Health Care for Northeast Sri Lanka
- Reflections for the future

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Preamble

Prof. K Balasubramaniam, the immediate past president, the distinguished past presidents, respected members of the Jaffna Science Association, honoured guests, fellow members and students.

I thank the members of this Association for the trust and confidence you have placed on me in electing me to this post of President of this esteemed Association – the highest honour that the members of an Association could bestow on one of their associates.

I accept this post of President of this prestigious Association, with great humility. I assure the members that I will do my utmost to uphold the traditions and maintain the high standards maintained by the Association in the past. I look forward to your support in order to carry forward the activities of the Association during the ensuing year. I wish to sincerely thank the chairman, Prof. Balasubramaniam for the nice words he has spoken about me.

I have been in the field of Community Medicine for the past 30 years, and especially interested in planning for the development of the Health sector of the Northeast Province for quite some time.

The topic, which I propose to present to you today, is relevant in today's political context and in the context of the theme seminar, which was held two days ago.

Introduction

The ethnic conflict in Sri Lanka, which started half a century ago, has now metamorphosed into a large-scale civil war - if not a conventional war.

All sectors of the people have been affected. However the most affected are the people living in the Northeast of Sri Lanka. Their earning capacity has been reduced education has been hampered; health has deteriorated to very low levels. Some of the indicators of health, in the Northeast, may not be as low as in some countries with civil war, but certainly

there is a downward trend, which could eventually lead to a situation worse than war torn countries like Ethiopia.

Therefore, it is imperative that the intelligentsia of this part of the country should foresee the future and take all preventive action to avoid a calamity that would befall our future generation.

Preventive action should be undertaken in all sectors including, health, education, fisheries, agriculture, livestock development, social services etc. The preventive action will include Primary, Secondary and Tertiary prevention.

Primary prevention is to undertake activities in sectors, which have still not deteriorated but likely to deteriorate in the future. Secondary prevention will be in activities where deterioration has already commenced but not obvious and tertiary prevention will be in sectors where the breakdown is obvious. Primary prevention will prevent or at least delay the breakdown in that sector, and secondary and tertiary prevention will prevent the deterioration of the situation.

In the Health Sector, the destroyed and closed down health institutions and lack of basic equipment in hospitals, are obvious. The lack of health manpower is also obvious. The insidious increase in the Infant & Maternal mortality, water and food borne diseases, the lagging behind in the introduction of newer technologies in medical management are not so obvious. The increase in the number and proportion of disabled and elderly among us, the increase in persons affected by war stresses, increase in addiction to alcohol & smoking (and probably introduction of drug abuse) and deterioration of moral and cultural values are rarely thought of. We have not given priority to them as problems or challenges in planning, reconstruction and rehabilitation programmes.

Demographic Pattern

The people of the NEP have undergone displacements on several occasions and the population distribution has kept changing so frequently that we are unable to keep a track of the population in the various parts of the NEP.

The distribution of the population at the last census, in 1981, and the latest figures from different sources is given in Table1.

Table1: Population (in thousands) of Northeast Province

Districts	1981 (in thousands)	2000 (in thousands)
Jafna	831	502
Killinochi #		152
Mullativu	77	199
Mannar	106	111
Vavuniya	95	117
Total North	**1,109**	**1,077**
Trincomalee	389	352
Batticaloa	330	524
Ampara	256	650
Total East	**975**	**1,526**
N E Grand Total	**2,084**	**2,603**
Sri Lanka Total	14.747	18.927

 # Kilinochchi was part of Jaffna in 1981
Source: Reports from Government Agents, 2000

A cursory review of the population pattern has shown that the population has decreased considerably in the Jaffna district and increased in Vavuniya, Kilinochchi, and Mullaitivu districts.

However the estimated population of the Northeast remains around 2.6 million, which is 14 % of the population of Sri Lanka.

Health Situation Analysis

The Sri Lankan health Service has been a model for developing countries. The country has been spending less on health care and achieving better results than countries with more income levels. In 1994, Sri Lanka, with a per capita income of US$ 800, had a higher life expectancy than Korea, Thailand or Malaysia, and lower Infant Mortality Rate, despite a per capital income less than 10 % of Korea's.

In Sri Lanka the life expectancy now is 75.4 years for women and 70.7 years for men; Maternal Mortality rate is 2.3 per 10 000 live births, Infant Mortality Rate is 15.4 per 1000 live births; Neonatal Mortality rate is 12.9 per 1000 live births and Child mortality is 0.9 per 1000 children 1-4 years old. The population growth rate is 1.2 % and the fertility rate is 2.3. Immunization coverage is generally 95-99 %. On an average health care of some sort is found less than 1.4 kms. from any home and free Government western health service is available within 4.8 kms. from any home.

However in the conflict affected areas of Northeast, the situation is different. The people have been affected by internal displacement, destruction of social and economic structure, lack of transport, food shortages, limited source of income with a higher proportion of widows and orphans.

In a Baseline study of Health & Nutrition in the Trincomalee district, (Ines Reinhard & Danela Kraemer, 1999) it was found that in the 'uncleared' areas of

Trincomalee district (where the population is exclusively Tamils), 61 % of the fathers & 66 % of the mothers of children surveyed were unable to read & write compared to 13 – 15 % among the other communities in the same district. According to the Demographic survey of 1994 (which excluded the NEP), the literacy rate for Sri Lanka was 90.1. Nuwara-eliya recorded the lowest literacy rate of 77.7 (AHB, 1999)

The health infrastructure has broken down. Hospitals have been destroyed as a result of bombing or abandoned due to military operations (like Central Camp, in Amparai district). Some hospitals (like in Akkaraipattu & Thirukkovil) are occupied by the armed forces. Some hospitals remain targets, as military camps and shelling devices are installed near these hospitals. As a result of closure of some hospitals, the existing hospitals are working beyond their capacity.

In addition there is a critical lack of manpower, both at the consultant level and at the grass root level.

Deterioration of the Health services

Comprehensive Data on Health status is lacking in the Northeast, as most of the surveys carried out in Sri Lanka after the onset of the conflict excluded the Northeast. Even the Annual Health Bulletin published by the Ministry of Health, lacks common routine data (such as inpatient statistics etc), which are collected through the DDPHS's. Only limited reliable data is available for the Northeast. Adhoc surveys have been carried in small populations and they could be used to give an overview of the health status of the population in the NEP.

Nutritional status of children

The nutritional status of the children in Sri Lanka has been deteriorating during the past few decades. But the deterioration of the nutritional status has been rapid and drastic in the areas of conflict. The nutrition status studies of children done in Sri Lanka, including NEP is given in Table 2.

In a study carried out by the Ministry of Health in 1975/76 only 3.7 % of the children in the Jaffna district were wasted. In fact, that year, Jaffna district had the lowest prevalence of under-nutrition among the children in the various districts of Sri Lanka. However, later studies in Jaffna (Sivarajah N, 1993)

showed that the wasting in Jaffna was 18.9% and stunting was 31.4 %. This has been corroborated by studies done in August 2000, by an MSF team (David Becker & Michelle Kelly, 2000), where they reported an 18.9 % wasting. The wasting was very high (30.7 %) among the 6-17 months old children. A study carried out in Vavuniya (Keetheeswaran A, 2000.) showed that 19.5 % of the displaced children were wasted. Studies carried out in Trincomalee District (Innes Reinhard & Daniela Kraemer, 1999) too showed a similar trend. In this study of children in Trincomalee 26% of the children were wasted, 27% stunted and 50% underweight. Among the ethnic groups, the nutritional status of Tamil children was worst, both in 'cleared' and 'uncleared' areas.

Communicable Diseases

Communicable diseases have been a major health problem in all countries. With the development and affluence in developed countries, the incidence of communicable diseases started declining and non-communicable diseases such as cardiovascular diseases started increasing. However, in Sri Lanka, we still have the communicable diseases and also an increase in the non-communicable diseases.

The incidence of communicable diseases (like bowel diseases, tuberculosis, parasitic infestations etc) appears to be high in the NEP. The main contributory factors being the lack of sanitary facilities, clean water, poor housing and under nutrition.

The availability of sanitary facilities and water supply, enumerated at the last census in 1981 is given in Table 3

In Jaffna, 45% of the population did not have adequate sanitary facilities. The worst was Batticaloa district, where 82.7% did not have adequate sanitary facilities

The situation at present would be much worse, as a result of damage and destruction caused by the war and inability to repair or reconstruct due to non-availability of building material.

Table: 2 Nutritional status of children in Sri Lanka

Study particulars	Sri Lanka		North-East Province (NEP)	
	Wasting (weight for height)	Stunting (height for age)	Wasting (weight for height)	Stunting (height for age)
Sri Lanka Nutritional Status survey **(Sept. 75 – March 76)** prepared by US Department of Health education and welfare, public health service in cooperation with Ministry of Health, Government of Sri Lanka (CARE/Sri Lanka and US Agency for International development)	6.6 %	34.7 %	3.7 % (Jaffna)	
Sri Lanka Demographic Health survey **1987**. Ministry of Plan implementation, Colombo 1988.	12.9 %	27.5 %	n.a.	n.a.
Demographic and Health Survey 1993 conducted by the Department of Census and Statistics in areas excluding North Eastern Province	15.5 %	23.8 %	n.a.	n.a.
Sivarajah N **(1993)** Nutritional Survey of Children in the Jaffna District. Department of Community Medicine, University of Jaffna.			18.9 % (Jaffna)	31.4 (Jaffna)
Ines Reinhard & Daniela Kraemer, **(November 1999)** Integrated Food Security Programme, Trincomalee. Baseline Survey on Health & Nutrition. Ministry of Plan Implementation			26 % (Trinco malee)	27 % (Trinco malee)
David Becker & Michelle Kelly **(2000)**. Rapid Nutrition Survey of internally displaced Children under five, in camps, Jaffna Sri Lanka. Medicins Sans Frontiers, Jaffna			18.9 % (Jaffna)	
Keetheswaran A. **(2000)** A study of selected aspects of nutritional status of children under five years, pregnant, lactating mothers & adolescent girls in selected welfare centres in Vavuniya district. Study carried out for World Food Programme.			19.5 % (Vavuni ya)	
Sivarajah N **(2001)** Nutritional survey of Welfare Centres in Jaffna District. Study carried out for World Food Programme			22.6 % (Jaffna)	36.2 % (Jaffna)

The lack of latrines is a major contributory cause for the high prevalence of bowel diseases. If one assumes that a person passes on an average 200 grams of stools every day, in Jaffna there will be 45,000 kilograms of stools deposited daily, on the Jaffna soil and most of it will find its way into the sources of drinking water or food.

Table: 3. Percent population with adequate water & sanitary facilities at home or vicinity, by districts in NEP

District	Adequate sanitary facilities	Adequate water facilities
Jaffna	55.0	87.8
Mannar	24.2	91.6
Vavuniya	19.2	78.1
Mullaitivu	16.8	63.7
Trincomalee	35.2	68.1
Batticaloa	17.3	79.4
Amparai	28.7	68.7
All Island	66.6	69.6

Source: Annual Health Bulletin 1985 Ministry of Health. Sri Lanka p.19

Even the soakage pits could be a source of contamination of underground water. The Jaffna soil is loamy, and has conduits. If a soakage pit connects up with a conduit, which has access to a source of water, that source of water could be easily contaminated. Several examples of such contamination in Jaffna have been recorded.

It is not only the public, who are responsible for this contamination of water sources. The Health Ministry is a bigger culprit. Most of the hospitals in the NEP remain the 'reservoir of bowel diseases'. None of the hospitals in the NEP have a sewage treatment plant. The hospitals act as 'reservoirs' or 'amplifiers' of disease. They admit patients with bowel diseases (mostly the virulent forms) collect their excreta and pump them into the open without any form of treatment, thereby contaminating the environment and spreading diseases.

The Jaffna Teaching Hospital pumps out untreated sewage into the drain outside the hospital, which winds through open drains in the city and ends up in the lagoon where we collect our prawns, crabs and fish. Untreated sewage from Trincomalee Base Hospital is pumped into the sea a quarter kilometre from the Trincomalee beach, which is a bathing resort. The sewage from the Vavuniya Base Hospital overflows into the open land at the rear of the hospital leading to stink. The effluent carrying dangerous bacteria pollute the environment and will find its way to the sources of drinking water.

The law does not permit a private individual to construct a house without a facility for proper disposal of excreta, but the government hospitals do not appear to be bound by this law.

Although it appears that a good proportion of the population has adequate access to water, the quality of the water as regards faecal contamination is doubtful. This is an area, which needs further investigation.

Malaria

Malaria had been a major problem in the past. The incidence of malaria in the NEP is given in Figure 1.

In 1995, 31% of the malaria cases in Sri Lanka were in the NEP. In 1998, this increased to 62.3%. Some recent data show that the incidence is decreasing in the Jaffna district. It is not known whether the situation is similar in the other districts, especially in the Kilinochchi, Mullaitivu and parts of Vavuniya & Mannar districts.

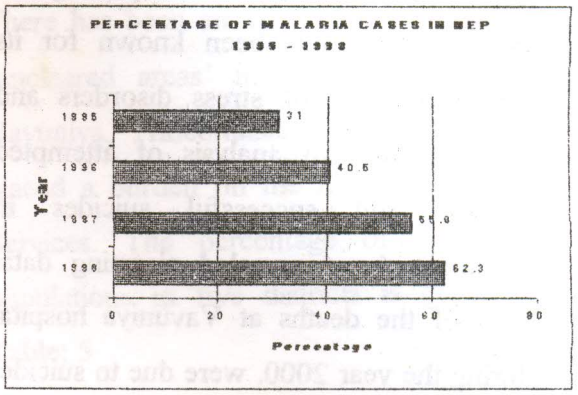


Figure 1

Stress related disorders

Sri Lanka's suicide rates are considered to be high when compared to the rest of the world (Table 4).

Table: 4. Annual reported suicides in Sri Lanka (1986 to 1997)

Year	Reported suicides	Incidence (per 100 000 population)
1986	6 784	42.1
1995	8 414	46.4
1996	7 344	40.1
1997	6 418	34.7
1998	6 010	32.2

Source:Police Department Administrative reports & statistical division of Police headquarters quoted in William Hsiao (2000), A Preliminary Assessment of Sri Lanka's health Sector and steps forward

Within Sri Lanka, the NEP, especially the Jaffna District has been known for its high prevalence of stress disorders and suicide rates. An analysis of attempted suicides and successful suicides in Vavuniya, have revealed alarming data. 12% of the deaths at Vavuniya hospital during the year 2000, were due to suicide. 62 suicide deaths and 691 attempted suicides were admitted to Base Hospital, Vavuniya in 2000, from among a population of 117 000. The deaths could be more, because the deaths do not include the outcome of 103 attempted suicide patients transferred to Provincial Hospital, Anuradhapura.

Suicide attempts were three times higher among those displaced and living in "welfare centres" - which is a decent name for refugee camps - than among the general population in Vavuniya.

Cancer

Cancer has been a major problem among the Tamil Community especially those living in the North. A study done by R G Panabokke during the period 1973 to 1977 showed that the incidence of cancer was high in the Northern Province. The incidence for Northern Province at that time was 36.8 cases per 100 000 population. During the same period the incidence for Sri Lanka was 16.4. Recent documentation in 1998, shows that the incidence in Jaffna District has risen to 50.5 per 100 000 population.

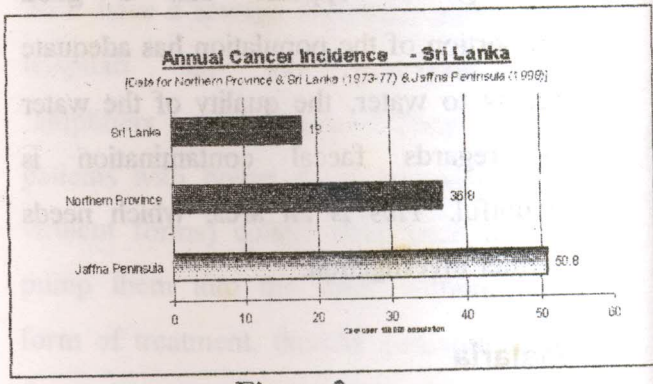


Figure 2

Hospital Services

As a consequence of the war several hospitals have been damaged and equipment damaged and destroyed. Some hospital buildings have been completely or partly taken over by the military. Military camps have been installed near hospitals thereby restricting access to patients at nights due to road- blocks. Most of the hospital buildings in the Northeast are several decades old and dilapidated and deteriorating. Very little improvements have been made during the past two decades. Many hospitals lack adequate water supply. Sewage disposal is rudimentary and usually broken down.

There has been very little capital investment in hospital development in the NEP during the past two decades. The services provided to the people in the Northeast, is very poor. The most affected are the districts of Kilinochchi, Mullaitivu and parts of Vavuniya, Mannar, and Batticaloa.

There has been an influx of people from 'uncleared areas' into districts such as Vavuniya, Trincomalee & Batticaloa and placed a burden on the District's Health Services. The percentage of displaced populations in five districts is given in Table: 5

Table : 5 Displaced persons in selected districts *

District	in welfare centres	Outside Welfare centres	Total Displaced	% of district population
Jaffna	19,507	182,493	202,000	40 %
Mannar	29,224	24,243	53,467	51 %
Vavuniya **	17,429	38,690	56,119	41 %
Trincomalee	3,186	11,631	14,817	5 %
Batticaloa	1,535	34,572	36,107	7 %
Amparai	5,364	1,294	6,658	1 %
Other Districts **	n.a	n.a	540,471	
Total Displaced			909,639	35 %
% of Total Sri Lankan population				5 %

* Source Report Government Agent & NEPC July 2000

* * Source 1997 estimates of Planning Secretariat, NEPC

Shortage of staff

The shortage of medical and paramedical staff is a major constraint. The shortage of staff for the NEP is given in table 6.

Over 50% of the shortage of approved cadre is among specialists and Public Health Staff.

The reason for the reluctance of the different grades of the medical and paramedical staff to work in provincial and district capitals, appear to be different. Some of the reasons are also specific to the different towns. The reasons are also applicable not only to the health staff, but also to other staff that is in short supply.

In the case of the specialist doctors, they are concentrated in cities and major towns, where facilities for private medical practice and education of their children are available. It is possible that they will go to Provincial & district towns, if these facilities are made available. It is possible to attract specialist doctors to provincial and district towns if private nursing homes are constructed. This could be encouraged, by the government providing loans at low interest to entrepreneurs who are prepared to construct nursing homes in specified towns where the need is present. It is estimated that a nursing home with operating theatre, X ray and laboratory facilities with about 25 beds would cost around 25 million rupees. The profit after the 3rd year, is estimated to be around 3-4 million a year. This could be an attractive investment for businessmen.

Table: 6. Cadre position of (selected) staff in the NEP as on 30.09.2000

Category of staff	*Cadre*	*Vacancies*
Medical Officers (Specialists)	51	40 (78.4%)
Medical Officers	402	86 (21.4%)
Pharmacists	139	60 (43.2%)
Public Health Inspectors (all grades)	383	109 (28.5%)
Public Health Nursing Officers (all grades)	70	66 (94.4%)
Nursing Officers (all grades)	1191	511 (42.9%)
Public Health Midwives (all grades)	1231	679 (55.2%)
Medical laboratory Technologists	59	22 (37.3%)
Microscopists	40	14 (35.0%)

Another factor which deters doctors from coming to district capitals like, Vavuniya, Trincomalee, Batticaloa, Mannar etc is the lack of accommodation. In these areas suitable housing for doctors is not freely available. Construction of quarters for the doctors may induce them to work in these provincial & district capitals.

Another factor is non-availability of facilities for post-graduate education. All post-graduate training is in Colombo. It is essential for a doctor who is contemplating on post-Graduate studies to be in touch with latest knowledge & technology for which he/she will have to attend classes in Colombo. This is not possible for persons working in Jaffna. Provision of easy and less expensive travel between Colombo and Jaffna, will encourage doctors to opt to work in places like Jaffna.

The lack of paramedical staff is mainly a problem of lack of training of Tamil persons. The training courses for Medical laboratory technologists,Physiotherapists, School Dental Therapists, are held in Colombo and mostly in the Sinhala medium. Students from the NEP who have done their entire education in the Tamil medium are unable to cope up with the studies and several of those who join also leave half way through the course. Another reason for students being reluctant to go to Colombo for the training is due to fear of frequent arrests by the military on security grounds for being young and Tamil speaking from the NEP.

The lack of Family Health Workers (FHW) is mainly due to centralized & irregular selections for training. The number of Nurses and Family Health workers trained during the past 10 years is given in Table 7.

Applications called for training do not reach the prospective applicants on time. Even if they do send their applications, they do not reach the Ministry on time because of postal delays. Usually processing is delayed & candidates are called after several months or even after years, by which time the applicants have obtained other employment, left the area or married.

Although the two Nurses Training Schools in the NEP (Jaffna & Batticaloa) have the capacity to train 100 FHWs and

Table: 7. Annual output of Nurses & FHWs from the Training centres in Batticaloa & Jaffna (1991-2000)

Year	Batticaloa		Jaffna	
	Nurses	FHWs	Nurses	FHWs
1991	24	07	nil	49
1992	100	nil	115	08
1993	27	nil	30	27
1994	76	33	29	nil
1995	24	nil	nil	nil
1996	17	nil	nil	nil
1997	nil	30	nil	nil
1998	66	21	27	nil
1999	nil	91	13	04
2000	44	nil	33	23
Mean for 10 years	37.8	14	24.7	11.1

Source: Annual Health Bulletin, 1995, 1998. Ministry of Health. Colombo & personal Communication from Principal NTS Jaffna

100 nurses annually, the mean annual output for the past 10 years has been 63 Nurses and 25 FHWs from both training institutions.

Reflections for the future

The people of the NEP have undergone severe hardships and losses during the past two decades. The war has affected all sectors. The infrastructure has been destroyed. The social and moral character has degraded. Discipline has come down to very low levels. Law and order is almost non-existent. Some have been forced to think that this mess could be put to order, only by a dictator – may be a benevolent dictator.

Whatever it is, all hardships have to come to an end and we are probably coming to the end of the calamity that has struck us. Should we not start planning now without waiting anymore? The plan need not be a rigid one. It can undergo changes as we proceed. But we must have some plan. All sectors must have a plan for reconstruction, rehabilitation & redevelopment.

The plans should not simply put us back into the status we were in 1980. The world has progressed much forward and

we have to keep abreast with the rest of the world. The responsibility rests with the intelligentsia of this country. A distinguished array of intelligentsia of this country are assembled here today and every one of us, especially the younger generation, should resolve to dedicate a part of their time and energy for the development of their motherland. Thousands of young and old have already sacrificed their lives. These supreme sacrifices should not be in vain.

We have to consider our losses and damages as stepping-stones to our development, and use the destruction to plan a new structure for the NEP. Most developed countries and cities grew up after a devastating war. This can be true of the NEP too.

The plan for reconstruction should aim at a Health Service increasingly oriented towards prevention, backed up by a reasonably good curative service.

Basic health care must be available to the people, as near as possible to where they live and work, with access at all times and with an efficient referral system.

The concept of Primary Health Care (PHC) satisfies these needs. The PHC concept was adopted by countries (including ours), at the Alma Ata conference as far back as 1978. But only few countries have even attempted to implement the programme. In fact, though PHC was supposed to be beneficial to underdeveloped countries, it was only the developed countries, which adopted most of its components.

The failure of the underdeveloped countries to adopt PHC was mainly due to lack of political will and political interference. Construction of specialized hospitals was given priority over Primary Health Care. Most politicians usually preferred to put up hospitals, where his or her supporters were, rather than where it is most needed. To provide a good health service there must be a political will and commitment, and non-interference by politicians in the day-to-day functioning of the institutions.

The Primary Health Care system is the ideal system to start in the present situation where the infrastructure has been totally destroyed. In PHC we start from the grass root level. In fact, in the early 1980s when Pakistan & India had 36 & 27 doctors per 100,000 population respectively, Sri Lanka had only 8.1

doctors per 100,000 population (World Health, 1987). But our Health indicators were much better than the ones in these countries. The credit for lowering of mortality and morbidity should go to the grass-root level health care workers (the AMPs. PHMs & PHIs).

One of the major Health challenges today in the NEP is the lack of these paramedical personnel. Development of health manpower is a process with a long lead-time. Therefore manpower development planning should target the requirement for at least 10 to 15 years hence and the effort has to be sustained. The paramedical manpower requirements for the NEP are given in Table 8.

Sri Lanka is producing 800-900 medical graduates annually. The Hon. President has announced in December 1999, the opening of an additional medical school in Batticaloa. The Batticaloa hospital has already been upgraded to a Teaching Hospital. A further 100-200 foreign trained medical graduates are returning to the country and registering with the Sri Lanka Medical Council every year. In 15 years we will have 15,000 more doctors than we have today. There is a fear in some circles that we are overproducing medical graduates. Considering the potential this may not be correct. But cessation of training paramedics like AMOs, because there are enough doctors is not in the correct direction.

Table: 8. Paramedical Health Manpower Requirement for NEP

Category of staff	Requir-ement	Availability	Shor-tage	Criteria
Assistant Medical Officers	250	192	58	1 per 10,000 Population
Nurses	3375	1077	2298	1 per 4 beds
Public Health Nurses	250	04	246	1 per 10,000 Population
Family Health Workers	1400	353	1047	1 for 3000 population
Midwives for hospitals	350	198	152	1 per 15 deliveries/month
Public Health Inspectors	400	169	231	1 for 9000 population
Medical Laboratory Technicians	210	48	162	1per 50 beds in Divisional & General Hospitals
Pharmacists	300	60	240	1 per 300 beds & 1 per 200 OPD & 1 per SDC
Physiotherapists	100	7	93	1 per 100 beds in Divisional & General Hospitals
Radiographers	230	15	215	2 per machine

Assumptions for estimates:

The population of NEP will be 3.5 million by 2005

Total beds in NEP will be 13,500

Criteria for calculation of requirement are based on the Report on staffing, Planning Division, Ministry of health. 1981

In the whole of Sri Lanka (including the NEP), today secondary and tertiary care hospitals are overcrowded with patients who need primary care. Highly skilled manpower, is often providing care that requires lesser skills.

The AMOs are the best persons to provide primary & secondary care in the remote areas, until the state could find the resources to ensure that diagnostic and treatment facilities in which the medical graduates are trained are made available in all the remote areas of the country. Sending the medical graduates to remote areas where there are no facilities to practice what he has learnt will only demoralize and make him frustrated. The ideal person for these outreach centres will be the AMO.

In addition, the lack of other paramedical staff like Nurses, Physiotherapists, Medical Laboratory technicians, Pharmacists, Social workers etc. is a major problem. The training of these categories of staff is conducted only by the central government by legislation, and in sufficient numbers to fill its own cadre. With the proposed privatisation of health it is necessary to produce these category of staff outside the health sector.

This state monopoly in medical and paramedical training should cease. The Private sector and the Universities should be given permission to carryout training of these categories of the staff under the guidance and supervision of a controlling body, which should monitor the training.

The availability of Family Health Workers and Public Health Inspectors in the NEP is low because of lack of training in the Tamil medium. Additional training centres should be put up to clear the backlog. At the same time training should be devolved to the NEP and selection should be done locally at the district level so that persons who are prepared to work in the villages at grass-root level, and those who know Tamil could be recruited.

In 1998, the Health Ministry selected 75 students for training as FHWs at the NTS Jaffna. But only 4 students turned up. 45 of them were not sent because they did not know Tamil.

Another factor to be given thought is whether the training of medical and the different paramedical personnel separately, are ideal. Care of the patient is teamwork involving the Consultant, House Officer, Nurse, attendant, Laboratory technician, physiotherapist and all such paramedics. Should not this teamwork start during the training itself? Thiruvalluvar, when he spoke about treatment said,

உற்றவன் தீர்ப்பான் மருந்து உழைச்செல்வான் என்று
அப்பால் நாற் கூற்றே மருந்து.

- திருக்குறள் (950)

உற்றவன் - நோயுற்றவன்

தீர்ப்பான் மருந்து - வைத்தியன், தெய்வம், நண்பன்

உழைச்செய்வான் - தவறில்லாது மருந்தை கொடுப்பவன்
(தாதி, மருந்து கலைவையாளர், முதலியோர்)

Which means, in treatment and cure of a disease, the patient, the doctor, the medicine (which includes the drug, injection, physiotherapy, dressing of a wound) and the administrator of the medicine (which includes the nurse, pharmacist, physiotherapist, etc) all have to cooperate to cure the patient. They cannot work in isolation. There has to be teamwork. This teamwork has to start during the training period. For this, it is important that training of medical and paramedics is done under one roof.

Health Care Services

The Health Services in the Northeast has to be reorganized on the basis of Primary Health Care. The NEP has 74 divisions – each under the administration of a Divisional Secretary. Each such division will form a Primary Health Care complex with a Medical Officer of Health (MOH) or as presently renamed Divisional Director of Health Services (DDHS). Each division will be divided into smaller units, having a population of 2500 to 3000. Each such unit will have a Family Health Worker (FHW).

The FHW will be the grass-root level worker in the health structure providing Primary Health Care to the population. (Figure 2)

Three to four FHW areas will form a Sub-Divisional Centre (SDC). This Centre will have an Assistant Medical Officer (AMO), a Public Health Nurse (PHN) and a Public Health Inspector (PHI). There will also be a small hospital with about 15 beds and labour room facilities.

The next higher level of care will be the Divisional Health Centre (DHC). This will be under the DDHS and have 50-100 beds basic diagnostic facilities including a laboratory and X-ray facilities. There will be one DHC for each division.

Sri Lanka has several grades of hospitals. The grading of hospitals is obsolete and not consistent. There should be only General hospitals outside the Primary Health Care complex.

General hospitals will be mainly curative institutions treating patients referred from the Primary Health Care complex.

They will have around 500 beds with all specialities.

At present, Sri Lanka has 2.9 beds per 1000 population (Table 9). The NEP has 2.4 beds per 1000 population. The range is 1.9 in Kilinochchi to 2.6 in Amparai.

Table: 9. Distribution of Institutions and beds by districts -1999

District	Institutions	Beds	Beds (per '000 population)
Jaffna	25	2011	2.0
Kilinochchi	5	243	1.9
Mannar	5	310	2.4
Vavuniya	3	253	2.0
Mullaitivu	4	263	2.5
Trincomalee	12	851	2.4

By the year 2000, NEP should have 13,300 beds, so that there will be 3.8 beds per 1000 population. The suggested distribution of beds in the Primary Health Care system and General Hospitals is given in Table 10.

In addition to these General Hospitals, 'specialized' hospitals such as hospitals for cardiac surgery, neurosurgery, oncology etc will have to be constructed in association with the teaching hospital or independently.

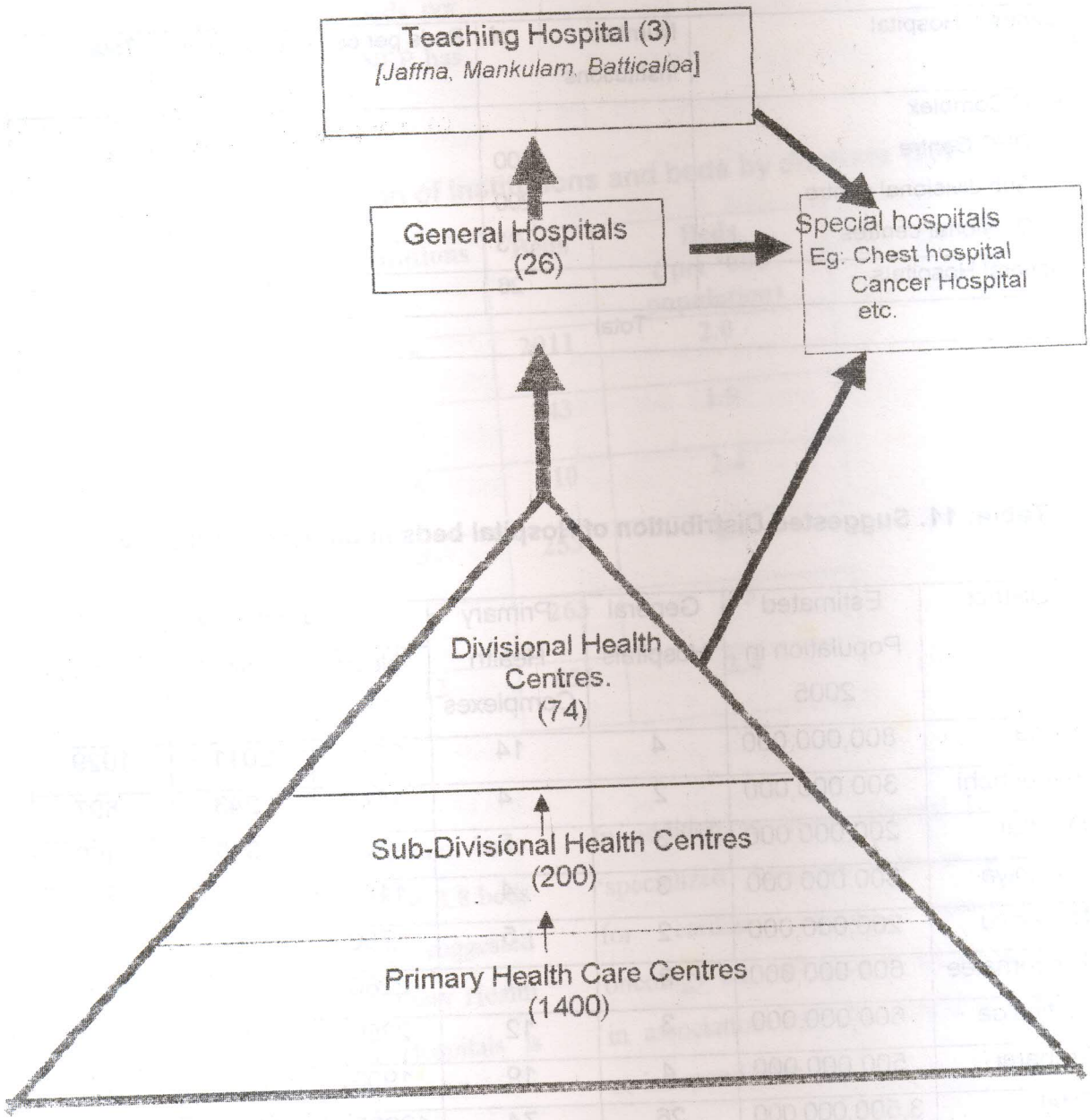
Table: 10. Proposed distribution of Hospital beds by type of Institution

Centre / Hospital	Number of Institutions	Beds per centre / Hospital	Total
PHC Complex			
PHC Centre	1400	Nil	
Sub divisional centre	200	15	3000
Divisional centres	73	50	3650
General Hospitals	26	200 to 500	7000
Total			13650

Table: 11. Suggested Distribution of Hospital beds in the Northeast Province

District	Estimated Population in 2005	General Hospitals	Primary Health Complexes	Number of beds		
				Need	Available	Shortage
Jaffna	800,000,000	4	14	3040	2011	1029
Kilinochchi	300,000,000	2	4	1140	243	897
Mannar	200,000,000	3	5	760	310	450
Vavuniya	300,000,000	3	4	1140	253	887
Mullaitivu	200,000,000	2	5	760	263	497
Trincomalee	600,000,000	5	11	2280	851	1429
Batticaloa	600,000,000	3	12	2280	1168	1112
Amparai	500,000,000	4	19	1900	1516	384
Total	3,500,000,000	26	74	13300	6615	6685

Proposed Health Care Services for Northeast Province



Primary Health Care Complex

Note: ↑ Channel of referral

Figure: 2.

Under nutrition

Another major problem we are facing is the problem of under nutrition. Recent surveys in Jaffna, Trincomalee and Vavuniya have revealed that nearly 50% of our children are malnourished. A recent study in the welfare centres in Jaffna have shown that, 61% of the pregnant women, 60% of the lactating women and 56.2% of the adolescent girls are anaemic. A study done in Sri Lanka (excluding NEP) has revealed that 36% of the children are suffering from Vitamin A deficiency. Study has not included the children in the NEP, but it could be assumed that the situation is much worse here. This is an alarming situation, and unless immediate action is taken, we are going to be left with a generation of physically & mentally retarded people.

Nutrition rehabilitation programmes for children under-five have to be started immediately in areas of high prevalence. The Nutrition Rehabilitation Centres should be set up in association with & under the supervision of the local provincial or district hospitals.

Re-introduction of nutrition programmes in schools has to be done. High protein biscuits or milk has to be given to all school children. In addition, teenage girls have to be given more attention regarding their nutrition. Since anaemia is a major problem in adolescent girls, which has an effect on pregnancy, childbirth and birth weight of the baby, action should be taken to correct the anaemia at this stage. Providing biweekly iron supplements in school could easily do this.

To achieve this, cooperation of teachers is essential. It will be necessary to empower teachers on Health and Nutrition. They should be trained in identification, correction and referral of nutrition problems in children. This component should be introduced into the teacher training courses.

Physical & Mental Disability

As a consequence of the war, we have with us an army of physically, mentally and socially disabled.

The physically disabled are the end result of continuous bombing, shelling, shooting, landmines and illness.

Landmines have become a major cause of disability. During the period 1996-98 we

had, on an average, 11 cases of landmine injuries every month. This dropped to 4 per month in 1999. By the end of 2000 and early 2001 the incidence is rising again. During the first quarter of this year we have already had 24 cases of Landmine injuries. Even if peace comes, the problem of injuries due to landmines will remain with us for decades. Some of the landmines, which have been laid, could remain active for over 50 years.

Due to lack of proper health care, such as physiotherapy, a number of sick people who could get back to normalcy remain disabled. In the Jaffna Teaching Hospital where there should be 14 physiotherapists, there are only two – one of them is a retired person who has volunteered to serve.

Although there are increasing number of physically disabled, the facilities for them are lacking. It is essential to establish centres for physically disabled where they could learn a trade that they will be able to carry out, and stand on their own feet.

During the past two decades the proportion of mentally affected persons, have also increased substantially in the NEP. This has led to higher incidence of suicides. In the plan for a health service in the NEP, thought has to be given to the inclusion of a service component for stress related illnesses. The only related speciality that is available in the state hospitals is the psychiatry unit. These units are also not available throughout the NEP. It's only available in Jaffna.

Psychiatric patients treated at hospitals have to return to their homes, which do not sometimes accept them. It is necessary to establish some 'half way homes' for them, which could coordinate with the family and make these unfortunate people acceptable. They could also function as a 'relief station' to those who are in distress and need someone to talk to. Of course dedicated persons who are concerned with the welfare of the mentally ill patient must man these institutions

Social Disability

The problem of the socially disabled is very serious. But what is visible is only the tip of an iceberg. The effect of this social disability will affect several generations to come.

In a recent survey of school children (Sivarajah N, 1998), 10 % of the children 5-19 years old did not have one or both

parents. What is their future? Who are looking after them? Are they being denied access to education? How far have they been affected psychologically? These are questions to which we have to find answers and provide services.

The loss of parents, especially the father, will seriously affect the education of children. Even among the University students, a vast majority do not have their father. It is time we probe into this and find out the extent of the problem and what their problems are, and take action to alleviate their problems.

Another major social problem, which is emerging, is the increase in alcoholism and smoking among the population – especially among the younger generation. This is encouraged by the state making alcohol freely available. Although the law prohibits the granting of liquor licences to liquor bars within 500 meters from a teaching institution, we have 13 licensed liquor stalls within 500 meters from the University of Jaffna. Of course the excuse is that they are not for consumption at the site. But it is an open secret that adjoining each such liquor stall there is a place where you could consume it. In addition, it is well known that we have several illicit liquor booths around the University.

Table 11: Quantities of arrack , Beer & stout brought into Jaffna

Year	Arrack (in Litres)	Beer & Stout (in litres)
1997	206,363	30,275
1998	413,851	64,850
1999	536,882	50,743
2000	615,031	72,344

Source: Department of Excise, Jaffna

The quantity of arrack, beer & stout brought into Jaffna during the past four years is given in Table 11 . During the first three months of this year, 200 cases have been filed in the Jaffna, Mallakam & Point Pedro courts against sale of illicit liquor.

The population of Jaffna district is only 502,000. Based on the data available the consumption of arrack alone (excluding all other types of liquor) is 1.2 litres per head per year.

A third of the male students in the Jaffna University have taken liquor before entering the University, and another third start, while in the University. Many of them will probably continue the habit late into life. However it is enlightening to see that some medical students are forming groups to fight against alcoholism among undergraduates.

Teenage pregnancies have also increased with the consequent health hazards to the mother and the baby. Earlier we used to see about 2-3 such teenage pregnancies per year in our clinics. But now we see 2-3 new teenage pregnancies at every clinic. Most of these pregnant mothers are from displaced families, identified late and attend clinics late in their pregnancies. Most of the husbands of the teenage mothers are themselves teenagers.

They are mostly unprepared for safe delivery and child-care.

Prostitution, which was rare in the Jaffna society, has increased into alarming proportions. Recently we had a 14 years old girl who was in her late pregnancy and allegedly engaged by the grandmother in prostitution.

Care of the Elderly

There is a major demographic change occurring in Sri Lanka, with an increase in the elderly population. This demographic change is marked in the NEP as demonstrated in the Jaffna District. The migration of youth out of the NEP has contributed very much to this demographic change.

As a result, elderly persons are left behind with no one to look after him or her. The traditional extended family, which looked after, the elderly has collapsed. In our culture it was the females who looked after the elderly. With employment of women and young girls moving out to cater to the international marriage market, this support is also decreasing. Therefore it is essential that some sort of care for the elderly should be provided to the elders in the new health structure that will be implemented.

Although Institutions for the elderly are not being encouraged, this has become the only alternative in the present circumstances.

Ladies and Gentleman, I have in my address dealt with some aspects of Health Planning for the future, which I am aware is in broad terms.

It is said that the experience of the past helps to meet the needs of the present and plan for the future. I have put in my experience in the State Health Services, especially for over 9 years in Amparai , Vavuniya and Kayts and 20 years in this University, to prepare the plan. It needs

much improvement. I would have achieved my objective if this address would stimulate some of you to improve this plan in order to provide a decent health service to the people of our motherland.

I thank Prof. C Sivagnanasundram & Dr. C S Nachinarkinian for their valuable advice, and my wife Malaiaracy for the preparation and appropriate projection of the transparencies

Ladies and Gentlemen, thank you again for your patient hearing.

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