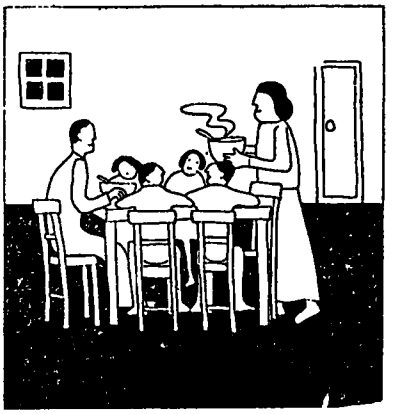
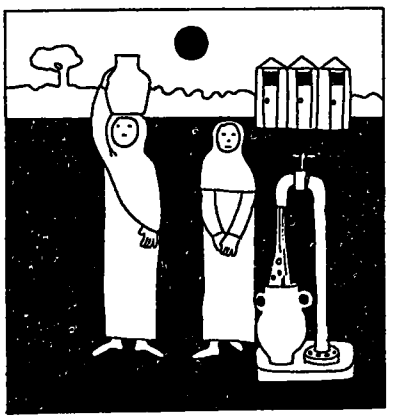
PRIMARY HEALTH CARE



. . proper nutrition and good food . .

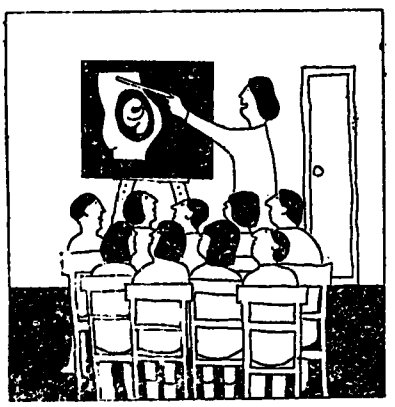


. . safe water and sewage disposal . .

. . adequate housing . .

. . mother and child care . .

. . immunization . .



. . information on health problems . .

. . treatment for injuries.

MEDICAL CARE AND PUBLIC HEALTH

It has often been said that the mortality rate and the life expectancy in a country would be some of the most revealing indicators of its socio-economic development. An increase in life expectancy would reflect a host of contributory factors such as adequate housing and sanitation, adequate nutrition, an increase in real incomes and an equitable access to resources such as food and health care facilities. In some exceptional cases, however, an increase in life expectancy has been made possible by advances in medical science and less by general improvements in living conditions.

In Sri Lanka in 1945 for instance the infant mortality rate was 140 per 1,000 live births while the crude death rate was 21.5 per 1,000. By 1977 these had fallen to 42 per 1,000 and 7.4 respectively. This decline was reflected in a rise in life expetancy from 42 years in 1964 to 65 years in 1972.

Compared with other Asian countries Sri Lanka's achievements in this regard are quite mpressive as the table below shows:

Death Rate and Life Expectancy in Some Asian Countries

Country	*Death Rate per* 1,000	*Life Expectancy at Birth*
Bangladesh ..	18	53
India	15	51
Nepal	22	43
Pakistan ..	16	54
Indonesia ..	18	48
Rep. of Korea ..	9	64
Malaysia ..	10	60
Philippines ..	11	59
Singapore ..	5	70
Thailand ..	11	62
Sri Lanka ..	8	65

Moreover, in Sri Lanka, diseases which affected the population adversely such as small-pox, typhoid and cholera had almost been eradicated.

Sri Lanka has also a well distributed variety of health care institutions. A western medical facility

is available within 3 miles of an average house while an ayurvedic or indigenous facility is accessible within 0.8 miles. Among the western medical facilities, they consist of a curative set up of 2 University specialist hospitals, 10 provincial hospitals, 18 base hospitals, 110 district hospitals, 108 peripheral units, 87 rural and 27 maternity homes. It has a preventive public health system of 102 medical officers of health units and 1200 clinical outlets.

Existing side by side with western medicine is the practice of an indigenous system of medicine. It has had a long tradition in the country and its origins can be traced over a long period of time. Though it was neglected during the nineteenth century during the British colonial period it now plays an important role in the health care services in the country.

The main difference between the indigenous system of medicine and western medicine is that indigenous medicine attaches greater importance to the constitution of the patient as against western medicine which attaches greater importance to the nature of the disease.

There are three main systems of indigenous medicine. *Ayurveda* is based mainly on the treatment of illness through decoctions of different herbs, *Unani* is based on treatment by different oils while *Siddha* is based mainly on treatment with metals such as mercury. All these three systems are often described under the term ayurveda.

The total number of registered ayurvedic practioners has been estimated to be nearly 11,000, being more than three times as high as the number of western doctors in the country. The ayurveda doctor population ratio in 1973 was 79.5 per 100,000 for the island with the highest ratio being in the Kalutara S.H.S. division. (See Box on pages 4and5)

Treatment of patients by ayurveda is undertaken by government as well as private practitioners. There are estimatedto be 12 government hospitals with a 1,000 hospital beds and 238 ayurvedic dispensaries. On

AYURVEDA

The Traditional System of Medicine in Sri Lanka is popularly known as Ayurveda which is the term used in India for the Traditional System of Medicine in that country. The word Ayurveda in legal terms in Sri Lanka includes the Ayurveda, Siddha and Unani systems of medicine. It also includes the indigenous system of medicine known as "Deshiya Chikitsa". Ayurveda which means science of life is expected to promote physical, mental and spiritual health of the individual and the community, to prevent disease, to treat and cure it when it occurs. Ayurveda not only deals with human beings, it also deals with animals or veterinary science (Sathva Ayurveda) and plants (Vruksha Ayurveda). It is based on sound scientific data and principles which are clearly described in ancient literature.

Writing about Ayurveda Dr. B. Thirumalara, FRCS, Edinburg, DLO London; Surgeon, King George Hospital has stated that "there is still a great deal to learn from the ancient systems of medicine. They have got an extensive pharmacopoeia. They have developed dietetics almost to a fine art. We may have yet to learn from the observations of the ancient physicians, their decisions and the principles they have laid down and the methods they adopted for treatment".

It is remarkable that the earliest references to medicine are associated with Ravana, a King of Sri Lanka dating back to prehistoric times, who was himself a great physician. A researcher may dismiss this reference as more legend but it is not impossible that there is at least a nucleus of truth behind the legend.

History records that Ayurveda was a very developed system of medicine in Sri Lanka. King Pandukabhaya in the 4th century B.C. founded a hospital to the north of the walled city of Anuradhapura; he was also renowned for public health measures he had introduced in the ancient capital city of Anuradhapura. At Mihintala, near the ancient capital of Sri Lanka, one can see the ruins of a hospital, said to have been constructed in the 3rd century B.C. The medicine boats turned out of stone and used for medicinal oil baths are still in a fine state of preservation.

A number of cave inscriptions of the 3rd century B.C. mention several physicians by name. The Piccandiyava Cave Inscription in the Puttalam District speaks of a Brahmin named GOBHUTI as the physician and teacher of the great king Devanampiya Tissa. The Rajangane Cave inscription speaks of a Vejja (physician) named Mitta. The Gonagala Cave inscription in Hambantota District refers to a physician named Tissa.

King Dutthagamani who was in power in the 2nd century B.C. had been a great benefactor of the sick and had bestowed on them their food and medicaments as ordered by the physicians.

History also records names of several kings who were great physicians themselves, the chief among them being King Buddhadasa who reigned in the 4th century A.D. He was a great medical practitioner and a skilled surgeon. The chronicle speaks of several feats of surgery he has successfully performed not only on human beings but even on animals. He had set up medical halls for the sick and placed physicians in them. He had also appointed a physician to be in charge of every five villages and by way of remuneration given them the produce of ten fields. Physicians also had been appointed for elephants, horses and soldiers. Hospitals had been put up for the treatment of the crippled and the blind. Above all he had made a summary of the essential content of all the medical text books.

The Culavamsa refers King Parakramabahu I as a King well versed in Ayubbeda (Sinhala equivalent for Sanskrit Ayurveda) who could test the physicians in their healing activities and point out to them the proper use of the instrument. Not only did he build hospitals, he also visited them regularly. Apart from the physicians, he appointed male and female attendants to these hospitals. This king is referred to as an expert physician, who could distinguish between the curable and incurable by the methods described by the rules of the order.

The evidence in recorded history throws light on the practice of traditional medicine in Sri Lanka from its small beginnings which individual physicians gradually expanded over the years into an organised system, under royal patronage till it constituted a network of institutions and establishments to render patient care services to the people.

There is also evidence that Ayurveda had been included in the curriculum of practically all the principal seats of learning in the past. The extent to which the education in medicine had been popular is seen from the number of treatises on medicine produced in ancient times.

The tributes paid to the practice of indigenous medicine in Sri Lanka by the Western writer Robert Knox from what he had witnessed here is an indication that the practice of traditional medicine moved on uninterrupted even after the advent of the Portuguese and the Dutch. It appears that it had received a set-back after the coming of the British, perhaps because of their enthusiasm to achieve quick results by implanting their own systems in this country.

However, owing to the vicissitudes of history and periods of foreign domination, these valuable traditional systems of medicine, have perished and been neglected to a large extent. Yet some of these traditions have been passed down from generation to generation, from father to son and are still popularly practised in Sri Lanka. Besides the Ayurveda introduced from India, there

is, in Sri Lanka a more ancient system called "Deshiya Chikitsa" which is indigenous to Sri Lanka. There are still well known traditional physicians who are reputed in the treatment in special branches such as Eye diseases, Fractures and Dislocations, Snake bites, Burns and Ulcers, Hydrophobia etc. "Deshiya Chikitsa" has not been recorded and published but has been handed down by tradition. Action has now been taken for the compilation of these valuable prescriptions.

Most of the traditional physicians do not have the benefit of a written education in this system of medicine, but have learnt it after long periods of apprenticeship at the feet of Master Physicians.

The Ayurveda system of medicine uses plant, mineral and animal materials for the preparation of drugs. In ancient times the supply of herbs required for the Ayurveda Institutions had been met by assigning to each hospital, gardens and lands where they were grown as indicated in several inscriptions. Medicinal forests found in several parts of Sri Lanka are ample testimony to organised cultivation of medicinal plants in the past.

The traditional physicians used to prepare their own drugs in their home pharmacies in the past, but with the commercial production of drugs, they too now tend to buy their drugs from commercial manufacturers. The Ayurveda Act No. 31 of 1961, has made provision for registration of commercial manufacturers of drugs and the pharmacies of these manufacturers are licenced annually by the Commissioner of Ayurveda.

The revival of Ayurveda became an issue in the agitation for Independence from the British rulers.

Organised teaching of Ayurveda was started in 1929 with the establishment of the Svadesiya Vaidya Vidyalaya (College of Indigenous Medicine). This College became a government institution in 1941. In 1929 another seat of ayurvedic studies, the Gampaha Siddha Ayurveda College was started with a sense of dedication by the late Ayurveda Chakrawarthy Pandit G. P. Wickramaarachchi out of his own funds. His reputation as an eminent physician was such that "Gampaha treatment" almost came to be identified as something apart from the Ayurveda system.

The practice of traditional medicine in Sri Lanka today can be broadly grouped under two types, viz. "Ayurvedic Medicine" and "Indigenous Medicine" (Deshiya Chikitsa).

Ayurvedic medicine is practised in the form of all its components, Ayurveda, Siddha and Unani. In Ayurveda the therapeutic agents for curing disease are mostly herbal preparations, while in the Siddha system they are predominantly mineral preparations. The Unani system differs from the other two in its fundamental concepts. These three systems are identical with what appears under the same names in India. It is historically evident that Ayurveda and Siddha systems came here from India along with several waves of culture that passed over Sri Lanka from India. The Unani system has left its imprint here through the Arabs who came for purposes of trade. What is designated as "Indigenous Medicine', (Deshiya Chikitsa) originated in Sri Lanka, probably during prehistoric times and developed on its own lines. It is practised mainly as a traditional process, knowledge being handed down from father to son, often being jealously guarded as a special preserve of the family. For the same reason there is a high degree of specialisation in certain fields such as Ophthalmology, Hydrophobia, Fractures etc.

The special fields of specialisation in Indigenous Medicine which we may conveniently refer to as "Paramparika" treatment, may be enumerated as follows:

1. As Vedakama (Opthalmology)
2. Gedi Vana Vedakama (treatment of boils and carbuncles)
3. Sarpavisa (Snake poison)
4. Pissubalu Vedakama (Hydrophobia)
5. Vidum Pilissum (a system similar to Acupuncture)
6. Kadum Bindum (treatment of fractures)
7. Pilissum (treatment for burns)

In this treatment magico-ritual performances like Bali (offering of oblations), lime-cutting, Santi (appeasement) are also used, particularly for treatment of mental afflictions.

The Ayurveda system of medicine had received official and legal recognition nearly fifty years ago. The Ayurveda Act No. 31 of 1961 replaced the previous legislation and made provision for registration of Ayurveda physicians, nurses and pharmacists. It also provided for establishment of an Ayurveda Medical Council, an Education of Hospital Board, an Ayurvedic Research Committee and a separate department to handle matters pertaining to the subject of Ayurveda.

The Government College of Ayurveda which has now been made the Institute of Ayurveda of the University of Ceylon is the main training Institute imparting knowledge of Traditional Medicine. Admission to the Institute is at the level of General Certificate of Education (Advanced Level) and a student has to follow the course for five years. On completion of the five years, he has to undergo an internship of one year in an Ayurvedic Hospital, before he could be registered with the Ayurvedic Medical Council.

The Siddha Ayurvedic College, Gampaha, a College of Traditional Medicine also trains students to become Ayurvedic Physicians and has received official recognition of the Ayurvedic Medical Council. The period of training in this College too is five years. There are few other Colleges which train students to become Ayurvedic Physicians and the period of such training varies from three to five years. These Colleges have not been recognized yet by the Ayurvedic Medical Council. Master Physicians well-versed in "Deshiya Chikitsa" also train their children or faithful pupils for long periods. Since the "Deshiya Chikitsa" has not been recorded properly, the students have to spend long periods of apprenticeship before they could become well trained physicians. Ayurveda Education and the Hospital Board hold examinations for these students and grant diplomas to the successful candidates. Those who pass the diplomas could get themselves registered with the Ayurveda Medical Council as Practitioners. Others continue their apprenticeships while practising as physicians in their limited field of training and experience. There are approximately 16,000 Ayurvedic Physicians in Sri Lanka of whom about 2,500 have been institutionally trained, and of the balance about 7,500 have been registered as Physicians by the Ayurvedic Medical Council while others are not registered.

A Research Institute for Ayurvedic Research was established at Nawinna in 1962. This Institute is responsible for Clinical, Literary and Drugs Research in Ayurveda. The Department of Ayurveda runs Ayurveda hospitals at Colombo, Kurunegala, Ratnapura, Anuradhapura, Beliatta and Jaffna. These hospitals have a total bed strength of 941 while the research hospital at Nawinna has 48 beds. They also provide out-patient services to several thousand persons daily. In addition to this, out-patient services are provided at places where new hospitals are being built, namely Kandy (Pallekelle) and Diyatalawa. As a Pilot Project, an Ayurveda Out-patient Department is being run at the Government Hospital at Lunawa, where the daily attendance is very high and most encouraging. The Department of Ayurveda grants financial assistance to Local Authorities to maintain free Ayurvedic Dispensaries in their areas and there are 238 such dispensaries receiving financial assistance at present.

The Sri Lanka Ayurvedic Drugs Corporation meets the major portion of the requirements of prepared drugs of the hospital managed by the Department of Ayurveda and the dispensaries run by Local Authorities.

Approximately 95 percent of the raw drugs required for the manufacture of Ayurveda drugs is found locally and only about 5 percent is imported.

Since it is the policy of the Government to give greater impetus to the development of Ayurveda including Siddha and Unani systems of medicine to ensure a better system of health care to the people, a comprehensive plan for its expansion is now under active consideration.

the average an ayurvedic medical facility is found within 0.8 miles of a house.

Sri Lanka also stands better than many countries in the region as well as among most African countries in respect of its ratio of doctors of western medicine to population. The table below gives these ratios.

Country	*Year*	*No. of Doctors 100,000 population*
Sri Lanka ..	1972	25.7
India (estimate)	1972	22.0
Thailand (estimate)	1973	18.7
Taiwan ..	1962	47.6
Sudan ..	1962	34.5
Senegal ..	1962	5.0
Nigeria ..	1962	2.0
Malawi ..	1965	0.7

However, in spite of this impressive performance in Sri Lanka, a deeper examination of the health care system reveals many hidden deficiencies. For instance though the national infant mortality rate in 1971 was 44.8 per 1,000 live births and maternal mortality was 1.4, these average figures hide many tragedies in remote communities. For example in the estate sector in 1971 the infant mortality rate was 85 per 1,000 live births and maternal mortality was 2.5. Similarly, morbidity figures indicate increases in specific illnesses such as malaria, venereal disease, filaria and tuberculosis in certain specific areas.

The distribution of western doctors in the health care institutions show a heavy bias in favour of large towns while nearly 80% of people live in the rural areas. Here the hospitals are poorly staffed and badly equipped. Naturally the institutions in the periphery are by-passed and patients flock to the better equipped provincial hospitals. This has resulted in an over-utilisation of the better equipped hospitals in the big towns, thereby lowering the standards of health care in these institutions. The brunt of the responsibility of catering to the health needs of the rural population is borne by the ayurvedic physician. It is estimated that out of the 10,000 practitioners over 90% practise in the rural areas. This gives a ratio (excluding plantations) of approximately 100 for 100,000 population.

The maldistribution of doctors is indicated in the table below. It shows the distribution in each Superintendent of Health Services division.

SHS Division	*Ratio per 100,000 population (1972)*
Anuradhapura ..	17.4
Badulla ..	13.2
Batticaloa ..	13.2
Colombo ..	52.7
Galle ..	14.4
Jaffna ..	28.7
Kalutara ..	18.9
Kandy ..	20.1
Kegalle ..	9.7
Kurunegala ..	13.6
Matale ..	10.4
Matara ..	10.3
Puttlam ..	20.8
Ratnapura ..	17.1
Vavuniya ..	12.1

As it indicates Colombo SHS division has the highest concentration of doctors with 52.7 per 100,000 with Jaffna S.H.S. division coming second with a doctor population of 28.7. Kegalle has the lowest ratio with 9.7. The maldistribution is even more evident when a comparison of some of these figures is made with the actual population figures. For instance Colombo S.H.S. division with 21% of the total population of the island has 45% of the practising doctors. Moreover, 59% of the specialist doctors live and work in the S.H.S. division of Colombo. While urban areas have 25,254 hospital beds rural areas with nearly 80% of the population have only 7,044 beds.

Staffing

Staff depletion is regarded as the single biggest problem presently experienced in Sri Lanka's delivery of health services. This situation, which is felt very much more acutely in the rural areas, is a result of a shortfall against the cadre requirements further vitiated by maldistribution of the available numbers of most categories of staff. An official proposal from the Department of Health has suggested various measures to meet this problem. The official view is as follows:

"This proposal presupposes a reversal of both these trends if successful implementation is to be achieved. The first will hopefully be reversed in the next few years, the intake for basic training courses being increased considerably in the case of several of the relevant staff categories. The need will therefore be to reverse the second trend, namely maldistribution.

The following are suggested as possible interventions in order to achieve this end.

(a) Priority needs to be given to appointment of staff to positions, both existing and new, in the development areas. Action needs to be taken in the short-term to fill the existing and proposed vacancies and in the long-term, to formulate a scheme whereby all new recruits are required to serve an initial period of a few years in the "difficult" areas.

(b) Staff opting to serve in these areas need to be given special privileges in the choice of a station when transferred out of the area after a specified number of years, as an incentive for opting.

(c) Comfortable housing quarters with the basic facilities of electricity and water service are a sine qua non.

(d) Staff undertaking field activities need to be provided with transport facilities to be determined by the area characteristics and services to be performed and

(e) Preference should be given to staff who have worked or are working in these areas in selections for training courses, scholarships, fellowships and promotions".

Brain Drain

One of the reasons for the inequitable distribution of doctors in the island and the malfunctioning of the health care system is the depletion of trained medical staff, particularly of fully qualified doctors, due to migration from rural areas to towns or emigration abroad. This problem of internal and external migration reflects a deeper problem which is linked to the training system of doctors.

The Ceylon Medical School was the first professional school to be set up in the island during British colonial rule in 1870. In 1887 the Licentiate which was granted by the School was recognised by the Privy Council in England and the school was authorised to confer diplomas in surgery and medicine and holders of the School's licence were registered in the Colonial Medical list. In 1942 the Medical School acquired university status and granted its own medical degrees which continued to be recognised by

the British Medical Council until a few years ago. This recognition meant that the local degree maintained a standard that was acceptable in the United Kingdom.

In reality undergraduate training programmes in medicine based on the British model have been in existence in the island for nearly a century. These training programmes are heavily biassed in favour of curative medicine with training in relatively sophisticated hospitals. In Sri Lanka doctors are trained in two teaching hospitals in Colombo and Kandy where until recently the curriculum in medicine was not very dissimilar to that which was available in the United Kingdom for British medical undergraduates. This training in well-equipped urban hospitals isolated the medical student from the environment and conditions in which the majority of people live. Consequently a medical doctor who is posted to a poor rural area found that he was unable or ill-equipped to work. His expertise was seldom required to treat simple preventive diseases which were predominant among rural people. Moreover the poorly equipped rural hospitals could not provide the technology for such doctors to practise their profession. They often lacked the simple drugs or equipment that the trained doctor required for his curative practice. This was often described as a lack of 'job satisfaction' by such doctors. As a result doctors soon moved from the rural areas to the towns where conditions were more conducive to the practice of their profession.

Until the Institute of Postgraduate Medicine commenced to function this year and provide training courses in subjects relevant to the country, postgraduate training in medicine was undertaken abroad mainly in the United Kingdom. (See box on pages 8and9)

The preliminary examinations of the Royal College of Surgeons and Physicians have been held in the island since 1948. However, in order to obtain full membership these British professional bodies required that the graduates be resident in the United Kingdom and trained in hospitals approved by the General Medical Council in the United Kingdom. The consequences of training Sri Lankan graduates in the United Kingdom was that they acquired skills and training relevant to a developed country which alienated them from their own environment where they had to work and in which conditions are so different. Training in affluent countries meant that the students were trained in skills and specialities relevant to a highly affluent society with a pattern of disease related to that society, such as degenerative diseases, vascular diseases and cancer, while those associated with a developing country are largely preventible diseases. Moreover, in an affluent country the skills taught to students had an increasing emphasis and expenditure on technical advances in medicine.

The acquisition of degrees abroad had other consequences as well. It provided the doctor with an internationally recognised qualification. One of the reasons that lead to doctors' emigrating abroad was this international recognition of local medical degrees as well as his membership to a professional body in the United Kingdom. During the period 1970-1979 it has been estimated that 1101 doctors have left the government service, the greater number have gone abroad, averaging a loss of 145 doctors per year. Today it is estimated that there is a shortage of nearly 800 doctors in the government sector.

Diseases	1971	1974	1976
Bacillary dysentry and amoebiosis ..	147	166	331
Enteritis and other diarrhoeal diseases ..	4712	6524	6816
Infectious hepatitis	75	80	82
Total	4934	6770	7329

Another contradiction that exists is that inspite of the availability of a variety of health care institutions, inspite of the achievements in health attained as depicted by the national statistics, ill-health characterises the majority of the people. It seems that the sophisticated technology of modern medicine has failed to ensure simple health for the majority of the people. This is reflected in the character of diseases prevalent in the island as shown in the table below.

In 1951 the three leading diseases treated in government hospitals were respiratory diseases with 46.58% of the total, diarrhoeal diseases with 20.07 and other infectious diseases with 14.73% of the total. In 1971 the disease pattern remained similar in respect of the first and second leading diseases, that is respiratory diseases with 54.78% and diarrhoeal diseases with 25.99% of the total, while anaemia and malnutrition came third in order of importance with 10.64% of the total. Between 1969-70 the order of the three leading diseases was respiratory diseases with 40.74%, diarrhoeal diseases with 22.25% and other infectious diseases with 16.95% of the total.

A recent study has indicated that deaths from water-borne disease alone have steadily increased in the past few years. The types of infections and the number of deaths are given in the table above.

These leading diseases which afflict the majority of the people are diseases of the environment. They

Number of cases of leading diseases treated at Govt. Hospitals and Percentages of total leading diseases in 1951-1970

Diagnosis	*Cases* 1951	%	*Cases* 1961	%	*Cases* 1969	% 1970
Diarrhoeal diseases ..	81,802	20.07	164,032	25.99	180,232	22.25
Tuberculosis	15,598	3.83	12,744	2.02	12,841	1.58
Anaemia and malnutrition	25,439	6.25	67,152	10.64	89,017	10.98
Malignancies	4,380	1.08	5,488	.37	12,115	1.49
Respiratory infections ..	189,647	46.58	288,956	45.73	330,124	40.74
Diseases of infancy and immaturity	13,853	3.40	22,444	3.56	4,747	.58
Heart diseases	16,515	4.06	38,911	6.16	44,000	5.43
Other infectious diseases ..	59,952	14.73	31,437	4.98	137,424	16.95
Total	407,084	100	631,164	100	810,571	100

POST-GRADUATE INSTITUTE OF MEDICINE

Post-graduate Medical Education in Sri Lanka has since the late 19th century been centered around British Medicine. Post Graduate students from this country had to proceed to Britain to specialize in every discipline of Medicine including even Tropical Medicine. The ambition of every doctor was to obtain a Fellowship or Membership of one of the Royal Colleges in the U.K. or a doctorate from a British University. These added diplomas were highly priced as they were recognized throughout the English speaking world, the doctors being able to obtain appointments in their chosen specialities in any country thus draining our talent to other countries. It was also a hallmark for appointments in the Health Department and it helped to enhance the earning capacity of the Doctor in the private sector.

For the past decade or two the University of Colombo has awarded Doctorates and Masterships in Medical disciplines but these were few and far between. They were not even recognized by the Health Department as full qualification in that particular discipline. The training of the undergraduate in Sri Lanka Universities has long been recognized and accepted by the developed countries. They had from past experience realised that the Sri Lankan doctor was a better choice for employment than his counterpart from other Asian countries and consequently employment was easily obtained in Britain or the United States. The doctor himself sought such appointments because of the ennanced salaries paid to them in the state services or their ability to earn much more in the private sector. The facilities available to him in those countries gave him a great deal of work satisfaction. However much they may have yearned to come back to their own country these considerations outweighed any sense of patriotism. It appeared from talks with these expatriate doctors that monetary considerations were not the only factor that lured them to foreign land. They felt that on the salaries paid to them by the Health Department they were unable to adequately meet the cost of living. The conditions under which they had to practise their profession in the hospitals, did not give them the job satisfaction which most of them desired.

An unsympathetic administration, political meddling in transfers, appointments and awards, lack of adequate transport, of housing facilities, the difficulty and cost of educating their children, were added factors which encouraged the exodus. A good percentage of doctors who were sent on Government Scholarships, or on pay leave never returned, thus upsetting any long-term plan that the Health Department had. While in the affluent countries to which he was sent for training, the doctor realised that he had vast untapped earning capacities. On his returning home he would have to exist on his salary as he was debarred from engaging in private practice outside his working hours. All these factors contributed to the so-called 'brain drain'.

The Health Ministry found itself unable to give the necessary health care to the people of this country due to the drain on this trained manpower. Whereas a great deal of money was spent by the government in producing a doctor at no cost to him, this investment was wasted when the doctor decided to leave the country. An adequate balance could not be maintained between the production of doctors and the exit of doctors to other countries, retirements and deaths. Moreover the availability of parts of foreign examinations of the Royal Colleges of Surgeons, Physicians and Obstetricians and Gynaecologists in the country helped the doctor to get over some of the hurdles in his quest of postgraduate qualifications.

From time to time the governments had to resort to draconian measures to restrain the loss of its medical talent to other countries. One of these was the introduction of the Compulsory Services Act and the other the non-issue of passports to doctors by the previous Government. These though they may have had an impact at first were gradually resented by the doctors and again political interference favoured some who were able to get over these barriers with consummate ease leaving a set of frustrated doctors who had no such political pull. The Government now realised that coercion was not the answer to the brain drain.

The introduction of the scheme of channelled consultation practice for all doctors was introduced and this had a great impact on the exodus as the doctor could now utilise his full earning capacity if he chose to do so, outside his hospital practice. Plans to improve housing for doctors, the release of foreign exchange to enable him to buy a car and to attend seminars and congresses of international standard were other factors introduced by the present Government.

The Government has also during this time given thought to the question of post-graduate training for doctors in the country. The reasons for this were many. The training a doctor obtained abroad in his postgraduate studies, was not relevant to the diseases prevailing in this country. It was more geared to pattern of diseases in the country in which he chose to do his postgraduate work. The conditions under which he was being trained and the facilities available to him to practice his art were not those he would have on his return. The doctor would have to be away from the country for at least 3-4 years to obtain his qualifications and experience thus causing a hiatus in the manpower available to the department. It was also realised that a great many doctors were not being trained in a speciality but were studying solely with the idea of obtaining a post-graduate diploma. He was sustaining himself by obtaining employment in hospitals abroad in disciplines quite alien to what he hoped to specialise in. To combat these two deterrents in its efforts to offer health care to the people, namely the loss of manpower by emigration both permanent and temporary, and the lack of relevancy in the training of its doctors abroad, the Government decided to establish post-graduate education locally. In 1974 an Institute of Post-graduate Medicine was established affiliated to the University of Ceylon and based in Colombo. This consisted of a Director, a Council of Management, the establishment of Boards of Study and an Academic Syndicate. The teacher of post-graduate medicine were available both in the medical faculties in Colombo and Peradeniya and in the Teaching Hospitals. The facilities for training,s uch as equipment and library facilities which were insufficient for undergraduate teaching was sadly lacking, thus frustrating the Boards of Study in its endeavours to set up curricula, training programmes etc. The Health Ministry was unable to supply all the facilities required due to foreign exchange problems, hence the decisions of the Boards of Study could not be implemented. The only discipline which began a training programme was that in Community Medicine, commencing in 1977 and finishing its final examination in January 1980. The post-graduate student himself was not interested in obtaining any local degrees at this time as foreign primary and Part I examinations of the Royal Colleges in the U.K. were still being held in Sri Lanka. On obtaining this preliminary qualification the Health Ministry were sending these doctors on no-pay leave to the U.K. for their Part II qualifications.

The very fact that facilities for post-graduate training were not available; foreign examinations were being held and that the postgraduate degrees given by the University were not recognized by the Health Ministry on a full qualification, hindered all the efforts of the fledging Institute.

The present Minister of Health seeing all the difficulties his Ministry faced in providing health care to the people took a bold step in this direction. He decided that as Government policy foreign examinations in medicine were to be prohibited after 31st December 1979. He also decided with the concurrence of the Minister of Higher Education to reconstitute the existing Institute of Post-graduate Medicine. On May 1979 by a Government Gazette No. LD/B 21/78 the Post-graduate Institute of Medicine was promulgated, with a view to postgraduate training and holding of post-graduate examinations. The Post-graduate Institute of Medicine was affiliated to the University of Colombo and consisted of a Director, and a Board of Management who were empowered to form a Board

of Studies in the various disciplines of Medicine.

The Board of Management consisted of ex-officio members, including the Secretary of Higher Education, Health, Finance and Planning. The Deans of the Faculties of Medicine in Colombo and Peradeniya, two representatives of each Faculty elected by the Faculty members, the Director of Health Services, and the Deputy Directors of Medicine and Laboratory Services. In addition there were nine members nominated by the University Grants Commission, seven of whom were to be from the Medical Profession. The Board of Management empowered the Director to form Boards of Studies in the clinical discipline in the first instance, in Medicine, Surgery, Obstetrics and Gynaecology, Paediatrics, Anaesthesiology, Pathology, Psychiatry, Community Medicine, Radiology, Ophthalmology and General Practice/Family Medicine.

The Boards were to comprise of representatives from the Faculties of Medicine, of Colombo and Peradeniya and from the College or Associations of the various disciplines. Its functions were to formulate the policy of selection of candidates for specialised training, a training programme and an examination leading to a doctorate or mastership in the respective disciplines and were to be awarded by the University of Colombo.

The finances of the Institute were to be shared both by the Ministry of Higher Education through the University Grants Commission and by the Ministry of Health. The WHO through its regional Director for South East Asia also pledged their help in implementing the programme.

One of the stipulations laid down by the Board of Management was that standards of training and examining should not be lowered at any cost. The degrees awarded were to be on par with those diplomas which were already recognised in Sri Lanka. The degrees granted by the Institute would be recognised as full qualifications in that particular discipline for payment of allowances and for recognition as consultants after board certification and after a deadline be given preference over foreign diplomas for appointments to consultant posts in the Health Department or Universities. It was also stipulated that every successful candidate in all disciplines should be sent abroad to a recognised institute for a period of one year to gain further experience. This last stipulation was the responsibility of the Institute which would obtain the necessary appointments abroad. The postgraduate student going abroad would be given full pay leave and some form of scholarships or other award. It was only after successfully completing the one year abroad that the post-graduate doctor would be Board Certified as a consultant.

This did not mean that all doctors were compelled to go through this programme. The Ministry would still allow those already holding the Primary or Part I examinations of the Royal College of the U.K. to proceed to the U.K. on no-pay leave on a phased programme to complete their Part II examinations. However after a deadline to be given by the Ministry the local post-graduate degree would be giving preference over foreign degrees in the matter of state appointments. Any doctor not willing to do his post-graduate diploma in Sri Lanka was also free to go for foreign examinations if he so desired after serving his compulsory service period.

Within three months of its formation the Post-graduate Institute of Medicine has constituted all Boards of Study except that in Ophthalmology. Examinations for the Part I in most disciplines were to be held in the first part of 1980 to choose candidates for the various training programmes. Part I examinations would also be held in the latter part of 1980 or early 1981 for those already holding the Part I of foreign examinations and who would have completed the necessary training programmes drawn up by the various boards.

There has been a great deal of enthusiasm and encouragement from the Board of Management, the Ministry of Health, the University Grants Commission and the World Health Organisation.

The Ministry of Health has offered a block of land on Norris Canal Road, close to the General Hospital, Colombo to the Institute to construct a building of its own. The University Grants Commission increased its financial contribution to Rs. 600,000 and the Health Ministry doubled its previous contribution. The WHO has undertaken the task of obtaining examiners from abroad and teachers and other advisors on a short-term consultancy basis.

Although there is much agitation from the Government Medical Officers' Association for holding foreign examinations in the future, and its instructions to members to refrain from taking local post-graduate training or examinations, pending further negotiation with the Ministry of Health, the response from many younger doctors for post-graduate training and qualifications has been encouraging and the first examinations due to commence in January 1980.

Undergraduate Medicine has been in existence for over a century in Sri Lanka, Yet post-graduate medicine has not made any headway at all. This country has depended too long on British Medicine for its post-graduate training even though a great personality in the Medical field Lord Rosenheim exhorted us to break away and do our post-graduate medical training suitable to our country as we have both the talent and potential to do so.

are caused by the spread of contamination, lack of adequate sanitation, lack of a safe supply of drinking water and by malnutrition which weakens the body leaving people vulnerable to further disease.

It is evident that without a basic change in the environment a major reduction in these diseases cannot be expected to occur. It is also significant that the present morbidity pattern does not differ significantly from the pattern of 25 years ago. Furthermore, the pattern of disease shows that major problems in the people's health are basically preventable.

Malnutrition is not a medical problem, but a health problem. As the article from *World Health* states, on page 10 it is not caused by an insufficient knowledge of what human beings should eat nor is it caused by the country's incapacity to produce the food required by its population. It is in reality a problem of inequitable distribution of food within countries and between countries. Even in those countries which do not produce sufficient food to feed their populations adequately the chief problem is not a physical inability to do so, but that the socio-economic structure which restricts the capacity of sections of the population to produce or buy the food they require to eat. In this sense "malnutrition is one of the consequences of social injustice and is a factor which contributes to its maintenance".

The predominance of preventive diseases points to another imbalance in the health care services. This imbalance is between the preventive and curative services which is reflected in the percentage of the health budget spent on these services. For instance in 1976 out of a total health budget of Rs. 416,589,000, 66% of it was spent on patient care services while only 24% was spent on preventive services. In 1977 the proportionate figures spent on curative and preventive health were 66% and 27% respectively. In 1978 the expenditure on preventive services showed a marginal increase with 28% of the health budget while curative services accounted for 65% of the expenditure.

There are many reasons for this continuing bias in favour of curative services while the predominant diseases prevalent in the country are preventive ones. For one thing the tradition of medicine has been in curing illness. The building of hospitals, moreover, are far more tangible and visible than the invisible benefits from commencing a campaign of immunization of children or the benefits from the installation of latrines in a village, which would in the long-term have major impact on increasing health and decreasing infant mortality. It is thus evident that the disproportionate share spent on curative health is essentially a political decision based on preference rather than on real conditions.

This problem however, cannot be solved by merely redistributing medical manpower and resources from the richer urban areas to the poorer rural areas, even if this were possible. This is because an expensive curative-biased medical system in this context is inappropriate to the health needs of the mass of the population. The diseases prevalent in the country as the evidence shows is caused by poor environmental conditions. These diseases are highly susceptible to preventive health measures.

The appropriate cure for these diseases and ill-health is not expensive hospitals with highly-trained medical doctors and sophisticated equipment. It is the provision of sanitary living conditions, clean water for drinking, elementary hygiene, education and the availability of the right kinds of food.

As a preliminary measure then it is clear that the percentage of the health budget must increasingly be spent on community health services. While it is true that the rate of morbidity in the country is high and curative services are essential, it is however, clear that if an improvement of the health status of the people is to be achieved, more emphasis will have to be placed on preventive services. Some of the most positive steps taken in this direction are the plans for preventive health care between 1979-1983. Among them are plans for increased immunisation to reduce infections, improving nutrition education and south west coastal water

CRUEL PARADOX

Although our planet has more than enough potential resources to feed the entire human population adequately, now and for some decades to come, yet a high proportion of its people remain chronically undernourished. This cruel paradox arises from three main causes.

In the first place, even in the industrialized world the crop yields per hectare fall far short of the yields that are technically feasible. In the poorer countries, there is chronic under-use of land and a traditionally ingrained concentration on low-food-value crops.

Secondly, the world's grain markets remain highly unstable—subject to crop failure and famine, or to sudden man-made shortages and gluts.

The message of correct eating habits could come through a programme of health education, which can help avoid cases of malnutrition and debility such as this. But, even with a knowledge of the best food habits, if it is not available to the population the problem will not be solved.

Thirdly, there are serious failures in distribution at the regional, national and local levels, so that the right quantities of food supplies never filter down to those whose need is greatest. The greed of middlemen and retailers ensures that a healthy diet remains far beyond the reach of the poorest of the poor.

All three of these causes are technically amenable to improvement; all three are likely to remain largely intractable for the foreseeable future. Yet plenty can still be done on the food front to improve the lot of the under-served. What most of the deficiency diseases that plague humanity have in common is that they are preventible. Only quite minor additions to the diet, available now and at low cost, would suffice to avoid such pitiful conditions as nutritional anaemia, endemic goitre or the blinding disease, xerophthalmia. Improvements to an unsatisfactory environment or the provision of clean drinking water can have very positive results. In some parts of India, for instance, gastroenteritis is the root cause of malnutrition in young children. Elsewhere, cultural taboos and superstitions may be helping to create malnutrition.

Then, nutritional studies invariably throw up strange discrepancies in feeding habits, not only between villages in the same area but even within families. How can such inequalities be overcome?

The most valid answer is: by health education. The message of good eating habits—starting with the inestimable value of breastfeeding babies and then weaning them wisely on to the right foods—must be conveyed to people by every means at our disposal. Radio, television, newspapers and posters are powerful media for conveying such messages, including the value of growing a broad range of vegetables in the backgarden. In line with WHO's concept of primary health care, the word about good food is also being spread by community health workers and other health professionals in many countries.

Schoolchildren in particular readily accept a reasoned explanation of why it may be necessary to break away from too narrow food habits. This is important when it comes to convincing community leaders that better foods need not depend on exotic and expensive "imports" from outside, and that some of the best sources of energy, proteins and vitamins are locally-grown cereals, pulses, vegetables and fruits.

Malnutrition is both a consequence of social injustice and a leading factor contributing to its maintenance. It bears hardest on small children, exacting an appalling toll in death and disability among the young. Together with other adverse environmental factors, it interferes with the adequate growth and normal disease-resistance of the survivors, and reduces their capacity to learn during childhood and to earn during adulthood.

As the Director-General of WHO, Dr Halfdan Mahler, wrote in an earlier issue of this magazine, "the inevitable result is a downward spiral in which poor malnourished parents produce malnourished children who in turn will become poor and malnourished parents".

Courtesy: World Health, Aug/Sept 1979

supply projects and rural water supply schemes.

The establishment of an adequate preventive service implies in the first place a better utilisation of the existing preventive services and perhaps where it is inadequate, the training of a number of preventive cadres. For instance it has been reported that Medical Officers of Health who head the preventive service spend as much as 60% of their working time on administration and only 35% on preventive health care for which they are trained. Moreover the cadres that today form the backbone of the preventive health service such as Public Health Midwives, Inspectors and Nurses would need to be expanded and beter equipped if their services are to be adequately utilised.

The Public Health Midwife is at the heart of the preventive system in the periphery. However, the availability of the PHM is inadequate. In 1976 for instance the ratio of PHMs to population was about 1 : 6,000. Naturally the time spent on preventive work is low especially when one considers that the PHM has to travel wide distances in addition to reach her patients.

As mentioned at the outset the country's health care system consists of (a) a curative set-up of various grades of hospitals and maternity homes; (b) a preventive public health system made of 102 Medical Officers of Health (MOH) units and 1,200 clinic outlets. The smaller institutions are spread out mainly in the periphery and are characterised by a host of deficiencies, particularly, lack of staff; lack of equipment and malfunctioning of equipment; inadequate drugs and services and inadequate staff quarters and improper maintenanc of buildings. The result is that there is often a bypassing of these institutions and an underutilization of the 110 District Hospitals and smaller Rural Hospitals in order to avail of the, better facilities in the 10 large Provincial Hospitals of the island, which are generally overutilized.

The existing health care services have developed through a regional network system of health institutions. In the early phase of this development, (particularly 1930-50) the control of communicable diseases and preventive measures were generally emphasised, but later regional treatment centres like the Provincial, Base and District Hospitals became established and a major portion of the health budgets came to be diverted to develop and maintain these hospital services. Thus today nearly 65 percent of the budget is allocated to patient care services while the public health budget amounts to only about 28 percent. It is further accepted that not only do the greater proportion of all forms of resources go into the development and maintenance of medi-

MEDICAL SPECIALIST SERVICE

Immediately after the removal of the legal barrier for medical specialists in the Government Service to run private hospitals or to serve in such institutions specialist medical care in the country had taken a new look. After careful investigations we tried to study the current position of this sphere of services. In order to observe how these services were carried out and to collect necessary data, we visited the General Hospital, Colombo and five other selected private hospitals situated in Colombo in the latter part of November 1979.

Although there were medical specialists not in government service practising in the private hospitals our attention had been drawn only to medical specialists attached to the General Hospital, Colombo, in compiling these data; and where the number of patients were recorded only outdoor patients at the private hospitals were taken into account not taking into consideration their inmates. It was observed from the available facts, that 50 to 75 patients who need specialist medical care had to go back unattended at the General Hospital in any one day. Although consulting hours were exhibited in the private hospitals, as shown in this table had been reported that consultations could be arranged even at other hours.

Following are some of the facts compiled on such visits

	General Hospital Colombo	Private Hospitals				
		1	2	3	4	5
1. No. of medical specialists who attend to consultations in a day*	75	35	25	16	15	4
2. No. of patients who consult medical specialists in a day ..	1120	400	150	70	50	20
3. Consulting hours	—	12.00 to 2.00 p.m. 05.00 to 7.00 p.m.	12.00 to 1.00 p.m. 05.00 to 8.00 p.m.	12.00 to 1.00 p.m. 05.00 to 8.00 p.m.	06.30 to 7.00 a.m. 12.00 to 1.00 p.m. 07.00 to 9.00 p.m.	12.00 to 1.30 p.m. 05.00 to 6.30 p.m.
4. Specialist fee for consultation ..	—	30/-	30/-	30/-	30/-	30/-

* Estimated

Rs. 25/- for the specialist and Rs. 5/- for the institution.

In addition to the details enumerated above the following features were noticed in this investigation.

1. Although daily attendences of Medical specialists at the General Hospital were declining it was not so at the private hospitals.
2. Some patients who had consulted Medical specialists at the General Hospital on earlier occasions were attending private hospitals where the particular specialist serves for interviews and for specialist treatment.
3. It was observed that some patients at the General Hospital had letters issued by specialists, whom they wanted to consult, and we were told that these letters were obtained by making prior payment to the specialist for such consultations.
4. Generally about 2½ minutes were taken per patient at the General Hospital for a consultation, but at the private hospitals more than 5 minutes were devoted per patent.

cal services, but also that much of these inputs are for the urbanised areas of the country where only about 20 percent of the people live, while almost 80 percent of the population who live in the rural areas get a comparatively small share of the country's medical care expenditure and services.

These rural people have to travel long distances, sometimes at great personal expense and inconvenience in order to obtain treatment for some simple conditions such as fever, headache or diarrhoea at a medical care institution. The Minister of Health inaugurating a workshop on Primary Health Care Workers' in August 1979, drew attention to the enormity of the problem and the inability of the primary health worker in the village to be of much help in these circumstances. He said "all the time the Public Health Midwife, the Public Health Nurse and the Public Health Inspector have to stand by and watch, because they do not have the training and the authority to give any help to these people". He emphasised that this had led to a "gross inequality in the health status of the people, which is politically, socially and economically unacceptable.... Indeed if the present system persists the attainment of better health will remain as elusive as ever for the rural poor". He added that his Ministry was in the process of planning a Primary Health Care System appropriate to the needs of Sri Lanka.

In order to achieve these objectives the Ministry had decided to review the job description of those health workers who are at present closest to the people at the village level—namely, the Public Health Inspector, the Public Health Nurse and Public Health Midwife. The aim is to infuse various types and degrees of skill and knowledge into these workers to enable them to carry out their numerous tasks and responsibilities more efficiently as members of a carefully selected team. This concept of teamwork implies a co-ordinated delivery of health care in the form of preventive, promotive, curative and rehabilitative services, including nutrition programmes, environmental control, fertility programmes and communicable disease control. The main significance of such a programme is that it would help to integrate the preventive and curative services at the village level by imparting a certain degree of curative knowledge and skills among those primary health care workers whose training is now confined to the preventive side only. For instance, the midwife if taught the diagnosis and treatment of simple medical and surgical conditions can play a far more useful role to the great relief of the people she serves in the villages as well as that of the qualified medical practitioners who can devote their time to more important tasks. A major role assigned to the National Institute of Health Sciences at Kalutara, which commenced functioning as a separate decentralised unit in the Health Ministry from July 1979, will be the planning out of such an integrated health care system and providing the necessary training facilities for its implementation. (See Box on Page 13).

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Environment

As we have seen the bulk of the country's health problems are deeply rooted in the environment. For instance, it is estimated that only between 15 percent and 25 percent of the people have access to safe water; or less than 10 percent have access to piped water. The majority of the people use shallow unprotected wells and in settlement areas tanks and water channels are the source of drinking water. It has also been found that the proper disposal of human and other waste through sewerage systems and latrines is also limited, less that one-third of the population having satisfactory latrine facilities. Again, there is inadequate emphasis by local authorities on water supply and excreta disposal programmes. At present it is estimated that 50 percent in the rural areas and 60 percent in the urban areas have access to these facilities. It is not surprising therefore that about 40% of the people seeking treatment at Government Medical Institutions are suffering from bowel diseases. (Bowel diseases constitute mainly Typhoid, Amoebic and Bacillary Dysentry, Infectious Hepatitis, Gastroenteritis Colitis and Worm Infestations). The cause of this alarming incidence of bowel disease is due to the unsatisfactory environmental sanitation and personal hygiene.

In the control of communicable diseases too sufficient attention has not been paid to environmental factors. It has thus been accepted that for example, malaria, diarrhoeal diseases, V.D., T.B., or Filaria, eradication programmes should include not only the control of vectors or the treatment of the diseases but also factors linked to the places people live in, the occupations they carry out and the pattern of their movements. A typical example is the Malaria control programme where gemming, chena cultivation, and settlement areas in the dry zone have been identified as high risk areas. Or again, whooping cough, polio and tetarus still account for 10% of the deaths of children under five years. An expanded immunisation programme now planned intends to provide protection to 50% of the population at risk.

Nutrition

Nutrition or more particularly nutritional deficiency is another major health problem. One aspect has been the lack of consensus as to the proper nutrition strategy among nutritionists. More important, however, is the fact that this problem is closely related to employment, availability of food, droughts and harvests. It has also been established that though significantly related to agricultural and economic factors, socio-cultural factors like breast feeding, weaning practices and food taboos critically determine the nutritional status of large sections of the people.

There are still other general constraints in the Health Care System. Increasing demands have thus generated a response from the health care system to provide: increased and more appropriate manpower resources; increased output and services by staff; larger and quicker turnover of patients both indoor and outdoor and increased outlets and service points.

The most evident constraints in the present system observed are overutilization of specialised services (e.g. teaching and provincial hospitals) especially in out-patient care; underutilization of district hospitals and some provincial hospitals; by-passing of institutions and shortages and loss of trained manpower—e.g. "Brain Drain" of most categories—Doctors, Nurses, A.M.P. Radiographers, Lab-technicians etc.

The acute shortage of manpower has required intensive manpower development programmes, for instance, the opening up of new schools of medicine and increasing the intake of medical students, more nursing and midwifery schools and training programmes; increasing intake of students by about 50%; and also restarting courses for middle level personnel like Assistant Medical Practitioners. Infact, manpower resources are required in all categories, especially those that are needed to work in rural areas, with more conducive conditions to function in a field setting.

Providing better facilities for existing institutions in laboratory services drugs and supplies, (see pages 25-33) diagnostic equipment, and repairs to buildings is another crucial requirement.

While attempts are currently being made by the government to increase the availability of preventive health staff, with the limited resources at its disposal and the rising costs of health care, it is unlikely that the state could provide large numbers of trained personnel in the preventive field. Moreover as the

THE NATIONAL INSTITUTE OF HEALTH SCIENCES

The Government of Sri Lanka, as a member state of WHO made a positive commitment towards the objective of Health for All by 2000 at the conference on Primary Health Care held in Alma-Ata in 1978.

Although the country is small in extent when compared to other nations in the South Asian Region, Sri Lanka too is confronted with the common problem in this region, viz. that of providing basic comprehensive health care to 80 percent of the population living in rural areas while over 70 percent of medical doctors practice in the urban and semi-urban areas of the country.

In order to meet this challenge the Sri Lanka Government through its Ministry of Health has embarked on a multi-faceted programme of action to develop primary Health Care in the country. The challenge is to be met in a three-pronged manner.

(1) By increasing the numbers of the existing Health workers in the periphery– namely the Public Health Inspector, the Public Health Nurse and the Public Health Midwife. The training curricula of these workers have been revised in such a way as to strengthen their capabilities in the provision of Primary Health Care.

(2) By increasing the output of Assistant Medical Practitioners who will supplement the medical graduates. The training of Assistant Medical Practitioners is to be community-oriented, so that they will be motivated to serve in the rural areas.

(3) By increasing the number of Health Volunteers, who form the interphase between the community and the midwife.

As an initial step in the implementation of this strategy the Health Ministry has established the National Institute of Health Sciences at Kalutara.

The National Institute of Health Sciences is a training complex which is made up of:

(i) The former Institute of Hygiene, Kalutara.

(ii) The area of CMOH, Kalutara– which is 52 sq. miles in extent and now serves as the Field Practice Area of the NIHS.

(iii) The Base Hospital, Kalutara.

(iv) The Rural Hospitals at Aluthgama and Alutgamveediya.

(v) The Central Dispensary at the Police Training College.

The Institute of Hygiene at Kalutara, started functioning as the first Health Unit in Sri Lanka in 1926. In 1960 the Health Unit was renamed "Institute of Hygiene" and moved to the present spacious building at Nagoda. The Institute which was headed by a Chief Medical Officer of Health was upgraded, and in 1974 a permanent Director was appointed as its Administrative head. In June 1979, the Institute of Hygiene together with the above mentioned units was established as the National Institute of Health Sciences, functioning as a separate decentralized unit of the Department of Health Services.

The Government of Sri Lanka has been assured of the support of UNICEF, WHO and US AID in he further development of the NIHS in the five year period 1979-1983.

The National Institute of Health Sciences will conduct multi-disciplinary, community-oriented, field-based training programmes for the Primary Health Care Workers.

The NIHS will thus play a key role in developing training programmes that will lay stress on teamwork with the objective of enabling Health Care workers to learn how to work efficiently as a team. This is in keeping with the world trend towards team work in planning for the development of rural health care.

The National Institute of Health Sciences is at present solely responsible for the training of Public Health Inspectors and Public Health Nurses. It is also one of the training centres for Public Health Midwives and will be responsible for co-ordinating and monitoring the Midwife training programmes in other centres as well. Thus the Institute is in a unique position to initiate multi-disciplinary training.

The activities of the NIHS will be expanded to include the training of Assistant Medical Practitioners in 1980. By doing so the AMP's will also be oriented towards teamwork and Community Health.

The NIHS will also conduct training in Community Health Management for middle level managers such as MOH's, DMO's and other supervisory grades. The training curriculum for this course is now ready and it is hoped to commence the first course in August 1980. The NIHS will spearhead the efforts of the Ministry of Health to increase the numbers of Primary Health Care Workers and already new training curricula for these workers have been developed and submitted to the D.H.S.

The Health Ministry has already recruited 2,604 persons to be trained as Public Health Midwives and with the additional intake of A.M.P. students to the NIHS, the P.H.S. service will be strengthened considerably in the next few years.

The N.I.H.S. will also undertake research primarily into alternate methods of Health Care Delivery. Towards this end the NIHS has taken steps to implement a new Primary Health Care Delivery Model in its Field Practice Area. This will be done concurrently with a WHO-funded project for strengthening the Primary Health Care Management Training. This operational research project will also be implemented in 1980.

data indicate the measures needed to reduce the ill health caused by poor environmental factors are not of a highly technical nature. It is increasingly being realised in developing countries that there must be a change of emphasis and outlook on medicine and the commonly encountered diseases must be stressed. This is seen in the work undertaken now in Bangladesh, India and Tanzania. This implies that the health services would need different cadres for the treatment of preventive diseases.

The Volunteer Health Workers

In Sri Lanka the need for such health cadres is even more important when one considers that preventive illness predominates the disease pattern among the majority of the population in the country. Preventive medicine in addition demands far less resources than curative medicine. The concept of the volunteer health worker arose out of the realisation that health was not merely the province of a doctor, but that the community should also participate with the assistance of paramedical cadres in solving the health problems and maintaining health amongst the community.

The volunteer health programme commenced in 1975 with the training of volunteer health workers particularly in the rural areas by the Health Education Bureau of the Ministry of Health. The programme draws on the fact that there already exists particularly in the villages a sense of sharing and cooperation among the peoples.

The volunteer worker is a member of the community and takes the responsibility for health care of the segment of the community amongst whom he works. He offers his services without any monetary gain. Volunteers are selected by the village leaders and the preventive staff of the department of health which serves the areas such as the Public Health Midwife, Nurse and Inspector. Volunteers are usually educated people and range between the ages of 18-40 years. Their education and membership of village societies confers a certain status on them within their family as well as among their immediate neighbours among whom they will work.

The volunteer assists the preventive health staff at the periphery level in the delivery and utilisation of primary health care. He is trained by the preventive staff. The training includes learning from visits to clinics, to homes and through lectures based on case studies. Through this training he learns to detect simple illnesses such as scabies, to train people in personal hygiene, the use of latrines and to drink boiled water, identifies home accidents and how to offer possible solutions to their prevention. In the sphere of nutrition the volunteer identifies possible sources to supplement food, recognises the misuse of foods and helps to supplement the diet with the cultivation of home gardens. In cases of immunisation the volunteer detects infants needing immunisation. He also identifies communicable diseases such as malaria and infectious diseases such as measles and simple diarrhoeas. Once these are identified he is taught to administer drugs for fevers, anti malaria tablets to prevent malaria and provide rehydration fluids in the case of diarrhoea.

These actions are essentially designed to supplement and complement the work of the primary health care workers at the peripheral level. In short, the volunteer becomes an active link between preventive health workers and those who seek primary health care. Today there are 500 villages in which volunteers work.

The effectiveness of the work of the volunteer health workers is seen for instance in the malaria campaign in 1976 in the Public Health Inspector area of Rajangane in the Anuradhapura district. Due to the assistance of the volunteer in the campaign of spraying and the distribution of preventive drugs, there was a remarkable decrease in the incidence of malaria. In a highly malaria endemic area after the programme commenced, only 4% of the population is reported to have developed malaria.

Another example comes from the village of Maddegama in the Kandy district. This programme which commenced in 1976 gave priority to personal hygiene and environmental factors in health. It included the construction of latrines, the popularisation of boiled water for drinking. As a result the diarrhoeal diseases were drastically reduced and over a period of one year no cases of dysentry or typhoid were reported in the village. In the same village immunisation of children increased from 12 to 88%, the incidence of infectious diseases declined from 28% in 1976 to 5% in 1979.

Though the training of volunteer health workers for primary health will go a long way towards improving the health of the mass of the population, it is necessary that this segment be well integrated into the general health services. and motivated to retain their interest.

For instance the volunteer workers must be a recognised link between the community and the preventive health personnel at the level of the periphery. Through the preventive staff a referral system must exist which will link the peripheral hospital in a hierarchy to the base and provincial hospitals. For such a system to operate smoothly it is necessary that there must be adequate transport to shift patients needing specialist attention from the periphery to hospitals with the necessary staff and equipment. This could eliminate the pressure that currently exists on the urban hospitals that are better equipped.

Socio-Economic Conditions

However, the health care service alone cannot solve every problem that arises out of ill health. It must be borne in mind that one of the major causes of ill health is the poor environment in which people live. This includes not merely the physical environment, but the socio-economic conditions within which people live. At the most elementary level, it is necessary that the majority of the population must have the purchasing power to pay at least for their food or have the means to produce it. Otherwise malnutrition and diseases would prevail.