

CHAPTER 3

Health Care and Infra-Structure : Development and Contemporary Situation

There is a general fascination among technical people with the scientific aspects of their calling. But science and methods we learn so carefully are tools for doing what seemed to be miracles not long ago. It is our privilege and responsibility to develop the skills of our calling so that we can use them to do good to the people. Unfortunately, however, science and technology have been used and are still being used to oppress people, and do many other evils. Therefore, much more important than the tools and the techniques are the purposes, values, and desires of those who use them.

Even in health care, we find limits and barriers to the use of various techniques and medicines. Medicines are expensive, trained people are reluctant to go to remote areas, and moral corruption prevents proper distribution of benefits to all. There is thus a social aspect to our practice, as well as a technical aspect. And, we should remember that concern with the social aspects of health care is certainly not new. Even in pre-literate societies, men sometimes gather together to join in rituals to help the sick. What ancient civilizations did, might not be significant from a modern standpoint but probably these were various ways of helping the sick and their families.

This ancient practice, it appears, survived in the health care programmes adopted by rulers and nations in the subsequent periods. In modern times, Germany began compulsory sickness insurance in 1883, England followed in 1911, and France in 1929. Russia began to have a goal of full health care in 1919. Russia, Britain, New Zealand and some other countries have now practically complete health care.¹

The concept of social medicine grew among health workers around the world, and particularly among those who were concerned with the vast health problems of the developing nations. The World Health Organization made this clear in defining health as a state of physical, mental and social well being (The Pan American Health Organization which is a branch of WHO also added "spiritual"). Man cannot be healthy in slavery or in social strife or in poverty. John Bryant wrote a book called "Health Care in developing Countries" which described the health needs and problems of developing countries and advocated the use of health para-professionals. These new ideas began to change old ways of health care delivery by stimulating professionals to use innovative problem solving approaches to medical care.¹

In Nepal, there has been a steady development of national and international concern for health care for the general population. Long ago little was done beyond sanitation. Gradually public health became a part of national health programme in Nepal. Public health is concerned with preventing disease through

sanitary codes and law, by active programmes of education and immunization, and by technical monitoring and testing. It is largely legal, educational, and technical. Social medicine, as we have seen, is concerned with the effects of social and economic conditions on health (and vice/versa).

The term community health has been in use much longer, and has had different meanings. At first it meant simply the extension of primary care programmes into rural or urban areas; this is still a common usage. More recently it has come to mean the development of health centres. In some cases it also includes motivation of communities. As with so many words in changing situations, "community medicine" and "community health" have different meanings for different people. Be whatever it may, health care is being progressively institutionalised in Nepal for some time past. In the Institute of Medicine, which is the highest educational and research organisation in health matters, located at Kathmandu, there is a distinct department of community medicine. And, even in the lower level school curriculum, general health education has obtained a place of its own. However, these are recent developments to appreciate the achievements and limitations of which we must take a look into the growth of modern education in general, and health education in particular.

3.1 Growth of Education in Nepal

Nepal had a long tradition of indigenous education and culture which was quite developed right from the 6th century A.D., but which, however, came to an end in 1768 with the fall of the Malla dynasty. Between 1768 and 1951 there was general neglect and often strong official opposition to educating the general masses.

The Durbar School (now known as Bhanu Madhyamik Vidhyalaya) was the first school established in 1859 and occupies an important place in the history of development of education in Nepal. Only the Rana families and their relatives were allowed to join the school and it was closed to the public.

Sanskrit education, upto the Acharya level (master's degree), affiliated with Banaras Sanskrit University, was given to Brahmin children from various parts of the country by providing free lodging and boarding facilities at Tindhara Pakshala (Kathmandu). The products of this system who originally came from a lower middle class background, later in 1948 ignited the first sparks of revolution with their campaign 'Javatu sanskritam' (let the indigenous culture strive and develop)².

After the advent of democracy in 1951 there was a series of government efforts, like the formation of the National Education Planning Commission in 1953. All Round National Education Committee in 1961 and the National Education Advisory Board in 1968. The purpose of these commissions was to implement and refine the education system. In 1971 the New Education System came into operation as an integral part of the Fourth Plan 1970-1975. This system was designed, in the light of the various practical considerations, to improve the link between the education system and problems of economic productivity and national development, narrowing the imbalance between the supply and demand sides of education by adapting the curriculum to the needs of the individual and society.

The new approach has failed to make any significant reduction in the dominance of Kathmandu over the countryside. There are tremendous inequalities existing between territorial zones in the form of: funding, student-teacher ratio, percentage of trained teachers, opportunity for higher education, literacy rate, caste-ethnic and male-female ratios in enrolments; etc. Recognizing this, the authorities began to give licences to private schools.

In 1975, primary education was made free and accordingly, the government became responsible for the provision of class rooms, teachers and educational materials.

According to the data collected from the school enrolments, the levels are categorised as following:

- a) The primary level includes grades 1 to 5 with a minimum age of six for entry into grade 1.
- b) The lower secondary level includes grades 6 and 7.
- c) The higher secondary level includes grades 8,9 and 10.

With the starting of the new education system in 1971, grades one to three were included in the primary level. But the experience upto 1979/80 indicated that those completing grade three were virtually illiterate in terms of the application of literacy skills. Three years of primary school is inadequate to produce literate students and only partially fulfils the objective of producing people capable of reading and writing normal letters. Hence in 1980, slight modifications were made in the primary education system, and accordingly, the duration of primary education was increased to five years, covering grades one to five.

Pupil-teacher ratios were about 35, 25 and 33 in the primary, lower secondary and secondary schools respectively in 1986/87. Similarly the pupil-school ratios were 156, 176 and 193 respectively in the same year. The literacy rates in the total population aged 6 year and over were 13.9 per cent in 1971 and 23.3 per cent in 1981. The literacy rates were about 5.3 in 1952/54 and 8.9 per cent in 1961. The estimated literacy rate was about 33 per cent in 1987.

Table 6: Number of students enrolled in schools in 1987 and 1988.

Level	1987	1988
Primary Education	1,952,504	2,108,739
Lower Secondary Education	289,594	305,409
Secondary Education	289,923	307,534
Total:	2,532,021	2,721,682
Total Population (1988 estimated)		17,976,000
Population aged 5-19 as percentage to total population (1981 Census)		35 per cent
Population aged 5-19 in 1988 assuming the 1981 age-structure		6,292,000
School going children (aged 5-19) in 1988 as from above		2,721,682
School going children as percentage of the total population of their age/group in 1988		43 per cent

The establishment of Tri-Chandra College in 1918 marked the beginning of higher education in Nepal. But this college and other colleges established later had to follow the syllabus formerly of Calcutta University and later of Patna University, India. The final examinations of their students were also graded by Patna University. In 1959, Nepal established its own university named Tribhuvan University after the late King Tribhuvan, the founder of

democracy and father of the nation. Tribhuvan University was authorized by law to conduct post graduate classes, award academic and honorary degrees and grant affiliation to the nation's colleges. It started holding its own examinations at all levels of higher education in 1961. In 1986/87 another University, named Mahendra Sanskrit University was established to promote the Hindu culture and the Sanskrit literature.

However, the total enrolment at the higher education has increased significantly. This increase was due to the plan of incorporation of the increased number of students who passed the school leaving examination. The number of colleges (campuses) rose from 8 in 1968 to 132 (69 campuses under Tribhuvan University and 63 under private) campuses in 1988. The number of students enrolled in higher education by institution is given in Table 7.

Along with increase in the number of campuses, different faculties were promulgated to provide education in various fields. These fields and faculties were Humanities and Social Sciences, Management, and Sanskrit (General Education); Law, and Education (Vocational Education) and, Science and Technology, Forestry, Agriculture and Animal Sciences, Engineering, and Medicine (Technical Education). In order to improve the link between the educational system and country's needs and employment possibilities, emphasis

was given to technical education in 1971. Accordingly efforts have been made to increase the enrolment in technical education.

Table 7 : Number of Students Enrolled in Higher Education

Faculty	1985/86	1988/89
Humanities and Social Sciences	20,880	38,320
Management	12,067	28,736
Sanskrit	333	578
General Education	33,280	67,634
Law	4,907	7,006
Education	3,630	6,032
Vocational Education	8,537	13,038
Science and Technology	7,303	9,119
Forestry	489	587
Agriculture and Animal Sciences	1,176	1,252
Engineering	2,180	1,952
Medicine	1,385	1,658
Technical Education	12,533	14,568
Grand Total:	54,350	95,240

Source: Central Bureau of Statistics, Kathmandu

3.2 Medical Education

The existing school health education in Nepal is recent one. The health education curriculum for Nepalese schools is designed to cover the following : Personal hygiene, water and sanitation, communicable diseases, nutrition, safety and first aid, elementary physiology, family life, drug abuse and community health services. In addition, teachers need to know about immunisations, to be aware of symptoms in their pupils and to refer children to health posts when necessary. School authorities are required to maintain a safe drinking water supply, provide latrines and safe waste disposal facilities.

The diffusion of health education in the health service system of Nepal is unique. Health source system in the traditional sense were limited to the practice of medicine in its curative aspect. Now health services have a broader approach and include health promotion, prevention and treatment of diseases. In Nepal, national level health education activities have been conducted by the Health Education Section, Department of Health Services. And, regarding training, the Institute of Medicine has been producing different categories of health manpower.

A new approach in medical education is being developed, keeping in view that the health needs vary depending on the economic situation of the people and prevalent disease

pattern. As such, the Institute of Medicine has started its own undergraduate programme to prepare medical graduates who will have the skill, knowledge and attitude to work in the environment that exists there. The setting up of a curriculum for the diploma course, the concept of community medicine and integrated teaching is seen as an opportunity to set a new pattern of medical education. Theoretical as well as practical and field training programmes have been set-up in the curriculae of each programmes-undergraduate, graduate and post-graduate levels of general medicine, public health, community medicine, Nursing and Ayurveda.

A greater emphasis in medical education at The Institute of Medicine is given to community medicine. Candidates eligible to apply for the Diploma in Community Medicine (Bachelor level) would need at least one year's experience in the field, 75 hours of Anatomy and Physiology, experience in taking histories, performing physical examination and prescribing durg commonly used in Nepal and would have worked in health posts.

Three most important branches of the behavioural sciences that are covered in both graduate and post-graduate level for medicine are : Medical Sociology, Medical Anthropology and Psychology. Medical Sociology and Medical Anthropology have become an integral part of the Institute of Medicine's curriculum with the aim providing the future health worker with a framework for studying health problems in the community.

The growth of medical education in Nepal goes with the history of health manpower training exercised in a few places with limited objectives by the concerned institutions. In brief, the history of health manpower training in Nepal is recent one. Medical training and education is provided through different sources like the health division and department of drug administration under the Ministry of Health, Tribhuvan University, Institute of Medicine, and different governmental and non-governmental organizations. Formally, medical education was provided for the first time by the Civil Medical School which was established in 1934. The training for the Compounders and Dressers at this school were conducted by the doctors of Bir Hospital, established during the last decade of the nineteenth century. The civil medical school was abolished in 1964. It may however be recorded that between 1934 and 1964 The Civil Medical School had produced 262 compounders and 208 dressers respectively. Later on, the experienced compounders were upgraded to Auxillary Health Workers (AHW) after being provided with extra training.

As far as Ayurveda is concerned, Nepal National Ayurved School was established in Kathmandu in 1928. Baidya Vinod, Baidya Bhusan, Baidya Ratna were the catagories produced by the school. Upabaidya, Ayurved Madhyama, Ayurvedacharya courses were also introduced during the training period. Before this school was abolished in 1957, there were 50 Baidya Vinod, 34 Baidya Bhusan, 19 Baidya Ratna, 11

Upabaidya, 89 Ayurved Shastri, 46 Ayurved Madhyama and 29 Ayurvedacharyas in between 1928 and 1957.

In 1954, the Government established a Nursing School under Division of Health to produce nurses. Beside the nursing school, Assistant Nurse/Midwife training course was started since 1964. In 1963, in the footsteps of the former Civil Medical School, an Auxilary Health Workers School was established. Before joining the Tribhuvan University, in 1972, the school provided Assistant Health Worker (AHW) training to 16 senior Auxilary Health Workers, 341 Auxilary Health Workers, 43 Malaria Workers, 84 Compounders, and 25 Dressers.

The Institute of Medicine was established as the premier institution in 1972 under Tribhuvan University and it has now the responsiblility of training all categories of health manpower needed in the country.

At its inception in 1972 the stress was on training of middle level health workers. The various programmes run for this purpose have been to train up Auxilary Nurse, Midwife, and Community Medicine. Auxilary, and also to conduct Certificate Courses in General Medicine, Pharmacy, Radiography, Physiotherapy, Nursing, Health Laboratory and Ayurved Medicine.

At graduate level, in 1977, two year Bachelor of Nursing Programme in Midwifery was started, followed by Bachelor of Nursing Programme in Community Nursing. Currently Bachelor of Nursing in Paediatric Nursing and Adult Nursing has also been started.

Education was further extended in a major way in 1978, in which year a community oriented and integrated MBBS training programme was started. In 1976 a member of the University of Calgary, Canada, spent several months in Nepal as a World Health Organisation Consultant to discuss with the Institute of Medicine faculty for the establishment of an undergraduate medical school in Kathmandu. Following these discussions, an MBBS programme was established. Later the need for postgraduate training became apparent. A new Diploma in General Practice was also established and is awarded following a three year training, 50 per cent of the training being provided within Canada and 50 per cent within Nepal.

The first batch of student graduated from the Institute of Medicine in March 1984. Every year 30 students are admitted into the programme, and from 1984 onwards, doctors have been graduating from the Institute every year. In 1992, the intake capacity has been increased to 40 for the MBBS course. Since 1984, a 2-year course offering Bachelor in Public Health has been inaugurated. Also, a full-fledged course of the duration of five years awarding the degree of Bachelor of Ayurved Medicine was begun in 1989. But, after

two batches were admitted in two successive years, the course has been suspended because the students are not sufficiently interested in learning traditional medicine, and prefer western medicine instead, possibly due to career considerations.

The yearly intake quota in different streams are given in Table 8.

Table 8 : Annual Intake Capacity in Various courses at the Institute of Medicine and its campuses

Course	Number of seats per annum	Qualification Requirement	Duration
A. Post-graduate level			One to 3 years
1. Ophthalmology	3	M.B.B.S.	
2. General Medicine	8	do	
3. Gynaecology	3	do	
4. Child Health	3	do	
5. Diploma in Otolaryngology	3	do	
6. Anaesthesia	4	do	
7. Diploma in Radiology	3	do	
8. Public Health	3	BN/BPH	
Total Post-graduate	30		

B. Under-graduate level

1. General Medicine (MBBS)	40	Inservice Health Assistants or I.Sc./Students/ (Biology group)	5 years
2. Publi Health (BPH)	15	Inservice Health Assistants	2 years
3. Laboratory Technology (BMLT)	4	do	2 years
4. Nursing (BN)	30	Inservice Staff-Nurse	2 years
5. Ayurvedic Medicine (BAMS)	16	Inservice Health Assistants with Ayurvedic background	5 years

Total Undergraduate	105
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C. Certificate level

1. General Medicine	50	School	2 ¹ / ₂ years
		Leaving	
		Certificate	
2. Health Lab	18	do	do
3. Pharmacy	15	do	do
4. Radiography	18	do	do
5. Health Education and Sanitation	15	do	do
6. Physiotherapy	15	do	do
7. Ayurved	40	do	do
8. Nursing (Staff Nurse)	260	do	do
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Total Certificate	431		
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D. Non-Credit Course

1. Community Medicine Auxiliary			
a. Western Medicine (CMA)	180	School	2 years
		Leaving	
		Certificate	
b. Ayurvedic Medicine (AAW)	40	do	do
2. Assistant Nurse- Midwife (ANM)	60	do	do
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Total Non-Credit	280		
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Notes: BAMS, Certificate Course in Health Education and Sanitation, and Physiotherapy, and AAW non-credit courses are at present suspended for various reasons. The number of seats in M.B.B.S. course has been increased from 30 to 40 with effect from 1992.

Source : Institute of Medicine, Kathmandu, Nepal

The number of enrolled students in medical education has been increasing over years. In 1985/86, they were 1385, and in 1988/89 this number was 1658. The number of students enrolled in medical education by levels in 1985/86 and 1988/89 is given in Table 9.

Table 9 : Enrolled Students by Level in Medical Education

Sl.	Level	Total number of enrolled students	
		1985/86	1988/89
1.	Lower (Non-credit course)	472	319
2.	Certificate (I.Sc. Level)	703	1057
3.	Diploma (under-graduate)	196	256
4.	Degree (Post-graduate)	14	26
Total		1385	1658

Source : Central Bureau of Statistics.

Apart from running the various training programmes, the Institute of Medicine is involved in many other activities including health manpower exercise, production of health learning materials, continuing education for health workers and medical research.

Not only the Institute of Medicine and government organizations are providing training and education to the health manpower in Nepal, but other several agencies including government departments and Non-government Organizations (NGOs) also have been associated with health care activities. Some of them are as follows:

Agencies (other than Institute of Medicine)
involved in Health Care and Health Education
in Nepal, 1988

Serial Number	Name of the Agency	Description of Activities
1.	Action Aid (Kathmandu)	Integrated Community Programme including aspects such as primary health care, health education, health worker's training, traditional birth attendant training, family planning, oral rehydration therapy, daycare centres, etc.
2.	Alcoholics Anonymous (Lalitpur)	Meetings for both Nepalese and non-Nepalese every Tuesday in Patan Hospital Paediatric's Ward.
3.	Blood Transfusion Service (Nepal Red Cross) (Kathmandu)	Collect blood, supply blood to hospitals in Kathmandu area, and disease research.

4. Britain Nepal Tuberculosis and leprosy
Medical Trust control programmes and
(Biratnagar) essential drug supply schemes
in designated parts of the
Eastern Development Region.
Female literacy in Sankhuwa
Sabha District.
5. Canadian Inter- Graduate programme training in
national Surkhet for general
Development Practitioners to work in rural
Agency Nepal. Also gives anaesthesia
(Kathmandu) training in Institute of
Medicine.

7. Community Develop- Work in Lalitpur District in
ment and Health five health posts running
Project primary health care
(Lalitpur) porgrammes and insurance
schemes for drug resupply.
Also run 35 mobile materials
child health clinics
nutrition, EPI, health
education, TB control, animal
health, improved livestock and
non-formal education
throughout the district.
8. Danish Volunteer One volunteer nurse working at
Service maternity hospital in
(Kathmandu) Kathmandu. creating an
information centre for
maternal/child health care,
one volunteer nurse teaching
at nursing school in Jiri, one
volunteer will establish a lab
in Geets Eye Hospital in
Dhangadhi, may soon be a
volunteer to work with the
government Traditional Birth
Attendant Programme.

9. Department of Ayurvedic Medicine (Ministry of Health) (Lalitpur) Supply of 75 government dispensaries throughout all 75 districts. Also run training Workers. Also training for dhamsi-jhankris in three districts. Rural pharmacies in three districts.
10. Development Communication Project (Lalitpur) A joint media centre : has a large Nepali, English, Tibetan selection of posters, books, pamphlets, videotapes and slides on various health, education and other topics.
11. Dooley Intermed (Kathmandu) 1. Two physio-therapists are teaching at Institute of Medicine in Kathmandu.
2. One therapist is clinical supervisor for students in the programme.

3. One infection control practitioner is an advisor in the Division of Nursing. Classes are conducted for hospital personnel on environmental control and infection control.

4. English/Nepali books on sanitation for health facilities available.

12. Dutch Volunteer TB Control Programme, other Service curative programmes have been (Kathmandu) conducting.

13. Family Planning Association of Nepal (Kathmandu) Family welfare programmes including income generation, community development programme, family planning services. Pamphlets, posters, flip charts, calenders in Nepali on family planning topics and parasite (roundworm, hookworm) control available.

14. Family Planning/ Government office which
Maternal Child coordinate the family planning
Health Care and mother/child health care
(Kathmandu) activities in Nepal.

15. Freedom from Work in Sindhupalchowk
Hunger District with an "applied
(Kathmandu) nutrition programme" that uses
ward community volunteers to
run, coordinate and combine
health and agricultural
components such as health care
clinics, nurseries, loans
towards/for agricultural and
horticultural projects, pit
latrines, manure composting,
kitchen gardening, and bee
hives. Engaged in production
of booklets, posters, health
training curriculum.

16. German Techni- Health related activities
cal Project including solid waste
(Lalitpur) management project in
Kathmandu, sanitary
environment development
project in Dhulikhel,
sanitation programme in
Banepa, and cereal seed
production project.
17. German Volunteer Three volunteer nurses working
Service in District Public Helth
(Kathmandu) Office in Tanahu, Pokhara and
Chitwan Districts.
18. Health Learning Produce health education
(Kathmandu) materials. Revised Nepali
edition of Where There is No
Doctor.
19. Himalayan Rescue Tend to trekking accidents and
Association cases of severe mountain
(Kathmandu) sickness on major trekking
routes.

English/French Pamphlet on
mountain sickness is
available.

20. Himalayan Trust Supply materials, and personnel
(Kathmandu) support of two hospitals - one
 in Phaplu (the solu region)
 and one in Kundi (the Khumbu
 region). Also village tour
 trips by doctors to give out
 medical supplies and services.
 Also school building,
 reforestation, and bridge and
 trial repair programme.
21. House of Provide a place to stay for
Hospitality sick people (especially TB
(Kathmandu) patients) who have come to
 Kathmandu for treatment. Also
 provide adult education-
 literacy and health education
 classes during a person's
 stay. Give medicines when
 available.
22. Indian Indian Government Aid
Cooperatiom Organization.
Mission
(Kathmandu)

23. International Nepal Fellowship (Lalitpur)
- Four main health related programme :
1. Hospital programme-provide medical and paramedical staff, training and supplies to the Gandaki Zonal Hospital in Pokhara.
 2. Community Health Programme/
One programme out of shining community Health Centre in Pokhara. Clinics in other parts of Pokhara and in Tibetan Refugee Settlements in the area. The other programme based in Burtibang in Dhaulagiri Zone - provide general outpatient treatment, health education and community follow-up of malnourished children. Priority given to mother and child care. Also health education programmes in schools and in small community groups.

3. Tuberculosis programme - based in Surkhet and Pokhara. Also field and clinic services for TB patient in Kaski, Surkhet and - Dang Districts. Includes treatment, defaulter and contact tracing, immunization, health education and paramedical workers training.

4. Leprosy Programme - Green Pastures Leprosy Hospital in Pokhara with regular leprosy treatment and specialist services including reconstructive surgery and socio-economic rehabilitation. Leprosy referral centres in Baglung, Surkhet, Dang and Jumla. Also field programmes in 23 districts.

24. Japan Overseas Cooperative Volunteer (Kathmandu) Provides Health Volunteers as and when necessary.
25. John Snow Incorporated (Lalitpur) Private Consulting firm hired to advise on direction of major projects, work closely with USAID on health programmes.
26. Leprosy Relief UK (Lalitpur) Provides treatment of Leprosy complications.
27. Malaria Eradication Organisation (HMG) (Kathmandu) Malaria Eradication and Control Project of the government of Nepal.
28. Mission of Charity (Kathmandu) The sisters run a hostel for old homeless people, a feeding programme and health care programme (including Tuberculosis care) at Pashupati, and run a school in Teku.

29. Nara Devi Ayurvedic Hospital (Kathmandu) Ayurvedic treatment is provided.
30. Contraceptive Retail Sales Compnay Pvt. Ltd. (Kathmandu) A not-for-profit autonomous social marketing organization that markets contraceptives such as condoms, birth control pills and vaginal tablets with brandnames of Dhaal, Panther, Gulaf, Nilocan and Kamal. Booklets, posters, stickers, keychains, etc. available upon request.
31. Nepal Anti A -Tuberculosis Association (Kathmandu) hospital in Kalimati, Kathmandu established including lab, x-ray, and dormitary facilities. Outside Kathmandu : community based eradication programme with one coordinator and three field workers per district work out of health posts. Produces booklets, some posters and flip charts on tuberculosis.

32. Nepal Association This association works for the
for the Welfare welfare of the blind in
of the blind academic and rural
(Kathmandu) rehabilitation and vocational
skill training. It supervises
most of the blind schools in
Nepal, 10 in number.
33. Nepal Associaion Supervises all the deaf
for the Welfare schools in Nepal, 5 in number.
of the Hearing
Impaired
(Kathmandu)
34. Nepal Association This association is
for the Welfare responsible to run schools
of the Mentally for the mentally retarded, 5
Retarded in number.
(Kathmandu)
35. Nepal Cancer Diagnostic facilities, and
Relief give out medicines. Provide
(Kathmandu) airplane tickets to patients
to be diagnosed and/or treated
outside Nepal. Some stickers
and pamphlets in Nepali
available.

36. Nepal Disabled and Blind Association (Kathmandu) Four main wings that provide:
1. general and vocational education for classes 1 to 7.
 2. rehabilitation and social
 3. orthopedic appliances, and
 4. medical clinic for blind disabled children.
37. Nepal Leprosy Trust (Lalitpur) Provide rehabilitation and vocational training for leprosy patients.

38. Nepal Red Cross Society (Kathmandu) Red cross chapters are in almost every district in Nepal providing disaster preparedness and services during disasters, also run ambulance services, eye camps, eye hospitals, blood transfusion programmes, primary health care (first aid) programmes in 11-12 districts, drinking water supply programmes in 7 Terai districts and 19 Hill districts, also Junior Red Cross Society Programmes run in middle and high schools, and youth clubs, where students are taught basic first aid, proper habits in personal health and environmental sanitation.
39. Netherland Cooperation Present Project (Lalitpur) Health Post building in the Far-West (Kailali and Kanchanpur Districts)/Development/Region.

40. Nursing Division - Responsible for posting nurses (Ministry of Health) throughout Nepal and Kathmandu coordinating nursing activities such as traditional birth attendants and infection control.
41. Nutrition Cell (Kathmandu) Two kinds of projects :
1. Joint Nutrition support programme in 5 districts.
 2. In 16 other districts, hospitals and health posts are supplied with medicines and health post staffs are trained.
42. Plan International (Formerly Foster Parents Plan) (Kathmandu) Works in 30 panchayats (committees). Works for both curative (clinics) and preventive (immunization, safe drinking water, community health volunteer, and traditional birth attendant) programmes.

43. Public Health Overseas training of
 Division government health workers, and
 (Formerly coordinate all government
 Integrated health programmes within the
 Community Health integrated districts. Also
 Service run the Community Health
 Project) ~~LeaJer~~ Programme that trains
 (Kathmandu) ward level volunteers in basic
 first aid and health
 education.
44. Save the Working in 4 districts ON
 Children-UK health education programmes
 (Lalitpur) for primary and middle level
 school teachers,
 maternal/child care clinics,
 health care education
 programme for parents, and
 health post support
 programmes. Dhamsi-Jhankri
 health trainings in all
 districts except surkhet.
 Water Supply Programme in
 Dhankuta, Community health
 field programmes in all
 districts except Baglung.

45. Save the Children-USA (Kathmandu) Community based rural development project with health and nutrition (including primary health care, nutrition education, immunization, maternal child health, family planning, tuberculosis, and oral rehydration programme).
46. SEVA (Lalitpur) Blindness prevention programme in Lumbini Zone including work in hospitals, mobile eye camps, village level blindness prevention volunteers, and outreach coordinators for motivation.
47. Seventh Day Adventists (Dhulikhel) Run hospital in Banepa, Dhulikhel.
48. Sisters of Charity of Nazareth (Lalitpur) Working in village health, adult literacy and school hearing and speaking impaired programmes in Dharan and Damak in Eastern Nepal.

49. Swiss Association Integrated hill development
for Technical Project in Sindhupalchowk and
Assistance Dolakha Districts, including
(Lalitpur) health related components such
as family planning, building
health posts, drug resupply
schemes, and curative
services.
50. UNICEF Support for national EPI
(Lalitpur) programmes including supplying
vaccines, equipment, and
transport, supplying growth
charts, weighing scales and
colored arm circumference
tapes for the Nutrition
Training Project, assisting in
iodinated oil vaccinations for
the Goitre and Cretinism
Eradication Programme,
training drug retailers,
supplying drugs to health
posts in Nepal.

51. United Mission Hospitals and integrated
to Nepal Community health projects in
(Kathmandu) Okhaldhunga, Gorkha, Tansen
and Lalitpur. Also nurse's
training in cooperation with
the Institute of Medicine.
52. United Nations Help to improve management
Fund for Popu- procedure and provide funding
lation for health worker training for
Activities the Integrated Community
(Lalitpur) Health Services Development
Project. Provide training (for
doctors and paramedics),
services, equipment and drugs
to the Family
Planning/Maternal Child
Health Project.

53. United States Integrated Rural Health
Agency for planning Service Project -
International supply, material and
Development financial assistance to
(Kathmandu) different government and
technically non-government
projects such as malaria,
immunizations, integrated
community health project,
family planning/maternal child
health care and Contraceptive
Retail supply, Oral
Rehydration Solution
(ORS/ORT).

54. United States Peace Corps has a large number
Peace Corps of village based volunteers
(Kathmandu) working in education, banking,
fisheries, agriculture,
engineering and health. Health
activities include Volunteer
Nurses working at certificate
level Nursing Campuses of the
Institute of Medicine.

55. Upachar Griha (Kathmandu) Outpatient clinic with lab services including sputum, stool, urine, semen, and blood testing. Under five-year-old clinic for children and mothers (nutritional information, immunizations, etc.), TB control programme. Community development programme in Sindhupalchowk District where they train health workers and establish health posts and give one year of support.
56. Voluntary Service Overseas (Kathmandu) VSO is a British Volunteer Service. There are approximately 12 volunteers now working in the field or health including nurses, lab technicians, physical therapists and community health leaders. VSO has a small resource centre with health related materials.

57. World Food Programme (Kathmandu) Nutrition, food provided each month to pregnant woman, nursing mothers and infants showing signs of malnutrition. Also primary school meal programme and pre-primary school programme.
58. World Health Organization (Lalitpur) WHO is a branch of the United Nations which acts as a directing and coordinating agency in International health.
59. World Neighbours (Kathmandu) Activities include agriculture, water supply/sanitation and health (nutrition, community health, family planning, etc.). They also run a large library with information on many varied health topics. Also filmstrips, booklets, books, flipcharts and posters on topics such as health and nutrition, family planning, community development, etc.

60. Worldview Supply of health related
International visual aids and reading
Foundation materials.
(Kathmandu)

3.3 Development of Health Administration

The western system of medicine or the allopathic system, as it is popularly known, is defined as that discipline of medicine care, advocating therapy with remedies that produce effects differing from those of the disease treated. There is not such evidence to explain the history of allopathic medicine and medical administration in Nepal, but the legends and history of medication sources suggest that the practice of allopathic medicine was started since the mid 18th century. When King Prithvi Narayan Shah had conquered Kirtipur, his brother Surup Ratna was heavily injured from an arrow of the enemy, and was treated by allopathic medicine where Michael Anjelli was the provider. Likewise the people of Kirtipur were heavily injured during the war period, and they also were treated by Father Anjelli. In fact, allopathic medication was started by the missionaries who were permitted to live even by the Mallas (Ranjit and Jaya Prakash Malla) before Prithivi Narayan Shah. The Padaris (Christian missionaries) who came for the propagation of their religion helped to develop this modern medication pattern in Nepal.

During the period of Janga Bahadur Rana (the first Rana Prime Minister of Nepal at the middle of the 19th century) Doctor Oldfield visited Nepal and started Surgery. In November 1852, Oldfield was asked to treat the sister of the then Maharajah, who was at the later stages of consumption.

Oldfield however failed to bring back health to her. Prior to that, in November 1851, Oldfield was summoned to take care of another lady in Jang Bahadur's family. The Raiguru (the royal priest) had announced that he did not have the slightest objection to Oldfield's attending her if she herself had no objections. But the lady did not agree and preferred to die without medication by a foreigner. Oldfield has put on record the frustration of Jang Bahadur who said in despair, "what can you expect from such a set of fools? When you attempt to reason with them, they answer you with abuse".³

From Oldfield's narration, it is known that as a general rule, in Nepal, no one gave a fee to the doctors "unless the case treated turns out successfully". He said, "I may vaccinate a child twenty times, but I get no fee unless it 'takes'. They will not pay for mere 'medical attendance' unless that attendance is followed by decided advantage to themselves".³

Oldfield has further noted that Jang has great faith in European surgical skill, and is, indeed, very fond of surgery, at which he often does a little himself. I remember his excising a small fatty tumour from a man's neck very successfully; and in any cases of slight injuries among his followers he generally doctors them himself. He has a sort of laboratory in his garden where he prepares constantly a large quantity of a particular sort of medicine, in which he has great faith. Its composition is a profound secret; he says it contains the precious metals, even diamonds and pearls.... Jang has great faith in vaccination, and has had all his children, most of his brothers; and those of the royal family vaccinated.³

Prior to Oldfield, another foreigner, Hamilton had visited Nepal in 1802-03. He had noted the following about the diseases prevalent in the kingdom during his visit in the following words :

The complaints to which they were chiefly subject, were fevers of the intermitent kind, and fluxes, attended with a very copious secretion of slimy matter, which, by the natives, is attributed to Bayu or wind; and which was brought on by very slight indulgences in eating. In the fevers emetics seemed much more efficacious than the cathartics which are usually employed at Calcutta; and indeed, a dose of emetic tartar very frequently cut the fever short, as usual in temperate climates. The fluxes were not attended with much pain, and both these and the tendency in the bowels to the slimy secretions, seemed to require the frequent exhibition of spirituous bitters and small doses of opium. In such cases, I found the chirata tolerably efficacious, but I thought other bitters more powerful, especially the infusion of chamomile flowers, and the compound tinctures of Gentian and Peruvian bark.

...I have seen no country where the venereal disease is so common as in Nepal, nor so generally among all classes of the people, who are indeed very dissolute.... I observed that the men did not consider it as extraordinary or shameful, when they found their wives afflicted with this malady. ... Cutaneous disorders, and especially the itch, are also very common, and almost as prevalent as in Hindustan. The leprosy, in which the joints drop off, is as common as in Bengal; but in Nepal it cannot be attributed to the lowness of the country, nor to a fish diet, to which the people of Kathmandu have little or no inclination. ... The natives consider the disease as hereditary, and allege that the child will become its victim."

The facilities were limited at the beginning to the family of the Rana Prime Ministers, but gradually expanded upto the family of all the Ranas of Nepal. Later on, Rana Prime Minister, Bir Shamsheer established the Prithivi Bir-Hospital in 1889, and it was the first allopathic hospital established theoretically also for public.

After the establishment of Prithivi Bir Hospital in 1889, the Ayurved Ausadhalaya (dispensary) was established in 1917. This dispensary was responsible for the production and distribution of Ayurvedic medicines required for the nobles and Rana family members. To produce medicine and run the dispensaries, Ayurvedic manpower had to be produced. To meet this objective, a school of Ayurvedic Medicine was established in 1928. The school produced more or less the dressers, dispensers and compounders in Ayurvedic field.

But, the western medical administration and medical services was institutionally spread out and established only after the establishment of the Department of Health Services (DHS) in 1933. This was the major organization to promote, regulate and manage the hospitals, dispensaries and medical schools. After the establishment of Bir Hospital, these came up gradually 33 Government-run western medical hospitals, several Ayurvedic dispensaries and one Ayurvedic school in between 1889 and 1933. These institutions were run by law enacted for the purpose, but more so by the personal orders of the political leaders of the Rana families.

Another important year during the Rana regime in Nepal was 1934. In this year, Bir Hospital was expanded to be a 160 bed hospital. Also for the production of allopathic health personnel, compounders and dressers, a Civil Medical School was established during the same year. This school was managed by the Department of Health Services which provided physical facilities and also financial requirements for the school. The superintendent of the Bir Hospital was the principal by chair for the civil medical school, and appointed by the DHS. In 1941, an Ayurvedic Vaidyakhana (drug production) unit was established to produce the required Ayurvedic medicines, to be supplied to the Ayurved Ausadhalayas (dispensary).

After the revolution of 1951, more health related institutions such as hospitals, health centres, health posts, Missionary units began coming up. In 1951, the Indian Cooperation Mission begun training the doctors in India through the Colombo Plan. In 1952, World Health Organization's Programmes began to be implemented in Nepal through DHS. In the hospitals, there was the need of nurses. Only the compounders and dressers were not sufficient to take care of the patient. Keeping this in view, the government of Nepal established a Nursing School in Kathmandu in 1954. This school started production of Nursing staffs for the fulfilment of the required nursing manpower in the hospitals and dispensaries. In 1955, the first Mission hospital, named as Shanta Bhawan Hospital was

established with the assistance of UNICEF in Nepal. This hospital started curative services with laboratory facilities for pathological investigation. Between the 1951-55 period, emphasis was given on training doctors in India through a combined plan.

In the early fifties of this century, there arrived two missionaries - Dr. Robert and Dr. Fleming "to bring modern medicine to the fabled valley of Kathmandu. They found Nepali nine million people fighting a losing battle with almost every known disease from cholera to worms. They were (at that time) only a handful of qualified doctors and five trained nurses."⁵

Bir Hospital has now an efficient, well-trained staff and excellent doctors and nurses expert in modern methods, but in 1956 it was Shanta Bhawan Hospital run by Dr. Bethel and Dr. Bob which pioneered by having the first modern operating room, the first x-ray machine, a modern laboratory routine, and by giving the first blood transfusions and intravenous feeding.

About the situation prevailing at that time, we can do no better than recollect them in their own words, as in the following -

The Kathmandu newspaper came out with a vicious attack upon Shanta Bhawan and upon us personally, insisting that we tied patients to their beds, cut them up, did all sorts of terrible experiments with their dead bodies. The editors violently demanded an investigation!. ...but for two weeks nothing happened except angry rumblings and dirty looks when we went downtown to shop.

Over 90 per cent of the population have some form of tuberculosis, pulmonary, bone, or another variety of this now preventable and curable disease; in some villages its incidence is 100 per cent due to damp houses in which the Nepalese live, as well as to their lack of proper hygiene and diet. A balanced diet would be easy to attain in the Kathmandu valley where the top soil is so rich that a trained farmer can raise from three to four crops a year. ...Public health improvement must go hand in hand with improved education and communication, a slow business.

The ten beds in the cholera hospital were in such demand that a newly vacated mattress was hardly cool before another patient moved in. Make shift cots were setup in the corridor and more wards and medical staff were desperately needed.

The news that medical help was now available flamed like wildfire up and down the mountainsPatients began to flood in, day and night The procession was endless, demanding, and wonderful.⁵

Several Nepalese young men volunteered to train as medical assistants and the busy doctors started classes in biology, hygiene, public health, parasitology, medical ethics, and laboratory procedure.

With the emergence of first plan (1956-1961), Ministry of Health was established in 1956, and hospitals were upgraded. In 1958, Nepal Malaria Eradication Organization (NMEO) begun training to large numbers of workers. The first specialised Maternity Hospital was established in 1959 only for the purpose of maternal and child care promotion. With respect to Nepal's health policy, priority was given to curative medicine, and the NMEO project was aimed at removing malaria from Terai region so that resettlement programme for people from mountains and hills into Terai could be pursued.

During the Second Plan (1962-65), as part of the overall health programme, emphasis was placed on both preventive and curative medicine for the first time. In 1962 a survey was initiated for smallpox. In addition, Pilot projects for Leprosy (1963) and Tuberculosis (1965) control were launched. In 1964, The Royal Drug Research Laboratory and Herbarium, and The Assistant Nurse Midwife Training Programme were started.

For the Third Plan (1965-70), more extensive efforts were made to help plan health strategies for the future. Although many of the health related services had been focused on the provision of curative activities, the concept of preventive medicine had also become fairly well established in the planning and budgeting process. In addition, the idea of Rural Health Posts was materialised in 1965. The rural health posts became the primary institution for the health delivery and health administration in the

country. In the Nursing School, Assistant Nurse Midwife (ANM) Course was introduced in 1966. For the laboratory development, a separate laboratory for health was needed. This need was fulfilled by establishing a Central Health Laboratory in 1967. In the same year, Smallpox Eradication Project also was established. Furthermore, The Family Planning and Maternal Child Health Board and the Royal Drug Production Unit were constituted in 1968. The Laboratory Assistant Training Programme was started in 1969 to produce the laboratory assistants that were needed in the hospitals, central laboratory and health posts level. In the same year, ANM schools were expanded further.

As part of the Fourth Plan (1970-75), Nepal's health priorities changed further from emphasizing curative services to focusing more on preventive services. In 1970, a condensed course for the training of Assistant Health Workers (AHW) was introduced. In the same year, the Community Health and Integration Division also was established to help in dealing with overlaps in services and to make the health programme more cost-effective. To do this, the Division experimented with the process of integrating the vertical projects under one administrative body. In 1972, the Institute of Medicine was established to produce adequate and qualified health manpower. In 1973, ANM school was expanded in Tansen and finally, the Health Planning Unit under the Ministry of Health was established in 1974.

During the Fifth Plan (1975-80) period, the process of integrating the vertical programmes into the overall health infra-structure was further developed. During this period, six major projects have been formulated including Basic Health Service Project. In 1975, the Long-Term Health Plan (LTHP 1975-90) was approved. In the same year, an elaborate strategy was formulated with participation from not only the crown but also the National Commission on Population (NCP), and the Ministries of Finance and Education. The plan called for the expansion of the basic health care services, to rural areas on a gradual basis. The policies of the LTHP included providing basic health services at the village level for the majority of the population and checking population growth to promote national development. In addition, the priorities included developing these basic health services, popularizing family planning and maternal and child welfare services and producing health manpower. In 1978, a Leprosy Organization was established and in the Institute of Medicine, courses for MBBS was started.

During the Sixth Plan (1980-85), health services were provided by different mechanisms. Basic curative health services were provided through hospitals, health centres and health posts. These services were static in nature, with no outreach. In 1984, a Bachelor course on Public Health in Institute of Medicine was started to produce Public Health Officer required for District Public Health Offices.

As far as the Seventh Plan (1985-90) is concerned, the major focus was laid on minimum basic health needs of the people. Primary health care and sanitation were mentioned as two of these needs. To produce Ayurvedic Doctors, Institute of Medicine started the BAMS (Bachelor in Ayurvedic Medicine and Surgery) course in 1989. This was also the product of the Basic Minimum Health Need Programme initiated by the government. The Eighth Plan (1990-95) is in its incipient stage because of the political changes in 1990 in Nepal.

Besides the above mentioned activities towards the development of better health care and management in Nepal, there have been several other activities initiated by the government.

Not only the hospitals, health centres and educational institutions began appearing after the revolution of 1951, but also the various concepts and programmes. HMG established the Ministry of Health (1956) first, and the concept and programmes followed suit. The Ministry of Health borrowed the concept of Public Health Service (PHS) in 1959 from the World Health Organization. The concept of PHS was to provide health services to the rural people emphasizing mostly the preventive medicines/measures.

The integrated public health services started firstly, in Kaski district in 1971 to create additional function for malaria workers, and later in Bara district in 1972 aiming to centrally manage the public health services being provided by various institutions.

The integration of public health services has two fundamental policy elements :

- i. Integration of all the vertical, single purpose projects under a common administrative structure for each level of health infrastructure, namely village, district, regional and ministerial; and
- ii. Integration of preventive and curative care at the least cost.

The integration policy was laid down clearly at the time of the Fifth plan (1975-80). Integration was to be completed by the end of the Sixth plan which projected the establishment of 1052 fully integrated health posts in all the 75 districts. It also meant the establishment of 15 districts and 4 regional hospitals in the same time frame. As envisaged the process of integration was to be gradual in respect of the vertical projects.

After the Alma Ata Declaration of Primary Health Care (PHC) by WHO in 1978, Nepal also borrowed this PHC concept since its declaration. The PHS was incorporated into PHC in

1978/79 with the new theme of providing Minimum Health Needs to the people. Another concept of health mechanism was developed named as Integrated Rural Health Programme (IRHP). It was one of the important components to support the PHC programme. The IRHP was converted into the Integrated Community Programme in 1979 and became a part of PHC programme. But, due to various reasons, the processes of integration was stopped in 1984. In 1987, HMG decided to integrate all vertical project activities in the districts and the Public Health Offices. These district health offices were responsible for implementation of the activities. Thus, the Primary Health Care Programme became the integrated form of all activities/other programmes, and also became a major component, and in a way the very basis of providing health services to the people of Nepal. The PHC programme was aimed to rely upon the utilization of local resources, and also the socio-economic and environmental standards maintained by the local people. The training, service, institutional facilities, and other required means of health have been provided through government agencies and community participation. The role of other non-government organizations and agencies in health care activities in Nepal is also an important step encouraged by the Ministry of Health. The diverse organizations and their activities have already been alluded to in the previous section.

Also, to provide health services, HMG was actively involved in the setting up of different committees/trust/societies and councils either privately or jointly with the government, a few examples of which are : Nepal Cancer Relief Society, AIDs Prevention Project, Nepal Eye Blindness Prevention Project, Resource Centre for Primary Health Care, Nepal Public Health Society, B.P. Koirala Memorial Teaching Hospital, etc.

To fulfill the aim of the primary health care (PHC), the Ministry of Health has initiated a few special programmes. The programmes/projects which were established before the PHC programme came into being are associated now under the PHC programmes as major components of it. Some of these major programmes taken up from time to time are as follows :-

Nepal Malaria Eradication Organization (1958);

Tuberculosis Control Programme (1965);

Nepal Family Planning and Maternal Child Health (1968);

Expanded Immunization Programme (1978); and

Leprosy Control Programme (1978)

Nepal Malaria Eradication Organization

The Nepal Malaria Eradication Organization (NMEO) was founded in 1958. It was the result of the amalgamation of the Pilot Project, namely (i) Insect borne Disease Control (IBDC) which the HMG/USA Project initiated in 1954 with the broad objective of controlling insect-borne diseases in Nepal and (ii) Malaria Control Project initiated by the HMG/WHO in 1956 which sought to study the feasibility of eradicating malaria in Nepal.

The Nepal Malaria Eradication Organization (NMEO) launched its first operation in the Central Region, then in 1962 in the Eastern Region, and later in the Western Region of the Kingdom. By 1965 the entire malaria-infested areas were covered. However, in 1966, the plan of operation to eradicate malaria in Nepal by 1971 was extended to 1973. Significantly, in 1975, it was conceded by NMEO that it is not possible to eradicate malaria but simply to control it to an acceptable level. The main components of the Plan of operation consisted of spraying and surveillance; parasitology research; entomology research; health education; training; general administration; and the other related works.

Tuberculosis Control Programme (TBCP)

The Tuberculosis Control Programme was established in 1965. The activities of the programme were confined to the Kathmandu Valley. Upto 1966 it consisted of providing BCG vaccination only to those children who showed negative reaction to the Mantoux test. From 1967, a direct campaign of door to door visit to vaccinate all children between 0-14 years of aged was started. In fact, during the period 1968-72 it was typical that more vaccinations were done by other projects than by the TBCP itself.

Extension of the Project's activities to areas out side Kathmandu valley took place from 1973. As a result, the predominance of the Project for TB control in Nepal was established, particularly when Japan began (since 1976) to assist the TBCP with its service focussing on the Far Western Development Region.

In 1976, the TBCP enlarged its strategy to include case finding on a door-to-door basis. Treatment, however, was to be provided by the Health Post serving the areas. Henceforth, the concept of integration was put into effect.

By 1980, it was anticipated that BCG mass vaccinations would be provided as a matter of routine to all target children throughout the Kingdom by TBCP together with Britain Nepal Medical Trust and Japan. Between 1980-85 the

project launched its new strategy seeking to provide maintenance vaccination. The major function of the TBCP are case finding, treatment, assessment, supply, manpower development and other related activities.

Nepal Family Planning and Maternal Child Health (FP/MCH)

Nepal family planning and maternal child health project was established in 1968. However, the history of family planning extends as far back as 1959 when a voluntary, non-governmental organization, the Family Planning Association of Nepal, first sought to promote family planning through a strategy oriented towards educating urban-based married couples by informing them on the availability and use of contraceptives, including social benefits from such usage.

Upto 1975, the delivery of FP/MCH services followed a static clinic strategy of operations whereby child and maternal health care and sterilisation services were rendered through the 181 clinics covering 64 of the 75 administrative districts in the Kingdom. It was after 1975 that, following the introduction of the concept of Panchayat based Health workers, the service began to be provided more on a door to door basis.

The major functions of FP/MCH are included as child health; maternal health; family planning; manpower development; information-education; communications; planning; research; and evaluation.

Expanded Programme on Immunization (EPI)

The Project on expanded immunization programme was founded in 1978. Its predecessor was the highly successful Smallpox Eradication Project which enabled Nepal to eradicate the disease and to be recognised as a small pox free zone by the international community. No other project in the health sector, until today, has been able to record a success story of such brilliant significance as the Small-pox Eradication Project.

Public efforts towards the provision of preventive care before EPI had started in 1968 when BCG and Smallpox vaccines were being provided although not on the mass scale. DPT was begun in 1972. What is new was the conceptualisation of a packages of services for a broader mass target group of children and delivery not only through clinics and hospitals as earlier but on a ward to ward basis backed up by health posts. Further the expansion in the delivery of this total expanded package of immunization was to be gradual. Typically it was implemented first in 1978 in two terai districts (Dhanusha and Rupandehi) and one hill district (Sindhupalchowk) for feasibility testing and then

extended to 6 districts namely, Jhapa, Morang, Sunsari, Mahotari, Nawalparasi and Bhaktapur in 1978-79 and another 9 districts in 1979-80 (Lalitpur, Chitwan, Sarlahi, Kapilbastu, Dang, Banke, Bardiya, Kailali and Kanchanpur).

The major function of EPI are vaccination; training; supervision; logistics and supplies; general management; and other planned works.

Leprosy Control Programme (LCP)

One of the major problem in Nepal is Leprosy. To solve the problem of leprosy, a project on Leprosy Control Programme was established in 1978. It's predecessor was a joint leprosy-tuberculosis pilot project initiated by WHO in 1965, which was subsequently split for administrative, conceptual and medical reasons. In 1967, the Expanded Leprosy Project took its place. This project was mainly concentrated in Bagmati and Narayani Zones whereupon it served patients upto a radius of 3 kilometres from hospitals located in these Zones. One of the chief contributions of LCP predecessor was the establishment of the Central Leprosy Clinic in 1970 which provided leprosy services institutionally.

The major function of Leprosy Control Programme (LCP) are case holding; education; training; rehabilitation; management and others. But whatever facilities are there in the Kingdom, it is far from adequate to fulfill the basic minimum Leprosy need of the people. Whatever functions are mentioned they are very slow in implementation, and the model which they use, are far from adequate.

A brief historical chronology of Health Sector Events in Nepal:

Serial No.	Year	Plans/Programmes/Institutions
1	1889	Bir Hospital established.
2	1917	Ayurved Ausadhalaya (Dispensary) started.
3	1928	School of Ayurvedic Medicine established.
4	1933	Department of Health Services established.
5	1934	Bir Hospital expanded (160 beds); Civil Medical School established.
6	1941	Ayurvedic Vaidyakahna (drug production) established.
7	1951	Indian Cooperation Mission started training doctors in India through Colombo Plan.
8	1952	WHO Programmes commenced.
9	1954	School of Nursing established.
10	1955	UNICEF assistance started; Shanta Bhawan first Mission Hospital established.
11	1956	First Plan (1956-61) begins; Ministry of Health Organised; Hospitals upgraded.

- 12 1958 Nepal Malaria Eradication Organization established.
- 13 1959 Maternity Hospital established.
- 14 1962 Second Plan (1962-65) begins; Manpower planning emphasized; Survey initiated for Smallpox.
- 15 1963 Leprosy pilot project begins.
- 16 1964 Royal Drug Research Laboratory and Herbarium established; Assistant Nurse Midwife training started.
- 17 1965 Third Plan (1965-70) begins; Tuberculosis Control Programme established.
- 18 1966 Assistant Nurse Midwife Course begins; ANM training programme started in Biratnagar.
- 19 1967 Central Health Laboratory established; Smallpox Eradication Project established.
- 20 1968 Family Planning/Maternal Child Health Board constituted; Royal Drug Production Unit established.
- 21 1969 Laboratory Assistant Training started; ANM school expanded.

- 22 1970 Furth Plan (1970-75) begins; AHW condensed course started; Community Health and Integration Division established.
- 23 1971 National Education System Plan for 1971-76 begins.
- 24 1972 Institute of Medicine established.
- 25 1973 ANM school started in Tansen.
- 26 1974 Health Planning unit established.
- 27 1975 Fifth Plan (1975-80) begins; project formulations for six projects including Basic Health Services begins; Long Term Health Plan approved.
- 28 1977 Zexopox attained; Bachelor in Nursing started in IOM.
- 29 1978 Expanded Programme on Immunization started; MBBS Course started in IOM; Postgraduate course begins; The drug act promulgated.
- 30 1984 Bachelor in Public Health started.
- 31 1985 Seventh Plan (1985-90) begins.
- 32 1989 Bachelor in Ayurvedic Medicine and Surgery (BAMS) course started.

- 33 1990 Eighth plan (1990-95) begins; political change occurred in Nepal.
- 34 1991 Master of Science in Public Health Course started in IOM.

As far as the structure of the health management organs are concerned, there have been significant changes in recent years in consonance with the various programmes and targets that have been taken up from time to time. A comparison between the situation prevailing in 1980 and 1992 will speak for itself.

In 1980, the Ministry of Health (MOH) was one of the 15 ministries of HMG/Nepal. It was headed by a Minister of state. He was the overall constitutional head of the Ministry and was assisted by a Secretary and an Under-secretary. The Director-General of Health Services was the executive head of the Department of Health Services (DHS) and was answerable to the Secretary. The Health Planning was an arm of the Ministry of Health. The hospitals at the Regional, Zonal and District level, and the public health offices were under the Director-General of the Department of Health Services. And the lower level health institution that is the health post was also under the supervision, management and direction of the Director-General who worked through the District health offices, Zonal hospitals and Regional health offices.

There was a separate section called Family Planning Service Committee linked with the Ministry to formulate the plan and execute the family planning/maternal and child health services. One Under-secretary was responsible for the execution of different sections such as General and personnel administration, Finance and Internal administration, Supply procurement and Inspection, Construction and Management, and different projects (small-pox eradication and EPI, TB control, leprosy, health education). He was also responsible to run the Nepal Malaria Eradication Organization Board. The Secretary for Health was entrusted with the task of planning and administration in general. He was also charged with the task of handling the Epidemiology, Public Health Labs and Statistics, Community Health Integration, Ayurvedic Institutions and International Aid programmes.

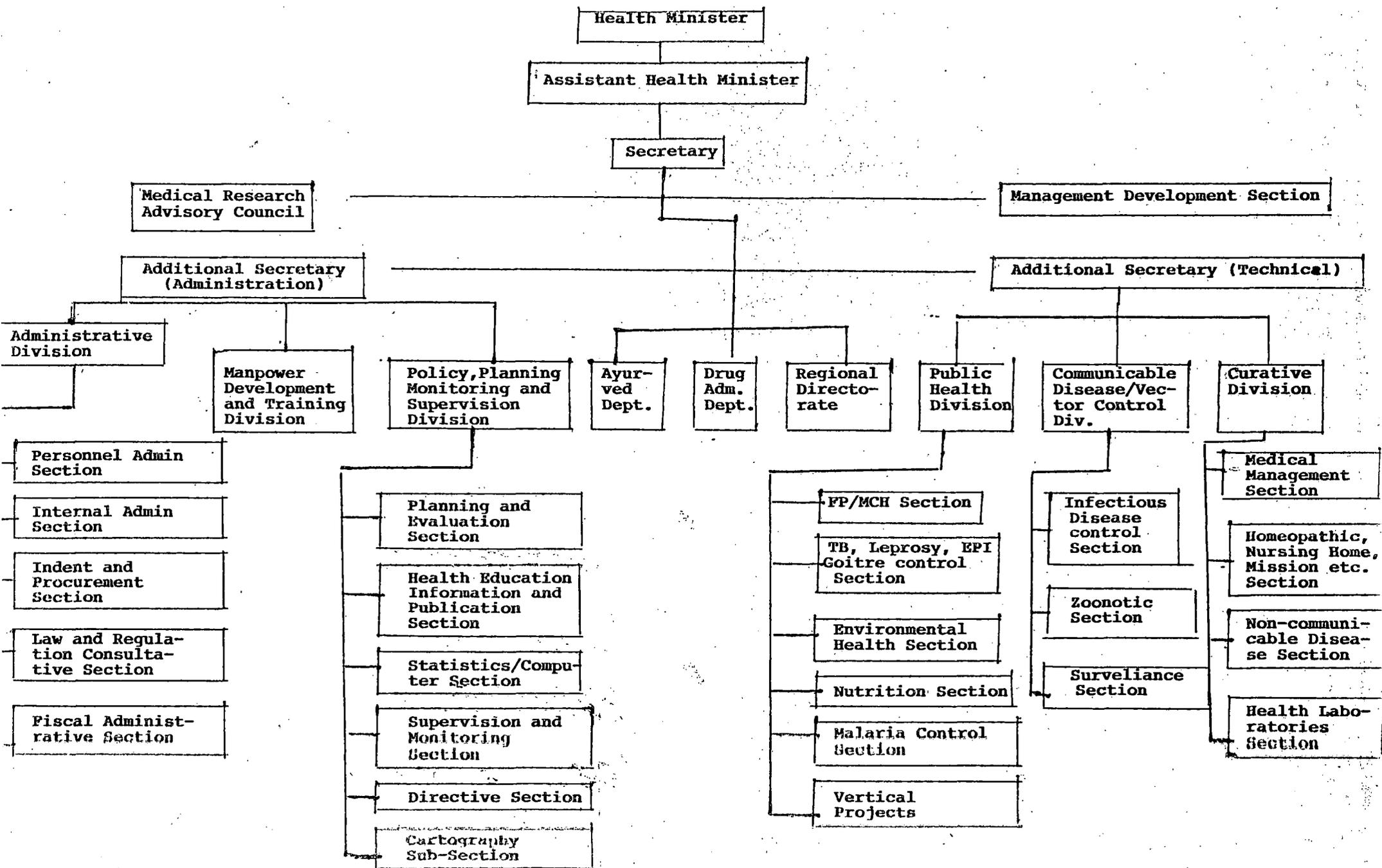
But in 1992, the structure of Ministry of Health has been slightly changed. The health system at national level consists of the Ministry of Health headed by the Minister of state and assisted by an Assistant Minister. The Ministry, as previously, is responsible for the management infrastructure and service facilities at the national, regional, district and local level. The various divisions and units are Administrative Division, Manpower Development and Training Division, Policy Planning Monitoring and Supervision Division, Department of Ayurved, Department of Drug Administration, Regional Health Service Directorates,

Nursing Division, Public Health Division, Epidemiology Division, Curative Division and Management Development Section. Three vertical projects : Family Planning and Maternal Child Health Project, Expanded Immunization Project and Nepal Malaria Eradication Organization are functioning at the central level. Ministers, Secretary, Additional secretaries and other Administrative Officers are responsible for supervising, monitoring and managing the logistics and supplies.

The policy Planning Monitoring and Supervision Division of the Ministry of Health coordinates the planning, programming, supervision, monitoring and evaluation of all activities in the health sector.

There are also Medical Research Advisory Council and Management Development Section under the Ministry of Health. The Medical Research Advisory Council sanctions the research proposals funded by the International Agencies advising, if necessary some changes relating to governmental policies, law and regulations. (See the organization chart of the Ministry of Health 1992).

Organization Chart of the Ministry of Health 1992



The Ministry of Health has links with other ministries, commissions and departments. The link has a positive impact to promote better health services in the kingdom. Of them, a few are illustrated as follows:

The Sectoral Programme Coordination Division, the Plan Implementation and Administrative Division, and the Resource Planning Division of the National Planning Commission have been helpful for the Ministry of Health. These divisions help in the preparation of periodic plans and advise and assist in removing impediments to progress. They also provide a general idea of funds that could be made available for the various projects of The Ministry of Health. The Ministry of Finance helps by examining and also approving the budgets submitted by the Ministry of Health. The external assistance to the Ministry of Health from different international agencies and foreign governments are channelled through the Foreign Aid Division of the Ministry of Finance. The Ministry of Local Development helps the Ministry of Health through the Chief District Officers who supervise the district and local level health institutions. The Ministry of Food and Agriculture helps providing calorie, nutritional supplements and research, veterinary services, dairy development and processed milk products. The Junior Technical Assistants under the department of Agriculture provide veterinary services, bacterial vaccines, rabies vaccines, laboratory animal breeding and standardization of the biologicals. The Irrigation

Department and Nepal Malaria Eradication Organization have jointly contributed to a massive reduction in the incidence of malaria. The Ministry of Housing and Physical Planning help in designing new hospitals, health posts and other health institutions. The Royal Drug Limited under the Ministry of Forest produces many essential drugs. The Ministry of Water and Power is responsible for making provision of clean drinking water and good sewerage facilities that has a direct bearing in maintenance of health. The Ministry of Education provide school health education and develops the curriculum in this regard. The Ministry of Communication helps by broadcasting health information to the people and making them aware of health needs. The Institute of Medicine is the producer of health manpower and the Department of Health Service is the user. The other voluntary organizations have played an important role not only as auxiliaries to HMG in the field of health but also in areas where HMG did not have programmes, much needed through they were.

Before concluding this section, it will be useful to examine the health care delivery system from the grassroot to the central level. The referral and the subsequent follow-up depend upon the quality of service provided at the lower level institutions. The situation at the local level, and also the movement from the bottom will be better illustrative of the health facilities that are available to the poeple.

The peripheral (grassroot) level health delivery is served by one health post. The concept of Rural Health Post was borrowed in 1965 and expanded in 1971. One Health Post has been bestowed upon each ilaka (one ilaka is the combination of more than two Village Development Committees) in the country. By the end of 1988, there were 816 health post in Nepal and of which 675 had a direct linkage with the district hospital. The health post is the basic institution for the delivery of health care, and their major function is to provide curative services, along with a few preventive services. The curative services are provided by the paramedicals. Health Assistant is the prescriber who is assisted by Assistant Health Workers, Assistant Nurse Midwife and other administrative personnel. The Village Health Workers also assist him providing services for vaccination, FP/MCH and door-to-door services. The health posts are supervised by the District Public Health Office who also provide some medicine to them. But the medicines supplied for the health post are sufficient only for three months for a year. The District Public Health Office also provides an annual grant of 25,000/- (the figure is proposed to be doubled from 1992 fiscal year).

There are District and Zonal hospitals who act not only as the recipients of the referred cases but also as the primary source of contact for the users. In 75 districts of the country, there were 120 hospitals including one Central Hospital by the end of 1988. For the 14 ecological zones of

the country, the district hospitals situated mostly at the zonal headquarters serve also as the zonal hospital. These hospitals have been manned by Medical Officers. They are also provided with paramedicals, and, as usual, by the administrative non-technical personnel. The Regional Medical Procurement Section provides medicines to these hospitals. Budgets allocated to these hospitals come directly from the Ministry of Health. The hospitals and health posts provide generally the curative services, while the preventive services are provided by the District Public Health Services through the Village Health Workers.

At the zonal level, there are also zonal Ayurvedic Dispensaries manned by Ayurvedic Kabirajes and other Ayurvedic paramedics. When needed, they refer the patients to the Ayurvedic Hospital situated at Kathmandu, which is functioning as the only central hospital for Ayurvedic health services.

At the apex, a highly specialized referral institution has been the Central Hospital run autonomously by a Board of Directors under the general supervision and control of the Ministry of Health. Executive Director is responsible for the management of the hospital administration. The Central Hospital has various specific services and facilities like Specialized Laboratories, Radiography, Computer Services, and Intensive Care Units. These are manned by the graduates of each subject and supported by paramedicals and other administrative staff.

3.4 Drug Scheme and Legal Provisions

The Nepalese government is committed to provide to all the people minimum basic health services through primary health care approach. In the delivery of minimum basic health services, among the major constraints is the recurrent shortage of drugs at all health institutions which is most especially felt at the health post - the most peripheral health infrastructure providing basic health care services. It is the experience, in Nepal, that the annual consignment of drug supplies for all government health institutions is sufficient only for about 3-5 months and there is no resource for reordering until the next year's supply is due.

When free medicines at hospitals and health posts run out, the only alternative is, for the patients, to purchase in private market. But most of the drug-shops selling drugs are located in town centers only, often more than one day walk away from the village. When the patients cannot afford the price charged, they often remain untreated. Shortage of medicines in health institutions destroy the confidence of the people and undermine the morale of the health staff. Whatever medicines are supplied to the hospitals and health posts, are insufficient in comparison to the out-patient involvement.

95 per cent of the total drugs needed for the country have been imported from India, or obtained from different organizations and countries aid. The rest five per cent drugs are producing by 18 national and multinational pharmaceutical companies in Nepal, even though more than 100 licences have been issued to various individuals and firms for the production of medicine. At present, more than 10,000 modern medicines manufactured by 637 companies are marketed in Nepal and of the 9500 products imported from India, 60 per cent are combination products.

In Nepal, there is only one government-run pharmaceutical institution which is named as Royal Drug Limited (RDL). The history of RDL can be traced back to 1966, when a programme for the production and marketing of some medicines was initiated in the Royal Drug Research Laboratory under the Department of Medicinal Plants, HMG Nepal. The programme was initiated with a view to demonstrate possibilities for establishment of pharmaceutical industries in Nepal and to help the laboratory for re-orientation of its research activities to the benefit and use of the country. To support the programme a separate production unit under the laboratory was later on created.

After the trial period of four years in the manufacture and marketing of medicines, the production unit was converted in 1972 in accordance with the company act into a company. This company which is fully owned by HMG Nepal, is named as Royal Drug Limited.

The Drug Act 1978, (see appendix at the end of this chapter) is being implemented in the country to control and regulate the availability, safety, efficacy and quality of drugs. At the same time, it aims to protect consumers from misuse, abuse and malpractices of drugs manufactures. Various Rules, Regulations and Acts have been promulgated from time to time, and they are as follows :

- i. Mulki Ain 1963;
- ii. Nepal Medical Council Act 1964;
- iii. Nepal Medical Council Regulation 1968;
- iv. Drug Act 1978;
- v. Drug Consultative Council and Advisory Regulation 1980;
- vi. Drug Registration Regulation 1981;
- vii. Drug Inspection Regulation 1982;
- viii. Good Manufacturing Practice 1983;
- ix. Sale and Distribution Code 1983; and
- x. Drug Standard Regulation 1986.

A National List of Essential Drugs, particularly for the purpose of drug production and procurement in public sector was published in 1986 and the RDL produces them, 60 in number. Also, Standard Treatment Guide was published in 1988 to promote rational drug use in the primary health care.

The Department of Drug Administration (DDA), established in 1979, has been the main agency responsible for the management and implementation of the Acts, Regulations and Rules. The DDA, through various regulatory measures, is aiming to protect the public from unsafe and substandard drugs.

A major contribution of DDA was that out of 7000 registered drug retailers and wholesalers, 5000 of them were trained by them about the dispensing, storage and safety of drugs. The remaining retailers are also scheduled to be trained by DDA in due course.

The DDA has also undertaken some important works. 17 drugs and their combinations were banned in 1983, Oral Rehydration Powders was banned in 1986, 41 drugs and their combinations were banned in 1991, sub-standard production in some of the batches of a few pharmaceutical firms was detected, and the batches were destroyed, I.V. Infusion have been stopped to prevent AIDs and such other diseases 10-15 products imported from India after a ban has been imposed on

them by the Indian Government were detected and destroyed, blood suspected or carrying AIDS virus are destroyed and banned, the Ayurvedic medicine -Mrita Sanjivani Sura has been banned; approximately 200 durg retailers had been warned for their improper storage, improper sale and illegal import of drugs, and some products of 39 Indian companies were found to be illegally imported into Nepal and actions are being taken against importers.

Although the modern medical practice in Nepal started since the last quarter of 19th Century, attempts were only made in 1963/64 to regularize the practice by introducing a chapter about medical practice in Mulki Ain 1963 (Law of the Land) and by enacting Nepal Medical Council Act, 1964. The first legal measure is only a general compromise and it deals with the procedure of treatment and the legal protection of a patient.

The main aim of the Medical Council Act is the protection and regulation of the modern medical practice by registration of practitioners. According to this Act all medical doctors with MBBS or equivalent as basic degree have been recognised and registered as prescribers. To meet these aims Nepal Medical Council Rules have also been enforced since 1968.

According to Drugs Act 1978 and Drug Standard Regulation 1986 all drugs have been classified into three categories. Drugs included in Category I and II require the prescription of registered practitioner. But the category III drugs can be dispensed and sold as over the counter products by any person who had acquired experience on drugs.

Generic name of a drug means the scientific name of the active ingredient incorporated in the drug formulation. However, in western countries products whose patent has expired or products not protected by patent rights are also termed as generic drugs.

In Nepal all intravenous fluids and most of the external preparations are manufactured in generic name. Royal Drug Limited, the government manufacturing unit produces about 35 per cent of the total products in generic name.

Products imported through UNICEF and the products supplied in donation from other donor agencies are also in generic.

In 1989, Ministry of Health decided to use generic prescribing in all health institutions including hospitals. Since most drugs supplied to the health posts are in generic name, the generic prescribing has been used for the products distributed through such units. In hospitals the generic

prescribing has not been enforced but a number of drugs have been usually prescribed in generic name as these are usually marketed in the nonproprietary names.

At present there are 951 doctors (about 750 of whom are employed by the government) and they provide service in hospitals, urban clinics and nursing homes. The paramedical persons prescribe medicines in health centres, health posts and rural clinics. The total number of these university trained manpower is 3248. However, this manpower has not been argued that they prescribe medicines on an institutional authority. Apart from these university trained manpower, in rural areas, a section of the persons experienced in drug sale and distribution also advice patients.

According to the section 26 of the Council Act, the Medical Council has the authority to classify some medicines which can not be sold by the retail without the prescription of a registered practitioner. In addition, Section 25 of the Drugs Act and related Rules clearly states that durgs included in Categories I and II should not be sold without the prescription of a registered practitioner.

However, practitioners registered according to Nepal Medical Council Act are not sufficient to fulfill the demand of prescription for the entire population. Therefore, due to technical reasons the provisions relating to prescription has not been fully implemented.

Before the enactment of the Drugs Act, 1978 medicines could be freely dispensed and sold by a person. In considering the dangerous outcome of the misuse of potentially harmful medicines and to provide an ethical and right service to the people, medicine shops have been registered in DDA as per the provision of the Act.

To solve the practical problem of drug dispensing by involving an ethical manpower in drug retail shops, DDA started an Orientation Training Programme. Since 1982, a 40-50 hour training is being regularly conducted in different places of the country with the financial assistance of UNICEF.

So far about 5200 have participated the training and 4338 persons have passed the course. Likewise, more than 5000 medicine shops have been registered in DDA. The successful candidates have been registered as professionalist for the sale and distribution of drugs. Since 1991, DDA has made the professionalist manpower compulsory while issuing the registration certificate of the retail shops which sells medicines included in category I and II.

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APPENDIX

THE DRUGS ACT 1978, (First Amendment) 2045 (1988)

REGULATORY APPROACH:

The act aims to prohibit the misuse or abuse of drugs and allied Pharmaceutical materials as well as the false or misleading information relating to efficacy and use of drugs, and at the same time to regulate and control the production, marketing, distribution, export-import, storage and utilisation of those drugs which are not safe, efficacious and of standard quality.

The Act defines a "Drug" as any substance intended to be used for or in the diagnosis, cure, mitigation, treatment or prevention of disease in human beings, animals or birds or any substance intended to be used for the destruction of vermin or insects which cause a disease in human beings, animals or birds or any article intended to affect the structure or any organic function of the body of human beings, animals or birds or such ingredients or components intended to use for the preparation of such drugs.

Clause 5 of the Act has constituted the Dept. of Drug Administration (DDA) for the purpose of carrying out the objectives of this Act.

1. DRUGS CONSULTATIVE COUNCIL (DCC):

For the purpose of clause 3 of the Act a regulation on the constitution of the Drugs Consultative Council and Drugs Advisory Committee, 2037 has framed a council (DCC) constituting of eleven members with the Honorable Minister of Health as its Chairman and the chief Drug Administrator as its member secretary. The regulation has prescribed the council with the following functions, duties and powers :

- a) The duties of the Council will be to advise His Majesty's Government on the basic principles and administrative matter relating to drugs keeping in view the national interest and promotion of import-substitution through the use of locally available herbal resources for the production of medicines and hence obtaining self-reliance in the field of drugs.
- b) The council in addition to matters in a), would also counsel the government in the following areas :
 - To promulgate Drug Policy encompassing matters like drug development, research, production, sale and distribution, use, export-import, etc.
 - Identify activities as per the policy,
 - Frame administrative and technical strategies to implement the identified activities,

- Promote mutual co-ordination and understanding among various organisations of HMG,
- Fix prices of Drugs,
- Provide decision on fundamental issues related to Patent on drugs,
- Ban production, sale-distribution, storage and transportation of drugs, if required,
- to recognise local or foreign Research Laboratory or laboratory for the purpose of testing or analysis of drugs or any such other activities, if require.
- undertake necessary action against reports lodged to HMG on matters related to drugs.
- implement the Act and regulations framed thereunder or resolve constraints, if any while implementation.

The council met twice so far. The first meeting was more on implementation of the legislation and the second was on banning harmful and irrational products. The third meeting, though after a long gap, is likely to be held soon.

2. DRUG ADVISORY COMMITTEE (DAC):

For the purpose of clause 4 of the Act the regulation on constitution of the DCC and DAC 2037 has constituted DAC of 13 members with the Health Secretary as the chairman and a senior official assigned by the DDA as its member secretary.

The regulation has prescribed the committee with the following functions, duties and powers:-

- a) The DAC is to advise the department on the technical matters in relation to research, development and control of drugs.
- b) The duties of the committee in addition to advise on the technical matters in relation to research, development and control of drugs, would be to advise the department on the following matters:
 - define standards of Drugs & related scientific methodologies for tests and assay of drugs and to execute them in actual practice.
 - bring out the Nepal Pharmacopoeia & such other official documents of other countries to carry out works until the Nepal Pharmacopoeia & other official documents as said earlier have been compiled & recognised by the HMG.

- formulate codes facilitating implementation of the following action:

* Govern production of drugs & excipients, dispensing, sale-distribution, import-export, transportation, storage & use of drugs in a manner which ensure their safety, efficacy and quality.

* Prevent misuse or abuse of drugs & related additives.

* Prohibit false & misleading promotion and advertising of drugs and related additives in relation to their use and usefulness.

* Withdrawal of products sold or kept for sale which are not safe, efficacious & of quality by the manufacturer.

* Manufacturer is to issue a letter of warranty stating that the products manufactured by him are safe, efficacious and of quality before the products have been sold.

* Narcotic & dangerous drugs are to be kept safely & sold with written record of the same in a format as prescribed.

* Formulation of basic guideline for the purpose of scheduling or sub-scheduling of drugs and to prescribe conditional provision for production, sale-distribution, export-import, storage, use and administration of such scheduled drugs.

- Recognition of Pharmacist or person experienced in pharmacy.
- Determining the qualification of professionals and their recognition.
- Formation of Sub-committee of a member or member-secretary or members of committee to execute functions assigned by the committee.

The committee had met for eleven times so far. As for the performance of the committee is concerned the regulation on the standards of drugs have been formulated and implemented. Various pharmacopias of other countries as listed in the regulation have been recognised for the purpose of standards of drugs. Codes on drugs production, drug sale-distribution, and drug promotion & advertisement have been formulated & implemented. Similarly, drugs have been grouped into 3 schedules and 4 sub-schedules and the provision of condition for their production, sale-distribution, import-export, storage and use have been laid down in the regulation on standards of quality fo drugs.

For the purpose of the provision of regulation on standards of drugs, particularly for the sale and distribution of drugs scheduled as Group Ka and Kha, a program popularly known as "Orientation Course For Drug Retailers and Wholesalers" was launched as early as on 2038 BS to train pre-exposed drug dealers for a course of 40 hours based on syllabus prescribed by the DAC. They were subsequently been recognised by the Committee as a "Professional" for sale and distribution of drugs.

The training is to be continued further but in an upgraded and updated version as the existing situation has not yet been favourable to handover the job of sale and distribution to qualified pharmacists. The committee on its eleventh meeting has decided to advise the department that the basic qualification of the condition to take part in the course be elevated from standard 8th to S.L.C. and the duration be increased based on the updated syllabus. The eleventh meeting decides to recognise certificate level pharmacists as sale and distribution pharmacists for the purpose of clause 17 of the Act. A new line of thinking in this direction is that a qualified pharmacy manpower should take care of the job of sale and distribution of drugs both in the public and private sector drug stores and pharmacies. Accordingly 1997 AD has been conceived as the deadline by which time only the qualified pharmacy manpower will be permitted to open private pharmacy and the professionals

being engaged before them will be updated through refresher courses and revised courses.

The provision of the (10th) meeting of the DAC, in addition to recommendation to HMG formed a sub-committee under the chairmanship of Chief Durg Administrator who is the deputy chairperson of the committee. The sub committee has been advising the committee on matters of safety and efficacy of drugs, new drugs approved and on related matters.

Further the DAC is to give more attention on quality assurance as tests and analysis of the drugs have suffered enormously due to lack of proper laboratory facilities or else it has to recognise foreign laboratory for this purpose. Works towards ascertaining standards of unofficial products mostly combination products if doubtful efficacy, compiling of Nepal Pharmacopoeia or any other official document have not received due importance so far. Codes for export-import transportation process and use of drugs need to be formulated to assure quality assurance and rational use of drugs. Some pre-conditions have to be defined for the purpose of recognition and registration of pharmacists for the sale and distribution, dispensing, quality control and manufacturing of various dosage forms of drugs such as capsules, tablets, injections and ointments etc.

3. ROYAL DRUG RESEARCH LABORATORY (RDRL) AND OTHER LABORATORIES:

Royal Drug Research Laboratory under the Ministry of Forests and Environment has been designated as the principal body to carry out the scientific research, testing and analysis of the drugs for the purpose of the Act. Over the years it has been experienced that among various underlying courses, the performance of the laboratory have hardly satisfied the regulatory necessities mainly due to interministerial incoordination, understanding and indetermination towards testing and analysis of drugs. The provision of duties, functions and authority of the DCC in the regulation allows it to intervene in the matter to better the situation unless and until yet another laboratory of the size of RDRL takes care the job. Although there is provision (clause 6.2) for such laboratory whether national or foreign but their job, if at all established, would be to conduct scientific research and development of drugs rather than testing and analysis of the drugs. Therefore, the determination, whatsoever, on the regulatory part to assure the quality of drugs to be consumed by the people of this country is principally handicapped. Despite the provision of such lab. in the sequate of quality assurance, still quality drugs can be made available through proper regulation of other elements like GMP, certification for imported products, registration and inspection, etc., which play key roles in building quality in the drug products.

4. MANUFACTURE, SALE, DISTRIBUTION AND EXPORT-IMPORT OF DRUGS:

Regulations governing manufacture, export-import and sale of drugs are prescribed in the Drugs Act, 1978 and Rules and Regulations framed thereunder (Chapter 4). Control is exercised over drugs from the raw-material stage during manufacture, sale, distribution and upto the time it is passed onto the patients or a consumer by a pharmacist or professionals in a retail shop or in a hospital.

A. LETTER OF RECOMMENDATION FOR THE ESTABLISHMENT OF DRUG INDUSTRY:

(Section 7, Rule 3 of Drug Registration Regulation)

APPLICATION:

Application should be made to the DDA on Schedule 1 (see annexures). An entrepreneur who desires to setup a drug industry is required to submit along with application the following documents at preset. Rs 1 stamp is compulsory on the application form.

Project proposal in triplicate: Prospect of product, fixed and running capital, turnover, break even point, profit margin, products on cost, brand leader comparison, marketing strategy, constitution of the firm, product description, formulation, production outline, plant site and

surroundings, plant size and layout, production and testing machineries and equipments and materials, manpower employment, raw-material requirements and source, production target, etc.

NOTE:

There are not as such any provision for categorising the types of industries whatsoever nor any differences in licencing process. The DCD, under the guideline of Drug policy Statement which is yet to come, is to function to promote self-reliance on drug by creating favourable situation for the industries to grow easy access to raw materials, technology, loan licence, cut down in the import of decontrolled products from abroad, etc.

RECOMMENDATION LETTER:

On submission of an application in a manner as described above the department after making necessary inquiries including site inspection finds it reasonable to issue a recommendation for the establishment of a drug industry, will issue a letter of recommendation to the applicant in the format of Schedule 2 with provision of necessary preconditions (approval of building site, design and layout before construction, etc.). A recommendation fee of Rs. 100 must be deposited in Nepal Rastra Bank and the voucher of the same in the department. A time period not exceeding 30 days may be required for this after submitting

an application provided that all the necessities are satisfied. This recommendation is not required to be renewed.

5. PRODUCT LICENCE FOR THE MANUFACTURE OF DRUGS

(Section 8, Rule 4)

APPLICATION:

Registered drug industries can apply to the department for obtaining product licence to manufacture a product in the form as prescribed in Schedule 3.

NOTE:

In order for the project to proceed on the right track right from the stage of inception it is logical to go ahead step by step with prior approval before moving to next. Factory site, design blue print, space, details of machineries for production and quality control (name, make, capacity, material of which it is made, automatic/manual, etc.), certificate and approval of technical manpower for production and quality control, reference literatures, quality control standard specifications and methodology, detail of formulation and production process, rational for combination products, leaflet and label information about Ga group of medicines, etc, would form the criterias of pre-requisites. Compliance with these pre-requisites facilitates efficiency in obtaining product licence. The correspondence

and official work should be done by an authorised person of the firm as per the constitution of the firm and where necessary by technical incharge of manufacturing or quality control.

RECOMMENDATION LETTER:

On submission of an application with the supporting pre-requisites, the department after making necessary inquiries, shall register drugs in a registration book in the form prescribed in Schedule 4 and issue the product licence to the applicant in the form prescribed in Schedule 5. The fee per product is Rs. 100 at present which should be deposited in NRB and the voucher produced to the department.

NOTE:

It is essential to understand that failing to comply with the codes on GMP (Rule 11) in whatsoever manner would always lead to prohibition in the manufacture of drug despite meeting all other legality and formalities (Sec 28).

A duration not exceeding 30 days may be required after submission of the application until the issue of product licence provided that all the necessities are satisfied. The licence will have to be renewed before it expires. The renewal fee which is Rs. 20/- per product, should be deposited in the NRB and the voucher produced with the application for renewal.

RECOMMENDATION FOR IMPORT OF RAW-MATERIALS:

The product licence will be followed by a letter of recommendation for import of raw materials (Rule 5, section 9) after submitting separate application for each items in the form prescribed in Schedule 6. The department after making necessary inquiries finds it reasonable to issue a letter of recommendation for import of raw materials, will register each item in thr form prescribed in schedule 4 and issue the letter in the form prescribed in schedule 7. The fee for recommendation letter, which is Rs. 100/- at present, should be deposited in the NRB and the voucher produced in the department.