancy rate (%)	Share of outpatient visits (%)
Teaching Hosp.	25.7	27.1	93	10.8
Provincial Hosp.	8.8	10.5	106	4.7
Base Hosp.	17.3	21.3	83	16.4
District Hosp.	23.8	24.5	52	26.9
Peripheral Unit	8.0	8.8	52	11.8
Rural Hosp.	7.7	6.0	37	11.7
MH & CD	1.2	0.1	6	3.1
Other Hosp.	7.5	1.6	-	1.3
Total number	57,027	4,015,087	75	43,329,090

Source: Annual Health Bulletin 2000

Table 8.3.2 shows many interesting things. Hospital beds are disproportionately (34.5%) distributed to higher-level hospitals of TH and PH and share of admissions (37.6%) surpasses slightly even the share of bed; up to Base Hospitals the share of admissions is higher than the share of beds. For Teaching and Provincial Hospitals the occupancy rates are too high to be able to accommodate seasonal increases in disease load. The Base Hospitals seem the most balanced, with a satisfactory share and occupancy rate.

District hospitals, which are expected to play a role of referral level facility, show very low bed occupancy rate of 52%, and facilities of lower levels show even worse occupancy rates. There is a discrepancy between share of admission and occupancy. In the proposed scheme, District Hospitals would get more use probably to full utilisation. That will leave almost 25% of beds to be rationalised probably by making them secondary district hospitals or assigning less number of beds.

This study could only look at average performance; the rationalisation at all levels should look at seasonal occupancy rates for each facility and try to make sure that there is a safety net of 10% above maximum utilisation. The study should be done regularly as the network is being rationalised in terms of functions, referral and counter-referral. Detailed studies should be done of reasons for hospitalisation including social reasons, observation, need for diagnostic tests, etc.), also of the processing of the patient in IPD and the conditions and reasons for release. These measures should be designed to permit improved design of approaches other than full hospitalisation, a more responsive and efficient management and an earlier release of patients.

8.4 ESTIMATES OF FUTURE HEALTH EXPENDITURES

This analysis explores what the trends may be in government expenditures and private payments for care. These two sources of financing represented about 90% of the total financial support for the health sector in 1999. They are expected to be the main sources of financial support in the near future. A third financing strategy, social health insurance, represents an alternative approach, which is expected to expand during the next fifteen years. However, it is difficult to project how it may evolve, as it currently does not exist in the country; the Study subsumed it under government expenditures because it would essentially fill the gap in tax support.

(1) ASSUMPTIONS AND METHODOLOGY

Two methodological approaches were used in conducting this assessment: macro and micro approaches.

Table 8.4.1 Assumptions for Health Expenditure Projections (macro approach) for Sri Lanka 2000-2015

Macro approach variables	Assumptions (Sources)		
	Low	Medium	High
GDP growth	4.5% (1972-2002 Trend Analysis)	6% (Annual Report of the Central Bank of Sri Lanka)	8% ("The Future: Regaining Sri Lanka")
Population growth (Source: A.T.P.L. Abeykoon, 1998)	Slow	Moderate	Rapid
GDP share for health (defined by MoH)	1.5% by 2010 & 2015 (MoH-JICA Study Team)	2.0% by 2010 and 2.5% by 2015 (based on Consultation Meetings between World Bank and the GOSL)	2.5% by 2010 & 2015 (MoH-JICA Study Team)
Private household expenditure for health services: Health expenditure elasticity with respect to changes in household expenditure (Dunlop and Martins)	1.1	1.3	1.5

Source: Population Division, Ministry of Health, 2002.

Table 8.4.2 Assumptions for Health Expenditure Projections (micro approach) for Sri Lanka 2000 & 2015

Micro approach considerations	Assumptions		
	2000	2015	Change
A. Total health service contacts per capita per year	6.0	6.5	
B. Share (%) of total health service use by source of care:			
1. Government Outpatient Visit	41	48	+ 7
2. Self-medication	15	22	+ 7
3. Government inpatient stays			+ 1
4. Private inpatient stays			+ 1
5. Private outpatient visits	31.5	22.7	- 9
6 Ayurvedic medicine	6.5	0.5	- 6
7. Other sources of outpatient visits			- 0.5
C. Health expenditure by sub-sector and source of care	2002	2015	Change
1. If government outpatient visits increase			
a. Public sector expenditure (in billion Rs.)	20	58-63	
b. Private sector expenditure (in billion Rs.)	35	90	
2. If no change in utilisation of outpatient services between government and private sectors			
a. Public sector expenditure (in billion Rs.)	20	57-60	
b. Private sector expenditure (in billion Rs.)	35	105-110	
3. If private outpatient visits increase			
a. Public sector expenditure (in billion Rs.)	20	50	
b. Private sector expenditure (in billion Rs.)	35	122-130	

Source: Central Bank Household Surveys in 1986/87 and 1996/97; World Bank Survey in 1991; and MoH-JICA Study Team in 2002.

The surveys provided the basis of estimating the total volume of service use and the relative shares of service use across the various public and private sources of care available. The results of the surveys were adjusted to reflect the actual service use data from the MoH. The basic results from these four surveys are presented in Table 8.4.3.

Table 8.4.3 Health Status, Care-Seeking Behaviour, Illness Episodes in Year, and Service Use in Sri Lanka, 1986/87, 1996/97, and 2002

		1986/87		1991		1996/97		2002	
1	Total Population of Sri Lanka, in millions	16.135		16.449		18.444		19.156	
2	Estimated Number of Illness Episodes in Sri Lanka per Capita								
	a. Share of the population reporting ill in recall period	12	two weeks	16.4	one month	13.2	two weeks	17.2	one month
	b. Estimated Number of illness episodes per person per year	3.12		1.968		3.432		2.064	
	c. Total number of illness episodes in the population (in millions).	50.34		32.37		63.30		39.54	
3	Estimated service Use by source of Service	1986/87 Share		NA in same format		1996/97 Share		2002 Share	
	A. No of Care	3.1				3.5		NA	
	B. Self Medication	5.8				2.2		16.2	
	C. Outpatient/Ambulatory/OPD	84.9				87.7		76.6	
	1. Private Western	34.8				32.6		30	
	2. Ayurvedic (all)	14.5				9.2		4.9	
	3. OPD/Govt	34.6				45.4		41.3	
	4. Other	1				0.5		0.4	
	D. Inpatient	6.2				6.6		7.1	
	1. Private Western	0.7626				0.8118		1.5	
	2. Public Govt.	5.4374				5.7882		5.6	
	Total	100.0	%			100.0	%	100.0	%
		1986/87 Revised Use, Adj. for govt Use Statistics	Revised Share (%)			1996/97 Revised Use, Adj. for govt Use Statistics	Revised Share (%)	2002 Revised Use, Adj. for govt Use Statistics	Revised Share (%)
	A. No Care	1.561	1.69			2.215	2.76	NA	
	B. Self Medication	5.595	6.07			1.814	2.26	19.29	16.77
	C. Outpatient/Ambulatory/OPD	81.906	88.91			72.296	90.11	90.653	78.81
	1. Private Western	33.573	36.44			26.874	33.49	35.504	30.87
	2. Ayurvedic (all)	13.989	15.18			7.584	9.45	5.799	5.04
	3. OPD/Govt	33.38	36.23			37.426	46.65	48.877	42.49
	4. Other	0.965	1.05			0.412	0.51	0.473	0.41
	D. Inpatient	3.065	3.33			3.91	4.87	5.085	4.42
	1. Private Western	0.384	0.42			0.514	0.64	0.75	0.65
	2. Public Govt.	2.681	2.91			3.396	4.23	4.335	3.77
	Total	92.127	100			80.235	100	115.028	100
4	Revised Est. of Total per Capita Service Use	5.710				4.350		6.005	
5	Revised Est. of Total Illness Episodes per Cap.	5.807				4.470 Est. 6.02		6.240	
6	OPD/IP ratio in Govt Facilities	12.45				11.02		11.27	
7	OPD/IP ratio in Private Facilities	87.45				52.3		47.34	

Source: Compiled by JICA Study Team

(2) TOTAL HEALTH EXPENDITURE

Macro Approach

Given the various assumptions regarding a) the rate of GDP growth, b) the MoH share of GDP and c) the household health expenditure elasticity with respect to total household expenditure, total health expenditures will grow to varying levels. Figure 8.4.1 shows that in 2002 they will be around Rs. 50 to 55 billion and climb to between a low of Rs.169 to a high of Rs.464 billion in 2015. The increase is a low of three-fold to a high of nine-fold. These estimates show that as a share of total GDP this level of expenditures will grow from around 3% in 2000 to between 3.6 and 6.7% of GDP in 2015.

Table 8.4.4 Total Health Expenditure Projections (macro approach) for Sri Lanka by 2015

	Total Health Expenditure Projection		
	Low	Medium	High
2002 (in billion Rs.)	50-55 (3% of GDP)	50-55	50-55
2015 (in billion Rs)	169	267 & 326	464
2015 (as % of GDP)	3.6%	4.5% & 5%	6.7%

Source: MoH-JICA Study Team

If international standards of spending, based on the WHO Macroeconomics and Health Commission's findings, are used as a norm to sustain priority health interventions,[4] Figure 8.4.1 shows Sri Lanka generally meeting or exceeding these suggested levels well before 2015.

The various upward sloping expenditure trends presented in Figure 8.4.1 represent various expenditure scenarios expressed in per capita terms. The horizontal lines represent various expenditure criteria based on various required expenditure scenarios as established by the WHO Macroeconomic Commission for Health and based on the disease burden and resource prices prevailing in each specific region of the globe. Where the lines cross, it represents when Sri Lanka's health expenditure levels will met the required minimum expenditure level. The allocation of those expenditures to priority programmes remains an issue for Sri Lanka over time to resolve.

[4] World Health Organization, *Macroeconomics and Health Commission Report* (Geneva: WHO, 2001).

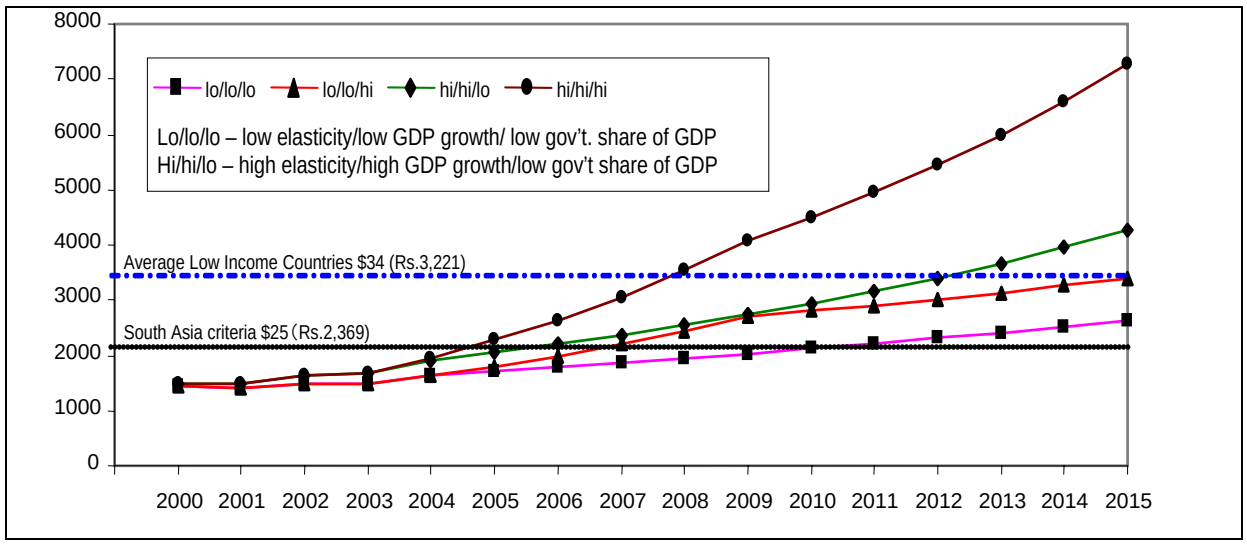


Figure 8.4.1 Estimated Total Health Expenditure Per Capita in Sri Lanka, 2000 to 2015 (Case of High Population Growth)

Note: Vertical lines are estimates of per capita health expenditures to sustain priority health intervention as defined by the WHO Commission on Macroeconomics & Health, December 2001. Exchange Rate is Rs.94.746 / US$

Source: MoH-JICA Study Team

Micro Approach

These findings are based on trends of preferred source of care if sick or ill, estimates of expenditures per unit of service, and total expenditures according to source of care.

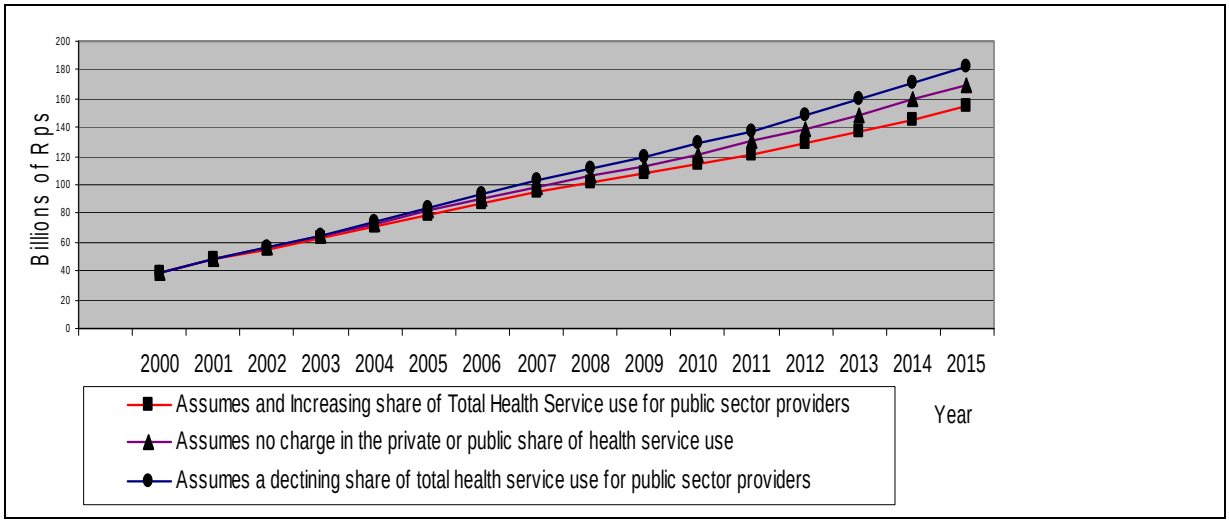


Figure 8.4.2 Summary of Projected Total Health Expenditure Based on Source of Care, Sri Lanka, 2000 to 2015 (Case of High Population Growth)

Source: MoH-JICA Study Team

Figure 8.4.2 shows the difference in total health expenditures depending upon the trend in the source of care over the 2000 to 2015 period. Depending upon the trends in sources of care, total expenditures will be somewhere between Rs.155 and 180 billion. These results are in the low to medium range of the figures derived via the macro approach.

Figure 8.4.2 also shows the differences in the trends in the sources of care will lead to varying levels of expenditures depending upon whether the public seeks more care from government vs. private providers.

If the private provider share of total use grows, health expenditures will be about Rs.7 to 10 billion larger in 2015 than if there is no change in the utilization shares. Similarly, if the public share of total utilisation grows relative to the private share, total expenditure will be about Rs.7 to 10 billion lower in 2015 than it would be if there was no change in the shares. The relative magnitude of these various estimates is based on differences between estimates of the expenditure per unit of service in the public and private sub-sectors. More in-depth information is required to assess whether the assumption made regarding price increases in the private health sector reflect reality. This matter is under further investigation.

(3) IMPLICATIONS ON PLANNING

Total health care expenditures will rise from around Rs.50 to 55 billion in 2002 to somewhere between Rs.170 to 465 billion, representing 3.6% to 6.7% of GDP. This implies that the share devoted to health will grow from the current level of about 3.0% of GDP to between 4% to 5% of GDP as most of the evidence presented in this analysis suggests. Both the macro and micro approaches tend to suggest this basic finding. As such, if the trends continue and the assumptions hold, then Sri Lanka will be able to provide the level expenditures equal to or even greater than international standards. This implies that the essential health services could be financed.

Even if high population growth were considered, both approaches however did not account for ageing of the population and epidemiological transition. They have not factored in the higher cost of providing health services for non-communicable diseases that often require long-term if not life-long interventions. As such, the results of the analyses using either approach may be an under-estimation of the total health expenditures. Nonetheless, further studies need to be conducted to refine the estimation and projections.

Caution must be observed when planning so as not to overspend, a natural response when one assumes availability of sufficient budget. Remember, the projections are only as good as the assumptions. As such, there is a need to monitor the stability of these assumptions.

The issue for additional concern is where people in Sri Lanka will seek additional care, and how much will they pay directly or indirectly via taxes for this care. The micro approach suggests that if people tend to use private care more than public care, they will pay a larger share of GDP for the care they obtain. Where people go for care will be determined in large measure by the service quality of the care they obtain in the public sector. If that grows by spending a larger share of GDP in public facilities, the cost of that care can be reduced by at least Rs.20 billion per year. That sum would represent a good return on investment on public sector health expenditures. Does this imply that it is better to encourage patients to use public facilities? Does this further imply that the public sector needs to be responsive to the needs of the public to be more attractive?

CHAPTER 9

OPPORTUNITIES FOR CONSENSUS-BUILDING

9 OPPORTUNITIES FOR CONSENSUS-BUILDING

Consensus building within and out of the health sector is a key element in the implementation phase of the master plan. To build consensus within and without the health sector the planners need to consider the following.

1. Lessons learnt from previous health sector programmes. This includes both successes and failures.

2. The stake holders – They are the key resource personnel involved in formulation, implementation, monitoring and evaluating health programmes.

3. Public opinion – This is the most important component in the assessment of the health system. As the public perception of what they get out of the system will determine future health planning.

Thus to achieve a consensus among all these elements, though a Herculean task, is not impossible in Sri Lanka. This is so because in the past and at present health programmes have been conducted with inter and intra sectoral partnership which has brought about dramatic changes in the everyday life of the average Sri Lankan.

eg. MCH/FP Program, Immunization Programs etc.

The master plan offers the technical basis for future improvement in the health sector. This opportunity should be take to build inter/intra sectoral partnership for the betterment of the health of the nation.

9.1 PLANS IN THE PAST

(1) DESCRIPTION OF PLANS AND LESSONS LEARNED

In the last decade, several health policies and plans were formulated internally or externally by organized task forces. Those national health policies and plans were,

- National Health Policy by Presidential Task Force (1992-2000).
- The Perspective Plan for Health Development in Sri Lanka (1995-2004).
- Six Year Development Program (1994-2004).
- National Health Policy (1996).
- Presidential Task Force/Proposals for Reform in the Health Sector, 1997.

By reviewing some of these previous attempts, we would like to derive key lessons for realistic master plan formulation and implementation.

Formulation of National Health Policy by Presidential Task Force in 1992

This attempt was made by a Presidential Task Force (PTF), which was constituted by a letter of the Secretary to H.E. the President in 1992 to formulate a comprehensive National Health Policy for health development in the country. The report was published in July 1992. This policy document was designed to be comprehensive so as to provide a framework for government activity and to serve as a guide in decision making for politicians, administrators, health planners, health professionals and all other concerned with health and health related activities within and outside the government.

The Terms of reference for the PTF were to examine the existing system of health care, the proposed Primary Health Care (PHC) model, the role of private practice and the private sector, the role of the Ayurveda sector, and the responsibilities of the Provincial Councils and Divisional Secretaries and formulate a National Health Policy for Sri Lanka.

The 16 task force members consisted of representatives from various organizations that included the MoH, other Ministries, Universities, NGO's, WHO, Hospitals, etc. However, only one person represented the MoH and it was formed in a rather a short period of time. The paper was submitted to the cabinet, but, before it was approved , the political parties changed in 1994 and the paper was aborted.

Formulation of a National Health Policy by the Presidential Task Force in 1997

This attempt was made by the President; Mrs. Chandrika Kumaranatunga who became President in 1996. This exercise was done in 1997 and it took eight months. There were 25 members representing various aspects of the health sector in the committee but again the involvement of the Health Ministry was minimal. The Task Force worked in 14 committees and came up with their own recommendations. This policy aimed at consolidating the gains already achieved in health development and meeting the new challenges and threats to human health more effectively. The PTF on Health Policy Implementation recommended how to respond to the challenging demands on the health care system.

The main recommendations were,

- Reform the organizational structure and management to improve efficiency, effectiveness and accountability.
- To establish mechanism to provide need based care, set priorities and allocate resources equitably.
- Focus on community needs that require special attention – the elderly, disabled, mental health etc.
- Encourage and promote revenue and resource generation at institutional and national levels
- Promote the development of the private sector health care services, including resource sharing between the two sectors.
- Improving patient care provision and quality by reorganization the health care delivery system.
- Developing health promotional programmes using formal education system and the media.
- Rationalizing human resource development and emphasising career development.

Following this exercise, the Health Sector Reforms Implementation Unit (HSRIU) was formulated in January 1998 to coordinate and facilitate the implementation of the recommendations. However, the unit was not given adequate capacity to perform as a reform implementation unit.

The Perspective Plan for Health Development (PPHD) in Sri Lanka (1995-2004)

The PPHD was a comprehensive Master Plan for heath development in the country formulated by the MDPU, MoH in 1995. This plan was principally meant as an implementation plan of the National Health Policy of 1992 formed by the Presidential Task Force. A participatory process was adopted to formulate the perspective plan for health development (PPHD). The process consisted of three echelons. A national steering committee was constituted under the chairmanship of the Secretary, Ministry of Health. A total of 27 persons were in the steering committee representing various sectors, organisations and disciplines. The terms of reference were to direct and monitor the formulation of the perspective plan.

A working group was constituted under the chairmanship of the Director General of Health Services. A total ten members including three consultants were in the group, representing concerned departments of the government health services. The main role of the working group was to provide technical support for the plan formulation exercise.

Ten plan formulation teams were set up for ten main programme areas. The programme areas were; curative services; prevention and control of communicable diseases; prevention and control of non communicable diseases; Health and Environment; Services for special population groups; logistics; infrastructure development; alternate systems of medicine; research for health development and Human Resource Development.

The PPHD was meant to be the Master Plan for health development in Sri Lanka and was meant to cover the ten years between 1995 –2004 as a guide to health development efforts.

But unfortunately even after 10 years, the PPHD has not been used as a reference for action planning in the MoH. There is no person who can explain why it has not been used, but one explanation could be the lack of a monitoring system. Also the attempt of the Presidential Task Force to formulate another master plan in 1997 might have affected the delay in implementation of this plan.

9.2 STAKEHOLDERS ANALYSIS

(1) STAKEHOLDERS

OVERVIEW OF STAKEHOLDERS

In accordance with Stakeholders who concerned to health sector in Sri Lanka, are listed as follows:

1) COLLABORATING GOVERNMENT AGENCIES

- Ministry of Health
- Ministry of Policy Planning & Implementation
- Ministry of Education
- Ministry of Labour
- Ministry of Transport
- Ministry of Agriculture
- Ministry of Interior
- Ministry of Defence
- Ministry of Mass Communication
- Ministry of Higher Education

2) PRIVATE SECTOR HEALTH INSTITUTIONS

3) PROVIDERS AND SUPPORT STAFF IN ALLOPATHIC/INDEGENOUS MEDICINE

- Professional Bodies
- Trade Unions
- Health teams by facility

4) POLITICAL PARTIES

5) DISTRICT AND DIVISIONAL HEALTH AND DEVELOPMENT COMMITTEES

6) PROVINCIAL COUNCILS

7) HEALTH RELATED NON GOVERNMENTAL ORGANIZATIONS

8) SERVICE RELATED NON GOVERNMENTAL ORGANIZATIONS

9) STATE AND PRIVATE SOCIAL SECURITY SCHEMES

10) RELIGIOUS BODIES

MoH-JICA Survey

A survey of key personnel in and out of the health structure in Sri Lanka was commissioned by the JICA study team in October 2002 to gauge opinion of stakeholders on who should be and who are playing a role in health sector reform in Sri Lanka. The following tables give a selection of the findings. (Tables 9.2.1 – 9.2.4)

Table 9.2.1 Affiliations of respondents

CATEGORY	NUMBER INCLUDED IN THE SURVEY	NUMBER RESPONDING	PERCENTAGE RESPONDING
Ministry of Health (Line Ministry)	40	36	48.4
Provincial Health Ministries	10	8	10.8
Other Ministries	5	3	4.1
University/Academic Institutions	10	8	10.8
Private Sector Institutions	5	3	4.1
NGO's	5	2	2.7
Consumer/Patient Groups	5	3	4.1
Expert advisory Panels	5	3	4.1
International Organizations	5	2	2.7
Professional associations	5	3	4.1
Research Organizations	5	1	1.4
Retired government sector	3	2	2.7
TOTAL	100	74	100.0

Source : MoH-JICA Study Team

Table 9.2.2 Organizations that should take leadership in reforms

ORGANIZATION	FERQUENCY	%
Ministry of Health	44	59.5
Ministry of Health with the support of Provincial Health Ministries	5	6.8
Political Leadership	3	4.1
Nominees of the President/Prime Minister	2	2.7
Government	15	20.3
No response	5	6.8
Total	**74**	**100.0**

Source : MoH-JICA Study Team

A majority of respondents feel that the line and provincial Health Ministries should take leadership in health reforms.

Table 9.2.3 Organizations that play an active role in HSR

ORGANIZATIONS	FRQUENCY	%
Private organizations	27	36.5
Non-Governmental Organizations	22	29.7
Consumer Groups	13	17.6
Ministry of Finance Planning, Policy Planning	24	32.4
Trade Unions	3	4.1
Ministry of Health	9	4.1
Medical, Paramedical Organizations	1	1.4
Provincial Health Ministries	8	10.8
Professional Organizations	4	5.4
Universities	2	2.7

Note : Multiple answers were provided

Source : MoH-JICA Study Team

A majority of respondents (>80%) identified non state organizations as those playing a active role in reforms.

Table 9.2.4 Key stakeholders of policy development for health sector reform

ORGANIZATION	FREQUENCY	%
Health Ministry	69	93.2
Provincial Governments	61	82.4
Professional Associations	60	81.1
Private Health Sector	59	79.7
Health Related Ministries	59	79.7
Community Groups	54	73.0
Municipalities and Local Govt:	45	60.8
Trade Unions	42	56.8
Health Industries, eg-Pharmaceuticals	37	50.0
Non-Governmental Organizations	37	50.0
UN Agencies	30	40.5
Legislative Groups	29	39.2
International NGO'S	26	35.1
Mass Media	21	28.4
Bilateral Donors	20	27.0
Religious Bodies	12	16.2
Development Banks	9	12.2

Note : Multiple answers were provided

Source : MoH-JICA Study Team

A review of stakeholder analysis reveals that key respondents identified the stakeholders who should be involved in health sector reforms and those who are actively involved in reform separately. They identified the government sector as those who should take leadership in health sector reforms. But, they identified the non government sector as those who are active in health sector reforms. As can be seen there is a gap between what is perceived and what is practiced. This gap could be a barrier in building consensus among stakeholders in health sector reforms. It is evident that there should be a partnership between the government and non government stakeholders.

With this in view the JICA study team commissioned a study on private co-operation and collaboration in health systems in Sri Lanka.[1] The study revealed that with the rapid development of the Private Sector, the Sri Lankan health system has been challenged in few, but yet important issues. There have been many questions that have been raised in many forums for discussion, but still remain unanswered. They are,

- Should the Government get actively involved in collaboration with the Private Sector? What are the views of the Government health officials and the Private Sector representatives in this regard?
- In such collaboration, what support does the Private Sector expect from the Government/ Government Health Sector?
- Similarly, what does the Government expect from the Private Sector in order to maximize the efforts for provision of better health care?
- Can the two parties arrive at a consensus and identify areas in which both parties are willing to provide each other for the benefit of the Consumers?

[1] MoH/JICA Study No 5.2

Another aspect that should be studied in order to enhance the Private Public collaboration is to; carefully review what elements are being presently shared by the Government and the Private Health Sectors.

- What is the disparity between the ideal and the reality?
- Can this disparity be minimized? And how?

The third aspect is to determine, what action has been proposed by the Government Health Sector to coordinate and to regulate the Private Health Sector.

- Does the bill addresses the issues that will be identified by the above questions?

A fourth and one of the most important aspect, is to explore for the opinions of Consumers in this regard.

- Do the Consumers expect the Government health system to cooperate and collaborate with the Private health system effectively?
- What is the Consumer's opinion on the Government's action to regularize the Private Sector?

These are the questions that need careful answering, in order to strengthen the Public Private collaboration and coordination.

The study concluded with the following recommendations to strengthen the partnership between government and non government stakeholders.

- A policy should be developed to maximize the co-oporation and collaboration of certain activities between the Ministry of Health and the Private Health Sector.
- As an initial measure, a core group within the MoH should be identified to study the areas of co-operation and collaboration with the PHS. Members from various disciplines should be mobilized as the members of the core group whom, in turn should propose a mechanism to enhance the collaborative process.
- A committee comprising of representatives from the MoH, Private Health Sector, and other Sectors should be formulated to study the existing drawbacks and obstacles for such collaboration and to propose mechanisms to establish the collaborative process. This group may be strengthened with few Consumer/Community representatives in order to bring in proposals from the Consumers of Health Care.
- Few costing studies on the cost efficiency of certain services and investigations in the Government Hospital settings and in the Private Health Sector institutions should be carried out. Any decisions on out-sourcing of services should be carefully considered based on the results of these studies.
- The Private Health Sector has a definite role to play in the information sharing process, sharing Human Resource Development and in-joint quality control mechanisms. Their maximum participation of the PHS in these areas should be encouraged.
- The Government /MoH should assist the Private Health Sector development by extending certain assistance to the PHS, such as certain types of financial assistance, free accessibility to relevant information, sharing technical knowledge on Human Resource Development and by assisting them in developing quality control programmes.

So far there has been no formal Health System reforms in Sri Lanka except for some reorganization of the Central Ministry and Department and some decentralization (see separate section on decentralization). HMP organized a HSR survey of 100 key officials and we highlight some of the results.

On the question of the factors that forced MoH to consider reforms four stood out with 60% or more votes. They are increased health demands, financial constraints, pressure from donors and political reasons. Next comes equity issues with a percentage of 45%.

Table 9.2.5 Factors that have forced the MoH Sri Lanka to Consider Reforms

FACTORS	FREQUENCY	%
Increasing health demands	52	70.
Financial Constraints	47	64
Pressure from donors	47	64
Political reasons	44	60
Equity issues	33	45
Public pressure	22	30
Overall reform of the government	14	19

Source : MoH-JICA Study Team

On the question of the importance of HSR in a country the answers seemed very positive and convinced. However when asked to apply the same question regarding Sri Lanka, the answers were less strong. Even so, most areas for reform have more than 30% of officials agreeing, with almost 50% and more agreeing on responsiveness, efficiency and equity. They agreed that effectiveness need improvement.

Table 9.2.6 Important Elements in HSR in a Country

ELEMENTS	FREQUENCY	%
Improving efficiency	70	94.6
Improving equity	63	85.1
Increasing responsiveness to local needs	63	85.1
Improving effectiveness	60	81.1
Development of human resources for health	58	78.4
Responding to changing socio-economic dimensions	49	66.2
Enhancing Private-Public Mix	47	63.5
Decentralization (transfer of authority to smaller institutions) and/or reorganization of provincial ministries	44	59.5
Alternative approaches for financing health	44	59.5
Reorganization of Ministry of Health	43	58.1
Reducing cost for the health system	35	47.3

Note: Multiple answers were provided

Source : MoH-JICA Study Team

Table 9.2.7 Areas in which Sri Lanka should Undergo Reforms

AREA	FREQUENCY	%
Reorganization of the Ministry of Health	21	28.
Decentralization (transfer of authority to smaller institutions) and/or reorganization of Provincial Ministries	21	28
Increasing responsiveness to local needs	37	50.
Improving efficiency	44	60
Improving effectiveness	36	49
Improving equity	40	54.

AREA	FREQUENCY	%
Reducing cost for the health system	34	46
Development of human Resources in for health	23	31.
Responding to changes in socio cultural dimensions	22	30
Alternative approaches for financing for health	35	48
Enhancing Private-Public Mix	24	32.

Note: Multiple answers were provided

Source : MoH-JICA Study Team

On the question about the key HSR stakeholders, Table 9.2.8 shows that the MoH officials recognize most if not all potential stakeholders.

Table 9.2.8 Key Stakeholders of Policy Development for Health Sector Reforms

ORGANIZATION	FREQUENCY	%
Health Ministry	69	93.2
Provincial Governments	61	82.4
Professional Associations	60	81.1
Private Health Sector	59	79.7
Health Related Ministries	59	79.7
Community Groups	54	73.0
Municipalities and Local Govt:	45	60.8
Trade Unions	42	56.8
Health Industries, e.g. Pharmaceuticals	37	50.0
Non-Governmental Organizations	37	50.0
UN Agencies	30	40.5
Legislative Groups	29	39.2
International NGO'S	26	35.1
Mass Media	21	28.4
Bilateral Donors	20	27.0
Religious Bodies	12	16.2
Development Banks	9	12.2

Note: Multiple answers were provided

Source : MoH-JICA Study Team

The participatory modalities proposed represent a wide array but are still heavily weighted to MoH centred formal mechanisms even though there seems an overture to the use of mass media.

Table 9.2.9 Participatory Modalities that could be deployed in the Development and Implementation of Policies Pertaining to HSR

MODALITY	FREQUENCY	%
Discussions	69	93.2
Meetings	55	74.3
Reviews and Analysis by Research organizations	55	74.3
Advocacy	46	62.2
Internal Departmental Reviews	45	60.8
Use of Mass Media	43	58.1
Lobbying	31	41.9
Political Campaigns	11	14.9
Demonstrations	9	12.2
Referenda	5	6.8

Note: Multiple answers were provided

Source : MoH-JICA Study Team

HMP therefore embraces a step by step approach to recognition of problems, corrective planning and evolutionary reform of the system, which can reflect the felt need for HSR and avoid the danger of an overly ambitious overhaul that might come at high opportunity costs.

Role of professional associations, trade unions and other stakeholders

There are many stakeholders in the health sector. There are no official channels to consult and have a dialogue with them. In phase II, we will investigate how this dialogue could be started and maintained.

In this regard the government appointed a cabinet sub committee to consult the stakeholders within the government sector. The terms of reference of the sub committee were:

1) Service issues of the health sector were divided into four groups:
    a. Current and emerging service requirements.
    b. Human Resource Development needs to meet above requirements.
    c. Continuing professional development needs of Human Resource for health.
    d. To examine the above in the context of the contents of Trade Unions, Professional bodies, Academics and the civil society.
2) To study the submissions forwarded by the relevant TU's and identify the main goals/service issues identified by them and evaluate them, taking in to consideration the overall organizational needs of the health sector.
3) To contact and consult any person or organization with regard to above service issues.
4) To submit the comprehensive report on matters observed with recommendations before 28th February 2003.

The final report of the sub committee was published in July 2003 by the Ministry of Health, Nutrition & Welfare. 45 trade union within government health sector submitted proposal to the committee below.

The recommendations of the committee are extensive and specific. These recommendations indicate the direction of change within the health sector and can be used for consensus building within the government health sector.

9.3 PUBLIC OPINION

Public opinion of health services is an important component in the assessment of any health system. The success or failure of health systems can be gauged by public opinion as they are the end point of service delivery. With this view in mind JICA commissioned a study with the general objective to determine the user perspective of the current health services responsiveness, accessibility, demand, quality of care and cost as well as the preference among service providers and the reasons for such preferences[2]. (JICA Master Plan Study for Strengthening Health System – Final Report for Health System Research. MG Consultants (Pvt) Ltd).

The study has revealed that although there seems to be considerable expansion of private allopathic sector, in seeking care for chronic illnesses and particularly for inpatient care general, patients more often use the public allopathic system.

On the one hand, unaffordability of private care appears to be a major reason for this tendency. Utilization of private care appears to be substantially higher in the urban sector and amongst high-income brackets.

On the other hand, patients seem to be more satisfied with the inpatient care compared to outpatient care of the public allopathic medical institutions. However, patients are forced to bear a large proportion of the cost of treatment even when they seek care from public medical institutions, irrespective of the type of care or illness.

In fact, patients in the peripheral locations are worst affected with high travel cost in seeking care from better-equipped medical institutions from the city centres. Further, drug shortages and fewer facilities at the public medical institutions in such localities appear to have led the patients to bear a part of the cost of medical care in the form of purchasing drugs and coming back for medical investigations.

The direct and indirect costs to the patients of the public health system are high enough that many especially those who belong to low income brackets cannot afford it, and need to cope by borrowing. As it was revealed by some other studies, the high sensitivity towards illness among all sectors of the community and therefore the exploration of the best possible care for illness, seem to have brought the patients to bear a portion of cost of treatment even when they seek treatment in the public sector.

Although the government provides free health services with acceptable quality some of the issues yet to addressed are as follows:

- Inequalities and shortages in basic services with under utilization of facilities in rural hospitals and severe pressure on facilities in urban hospitals.
- Inequalities in resource allocations to meet the increasing demand on technological applications in health care services.
- The individuals spending nearly 50% of the cost of their illnesses out of their earning, in spite of free health services.
- The health problems caused as a result of the civil war in the country during the last two decades.
- The health problems associated with special population groups such as families of Middle East Employees and Free Trade Zone Employees.

[2] MoH-JICA Study No. 2.

Enhancing the responsiveness of the health system to the legitimate expectations of the population is an important intrinsic goal of the health system of a country. Responsiveness has two major components. The first is described as the "respect for persons", and it captures aspects of the interaction of individuals with the health system that often has an ethical dimension. This includes dignity, autonomy and confidentiality of information. The second component is "client orientation", and it includes several dimensions of consumer satisfaction that are not a function of health improvement. This category includes prompt attention, basic amenities, access to social support networks and finally choice.

In order to assess the degree of selected elements of responsiveness of the health system, few aspects of responsiveness were included in the survey questionnaire. They were prompt attention, communication, autonomy, confidentiality of information, surroundings and environment and dignity.

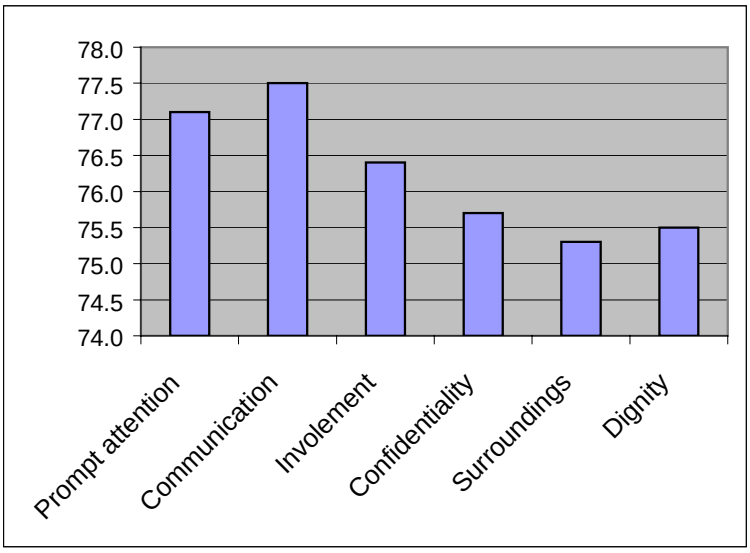


Figure 9.3.1 Key Elements of Responsiveness

Source : MoH-JICA Survey

The JICA master plan study team conducted several "Focus Group Discussions" (FGDs) with special population groups to identify their issues and concerns related to the existing health services.

The following special groups were identified for the focus group discussions:

- Urban Slum Community — Colombo
- Fishing Community — Tangalle
- Rural Community — Sooriyawewa
- Estate Community – Upcountry — Bandarawela
- Estate Community – Low country — Avissawella
- Community affected by the civil war — Jaffna

Expectations and attitudes of different groups about the existing health facilities and services varied. While most groups showed similarity in some aspects, improvements to the health care system in the north and east provinces where one of the focus groups namely, people effected by conflict are from, has to be addressed separately.

Most groups were satisfied with the in patient care facilities available to them while most groups were dissatisfied with the ambulatory care provided by the government hospitals. Allocation of more time for consultations, proper dissemination of information regarding the illness and prescribed medication / drugs, introduction of a better clinic appointment system were mentioned as urgent and essential changes to improve the existing services.

Participants were of the opinion that there is plenty of room to improve and increase the performance of the government hospitals thereby improving patient satisfaction. Provision of basic laboratory facilities at all government curative care institutions were thought to be by many as a requirement that if fulfilled would lead to patient satisfaction.

The majority of participants were satisfied with and appreciative of the services provided by the Public Health Midwives. However, participants were unhappy about the services provided by Public Health Inspectors (PHI) and wanted the PHI's to conduct more preventive programmes and community based screening programmes.

Participant groups showed that the Ayurvedic treatment and other traditional healer systems were not very popular among the groups and that the uses of such treatment methods by the participants were on the decline.

As can be seen the public opinion is basically demanding an improvement in the quality of health care within the present health care infrastructure. This improvement will undoubtedly lead to an improvement in patient satisfaction.

At present this public opinion demand for charge within the health sector is logging behind due to various reasons such as:

1) Lack of funding – for recurrent and capital expenditure.
2) Lack of commitment for charge without the health system itself.
3) Lack of political will to bring about change within the health system.

Lack of political will to change the health system seems to be the major obstacle to transform public demand for change into reality. The problems of health sector funding and commitment for change within the health sector have changed dramatically over the years. The latter two are now at the threshold level for change. This has brought the health planners in line with the public opinion.

The public while demanding for improved quality of services within the health sector seem to be unwilling to pay for such improvements. This unwillingness to pay for change among the public has prompted the politicians to put health sector reform at the back of their political agendas.

These issues have led the public to demand for change more urgently. The major problem at present is to identify the direction of charge. Though the public and stakeholders want change, there is ambiguity as to the direction, speed and scope of change. This is because previous health plans for change did not fully involve the stakeholders and thus missed out on their ideas. Furthermore, past plans failed to disseminate information with regard to change to stakeholders and public at large.

The HMP could be used as a tool to bring about a consensus building among these groups as to the direction of charge. For general direction please see vol II and specific programmes please see vol III.

The HMP could provide the general direction for consensus building. But there is a need for clarification on certain core issues. Thus the need for a policy dialog within and out of the health sector arises. This policy dialog is essential for the HMP as well as should continue even after the HMP.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