

CHAPTER 10: APPENDICES

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MEMBER LIST

Team Leader	: Yoshio HIROTA	Deputy-Director, Planning Div., Water Supply & Environmental Sanitation Dep., Environmental Health Bureau, Ministry of Health & Welfare
Grant Aid	: Hiroyuki NOGUCHI	Official, Grant Aid Div., Economic Cooperation Bureau, Ministry of Foreign Affairs
Coordinator	: Hironao SUZUKI	Deputy-Director, Planning Div., Grant Aid Dep., JICA
Acting Leader Medical Planning	: Kyoichi IZAWA	Daiichi Health Care Facility Consultants Inc.
Medical Equipment	: Junko TSUDA	Daiichi Health Care Facility Consultants Inc.
Medical Mechanical Engineer	: Minoru YAMADA	Daiichi Health Care Facility Consultants Inc.

(1) - 2)

ITINERARY

- Sept. 12 (Wed.) Arrive in Kathmandu
- Sept. 13 (Thu.) Courtesy visit to the Embassy of Japan, the Ministry of Health, the Department of Health Service, and the Ministry of Finance
- Sept. 14 (Fri.) First visit to Kanti Children's Hospital to survey present facilities, explain the details and schedule of Grant Aid Program including inception report, request for provision of the data necessary for the studies, and exchange of views and consultation on the medical equipment plan.
Courtesy visit to the Ministry of Health meeting with Secretary.
- Sept. 15 (Sat.) Visit Pokhara
- Sept. 16 (Sun.) Visit to Western Regional Health Lab. in Pokhara to study on the facilities and its current test data numbers
- Sept. 17 (Mon.) Visit to Kanti Children's Hospital to exchange of views and consultation on the equipment plan, survey on the place of equipment location, and confirm location of installation
- Sept. 18 (Tue.) Observation on the following medical institutions: Tribhuvan University Teaching Hospital, Bir Hospital, Infection Disease Unit and Central Health Laboratory.
Courtesy visit to the Ministry of Health meeting with the Minister.
- Sept. 19 (Wed.) Visit to Kanti Children's Hospital to exchange of views and consultation on the equipment plan etc.
Discussion on the Minutes of Discussions (draft) within the Team.
Visit to the Embassy of Japan for interim report.

Sept.20 (Thu.) Visit to the Embassy of Japan to discuss the Minutes of Discussions (draft).
Visit to the Ministry of Health to compile the Minutes of Discussions.
Visit to JICA Kathmandu Office to make the Minutes of Discussions.

Sept.21 (Fri.) Visit to the Ministry of Health to sign and exchange of the Minutes of Discussions.
Report to the Embassy of Japan and JICA

Sept.22 (Sat.) leave Kathmandu

MINUTES OF DISCUSSIONS

In response to the request made by His Majesty's Government of Nepal for the Improvement Project of Medical Equipment for Kanti Children's Hospital in Kathmandu (hereinafter referred to as "the Project"), the Government of Japan has sent, through the Japan International Cooperation Agency (JICA), a survey team headed by Dr. Yoshio Hirota, Deputy-Director, Environmental Health Bureau, Ministry of Health & Welfare (hereinafter referred to as "the Team") to conduct the basic design study on the Project for 11 days from September 12 to September 22, 1984.

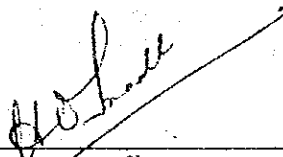
The Team has carried out a field survey, had a series of discussions and exchanged views with the authorities concerned of His Majesty's Government of Nepal on the Project.

As a result of the survey and discussions, the Team and the authorities concerned of His Majesty's Government of Nepal have agreed to recommend to their respective Governments that the results of the discussions attached herewith should be examined toward the realization of the Project.

Kathmandu, September 21, 1984.



Dr. Yoshio Hirota
Team Leader
Japanese Survey Team



Dr. H.D. Pradhan
Senior Public Health Administrator
Ministry of Health

ATTACHMENT

1. The objective of the Project is to provide essential medical equipment so as to meet the strengthening of Kanti Children's Hospital as the teaching and national referral hospital in the pediatric field.
2. Kanti Children's Hospital for which the Ministry of Health is totally responsible will be the implementing body of the Project in the Nepalese side.
3. The Team will convey the desire of His Majesty's Government of Nepal to the Government of Japan that the Government of Japan will take necessary measures to cooperate in implementing the Project within the scope of Japanese Economic Cooperation Program in the grant form. Medical equipment requested by His Majesty's Government of Nepal is as listed in Annex I.
4. Medical equipment to be provided will be finalized by the Team based on the request of the Nepalese side and the result of the study.
5. The Nepalese authorities concerned have confirmed His Majesty's Government of Nepal will take necessary measures as listed in Annex II on condition that the grant aid by the Government of Japan is extended to the Project.
6. The Team will convey the need of His Majesty's Government of Nepal to the Government of Japan that the technical cooperation will be required in view of attaining effective fulfillment of the Project.

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Annex I

1. Medical equipment requested by His Majesty's Government of Nepal whose cost will be borne by the Government of Japan is for:-

- (1) Special Care Baby Unit
- (2) Milk Kitchen
- (3) I.C.U.
- (4) Urgent Clinical Test Room
- (5) Radiographic Dept.
- (6) Surgical Dept.
- (7) Operation Theater
- (8) Sterilization Room
- (9) Clinical Pathology Dept.
- (10) Casualty Dept.
- (11) Ward, and
- (12) Others

2. Each item for the above categories is detailed on the following and the quantities and necessity of the items with a circular mark will be determined on the result of the further study.

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MEDICAL EQUIPMENT LIST FOR KANTI CHILDREN'S HOSPITAL

No.	Item	Specifications	Q'ty	Remarks
1.	Infant Incubator	manual control type, premature baby use (2 set.)	6	0
2.	Infant Warmer	Servo Control type with monitor stand	4	0
3.	Infant Warmer Stand	with basinet stand	4	0
4.	Bassinets Stand	steel made with mattress	12	0
5.	Infant Dressing Table		1	
6.	Phototherapy unit		4	0
7.	Oxygen Inhaler Head Box		4	
8.	Infant Ventilator	with O ₂ monitor	4	0
9.	Compressor Unit		2	0
10.	Patient Monitor App.	ECG heart rate, respiration rate	4	0
11.	Portable Suction Unit		6	0
12.	Ultrasonic Nebulizer Set		3	
13.	Sphygmomanometer		4	
14.	Infusion Pump	syringe type with syringe (100pcs)	2	
15.	Infusion Pump	with infusion set (50sets)	6	
16.	Instrument Table	size:60x45x75cm, stainless steel made	4	
17.	Dressing Cart	size:90x60x75cm, stainless steel made	2	

No.	Item	Specifications	Q'ty	Remarks
18.	Dressing Drum Stand	dia.;18cmx2 & dia.;27cmx2	1	1set
19.	Dressing Jar Set		1	
20.	Instrument Tray Set		1	
21.	Puss Basin Set		2	
22.	Oxygen Regulator Set		8	0
23.	Transport Incubator	with power pack	1	
24.	Power Pack		1	
25.	Transport Stand		1	
26.	Apnea monitor		3	0
27.	Thermometer		3	
28.	CPAP system		2	0
29.	O ² monitor	for O ² Head Box	2	0
30.	Weighing scale	for Infant ICU.....1 SCBU.....1 Ward.....4	6	

No.	Item	Specifications	Q'ty	Remarks
1.	Refrigerator	cap;400 lit. or more with freezer	1	
2.	Water Boiler	electric type	1	
3.	Nursing Bottle Sterilizer		1	
4.	Bottle Washing Machine		1	
5.	Balance	rotating dial type, cap; 4kgs	1	
6.	Kitchen Utensils		1	
7.	Sink Unit	stainless steel made	1	
8.	Working Table	stainless steel made	1	
9.	Cupboard	stainless steel made	1	
10.	Utility Cart	stainless steel made	1	

No.	Item	Specifications	Q'ty	Remarks
1.	Patient Heart Monitoring App.	bedside monitor, measuring item/ECG, HR, RR, BP (2 set.)	6	0
2.	ICU Bed	" /ECG. HR, (4 set.)	6	0
3.	Artificial Ventilator		3	0
4.	Artificial Compressor		1	
5.	Ultrasonic Nebulizer		6	0
6.	Oxygen Head Box		3	
7.	Radiant Warmer Stand	post operative type	2	0
8.	Oxygen Air Blender App.		3	0
9.	Auto-infusion Pump	with infusion set	6	0
10.	Oxygen Inhalation App.	with mask set	6	
11.	Suction Unit	with spare bottles	3	0
12.	Stand Light	with spare bulbs	2	
13.	Portable X-ray Unit		1	

No.	Item	Specifications	Q'ty	Remarks
1.	Blood Gas Analyzer	with standard gas	1	
2.	Transcutaneous Oxygen Monitor	with spare electrode	1	
3.	Flame Photometer	with pure propane gas cylinder	1	
4.	Centrifuge	with centrifuge tube	1	
5.	Hematocrit Centrifuge	with capillary tube	1	
6.	Refrigerator	cap; 200 lit. or more with freezer	1	

Dept. RADIOGRAPHIC DEPARTMENT

No.	Item	Specifications	Q'ty	Remarks
1.	Diagnostic Radiograph App.	150KV 500mA	1	
2.	Pediatric Radiography Acc.		1	
3.	Ultrasonic Diagnostic App.	for UCG (fan beam) type	1	
4.	Endoscope Set for Pediatric Use	consisting of: a) gastrofiberscope set....2 b) bronchofiberscope set....2 c) rectoscope set.....1 d) lectroscope set.....1 e) cold light supplies.....2 f) cystoscope set.....1 g) laprroscope set....1 w/Light Source	1set	0
6.	Portable Suction Unit		2	
7.	Dark Room Acc. Set		1	
8.	X-ray Consumables		1	
9.	Ultrasonic App.	ultrasound output; 0-5W/ccm2	1	
10.	Microwave diathermy App.		1	

Dept. SURGICAL DEPARTMENT

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No.	Item	Specifications	Q'ty	Remarks
1.	Recovery Stretcher		4	
2.	Radiant Warmer Stand	servo control system	2	0
3.	Oxygen Inhaler Set	with mask set	5	
4.	Suction Unit	with spare bottles	4	0
5.	Sphygmomanometer	stand type	4	
6.	Instrument Table	stainless steel made	2	
7.	Medicine Refrigerator	cap;170 lit. or more	1	

No.	Item	Specifications	Q'ty	Remarks
1.	Universal Operating Table	oil hydraulic elevating system, manual control position setting type	2	
2.	Major Operating Table	for septic operation room	1	
3.	Operating Light	combination, ceiling mounted type, diam.;100+56cm	2	
4.	Auxiliary Operating Light	5 bulbs, floor stand type	4	0
5.	Suction Unit	with spare bottles	4	
6.	Electro Surgical Unit	solid state type, 500W or over with air circuit system	2	
7.	Anesthesia Machine	pediatric use with ventilator and air circuit system	2	
8.	Compressor	for ventilator use	1	
9.	Defibrillator		1	
10.	X-ray Film Viewer	wall hanging type, 3 sheet use	3	
11.	Instrument Cabinet	width;120cm, stainless steel made	6	0
12.	Instrument Tray Stand	2-tray type x 2/3-tray type x 2, stainless steel made	4	0
13.	Mayo Stand	stainless steel made	3	
14.	Instrument Table	stainless steel made	4	

Dept. OPERATION THEATER

No.	Item	Specifications	Q'ty	Remarks
15.	Patient Stretcher	for operation room use	4	
17.	Operating Instrument Set	infant & pediatric use	2set	0
18.	Operating Room Materials		1set	
19.	Body Temperature Control Mattress		1set	
20.	Tube Dryer		1set	0
21.	Anesthesia Equipment set.		1set	0

Dept. STERILIZATION ROOM

No.	Item	Specifications	Q'ty	Remarks
1.	Autoclave	with generator	1	
2.	Hot Air Sterilizer	size; 90x60x60cm or more	1	
3.	Washing Sink	stainless steel made	1	
4.	Water Sterilizer Set	for hand washing, with washing basin	4	

No.	Item	Specifications	Q'ty	Remarks
1.	Centrifuge	desk-top type, 10m lit.x16, rpm;0-4,000	2	
2.	Hematocrit Centrifuge	capillary tubex30, rpm;12,000	1	
3.	Water Bath	temp range;0-110 deg.c, temp control accuracy;+/-0.5 deg.c	2	
4.	Water Bath Incubator	temp range;0-110 deg.c, temp control accuracy;+/-0.5 deg.c shaking; 100/min, dimensions;25x33x10cm (approx)	1	
5.	UV-VIS Spectrophotometer	wave length range;200-900nm, band width;7nm optics; concave grating photometric range;%T 0-100/ABS 0-1,0-2	1	
6.	Electronic Balance	weighing cap;200g, minimum digital indication;0.001g top-pan size;dia. 105mm	1	
7.	Analytical Balance	weighing cap;200g, readability;0.1mg one scale division;10mg, minimum reading range;micrometer	1	
8.	PH Meter		1	
9.	Microscope	binocular, 1500X	2	
10.	Microscope	trinocular with microphotographic app.	1	
11.	Microscope Projector Acc.	without microscope	1	
12.	Stereo Microscope		1	
13.	Fluorescent Microscope	magnification;100-1500X, illuminator;Koebler system	1	
14.	Incubator	inner dimensions;60x50x50cm (approx)	1	
15.	Hot Air Oven	inner dimensions;60x50x50cm (approx)	1	

No.	Item	Specifications	Q'ty	Remarks
16.	Autoclave	electric, vertical type, dimensions;30x60cm(approx)	1	
17.	Water Still		1	
18.	Hemacytometer Set	"THOMA" type	2	
19.	Hemoglobinometer	cyamthemoglobin method	1	
20.	Pipette Shaker	for blood diluting	1	
21.	Clinical Refractometer	for serumprotein, urine specific gravity	1	
22.	Refrigerator	cap;400 lit. or more with freezer	1	
23.	Bilirubinometer	with capillary tube	1	
24.	Micropipette Set	assorted set	1	
25.	Autodispenser		1	
26.	Blood Cell Calculator	12-key	1	
27.	Magnetic Stirrer	rotational speed;0-1,200rpm, cap;30-1,000m lit.	1	
28.	Tube Mixer		1	
29.	Double-pan Balance	cap;200g	1	
30.	Pipette Washer	polyethylene made	1	
31.	Mortuary Refrigerator	for 2 bodies	1	

No.	Item	Specifications	Q'ty	Remarks
32.	Electrocardiograph	6-ch, automatic type	1	
33.	Electro Cardiograph	1-ch, portable type	1	
34.	Autospirometer	covering all the fundamental spirometry VC. FVC. V-V MVV. & MV with CRT display	1	

Dept. CASUALTY DEPARTMENT

No.	Item	Specifications	Q'ty	Remarks
1.	Treatment Table	simple operating type	1	
2.	Emergency Stretcher		1	
3.	Diagnostic Instrument Set	assorted set	5	0
4.	Examination Couch		5	0
5.	Instrument Table	stainless steel made	3	
6.	Sphygomanometer	stand type	2	
7.	Stand Light	for examination	1	
8.	Autoclave	desk-top type	1	
9.	Suction Unit	portable type	1	
10.	Resuscitator Set	hand driven type	1	
11.	Oxygen Inhaler Set	with cylinder	2	
12.	Refrigerator	cap; 200 lit. or more	1	
13.	Emergency Tracheotomy Set	for child	1	
14.	Operating Instrument Set	assorted set for pediatric use	1	
15.	Utility Cart	stainless steel made	2	

Dept. CASUALTY DEPARTMENT

No.	Item	Specifications	Q'ty	Remarks
16.	Water Sterilizer	for hand washing	1	
17.	Dressing Drum Set	dia.;18cmx3/27cmx3	1	
18.	Dressing Materials	assorted set	1	
19.	Dry chemistry Test Set	for urin, serum examination	1	
20.	Centrifuge	desk-top type, 15m litx4 tubes with tachometer	1	
21.	Microscope	binocular, 1500X	1	
22.	Hemacytometer Set	"THOMA" type	2	
23.	Hemoglobinometer	cyannmethemoglobin method	1	
24.	Observation Bed	with mattress	4	
25.	X-ray Film Viewer	desk-top, 1 sheet type, O.P.D.3 Casualty1 ward6	10	

No.	Item	Specifications	Q'ty	Remarks
1.	Patient Stretcher	infant use	2	
2.	Patient Stretcher	child use	4	
3.	Dressing Cart	stainless steel	6	
4.	Refrigerator	cap; 200 lit. or more	6	
5.	Working Table	stainless steel made with hanger	6	
6.	Sterilizer	boiling type	6	
7.	Suction Unit	portable type	6	
8.	Resuscitator	hand driven type	6	
9.	Wheel Chair	for child use	6	
10.	Ice Cube Machine	up to 50kg/day(approx), storage cap; 15kg (approx)	3	
11.	Food Conveyer	stainless steel made, cap; 24 persons	6	
12.	Utility Cart	steel made, loading cap; 200kg	6	
13.	Oxygen Inhaler Set	with cylinder	10	
14.	Patient Bed	with mattress	60	
15.	Patient Bed (crib)	with mattress	30	
16.	Treatment Cradle	assorted set	1	
17.	Traction Frame Set	assorted set	1	
18.	Irrigation Stand	steel made	30	
19.	Infusion Set	box/100set	30	

No.	Item	Specifications	Q'ty	Remarks
20.	Traction Set	with weight	2	
21.	Thomas Splint	assorted set	1	
22.	Chart Holder Cart		6	

No.	Item	Specifications	Q'ty	Remarks
1.	Audiovisual Equipment	consisting of: slide projector set ... 2 over head projector ... 2 video tape recorder set with monitor TV set ... 1	1	
2.	Washing Machine	cap;20kg	1	
3.	Extractor Machine	cap;20kg	1	
4.	Medical Gas Supply System	with cylinder(40 lit.) and out-let devices	1	
5.	Air Conditioner Set	for operation room/I.C.U./special care unit	1	
6.	Emergency Generator Set	50KV diesel engine	1	
7.	Oxygen Plant		1	
8.	Emergency Call System	pocket bell type (10 sets)	1 set	0
9.	Water Pump		1 set	0
10.	Incinerater		1 set	0

Annex II

Following measures are to be undertaken by His Majesty's Government of Nepal.

1. To provide space and facilities necessary for the medical equipment to be installed.
2. To provide facilities for distribution of electricity, water supply, drainage and other incidental facilities.
3. To provide stock sheds for the medical equipment to be supplied in case that the medical equipment is required to be stored for some time for installation.
4. To ensure prompt unloading, customs clearance in Nepal and tax exemption of the imported medical equipment and materials for the Project and to facilitate the internal transportation for them.
5. To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in Nepal with respect to the supply of the products and services under the verified contracts.
6. To provide and accord necessary permission, licences and other authorization required for the Project.
7. To bear all the expenses other than those to be borne by the grant necessary for the supply of the medical equipment.
8. To maintain and use properly and effectively the medical equipment for the Project.

(1) - 4)

Government Officials Concerned

Ministry of Health

Mr. D.N. Yadav, Minister
Mrs. C.K. Kiran, Secretary
Dr. H.D. Pradhan, Senior Public Health Administrator

Department of Health Service

Dr. D.N. Regmi, Director General

Ministry of Finance

Mr. H.S. Shrestha, Additional Secretary

Kanti Children's Hospital

Dr. M.R. Baral, Medical Superintendent
Dr. N.B. Thapa, Assistant Superintendent
Dr. K.B. Rajbhandasi, Pediatric Surgeon
Dr. H.M. Dixit, IOM
Dr. Y.B. Shrestha, Senior Pediatrician
Dr. R.P.B. Shrestha, Pediatrician
Dr. K.D. Khand, Pediatrician
Dr. A.D. Shrestha, Pediatrician

Western Regional Health Laboratory

Dr. Umemura
Mr. Ishihara, Clinical Lab. Technologist

Tribhuvan University Teaching Hospital

Dr. Prasai, Director

Bir Hospital

Dr. Kahtri, Superintendent

Infection Disease Unit & Central Health Laboratory

Dr. F.B. Malla, Superintendent

Japanese Officials in Nepal

Embassy of Japan in Nepal

Mr. Kazuo Kaneko, Ambassador Extraordinary and Plenipotentiary
Mr. Takashi Arinobu, Counselor
Mr. Hideo Morikawa, Second Secretary

JICA in Nepal

Mr. Tatsuo Hoshi, Resident Representative

TABLE 2.1
Gross Domestic Product
(Rs. in Million at Current Price)

Sector	1977/78	1978/79	1979/80	1980/81	1981/82**	1983/84*
1. Agriculture, Forestry & Fisheries	11616	13365	13520	15510	16792	
2. Mining	25	34	42	58	68	
3. Manufacturing Industry	794	848	936	1049	1189	
a. Modern	(531)	(559)	(618)	(712)	(820)	
b. Cottage	(263)	(289)	(318)	(337)	(369)	
4. Electricity, Gas & Water	42	48	60	67	90	
5. Construction	1338	1559	1570	1974	2537	
6. Trade, Restaurants, & Hotels	707	724	889	953	1070	
a. Trade	(604)	(635)	(786)	(832)	(932)	
b. Restaurants & Hotels	(103)	(89)	(103)	(121)	(138)	
7. Transport, Storage & Communications	1093	1248	1541	1889	1992	
8. Finance, Insurance & Commercial Services	1534	1613	1833	2077	2351	
9. Community, Social & Individual Services	1277	1340	1495	1889	2174	
Gross Domestic Product (at Factor Cost)	18426	20779	21886	25466	28263	31312
Net Indirect Tax	1306	1436	1465	1841	2002	2309
a. Agriculture	(136)	(157)	(163)	(169)	(183)	
b. Non Agriculture	(1170)	(1279)	(1302)	(1672)	(1819)	
Gross Domestic Product (at Current Price)	19732	22215	23351	27307	30265	33621
(At 1974/75 Price)						
Gross Domestic Product	18607	19048	18606	20158	20926	20642
- Agriculture etc.	11141	11480	10933	12066	12492	12175
- Non Agriculture	7466	7568	7673	8092	8434	8467

* Estimate

** Revised Estimate

Source : Central Bureau of Statistics.

TABLE 2.2
Gross Domestic Product: Uses of Resources
(Rs. in Million at Current Price)

Item	1978/79	1979/80	1980/81	1981/82*	1982/83*
GDP at Factor cost	20779	21886	25466	28263	31312
Plus indirect taxes	1436	1465	1841	2002	2309
Less subsidies					
G D P at market price	22215	23351	27307	30265	33621
Less exports of goods & N F S	2618	2695	3523	3592	3297
Plus Imports of goods & N F S	3547	4374	5357	5828	7126
Total Available Resources	23144	25030	29141	32501	37450
Investment	3514	4270	4808	5098	7117
Gross fixed capital Formation	3263	3681	4299	5249	7479
-Public	1138	1466	1823	2487	3544
-private	2125	2215	2476	2762	3935
Changes in stocks	251	589	509	-151	-362
Consumption	19630	20760	24333	27403	30333
-Public consumption	1889	1565	1922	2304	2551
-Private consumption	17741	19195	22411	25099	27782
Gross Domestic Savings	2585	2591	2974	2862	3288
Net Factor Income	390	494	587	615	754
Net Current Transfers	579	844	951	1228	1374
Gross National Savings	3554	3929	4512	4705	5416

*Estimate

Sources : Central Bureau of Statistics.

TABLE 2.3
Gross National Product & National Disposable Income
(Rs. in Million at Current prices)

Item	1978/79	1979/80	1980/81	1981/82*	1982/83*
G D P at Factor cost	20779	21886	25466	28263	31312
Indirect tax less subsidy	1436	1465	1841	2002	2309
G D P at market price	22215	23351	27307	30265	33621
Plus net factor from abroad	390	494	587	615	754
Gross National Product	22605	23845	27894	30880	34375
Less fixed capital Formation (Depreciation)	1088	1091	1283	1422	1579
Net National Product	21517	22754	26611	29458	32796
Gross National Product	22605	23845	27894	30880	34375
Net Current Transfers From Abroad	579	844	951	1228	1374
Gross National Disposable Income	23184	24689	28845	32108	35749

* Estimate

Source : Central Bureau of Statistics.

TABLE 2.6
Population Distribution By Age Group

Age Group	In Percentage					
	Total Population		Male		Female	
	1971	1981	1971	1981	1971	1981
0-4	14.10	15.41	13.60	15.47	14.70	15.34
5-9	15.10	14.58	15.20	14.52	14.90	14.65
10-14	11.20	11.36	12.10	11.95	10.40	10.75
15-19	9.10	8.84	9.40	9.04	8.70	8.63
20-24	8.40	8.89	8.00	8.28	8.80	9.54
25-29	8.10	7.73	7.80	7.41	8.30	8.07
30-34	7.00	6.49	6.60	6.09	7.40	6.92
35-39	6.40	5.95	6.60	6.00	6.20	5.89
40-44	5.30	5.01	5.20	4.90	5.40	5.13
45-49	4.00	4.12	4.20	4.28	3.80	3.95
50-54	3.50	3.61	3.50	3.77	3.40	3.44
55-59	2.20	2.30	2.30	2.44	2.20	2.15
60-64	2.50	2.45	2.40	2.49	2.70	2.40
65-69	1.20	1.26	1.20	1.31	1.20	1.19
70-74		1.04		1.08		1.01
75-79	1.80	0.44	1.80	0.46	1.90	0.43
80-84		0.33		0.33		0.33
85+		0.18		0.18		0.18
Total	100.00	100.00	100.00	100.00	100.00	100.00

Source : Central Bureau of Statistics

TABLE 2.7
Population Distribution by Region *

Development Region	In Percentage			
	Himali Region	Mountain Region	Terai Region	Total
1. Eastern Development Region	9.01 (0.93)	33.88 (1.27)	57.11 (4.31)	100.0 (2.85)
2. Central Dev. Region	8.40 (1.56)	43.01 (1.96)	48.59 (3.04)	100.0 (2.43)
3. Western Dev. Region	0.59 (-5.95)	68.82 (1.73)	30.59 (4.89)	100.0 (2.51)
4. Mid-Western Dev. Region	12.23 (1.44)	53.35 (1.64)	34.42 (5.45)	100.0 (2.76)
5. Far-Western Development Region	21.85 (1.84)	45.81 (1.42)	32.34 (7.93)	100.0 (3.19)
Nepal	8.60 (1.26)	47.73 (1.68)	43.67 (4.20)	100.0 (2.66)

Figures in Parenthesis show annual rate of growth.

*Provisional

Source : Central Bureau of Statistics; Population Census 1981.

TABLE 2.8
Regional Population Distribution

Region	1971	1981*	Percentage Change	Pop. Density Per sq. Km.	
				1971	1981
1. Eastern Dev. Region	27,97,500	37,03,848	32.40	98	130
A. Himali Region	3,04,352	3,33,841	9.69	29	32
B. Mountain Region	11,05,590	12,54,787	13.49	103	117
C. Terai Region	13,87,558	21,15,220	52.44	191	291
2. Central Dev. Region	38,65,753	49,15,999	27.17	141	179
A. Himali Region	3,53,923	4,13,063	16.71	56	66
B. Mountain Region	17,41,594	21,14,378	21.40	147	179
C. Terai Region	17,70,236	23,88,558	34.93	190	256
3. Western Dev. Region	24,46,430	31,35,554	28.17	83	107
A. Himali Region	34,380	18,609	-45.87	6	3
B. Mountain Region	18,16,940	21,57,748	18.76	99	118
C. Terai	5,95,110	9,59,197	61.18	113	182
4. Mid-Western Dev. Region	14,88,006	19,53,309	31.27	35	46
A. Himali Region	2,07,122	2,38,873	15.33	10	11
B. Mountain Region	8,85,562	10,42,151	17.68	65	76
C. Terai Region	3,95,322	6,72,285	70.06	54	92
5. Far-Western Dev. Region	9,58,294	13,11,833	36.89	49	67
A. Himali Region	2,38,833	2,86,687	20.04	30	36
B. Mountain Region	5,21,721	6,00,881	15.17	77	89
C. Terai Region	1,97,740	4,24,265	114.56	41	88
Nepal	1,15,55,983	150,20,543	29.98	79	102
A. Himali Region	11,38,610	12,91,073	13.39	22	25
B. Mountain Region	60,71,407	71,69,945	18.09	99	117
C. Terai Region	43,45,966	65,59,525	50.93	128	193

*Provisional

Source : 1. Central Bureau of Statistics

2. Land Resources Mapping Project

Note : Total may not be accurate since figures are provisional and rounded

TABLE 2.10

Population Characteristics

Items	1971	1981
1. Crude Birth Rate	42.9	42
2. Crude Death Rate	22.8	19
3. Infant Mortality Rate	172.2	150
4. Fertility Rate	6.3	6.3
5. Life Expectancy	42.5	45.5
a. Male	-	47.5
b. Female	-	44.5
6. Male-Female Ratio (Per Thousand Woman)	1014	1050
7. Dependency Ratio	0.77	0.86
8. Total Number of Family	-	2585
9. Average Family Size	-	5.8
10. Percentage of Population In Urban Area	3.99	6.37
(Total Urban Areas)	(16)	(23)

Source : Central Bureau of Statistics.

TABLE 2.12
Growth of Labour Force¹

Year	Total (000)	Average Annual Growth %	Female as % of Total
1953	4702	-	54.2
1961	5138	1.0	51.5
1971	6206	2.0	50.1
1976	6910	2.2	49.7
1981 ²	7953	2.5	53.7

1/ 15-59 Age Groups only

2/ Provisional

Source : Central Bureau of Statistics.

TABLE 7.4
Extension of Health Services

	1979/80	1980/81	1981/82	1982/83	First Nine Months	
					1982/83	1983/84*
1. Extension of Services						
a. Hospitals	73	73	73	74	74	76
b. Health Centre	26	26	26	26	26	27
c. Health Post	533	644	644	744	744	744
d. Ayurvedic Service Centre	85	85	100	113	113	113
2. Hospital Beds	2,586	2,586	2,586	2,754	2,754	3,048
3. Skilled Manpower**						
a. Doctor				526		571
b. Nurse				1,820		1,986
c. Health Assistant				778		790
d. Axiliary Health Worker				1,373		1,389

* Provisional. **Estimated for the end of current fiscal year.

Source : Ministry of Health.

TABLE 9.1
Government Budget

52% 62.74 69.51 71.37 71.01%
(In Million Rs)

Head	1978/79 Actual	1979/80 Actual	1980/81 Actual	1981/82 Actual	1982/83 Actual	1983/84 Estimate
Expenditure	3020.5	3470.7	4092.3	5361.3	6979.2	8479.7
Regular	1041.7	1162.1	1361.2	1634.4	1997.1	2393.5
Development	1978.8	2308.6	2731.1	3726.9	4982.1	6086.2
Receipts	2411.1	2685.6	3288.1	3672.8	3931.7	5501.1
Revenue	1811.9	1880.0	2419.2	2679.5	2841.6	3904.4
Foreign Grants	599.2	805.6	868.9	993.3	1090.1	1596.7
Overall Surplus (+) or Deficit (-)	-609.4	-785.1	-804.2	-1688.5	-3047.5	-2978.6
Source of Financing Deficit						
Foreign Loan	390.2	534.9	693.3	566.7	741.4	1788.6
Reimbursement	-	-	-	163.2	244.4	50.0
Internal Loan	200.0	180.0	250.0	500.0	1000.0	1140.0
(a) Bonds and Bills	-	-	-	-	-	(640.0)
(b) Bonds (For Non-Banking Sector Only)	-	-	-	-	-	(500.0)
Cash Balance Surplus (-)	19.2	70.2	-139.1	458.6	1061.7	-

Figures have been rounded off.

Source : Ministry of Finance.

TABLE 9.2
Government Revenue

(In Million Rs.)

Head	1978/79 Actual	1979/80 Actual	1980/81 Actual	1981/82 Actual	1982/83 Actual	1983/84 Estimate
Tax Revenue	1476.8	1528.8	2035.7	2211.3	2421.1	3055.0
Customs	626.7	608.0	815.8	825.1	760.9	840.0
Excise	192.6	215.2	242.2	305.7	365.8	467.5
Land Tax	59.3	64.5	108.5	84.1	66.7	85.0
House and Land Registration	55.7	65.0	77.8	88.3	104.7	170.0
Income Tax	103.0	101.1	144.0	189.8	273.7	384.0
Sales Tax	356.8	401.2	537.7	597.4	709.3	900.0
Other Taxes	82.7	73.8	109.7	120.9	140.0	208.5
Non-Tax Revenue	335.1	351.2	383.5	468.2	420.5	849.4
Receipts from Sales of Commodities and Services	141.7	145.0	172.0	189.4	162.9	245.2
Principal, Interest & Dividend	100.5	122.0	117.4	135.6	166.7	289.7
Royalty and Sales of Fixed Assets	8.7	7.3	8.0	16.8	9.2	60.3
Mint	14.0	21.3	21.3	5.3	6.9	1.6
Charges, Fees, Fines and Forfeiture	44.4	29.7	48.7	56.9	71.5	232.6
Miscellaneous	25.8	25.9	16.1	64.2	3.3	20.0
Total Revenue	1811.9	1880.0	2419.2	2679.5	2841.6	3904.4

Figures have been rounded off.

Source : Ministry of Finance

TABLE 9.3
Regular Expenditure

(In Million Rs.)

Head	1978/79 Actual	1979/80 Actual	1980/81 Actual	1981/82 Actual	1982/83 Actual	1983/84 Estimate
Economic Services	98.8	105.7	110.1	130.6	165.7	203.2
Agriculture	7.4	7.7	3.4	3.8	4.5	5.4
Irrigation	3.9	2.4	3.2	3.6	4.7	6.4
Land Reform	11.7	12.0	12.9	15.7	18.1	20.8
Cad. Survey	3.4	3.9	4.2	5.3	6.8	8.2
Forest	4.0	4.3	4.6	5.4	7.3	8.2
Industry and Mining	2.6	2.8	2.9	3.4	4.1	5.1
Communication	29.4	32.8	35.6	45.2	58.4	75.5
Transport	31.9	34.2	36.6	40.1	50.8	61.7
Electricity	3.4	3.9	4.6	5.5	7.7	8.4
Other Economic Services	1.2	1.7	2.1	2.6	3.3	3.5
Social Services	175.5	184.6	210.2	249.6	320.4	394.0
Education	80.8	82.5	98.6	106.8	129.4	139.9
Health	52.2	57.7	65.2	80.5	102.3	141.6
Drinking Water	2.3	2.8	3.1	3.9	6.4	7.8
Panchayat	21.0	21.9	22.5	31.6	51.8	67.9
Other Social Services	19.2	19.7	20.8	26.8	30.5	36.8
Defence, Law and Order	286.7	348.3	419.0	463.4	624.6	727.6
Defence	192.2	223.0	259.0	282.8	392.4	463.4
Police and Jail	94.5	125.3	160.0	180.6	232.2	264.2
Miscellaneous	480.7	523.5	621.9	790.8	886.4	1068.7
Loan Repayment and Interest	154.9	217.1	216.3	256.7	307.0	505.2
Revenue Administration	28.6	30.4	35.9	44.0	54.6	62.6
Others	297.2	276.0	369.7	490.1	524.8	500.9
Total:	1041.7	1162.1	1361.2	1634.4	1997.1	2393.5

Figures have been rounded off.

Source : Ministry of Finance.

TABLE 9.4
Development Expenditure

(In Million Rs.)

Head	1978/79 Actual	1979/80 Actual	1980/81 Actual	1981/82 Actual	1982/83 Actual	1983/84 Estimate
Economic Services	1401.5	1813.3	2101.0	2556.1	3287.0	4262.2
Agriculture	196.5	153.4	257.0	468.0	668.6	851.2
Irrigation	226.3	232.7	288.2	359.6	487.4	677.6
Land Reform	9.9	11.3	12.2	16.3	20.6	22.0
Cad. Survey	35.7	25.7	30.2	37.7	45.6	48.4
Industry and Mining	71.5	113.2	123.2	266.5	373.0	549.3
Forest	66.8	94.2	89.3	185.4	228.1	238.7
Communication	14.3	25.6	30.9	49.2	74.3	111.4
Transport	488.2	648.3	601.3	744.0	802.2	1015.0
Electricity	263.6	494.3	653.2	382.2	443.3	701.5
Other Economic Services	28.7	14.6	15.6	47.2	143.9	47.1
Social Services	533.5	444.3	572.6	1059.6	1540.3	1699.8
Education	234.5	248.1	285.6	412.3	604.6	733.9
Health	98.5	72.2	97.8	152.8	216.3	268.5
Drinking Water	63.6	58.5	73.2	107.5	241.9	221.0
Panchayat	98.0	39.1	90.0	270.3	335.2	408.9
Other Social Services	38.9	26.4	26.0	116.7	142.3	67.5
Economic Administration & Planning	43.8	51.0	57.5	111.2	154.8	124.2
Planning & Statistics	3.2	14.3	30.0	14.4	20.2	28.4
Administrative Reform	0.9	0.5	0.7	2.9	7.9	15.8
Others	39.7	36.2	26.9	93.9	126.7	80.0
Total :	1978.8	2308.6	2731.1	3726.9	4982.1	6086.2

Figures have been rounded off.

Source : Ministry of Finance.

Reply to Questionnaire

Kanti Hospital has been functioning as a children's hospital from July 1970. Before that it had been functioning as a general hospital with some paediatric beds. The present capacity of the hospital is 150, though all the beds are not fully operational at present.

<u>Category</u>	<u>Existing</u>	<u>Planned</u>
Medical	60	90
Surgical	20	40 (Incl 4 Sur. Neo.)
Special Care Unit	4	8
Rehydration Therapy Unit	4	6
Intensive Care Unit	—	6
Total	88	150

Of the existing beds there are a number which are categorised as paying beds and the breakdown is as follows:

3 - 6 bed wards	-	18 beds
1 - 4 bed ward	-	4 "
2 - 2 beds cabins	-	4 "
1 - 1 bed cabin	-	1 bed
Total paying	-	29 beds

It is planned that there will be a further increase in the number of paying beds as the demand for such facilities continues to increase and as this is one of the major methods by which the hospital can generate income.

From Sunday to Friday the hospital provides out-patient services of different categories viz.:

Medical
Surgical
Dental
Pathology
X-ray
Pharmacy
Physiotherapy
Emergency
Family Planning and Maternal Child Health Services.

All out patient departments function from 9.00am - 2.00pm but the rehydration unit of the Medical Department functions daily from 9.00am to 8.00pm. The emergency functions for 24 hours, 7 days a week. There is also a Nutrition Clinic which is presently functioning once a week.

The hospital is presently administered by a nine member development board under the Chairmanship of the Hon'ble Ram Shanker Shrestha, Member of the Rastriya Panchayat. The composition of the development board is as follows:

1. Hon'ble Ram Shanker Shrestha	Chairman
2. Director General of Health Services	Member
3. Head, Department of Child Health, IOM	"
4. Member Secretary, Child Welfare Co-ordination	"
5. Representative of Nepal Paediatric Society	"

- 6.)
- 7.) 3 consultants of Kanti Children's Hospital Member
- 8.)
9. Medical Superintendent, Kanti Children's Hospital Member Secretary

There is also a nine member Kanti Children Hospital Management Committee constituted as follows:

Chairman	Assistant Superintendent
Members	Representative of Consultants
	Representative of Junior Doctors
	Matron - Representative of Nurses
	Unit Chief of Laboratory
	Unit Chief of X-ray Department
	Unit Chief of Pharmacy
	Unit Chief of Dental Department
	Administrative Officer

For proper function of the hospital a Hospital Manual listing duties of all personnel has recently been formulated.

Medical Statistic Data

The present mode of operation shows that the hospital functions as a general hospital catering to the needs of children. The figures for 2040 (April 1983 to March 1984) is as follows:

Total Number of out-patients	26,932 i.e.	17,041 Medical
		9,105 Surgical
		785 Dental

Total number of admissions	4,485 i.e.	4,122 Medical
		363 Surgical

Number of Surgical operations performed - 312

Laboratory Investigations	Urine	-	4008
	Stool	-	6152
	Blood	-	7122
	Biochemistry	-	1800
	Bacteriology	-	3844

X-ray total number of plates taken - 3728

The system of working is that the patient comes to the hospital and is generally seen in the out-patients department first. For this he comes to the foyer of the O.P.D. and on payment of Rs. 1 he gets a card with which he is seen in the medical, surgical or dental department. On this card, his history, finding and treatment are written and he can be referred elsewhere if necessary. If his illness is of such nature that it warrants admission, then he is admitted under the concerned physician or surgeon either in the free bed or on the paying bed of the hospital. Generally those from outside of Kathmandu Valley and those of poor economic status are admitted in the free beds where most of the drugs, food are free and there is no charge for X-ray and laboratory services whereas in others a nominal charge amounting to a quarter of the regular charge is made. In the paying beds the charge for occupancy is as given below:

In 6 bed ward	-	Rs. 10 per day
In 4 bed ward	-	Rs. 15 per day
In double cabin	-	Rs. 20 per day
In single cabin	-	Rs. 30 per day

The patient gets some of the drugs e.g. multi-vitamins, pencillin supplied free but may have to buy some medicines. For this there is a shop within the hospital compound which sells medicines at a slightly cheaper rate than at the market. These patients have to pay regular charges for X-ray and laboratory services. They do not pay other charges e.g. for doctors or nurses services.

Meals as stated, is provided free to the patients admitted to the free beds of the hospital. Those in the paying beds either bring it in themselves from home or procure it from nearby restaurants or eating houses. More recently, a canteen has been started at the hospital but the food it provides is of a limited variety.

Hospital laundry is at present washed by the age old custom of the washerman or 'Dhobi' on the hospital compound. This is not satisfactory and alternative arrangements are to be made.

Medical and Maintenance Manpower

1. Number of Doctors

	<u>Existing</u>	<u>To be added from July 1984</u>
a) <u>Medical Department</u>		
Consultant Paediatricians	4	3
Medical Officers	8	-
Medical Registrars (Lecturers) from the Teaching Hospital	2	-
House Officer	-	5
b) <u>Paediatric Surgery</u>		
Consultant Surgeons	2	-
House Officer	-	1
c) <u>Pathology</u>		
Consultant Pathologist	1	-
d) <u>Radiology</u>		
Visiting Consultant from the Teaching Hospital	1	1
e) <u>Dental</u>	2	-

2. Nursing

Matron	1	-
Sisters	3	2
Staff Nurses	10	33
Assistant Nurse Midwives	5	-

	<u>Existing</u>	<u>To be added from July 1984</u>
3. <u>Other Medical Personnel</u>		
Auxiliary Health Workers	4	2
Laboratory Technologist	1	-
Laboratory Technicians	7	-
X-ray Technicians	2	-
Physiotherapy	1	-
Medical Record Officers	2	1

The maintenance manpower existing, consists of an Electrician/plumber. Since the Tribhuvan University Teaching Hospital is next door it is hoped that co-operation between the two hospitals can result in us being able to utilise the services of the engineer/electrician and the radiographer who have been trained in Japan.

List of Existing Medical Equipments

This is barely enough to provide the most basic service.

Medical Department

Suction machines	2
Oxygen Cylinders	15
Incubator	1

Surgical Department

One single Operation Theatre unit with a set of basic general surgical instruments but without any Paediatric and Neonatal Equipments or instruments.

Anaesthetic Department

Basic Boyles Apparatus but no Paediatric or Neonatal accessories. There are no cardiac monitors and no ventilators.

Laboratory

Equipment at present can only provide investigation of very basic nature on blood, urine, stool and CSF.

Dental Department

One X-ray machine which can only do the most basic radiological investigations.

Physiotherapy

Equipment at present not suitable for use on children.

Level of Medical Care

As the Kanti Children's Hospital is one of the specialist hospitals in the country (others being eye, maternity), it means that the level of care provided should be of the highest level corresponding to tertiary care.

As this is the only children's hospital of the country, not only do patients come on their own accord but are referred here by doctors and paediatricians from different parts of the country. Limited manpower, financial constraints and lack of equipment (Men, Money and Material) have been the main set back, but with the functioning of the present Hospital Development Board as the governing authority, we are hopeful that some if not all the problems will be solved.

Maintenance System

The budget given by the government has some provision of funds for maintenance of buildings and equipment. The repair and the maintenance is done as and when required. There is, as already stated, an electrician/plumber on the hospital payroll. As far as maintenance of the equipment is concerned we hope that some sort of arrangement will be made with Tribhuvan University Teaching Hospital to utilise the services of their personnel already trained to maintain their equipment.

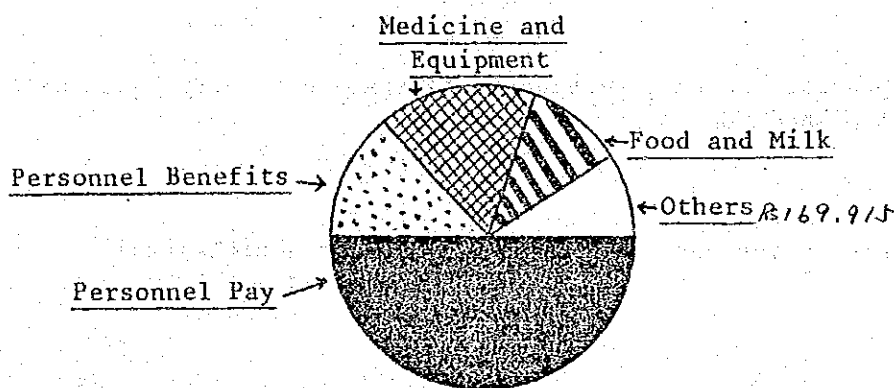
Total Hospital Income

Grant from Government for 2041/42 - Regular 16,00,000.-
Development 30,00,000.-

Income for Financial Year 2040/41	-	Out-patient tickets	-	Rs	11,919.-
		From Paying Beds	-	Rs	55,016.-
		From X-ray	-	Rs	49,281.-
		From Laboratory	-	Rs	56,705.-
		Total Income	-	Rs	1,72,962.-

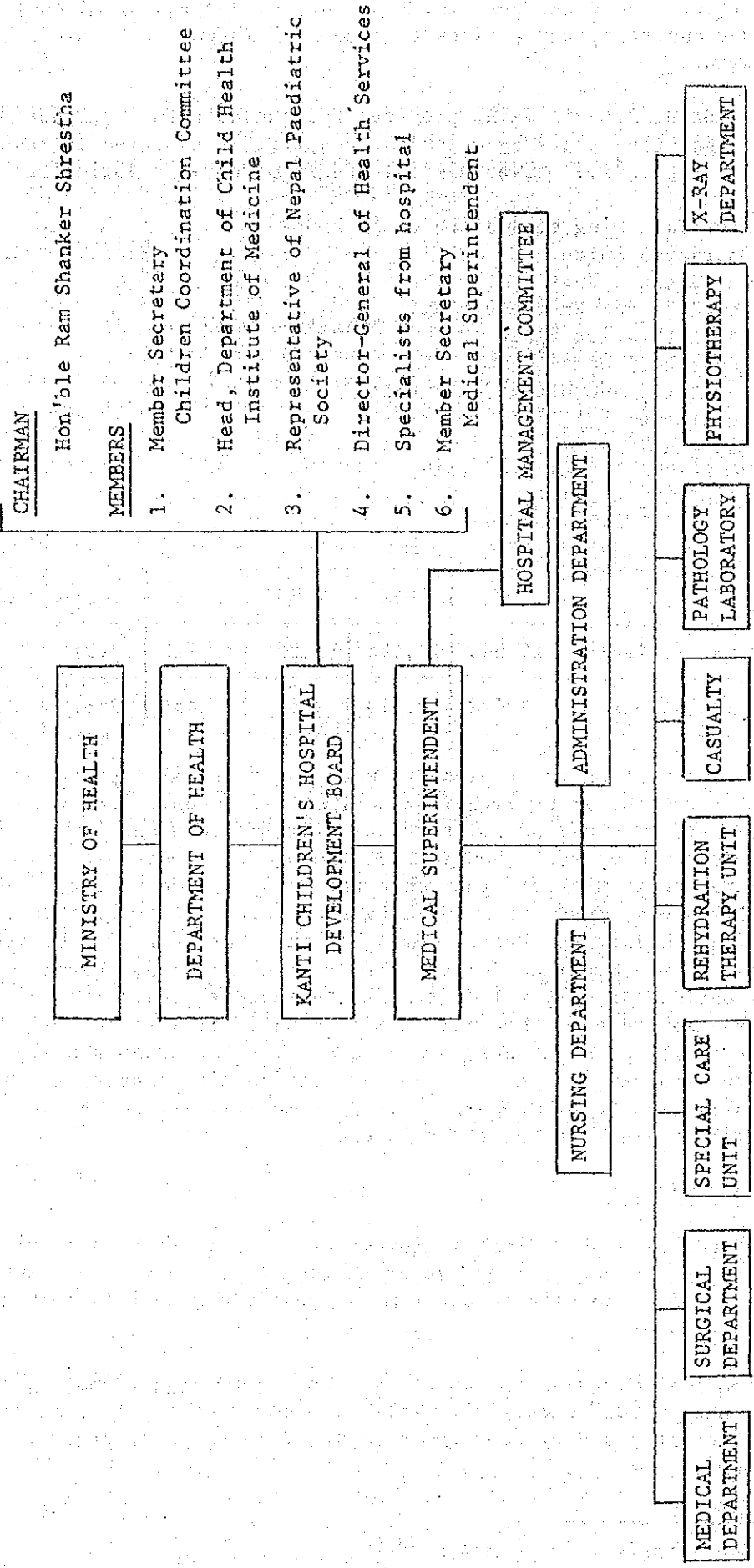
Total Hospital Running Cost (2040-41)

Total Budget	-	Rs.	14,47,480.-
For Personnel Pay	-	Rs.	7,27,342.-
Benefits	-	Rs.	1,72,223.-
Food and Milk	-	Rs.	1,78,000.-
Medicine and Equipment	-	Rs.	2,00,000.-



Hospital Future Plan

Services will be started as soon as possible so that the whole Hospital functions. Once the Anaesthetic Department is established then the Accident and Emergency Department will function properly. Plans are underway to a 'Kuruwa Char' for the parents of sick children whose homes are at a distance from the hospital. This will have cooking, washing and toilet



facilities. The other departments to be fully operational once the extra manpower and equipment arrives are Neonatal Intensive Care and Maintenance Department.

A Master Plan is being prepared for the hospital's expansion in the next twenty-five years by which the hospital is expected to have 250 beds. The master plan will have building programme for the following:

- A private wing consisting of 50 beds
- Operation Suite
- Out-patient Unit
- Accident and Emergency Unit
- Administrative Block
- Laboratory Unit
- New X-ray and Ultra Sound Unit
- Auditorium
- Canteen

Medical Demand - Existing, Potential and Future Trends

	2031	2032	2033	2034	2035	2039	2040*
Out-Patients	16,866	17,466	17,995	17,713	17,914	20,172	26,932
Admissions	2,422	2,473	2,663	2,454	2,672	3,319	4,485

As is well known at present, when the official capacity of the hospital was 50, it was running to almost 100 beds. Even with the increase to 150 beds, the demand for services will increase and it will not be unusual to see extra beds even then so that the hospital possible has about 200 beds running. It is expected that once the Tribhuvan University Teaching Hospital is fully operational, then the effect of this will be felt at the Kanti Children's Hospital. People coming to that hospital will be directed towards Kanti Children Hospital for the care of the children. Furthermore once the Kanti Children's Hospital facilities increase e.g. as with this help from the Japanese Government, then more children patients will not only be referred here but will come on their own accord. The fact that the Nepal Paediatric Society is based at Kanti is another contributing factor in this, for all paediatricians being members of it have most likely worked at Kanti Children's Hospital or are aware of its existence.

Medical Industry

Production of Medical equipment can be said to be non-existent. All have to be brought in from out of the country. As is prevalent elsewhere, the trend is gradually to use some disposable materials such as syringes, giving sets etc.

Medical drugs are produced by a couple of drug firms e.g. Royal Drugs Ltd., Chemi Drug Industries. These two concerns supply a maximum of 13-14% of the country's drug requirement. The full range of products is also not available.

* 2040 = April 1983 to March 1984.

Because of lack of medical equipment supplies on a large scale, the maintenance service as provided elsewhere is almost negligible. However, with the increased volume of equipment being supplied it is hoped that this type of after-sales service will be provided.

General Information

The population of Nepal is just over 15 million with an Annual Growth Rate of 2.66%. It has been estimated that at present the birth rate and death rate are 42 and 19 per thousand. Average life expectancy of the Nepalese is 45 years. When compared to other developing countries both birth rate and death rate are very high and average life expectancy is very low. Maternal Mortality Rate is 8.5 per thousand and total fertility rate is 5.9 per thousand. The standard of health in Nepal is considered to be very poor. Majority of the people do not have access to basic health services, malnutrition is common and infectious diseases are still widespread. The existing health services in the country is as follows:

Hospitals	-	83
Hospital beds	-	3321
Health Centres	-	26
Health Posts	-	744
Ayurvedic Clinic	-	113
FP/MCH clinics	-	210

It may be stated that there is a general shortage of manpower, though as far as Kanti Children's Hospital is concerned it may be said that the shortage that is most felt is that of nurses. Even with the increased number of posts that will be available as from this financial year, the nursing personnel will still be in short supply. It is hoped that the Hospital Board will, as it is doing now, appoint some extra personnel.

Regarding the training of health personnel, the Institute of Medicine is responsible for training some of the basic levels, all of the middle level and all of the higher level of health manpower.

Basic Level	-	Assistant Nurse Midwife Community Medicine Auxillary
Middle Level	-	Health Assistant Ayurvedic Assistant Nurses Laboratory Technicians Pharmacy Assistant Radiographer Physiotherapist
Higher Level	-	Medical Graduate - MBBS Doctor Nursing Graduate - Bachelors - Midwifery - Adult Medical/Surgical - Community - Paediatric Post Graduate - Generalist i.e. Family Practitioner.

The middle level manpower such as health assistants, ayurvedic assistants, nurses of Mahaboudha Nursing Campus do their practical training at Kanti Children's Hospital. The Graduate courses for MBBS and Bachelor Nursing as also the Post-graduate Generalist course also have their practical training at the Kanti Children's Hospital. However with the starting of the 2-year Bachelor Nursing (Paediatrics) from this year, an increasing amount of nursing training will take place at Kanti.

The number of Health Personnel currently available is as follows:

Doctors	-	801
Dentists	-	18
Nurses	-	500
Assistant Nurse Midwife	-	1284
Health Assistant/Senior AHW	-	770
Rural Health Worker	-	1600

Medical Practice in this country was regulated by a law known as 'On Medical Practise' in the Law of the Land. (Elaz Garne Ko in Mulki Ain). Following this the Nepal Medical Council Act 2020 was passed and this governs medical practise in this country. It is necessary for doctors who practise in this country to be registered with the Nepal Medical Council. Besides this, the other relevant acts are as follows:

Infectious Diseases Act	-	2020
Smallpox Control Act	-	2020
Nepal Medical Council Bye-Laws	-	2024
Drug Control Act	-	2033
Medicine Act	-	2035

Utilities and Other Services

Electric Power:

The Nepal Electricity Corporations 11 KV overhead line runs along the eastern side of the Institute of Medicine classroom block which is situated on the eastern side of Kanti Children's hospital. A line has been brought from there to a point by the side of the present out patients block.

1. Voltage

Primary voltage - 11 KV 3 phases 3 wires 50 Hz

Secondary voltage - 400 V/230 V 3 phases 4 wires 50 Hz

However voltage fluctuation is likely to during peak periods such as 5.00pm to 7.30pm. power failures do occur and can be due to scheduled maintenance of lines or due to failures and lightening strikes.

City Water Supply:

The present supply is from the main water mains which follow the electric supply lines along the main road. The present supply is very limited but the Water Supply and Sewerage Board is improving the water supply very soon by way of augmentation to the existing source through deep wells which are being bored in various parts of Kathmandu Valley.

Fuel:

In the hospital, electricity is mainly used for cooking. Problem can arise when the power break down occurs for long period. The back-up service is by use of kerosene heaters and cookers.

Local Conditions and Access to the Hospital

The main metalled road is about 100 metres from the hospital gates. This intervening road is presently gravelled but is expected to be asphalted within this current fiscal year. The hospital itself is close to the Institute of Medicine building. It is hoped that the triangular area in front of the hospital will be developed into a park with the collaboration of the Institute of Medicine and Kathmandu Nagar Panchayat (Municipal Authority).

Survey of Costs

The cost of building materials tends to be going up most of the time but it is generally accepted that the annual inflation rate is about 10%. The cost of building materials and labour costs is as given below:

Bricks per thousand	-	Rs. 480.-
Cement 50 kg. bag	-	Rs. 130.-
Wages of mason/carpenter	-	Rs. 45 per day
Wages of labourer	-	Rs. 20 per day

General Information

To improve the Health of the Nation, the Ministry of Health of His Majesty's Government has prepared a Long-Term Health Plan for the period 1975-1990. Some policies accepted to bring this about are:

1. Establishment of health posts in the rural areas to provide general curative and preventive services.
2. To establish at least one 15-bedded hospital in each of the 75 districts of the kingdom.
3. To curb the growth of population.
4. To increase the supply of health technicians by utilising and improving the existing facilities.
5. To increase the production of medicines in the country and to achieve self-sufficiency.

A large number of diseases occur as a result of the poor water supply. The municipal water supply reaches only 11% of the total population. Of this 83% of the urban population and 6.4% of the rural population have access to such facilities. The target of the 6th Plan is to provide piped water to 87.2% and 25.8% of the urban and rural population respectively.

Except for life insurance no system exists for general insurance for health. Some institutions and business firms provide some cover for their employees.

As stated already the Kanti Children's Hospital is one of the specialist Hospitals in the country. As outlined, it is a referral centre and also a place where paediatric teaching for a substantial number of health personnel takes place. Almost all paediatricians in the country have worked here prior to going to other areas of the country. What must be noted is the fact that though this hospital is in the capital, it is becoming increasingly accessible to Nepalese living in different parts of the country because of the available air connections and also the East-West, North-South network of roads. The argument that Kanti Children's Hospital just caters to the needs of children in the valley of Kathmandu is no longer true.

Nepal faces a number of problems and the problem of health for its children is one of the major ones. Children under 15 constitute 40% of the population. It has been accepted that population control is essential if Nepal is to progress. Family Planning will only become successful when people are convinced that their children are likely to survive and that large families are not desirable in the national interest when the country is trying to effect some population control. The existence of a good children's hospital, as is envisaged with this improvement project will help in attaining that by being a model on which the Children's Department of the various Zonal Hospital can be based and in which the personnel can be trained. The fact that the future doctors and nurses of this country are being trained here is no small factor. The investment in this project will therefore have much more far reaching effects than what is initially apparent.



NATIONAL BOARD OF EXAMINATIONS

ANSARI NAGAR, RING ROAD, POST BOX No. 4931,
NEW DELHI - 110029.

Ref No. 12-(32)/ACC/I/N/81-NBE/ 8956

Dated - March 28, 1983

The Administrator,
Nepal Paed. Society,
Kanti Children's Hospital,
Maharajganj, G.P.O.,
Box No. 2668, Kathmandu,
NEPAL.

Subject: Recognition of Kanti Children's Hospital, Maharajganj,
Kathmandu, Nepal.

Dear Sir,

I write to inform you that on the recommendations of the Accreditation Committee, the National Board of Examinations at its meeting held on 21st March, 1983 approved the recognition of Kanti Children's Hospital, Maharajganj, Kathmandu, Nepal for training of candidates appearing in the Examination conducted by the Board in the following speciality:

Paediatrics

2 candidates per year.

The recognition will be valid for a period of 5 years to be renewed only after reinspection or reconsideration of the Institution/Hospitals.

It has been observed that your hospital has not yet paid the Inspection Fee amounting to Rs.5000/- (Rupees Five Thousand only). It may please be understood that recognition should be provisional until the Inspection Fee is paid. It shall be withdrawn if the Inspection Fee is not paid. You are, therefore requested to remit it immediately.

Observations/suggestions of Inspectors:

The following observations of the Inspectors may please be noted for necessary action:

'The one lacuna found was lack of adequate library facilities. The hospital should have more books and should subscribe to many more journals. Medical record keeping is also in its infancy'.

The action taken on the observations of the Inspectors may please be reported to this office for further necessary action.

I am also enclosing herewith a copy of Rules & Regulations relating to general information regarding the Examinations and syllabus for the speciality.

Yours faithfully,

I.B. Gaur
(DR. I.B. GAUR)

SECRETARY-CUM-REGISTRAR

*President of Nepal
Med. Socy*

TOP TWELVE IN PAEDIATRICS IN NEPAL

by

Dr. P.L. RAJBHANDARI, M.B.B.S., D.P.H., D.C.H. (LONDON)
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and

Dr. P.L. SINGH, M.B.B.S., M.R.C.P., D.C.H.
Paediatrician, Kanti Hospital

This article is based on an analysis of approximately 17,000 cases seen in the Children's Outpatient Clinics of Kanti Hospital and Bir Hospital for a period of one year each case, from December 1969 to November 1970. The main purpose of this exercise is to ascertain the leading diseases with which children are commonly brought to the outpatient clinics here. The result of our analysis as tabulated below has shown that the following twelve diseases form the top twelve diseases since they constitute about 84 per cent of the total number of cases seen:-

Diseases	Total No. of Cases	Percentage
I. Diarrhoeas	6129	36.15 per cent
II. Upper Respiratory Tract Infections	3089	18.22 per cent
III. Bronchitis, Bronchopneumonia and Pneumonia	2875	16.96 per cent
IV. Pertussis	562	3.32 per cent
V. Tuberculosis	369	2.81 per cent
VI. Skin Infections	367	2.17 per cent
VII. Urinary Tract Infections	328	1.93 per cent
VIII. Eye and Ear Infections	227	1.34 per cent
IX. Ricketts	139	0.82 per cent
X. Rheumatic fever	102	0.62 per cent
XI. P.U.O.	61	0.41 per cent
XII. Meningitis and concussions	59	0.31 per cent
Total	14307	84.40 per cent

Member of District

1 Source

JNMA APRIL 1971

A BIRTH REF 131

This can be visualised by the following, which show (Fig 1):

I

RESPIRATORY DISEASES (336) 49%

1. Pneumonias (228) 67.8%	5. Pleurisy (7) 2.09%
(a) Bronchopneumonia 213	6. Other Respiratory (13) 3.84%
(b) Lobar Pneumonia 10	(a) P. Eosinophilia 6
(c) Segmental pneumonia 5	(b) Lung Abscess 3
2. Urti (31) 9.23%	(c) Bronchial Asthma 2
3. T. B. Lungs (31) 9.23%	(d) Emphysema 1
4. Bronchitis (26) 7.73%	(e) Bronchiolitis 1
(a) Asthmatic 10	
(b) Simple 16	

II

ALIMENTARY DISORDERS (177) 25.3%

1. Gastroenteritis & Enteric Disorders (67) 37.86%	4. T. B. Abdomen (15) 8.47%
2. Malnutrition (47) 26.56%	5. Other Alimentary Disorders (28)
3. Liver Diseases (20) 11.29%	(a) Worms 8
(a) Infective Hepatitis 6	(b) Dysentery group 4
(b) Amoebic Hepatitis 9	(c) Intestinal Obstruction 6
(c) Cirrhosis Liver 2	(d) Pain Abdomen? cause 4
(d) Splenohepatomegaly 2	(e) Failure to Thrive 4
(e) Biliary Atresia 1	(f) Feeding difficulty 1
	(g) Rectal polyp

III

NEUROLOGICAL DISORD. (59) 8.43%

1. Meningitis (26) 44.07%	(d) Muscular Dystrophy (Duchenne) 1
(a) Tubercular 14	(e) Infantile Hemiplegia 1
(b) Non-tubercular 12	(f) C.S. Thrombosis 1
2. Convulsion (15) 25.43%	
3. Other Cns Disorder (12) 20.34%	4. Cerebral Palsy (2) 3.39%
(a) Poliomyelitis 2	5. Psychological (4) 6.78%
(b) Infective Polyneuritis 1	(a) Enuresis 2
(c) Herpes Zoster 1	(b) Habit Spasm 1
	(c) Hysterical Pain Abdomen 1

IV

URINARY TRACT DISORDERS (30) 4. 23%

1. Urinary Tract Infection	(11.) 36.67%	3. Nephritis	(8.) 26.67%
2. Nephritic Syndrome	(11.) 36.67%	4. T. B. Kidney	1.

V

BLOOD DISEASES (17) 2.43%

(b) Hypochromic anaemia	8	(d) Aplastic Anaemia	1
(b) I. T. P.	5	(e) ? Haemophilia	1
(c) Leukaemia	1	(f) ? Lymphogranuloma	1

VI

INFECTIOUS DISEASES (17) 2.43%

(a) Pertussis	6	(c) Measles	8
(b) Diphtheria	2	(e) ? Neonatal Tetanus	1

VII

CARDIO-VASCULAR DISEASES (9) 1.3%

(a) Rheumatic Carditis	1	(e) ? V. S. D.	3
(b) Double Mitral	2	(f) C. C. F.	2
(c) Dextrocardia	1		

VIII

COLLAGENOSIS (7) 1.0%

(a) Rheumatic Fever	4	(c) Rheumatoid arthritis	1
(b) Scleroderma	2		

IX

CONGENITAL ABNORMALITIES (4) 0.57%

(a) Cleft palate	1	(c) Achondroplasia	1
(b) " lip	1	(d) ? T. O. Fistula	1

X

METABOLIC (2) 0.3%

Diabetes mellitus 2

XI

DEFICIENCY DISEASES (3) 0.43%

(a) Ricketa	2	(b) Vit. A Deficiency.	1
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XII

TUBERCULOSIS (2) 0.3%

XIII

OTHERS (32) 4.57%

Pyrexia of Unknown Origin
Poisoning, Drug allergy
Skin diseases, etc.

5th Sem
M B B S
Centre

Prepared by:
Dr. H. Dixit
Dr. R. Adhikari

Course for Child Health

(For the Diploma of General & Community Medicine)

The course in Child Health will enable students to:

1. Acquire the skill & develop attitudes to look after the health of child in different settings.
2. Supervise subordinate staff.
3. Develop attitudes to work as a member of health care team.
4. Develop skill to plan & implant school health programme & under five clinics.

The course itself has been divided into two parts, the first part will be taken up during the 5th semester & the second part in the 6th semester. The following are the contents & course objectives for the fifth semester.

Contents

1. General Paediatrics
(General Principles in child health)

Course Objectives

At the end of the course the students will be able to:

1. Take complete history from children, parents or guardians, including antenatal & postnatal, diet & development history.
2. Develop skill to examine child of any age.
3. Assess the nutritional & developmental status of the child.
4. Recognise signs & symptoms of illness.
5. Suggest appropriate test on blood, stools urine & radiological investigations & skin tests.
6. Recognise & differentiate between normal & abnormal growth and development.
 - Rate of growth
 - Patterns of gain in weight, height, head circumference
 - Dentition
7. Recognise nutritional deficiency diseases, plan & advise on nutritional requirements of child of any age.
8. Develop immunisation schedule.
9. Develop skills & attitudes to organise under five clinics.
10. Recognise course, signs & symptoms of diarrhoeal diseases & acquire skill to manage such cases.

Contents

2. Paediatric Emergencies.

3. A. Infectious disease

B. Respiratory diseases

C. Skin disorders

D. Allergic & Immunologic disorders.

A. Infections

I. Viral

-Small Pox

Chickenpox

Measle

Mumps

Poliomyelitis

II. Bacterial

-Pertussis, Diphtheria

-Typhoid, Tuberculosis

B. Respiratory diseases.

i. Upper respiratory tract infection

ii. Common ENT problems

iii. Pneumonia, Bronchopneumonia

iv. Bronchiectasis, Lung abscess.

v. Pleural effusion

vi. Pneumothorax

viii. Respiratory Failure

C. Skin diseases.

i. Leprosy

ii. Impetigo

iii. Cellulites, Furunculosis

iv. Candidiasis, Ringworm

v. Pediculoses, Scabies.

Course Objectives

1. Learn to recognise & institute appropriate managements in common poisonings like kerosine, Aspirin, Iron.
2. Learn to recognise & institute appropriate management in :
Hypovolaemic shock.
Electric shock.
Anaphylactic shock
With respect to the following diseases the students will :
 1. Recognise signs, symptoms produced in common infective diseases of respiratory system & in common skin disorders, allergic & immunologic disorders.
 2. Relate cause & pathophysiology to clinical symptoms.
 3. Develop skill to manage such cases.
 4. Understand the appropriate prophylactic measures available & be able to explain it to the patients and or their relatives.
 5. Recognise appropriate case for referral

CHILD HEALTH

6th Semester

Curriculum

General Objective

This course is the second part of curriculum in child health for Diploma in General and Community Medicine. After completion of the course the student will acquire knowledge, skill and attitude to diagnose and manage common paediatric problems and develop programme for school health and under five clinics.

Course content.

Specific Objective

1. Haematologic Diseases.

- At the end of course the student will be able
- Diagnose blood dyscrasia.
 - Recognise sign and symptoms of blood disorders
 - Leukaemia
 - Haemorrhagic disorder
 - Congenital haemoglobinopathies
 - iotrogenic disorders
 - Haemolytic anaemias
 - Plan short and long term therapy in causes of haematological disorders.
 - Develop skill to plan for investigation of such cases
 - Plan for safe blood transfusion and recognise hazards of transfusion.

Liver disorders

- Recognise sign symptoms and pathophysiology and learn the principle of management in
- Hyperbilirubinaemia
 - Infective hepatitis
 - Biliary atresia
 - Infantile cirrhosis
 - Portal hypertension

3. Disease of CNS

- Recognise sign, symptom, pathophysiology of the following conditions and learn to institute emergency treatment in
 - Coma
 - Convulsions / fits
 - Meningitis of bacterial, viral and fungal origin
 - Encephalitis
- Tumours-retinoblastoma

Cardiovascular disease

- Recognise cyanotic and non cyanotic disease and learn to institute emergency treatment in
- Cyanotic spells
 - Congestive heart failure in small infants and young children.
- Develop skill and attitude for counselling parents.

cont...

Contents

- D. Allergic & Immunologic disorders.
- 4. Neonatology:

Course Objectives

- i. Bronchial Asthma
 - ii. Rheumatic Fever
- The students will ;
1. Develop skills to examine the neonates.
 2. Elicit neonatal reflexes & recognise their significance.
 3. Detect malformations.
 4. Recognise & learn skill to manage appropriate therapy in High-risk neonates like: Neonatal
 - a) Birth trauma
 - b) Birth asphyxia
 - c) Low birth weight
 - d) Difficult labour or caesarean section babies. Infant of Diabetic mother.
 - e) Hypoglycaemia
 - f) Hypothermia
 - g) Respiratory distress.

*** **

5. Urinary Tract disease

a) Recognise sign symptom, pathophysiology of common urinary tract diseases in children and learn to manage

- Urinary tract infection
 - Acute glomerulonephritis
 - Renal failure - acute, chronic
 - Nephrotic syndrome calculi of urinary tract
 - Acute renal failure
- Neoplasm - wilms tumour

6. Endocrine disease

Recognise the signs, symptoms, pathophysiology of the following condition and learn the management of

- Cretinism
- Goiter
- Dwarfism

7. Congenital malformation

Recognise and institute initial therapy and advise and refer to appropriate authority for treatment of

- Cleft lip, cleft palate
- Tracheoesophageal fistula
- Imperforate anus
- Diaphragmatic hernia
- Congenital pyloric stenosis

8. Chromosomal disorder

Recognise, investigate and give appropriate advice in cases of

- Down's syndrome
- Tumors syndrome

9. The child with disabilities

Recognise the significance of childhood disabilities specially with reference to the following conditions

- Orthopaedic problems
- Hearing problems
- Visual problems
- Mental problems
- Cardiac problem etc.

PAY SCALE FOR GOVERNMENT SERVANTS, HMG, NEPAL.

Non-Gazetted (Technical)

1. Class Four	520-9(10)-610 E.B. 11(10)-720
2. Class Three	600-11(10)-710 E.B. 12(10)-830
3. Class Two	715-13(10)-845 E.B. 15(10)-995
4. Additional Scale	875-16(16)-1131
5. Class One	895-16(10)-1055 E.B. 18(10)-1235
6. Additional Scale	1095-20(16)-1415

Gazetted (Technical)

7. Class Three	1430-40(9)-1790 E.B. 45(8)-2150
8. Assistant Secretary	1610-45(8)-1970 E.B. 50(7)-2320
9. Class Two	1825-50(8)-2225 E.B. 55(6)-2555
10. Class One	2320-70(10)-3020
11. Additional Secretary	2675-80(5)-3075
12. Special Class	3075-100(4)-3475

Gazetted Class One - Senior Paediatrician, Medical Superintendent,

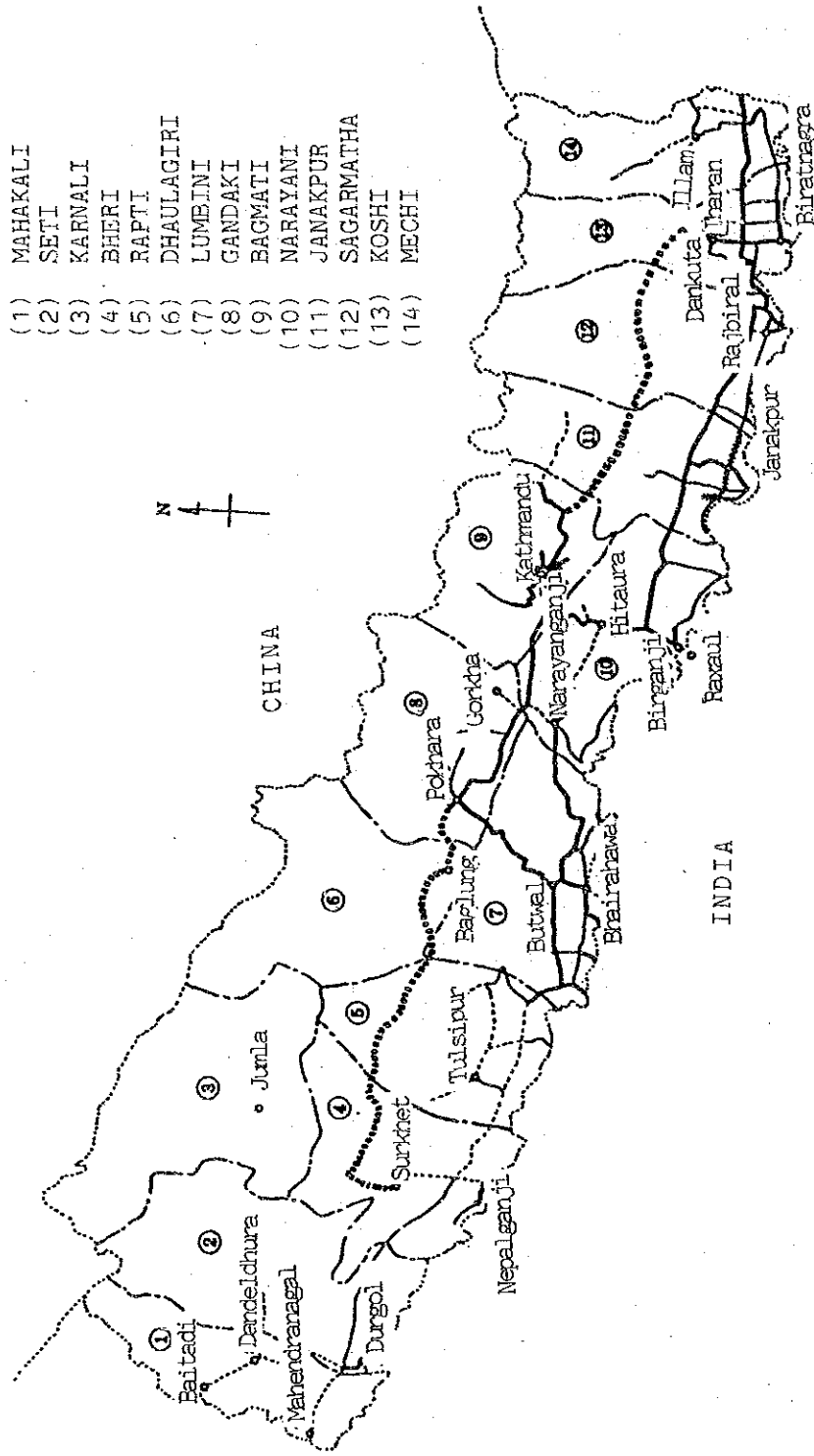
Gazetted Class Two - Paediatrician, Matron, Medical Technologist,
Radiologist.

Gazetted Class Three - Medical Officers, Sisters, Administrative Officer.

Non-Gazetted Class One - Staff Nurses, Senior Auxillary Health Workers,
Health Assistants, Dietition, Laboratory
Technicians, X-Ray technicians, Assistant
Physiotherapist.

Non-Gazetted Class Two - Assistant Nurse Midwives, Assistant Laboratory
Technician, Dark Room Assistant, House Keeper,
Auxillary Health Workers, Electrician cum
Plumber.

MAP OF NEPAL



JICA