

PN-111-757

NEPAL CHILD SURVIVAL PHARMACEUTICALS  
RETAIL SECTOR STUDY

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A Report Prepared By PRITECH Consultant:  
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During The Period:  
AUGUST 15 - SEPTEMBER 2, 1987

TECHNOLOGIES FOR PRIMARY HEALTH CARE (PRITECH) PROJECT  
Supported By The:  
U.S. Agency For International Development  
AID/DPE-5927-C-00-3083-00

AUTHORIZATION:  
AID/S&T/HEA: 4/6/88  
ASSGN. NO: SS 213

## ACKNOWLEDGEMENTS

I would like to express my thanks and appreciation to all those who have given of their time and energy throughout not only this consultancy but also during the previous efforts that have contributed to the concept, and now reality, of Pharmaceuticals for Child Survival.

It has been a pleasure and privilege to work with such capable colleagues as are at New Era, the Department of Drug Administration, and the Institute of Medicine. Without their enthusiasm and expertise, none of this would have been possible.

The support of the Agency for International Development, from both Washington and USAID/Nepal, has been instrumental, not only for funding but also for their personal support, encouragement, and patience.

Finally, thanks to the PRITECH Project for their willingness to creatively sponsor certain parts of this study.

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### RETAILERS

Thapathsh Medical Hall  
Sudha Medical Hall  
Bagmati Pharmacy  
Others

## TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION	1
II. BACKGROUND AND OBJECTIVES	1
III. STUDY DESIGN, SAMPLING, AND DATA COLLECTION	2
Part 1: Importer/Manufacturer/Product Data	2
Part 2: Importer Survey	4
A. Field Test of Importer Survey Form	4
B. Importer Test Results Summary	6
Part 3: Retailer Survey	7
A. Field Test of Retailer Survey Form	7
B. Sample Data Interpretation	8
1. Disease/Symptom Results	8
2. Results from Retail Top Selling Products Data Collection	11
C. Sampling Plan	11
D. Data Entry	11
IV. NEPAL NATIONAL STANDARD TREATMENTS	13
V. TRIP SUMMARY	14
ANNEXES	15ff
A. Draft Data Collection Instruments	
A.1. Importer Survey	
A.2. Retailer Survey	
B. Draft Outline of NEW ERA Report	
Draft Study Timeframe	
C. Standard Treatments (DEM Report)	
D. Nepal Essential Drug List	

## I. INTRODUCTION

The extremely high morbidity and mortality rates of childhood diseases in Nepal place a huge burden on the country, not only in terms of economic drainage but, more importantly, in terms of human suffering. Whereas improved sanitation, nutrition, education, and economic conditions play a critical role in the prevention of childhood diseases and deaths, it is also true that the availability and proper use of key medical products can be a determining factor. Immunizations, oral rehydration salts, prenatal supplements, certain antibiotics, and other essential drugs have the potential to prevent premature death and help children survive to adulthood.

The purpose of this consultancy was to assist with an in-country survey being conducted by New Era in collaboration with HMG, the Department of Drug Administration (DDA), and the Institute of Medicine (IOM). The Nepal work is part of a larger Child Survival Pharmaceuticals (CSP) study involving Indonesia and Egypt as well. The results from the three countries will be presented at a workshop in Washington, D.C. later this year. Participants at the workshop will be from the Agency for International Development, World Bank, and other donor and development institutions.

## II. BACKGROUND AND OBJECTIVES

No one knows exactly how many pharmaceutical products are available in the Nepali commercial market. When this study was initiated, DDA estimated they had registered from 4,000 to 8,000 products. From our current calculations we estimate that there must be more like 13,000 to 21,000 different pharmaceutical products currently available in retail outlets.

We know from computer data entry of DDA importer files that there are currently 428 importers licensed by DDA, who import products from a reported 450 manufacturers. The manufactures are overwhelmingly Indian. It is estimated that there are approximately 3,000 to 5,000 retail stores throughout Nepal.

The objectives of this consultancy were primarily to assist my Nepal counterparts with getting the private sector surveys started. Specific tasks included advising New Era on proposal development for USAID funding, field testing importer and retailer survey instruments, sample selection determination, data coding, computer entry, and assistance in analyzing the preliminary study findings which are described in this trip report.

Copies of the study draft report outline and estimated timeframe can be found in Annex B.

### III. STUDY DESIGN, SAMPLING, AND DATA COLLECTION

The study has three parts:

Part 1 -- data entry of importer by location and by the manufacturers they import from including related data on their products, prices and respective therapeutic class coding of products.

Part 2 -- a survey of the importers intended to get an estimate of the volume and type of products being brought into Nepal.

Part 3 -- a survey of retailers intended to get an estimate of what drugs are being recommended for key diseases and symptoms.

Each of the parts is discussed below.

#### PART 1: IMPORTER/MANUFACTURER/PRODUCT DATA

Thus far, New Era and DDA activities have documented by computer analysis that there are 428 registered importers in Nepal who purchase products from over 450 primarily Indian manufacturers.

It was previously believed that the vast majority (over 80%) of the importers were located in Kathmandu. According to our analysis, the importers are located much more widely, with only about 52% in the greater Kathmandu area. The importers have been sorted by city to get a rough view of the wholesale supply system. Figure 1 is a map of Nepal depicting the general location of importers.

Also under Part 1, data from the *Nepal Chemist and Druggist Retail Price Book 2040* were entered. Thus far, 6,957 products available from 67 manufacturers have been coded by therapeutic class and entered into a computer database.

New Era, in their final report, will sort these products by therapeutic class and calculate the percent of products each therapeutic class represents. The therapeutic class coding is being completed by DDA and IOM personnel.

At some point in the future, when all the product data are entered, an analysis could be done on the location of each importer and a listing of which products from which manufacturer are being sold in that part of the country. These data could also be sorted by therapeutic class to give an idea of the types of products that are being distributed. If these data were to be matched with epidemiology data (service statistics), a clearer picture of regional need vs. supply and need vs. drug use could be obtained using the drug estimation model (DEM).

We anticipate that once DDA has a computer system in place, all the data generated by this study (the importer, manufacturer, product and respective codes) can be transferred to their computer system. This will give them a headstart in their data entry and analysis which will be useful in performing their official duties.

# NEPAL

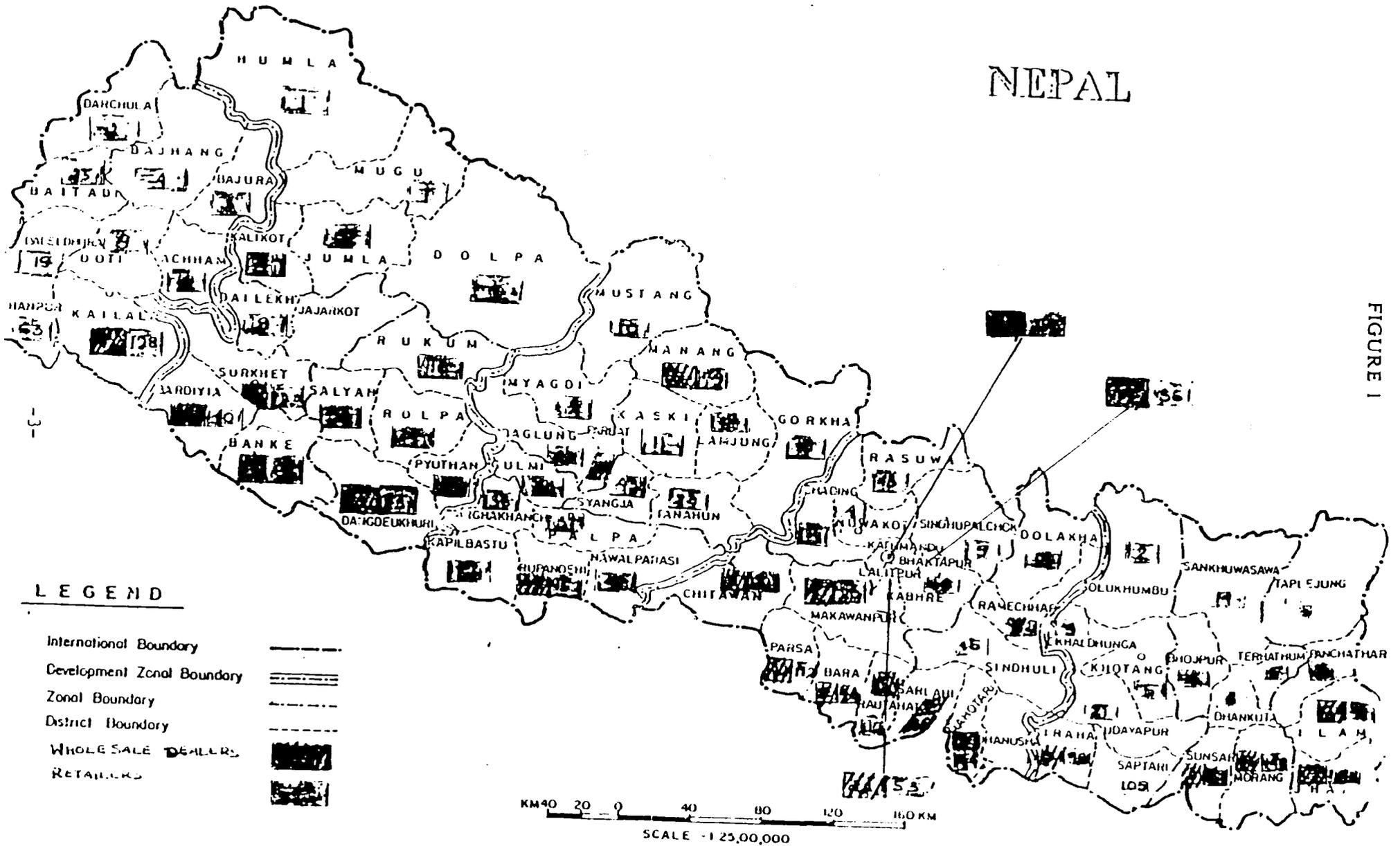
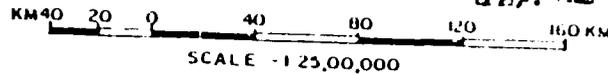


FIGURE 1

## LEGEND

- International Boundary
- Development Zonal Boundary
- Zonal Boundary
- District Boundary
- WHOLE SALE DEALERS
- RETAILERS



## PART 2: IMPORTER SURVEY

The main questions expected to be answered by the importer survey are:

- What quantity of key CSP pharmaceutical products were imported in 1986?
- What was the total wholesale value of all drug products imported into Nepal?
- What are the top selling (most popular) products being imported, and in what quantities are they being imported?

### A. FIELD TEST OF THE IMPORTER SURVEY FORM

A draft survey form was circulated for review and comment by DDA Officials and Dr. Kafle of IOM. It was then tested at MEDICHEM CONCERN, LTD., an importer in Kathmandu. The owner of the company is also the President of the Nepal Chemist and Druggist Association. The company records were in excellent condition, with monthly sales listed by month on forms specific to manufacturers.

The results of the field test, however, were not encouraging. The owner of the company was not willing to share information on his total volume of sales and wholesale costs and did not believe that other importers would be willing to do so either. It seemed he might have had some concern about revenues and taxes.

He was very willing, however, to give us access to his monthly sales ledgers. This particular importer purchases products from 7 manufacturers, so there were a total of 84 monthly ledgers to be analyzed. Interestingly, we were told that yearly sales summaries were not kept. As expected, all products were listed by brand name, some of them as foreign as they were weird. We were also given the importer's retail price lists, but not the manufacturer's price list.

Rolling up our sleeves, we plunged into the first company's monthly sales sheets (Fine Chemical Co). We analyzed each month's sales to obtain the top 20 products with sales by volume (number of packages sold). Package size could not be taken into account, since package sizes were not indicated. We collected sales data on 24 of the 77 total products supplied by the manufacturer.

Fortunately, this particular company used a form indicating at the top 'Rupee-Wise Sales,' with a rupee amount filled in. This information was, however, only available for this manufacturer; ledgers of the six other companies carried no indication of monthly rupee sales figures. We were told that total monthly revenues were proprietary information.

To gather, analyze, and verify the data on one manufacturer's yearly sales took about 5.5 hours with the assistance of a computer. The results are listed in Table 1. The most interesting outcome was that the 24 products we collected data on represented 106% of the yearly total sales. In other

TABLE I  
Nepal Importer Survey Field Test Results

Manufacturer = PCI		Importer = Medichem Concern, Ltd., Kathmandu					
Thera CLASS	BRAND NAME	PACKAGE SIZE	GENERIC	QUANT	PRICE	TOTAL SALES	% TOTAL SALES
1	6.3 Chemotrin Forte tablets	Bot. 100 OR 250 tab?	Co-Trimoxazole	1028	426.26	438,195.28	25.0%
2	6.3 Amoxipen 250mg caps	10X12	Amoxicillin?	783	364.11	285,098.13	16.2%
3	6.3 Cifalex 500mg caps	Bottle of 100 caps		240	899.53	215,887.20	12.3%
4	6.3 Amoxipen 500mg caps	6 caps	Amoxicillin?	506	329.01	166,479.06	9.5%
5	6.3 Gentasporin 80mg inj	2 ml vial	Gentamycin	9918	13.90	137,860.20	7.9%
6	6.3 Synthocilin Plain Syrup	40ml bottle		7126	13.10	93,350.60	5.3%
7	6.3 Amoxipen Syrup plain	30ml	Amoxicillin?	7036	12.34	86,824.24	4.9%
8	6.3 Synthocilin 500mg inj.	Vial		6431	10.08	64,824.48	3.7%
9	6.3 Amoxipen Syrup Forte	30ml	Amoxicillin?	2355	21.61	50,891.55	2.9%
10	6.3 Chemotrin Syrup Plain	50 ml bottle	Co-Trimoxazole	3756	10.44	39,212.64	2.2%
11	6.3 Cifalex 250mg caps	Bottle of 100 caps		81	473.27	38,334.87	2.2%
12	6.3 Synthocilin 250mg inj	Vial		4996	7.09	35,421.64	2.0%
13	6.3 Cifalex Plain syrup	40 ml bottle		1344	24.45	32,860.80	1.9%
14	6.3 Synthocilin Syrup Forte	40ml bottle		1365	21.35	29,142.75	1.7%
15	14.1 Gentasporin HCEE eye drops	3 ml bottle	Gentamycin	4258	6.42	27,336.36	1.6%
16	14.1 Gentasporin EY eye drops	3ml bottle	Gentamycin	4369	5.34	23,330.46	1.3%
17	6.3 Cifalorin 500mg inj	vial		793	28.01	22,211.93	1.3%
18	6.3 Cifalorin 1 gram inj	vial		386	54.80	21,152.60	1.2%
19	6.3 Chemotrin Syrup Forte	50 ml bottle	Co-Trimoxazole	815	20.78	16,935.70	1.0%
20	6.3 Cifalex Drops	10 ml bottle		522	24.09	12,574.98	0.7%
21	6.3 Synthocilin 100mg Inj.	Vial		1847	6.30	11,636.10	0.7%
22	6.3 Synthocilin Drops	10ml bottle		796	12.07	9,607.72	0.5%
23	6.3 Cifalex Forte Syrup	40 ml bottle		208	45.24	9,409.92	0.5%
24	6.3 Cifalorin 250mg inj	vial		454	15.99	7,259.46	0.4%
TOTAL VALUE OF INDIVIDUAL PRODUCT SALES =						1,875,838.87	106.9%
<hr/>							
PCI RECORDED MONTHLY SALES							
Jan	208,567	TOTAL VALUE ALL COMPANY SALES = 1,755,462.00					
Feb	121,926						
Mar	156,424	PERCENT OF TOTAL SAMPLE PRODUCTS TO TOTAL SALES = 106.86%					
Apr	94,811						
May	49,650	92% of products surveyed are antibiotics.					
Jun	125,115	Total manufacturer products = 77; sampled 24 or 31%.					
Jul	129,620	In other words, 31% of PCI products accounted for 106% of sales????					
Aug	227,121						
Sept	132,873						
Oct	266,027						
Nov	75,346						
Dec	167,981						
<hr/>							
Total	1,755,462						

words using the yearly sales total obtained from the ledger and retail price information, 31% of the products represented 106% of sales! One could deduce that: (1) sales are being under-reported; (2) sales are being miscalculated; (3) the markup from wholesale to retail is formidable; or (4) we got almost all the data on their sales, and the products we did not collect information on were therefore insignificant with respect to total sales.

Additionally, considerable confusion and contradiction arose around the question of package size, especially when attempting price comparisons. For example, we found that one top-selling product was "Amoxipen" 500mg capsules packaged in units of 6 capsules. Even though the quantity sold was relatively low (506 units), the given price was high (Rps 329.01 or US\$14.96 which is \$2.49/capsule). This price is obviously wrong. What is more likely is that \$14.95 is the price for a carton of perhaps 100 boxes, each containing 6 capsules. There was no information available on carton size for any of the products. According to our calculations, the total sales of this product represented 9.5% of the importer's annual sales for that manufacturer.

"Chemotrin Forte" (Co-Trimoxazole) tablets provide another example of packaging/price confusion. The monthly ledger listed the package size as 10 tablets, changed in pencil to be 100 tablets. The price list had a price for bottles of 250 tablets. The total sales of this product represented 25% of the company's annual sales for that manufacturer.

In other words, product and sales data from the importers have all the signs of a GOGI data collection system, that is: Garbage In, Garbage Out.

## B. IMPORTER TEST RESULTS SUMMARY

The results of this field test led us to believe that collecting data from importers might not be feasible under this particular study for the following reasons:

- (1) At this time the importers do not seem willing to share data on total sales volume; without such data, it would be impossible for us to know what portion of the total market certain products and therapeutic classes represent.

Although it might be possible to gather total volume of sales data from importers, such an undertaking is probably beyond the scope, budget, and current technology of this study. New Era plans to test the survey form on a medium and a small importer to see if the same difficulties and inconsistencies are encountered. Then a decision will be made on whether or not to continue with the importer survey. Annex B contains a sample of the draft importer survey instrument.

- (2) The confusion about package sizes and respective prices would make it difficult to obtain true quantitative and qualitative information.

Another consideration is that in the relatively near future, the DDA will be receiving a computer. They also have discussed the possibility of requesting a copy of customs records on all imported pharmaceutical products. Therefore, in theory they could have all the data and mechanisms to officially gather, analyze, and act upon importer/product data. At that time USAID might want to consider providing technical assistance to DDA in the development of their drug management information system(s).

### PART 3: RETAILER STUDY

The focus of the retailer survey is to get an estimate on which products are being most commonly prescribed for specific prevalent child diseases. In discussions with Dr. Kaflić, key childhood symptoms and conditions were targeted. These are:

1. Diarrhea and dysentery (Dysentery was added after the field test because of the variety of products being recommended depending upon the severity of the diarrhea and dehydration).
2. Fever and Cough -- Covers the Upper Respiratory Infections.
3. Skin Infection and Itching (Scabies) -- Included because of its ubiquitous prevalence and the often inappropriate use of antibiotics to treat it.

Drug use data included: how much is usually prescribed, instructions to the customer on how to take the product (SIG), price for the course of therapy, and the generic name if available. Because of the disheartening results of the importer field test, we also added a question regarding the sales of their top 10 drugs.

All the products in the retail survey will be coded by therapeutic class according to the the Nepal Essential Drug List system. This will allow a detailed analysis of which therapeutic classes are being used for which disease, an analysis which could be helpful in designing training courses and future regulatory decisions. Additionally, information on training level is being collected which, when matched with prescribing patterns, will give an indication of the quality of dispensing by level of training.

#### A. FIELD TEST OF RETAILER SURVEY FORM

Being a conscientious consultant, I decided to do my own test of retailer prescribing practices. I selected a typical step-in pharmacy close to the Maternity Hospital, and after the customary "Namaste" greetings I told the fellow behind the counter that my child was sick with a high fever, diarrhea, and coughing. What should I do?

The fellow immediately went into action and pulled out about 10 products explaining that this one was for cough, these for diarrhea (including streptomycin), and these for cough... I listened apprehensively as he described his amazing assortment. Noting my look of confusion, he didn't stop, but proceeded to show me even more products. At last count there

were 23 different products on the counter. He must have secretly hoped I'd buy them all. After all was said and done, I finally bought some Jeevan Jal for the PRITECH ORS collection and some aspirin for myself. Luckily, our surveyors obtained better results.

Four surveyors were used to test the retailer survey form. They did a superb job not only in gathering the data, but also in suggesting ways to improve the forms. (A copy of the retailer survey form is in Annex A.) Data collected from the 5 test forms were entered into the computer for a preliminary analysis. Table 2 shows the result of this analysis.

## B. SAMPLE DATA INTERPRETATION

To demonstrate various ways the data might be interpreted, a mini-analysis of the test results has been done on each disease/symptom. A similar analysis could be performed whether 5 or 500 survey results were entered. **Caution: the descriptions below are samples only. No valid conclusions can be drawn, or implied, from such a small sample size.** Also these descriptions should not be considered all inclusive: that is, another person's perspective and analysis could produce other information also gleaned from these data.

### 1. Disease/Symptom Results

#### DIARRHEA

**Products** -- From Table 2, it is easy to ascertain which products are being usually prescribed for diarrhea. Only 2 (40%) of the 5 retailers recommended oral rehydration therapy. On the other hand, by looking at the therapeutic class codes, we can tell that 100% of the retailers prescribed some form of antibiotic, a treatment which is indicated only in a limited number of cases.

**National Essential Drug List (EDL)** -- Of the 5 products recommended for diarrhea treatment, 3 (60%) are on the National Essential Drug List.

**Cost** -- The average episode treatment cost was Rps. 16.16 or US\$ 0.73. If only oral rehydration salts had been prescribed, the treatment cost would be about 5 rupees for 5 packs of ORS costing 1 rupee each.

The average cost/episode treated could be multiplied by the estimated number of diarrhea cases to get a rough estimate of the retail resources being spent on diarrhea. This amount could be contrasted to the total cost if primarily ORS were used -- a potential cost savings in this case of about 50%. This comparison could be done nationally, regionally, or locally.

**Training** -- Two of the 5 retailers have received no pharmacy training at all. Both of them also prescribed inappropriate antibiotics. The two retailers who recommended the ORS have had pharmacy training, one being a pharmacist and the other a certificate pharmacist (completed the national training program). This indicates that training does appear to have been beneficial in the effective treatment of diarrhea.

TABLE 2

Example from Retail Survey Field Test Results -- Nepal 1987

FORM NO.	USUAL TREATMENT	GENERIC NAME	SIG	AMOUNT GIVEN	Rx cost	THERA CLASS	TRAIN LEVEL	ON EDL
DIARRHEA USUAL TREATMENT								
1S	Metron Syrup Rd-Sol	metronidazole ORS	1/2 tsp tds ut dict	120ml 1 pac	11.00 1.00	6.20 17.62	2	y y
2T	Kroridize Syrup? Jeevan Jal	Co-trimoxazole ORS	15ml x 5d ut dict	100 ml 5 packs	27.20 5.00	6.32 17.62	1	n y
3K	Sulflaguanidine	sulflaguanidine	4 tab/day	20 tabs	10.00	6.32	4	n
4x	Aristogel Syrup	metronidazole	1 tsp ds	30 ml	14.85	6.20	3	y
5S	Streptomycin Syrup	Streptomycin	1 tsp qid	120 ml	11.60	6.34	4	y
FEVER USUAL TREATMENT								
1a	Cetamol Syrup Roscellin 123mg/5cc syrup	paracetamol ampicillin	1/2 tsp tds 1/2 tsp tds	4 oz 4oz	8.00 6.30	2.00 6.30	1	y y
2T	Cetamol Syrup	paracetamol	1 tsp tds	120 ml	81.00	2.00	3	y
3K	Cetamol Syrup	paracetamol	3 tsp/day	3oz	7.85	2.00	2	y
4x	Cetamol Syrup	paracetamol	NA	4 oz	8.00	2.00	4	y
5a	Cetamol Syrup	paracetamol	1 tsp oz?	120 ml	8.00	2.00	3	y
COUGH USUAL TREATMENT								
2T	Coscopine Drops		na	15ml	10.55	26.20	3	n
3K	Tizlea Syrup		3 tds	15ml	12.60	26.20	1	n
4x	Avil Expectorant		1/2 q4h	120 ml	12.10	26.20	2	n
5a	Avil Expectorant		1 tsp tds	120 ml	12.30	26.20	4	n
SCABIES USUAL TREATMENT								
1a	Scabex Cotrim Syrup		at night 1/2 tsp bd	3 oz 90 ml	7.00 12.00	13.10 6.32	1	 y
2t	Avil syrup Scaben Caladryl Lotion	pheniramine benzyl benzoate calamine	bid bid bid	120 ml 90 ml 4 oz	7.67 12.75 6.64	 13.10 13.30	2	 y y
3k	Sophamycin skin oint Tarmycin oint		ut dict ut dict	1 tube 1 tube	9.60 5.00	13.00 13.00	4	n n
4x	Scabine	benzyl benzoate	NA	NA		13.00	3	y
5a	Avil syrup Scaben		bid	NA NA	8.00 12.30	13.00	2	 y

EDL = Essential Drug List, y = on list, n = not on list.

## FEVER

**Products** -- All of the retailers recommended Cetamol syrup (paracetamol), which is the drug of choice for child fever. The dosages are somewhat acceptable and effective. Only one retailer also recommended an antibiotic, ampicillin. Both ampicillin and paracetamol are on the EDL.

**Cost** -- the cost for paracetamol is about 81.00 Rps./4 ounces. The cost entry of Rps. 81.00 is probably a mistake, and should be Rps. 8.10 instead. One could return to form number 2T to verify this.

**Training** -- Even retailers with no training recommended paracetamol which probably means that it is public knowledge that this product is good for fever. Perhaps some social marketing was done.

## COUGH

**Products** -- Various combination cough preparations were recommended, the most popular being Avil expectorant. The only cough drug included on the EDL is codeine (antitussive, therapeutic class code 26.20). This printout does not indicate if any of these products contain codeine, but probably for children under 5 years old codeine could be too strong; however, they would sleep well.

**Cost** -- The price/volume varied greatly. The average cost was about Rps. 12.00, but the recorded volume was from 15ml to 120ml. This could be verified if it was deemed important.

## SCABIES (LUTO)

**Product** -- The products recommended for scabies were the most numerous with Scaban (benzyl benzoate), the drug of choice, being recommended by 3 of the 5 retailers. Calamine was recommended by 1 retailer. Both drugs are on the EDL.

**Cost** -- The average treatment cost/episode is Rps. 20.24 with the medium cost being around Rps. 18.

In summary, the data from the disease/symptom questions can be sorted and analyzed by:

- **usual treatments** -- to get the most commonly recommended products
- **products and SIGs** -- to check if the course of therapy and patient instructions are effective or not
- **average episode cost** -- to get an estimate of the private sector costs for treatments
- **EDL** to see how many products being used are on the National Essential Drugs List
- **level of training** -- to see what difference the level of training has on prescribing patterns and patient instructions.

## 2. Results from Retail Top Selling Products Data Collection

The last question on the retailer survey gathered data on the 10 top selling products. Information was collected on each product's generic name, counting unit, average quantity sold/month, price, therapeutic class, and finally, whether the product is included on the National Essential Drugs list.

Data from the test survey were entered onto an electronic spreadsheet (Table 3). After the data were entered, the total cost was calculated by taking monthly sales multiplied by the price. These figures were then sorted by decreasing total cost. Percentages and the cumulative percent were then calculated to obtain an ABC analysis.

From Table 3, one can see that the top selling product was a tonic accounting for 17% of the total cost of goods sold. Interestingly, 4 products accounted for over 50% of the sales volume. These data, however, are misleading because there are duplicate products in the dataset, for example Dexorange and Rosicilin 250mg caps. For the final analysis to be accurate, duplicate product sales should be consolidated to obtain a single amount and the ABC analysis redone.

We estimate that New Era will input about 3,000 sales entries. Once all the data are collected New Era can do an ABC analysis by top selling product, by generic names, and/or by therapeutic class.

This information should be most useful in estimating the total volume of top selling products being commercially sold in Nepal.

### C. SAMPLING PLAN

New Era currently is planning to collect data in 3 districts: the Greater Kathmandu area (including Bhaktapur and Kirtipur) and in Persa and Mora. The justification for this is that the majority of the population will be covered and these areas contain the majority of the retailers, as well as importers. Figure 1 graphically show the location of the sample selections.

### D. DATA ENTRY

Data entry for the disease/symptom questions of the retailer survey will be initially done in dBase III, and then later transferred to other programs, such as Lotus 123 and the Drug Estimation Model as appropriate. The top selling products will probably be entered in Lotus 123, as the calculations and ABC analysis will be easier to perform in that program.

TABLE 3  
Examples from Retail Survey Field Test -- Top Selling Products

Nepzi 1987

ABC Analysis by Cost of Goods Sold

FORM CODE	DRUG NAME & STRENGTH	GENERIC NAME	UNIT SIZE	AVE AMOUNT SOLD/MO	UNIT PRICE	TOTAL COST	% OF TOTAL	CUMM %	RANK ORDER
2T	Hamper Tonic	tonic	bottle	30	331.00	9930.00	17.3%	17%	1
2T	Radin cap	vit	bottle of 60 cap	100	92.10	9210.00	16.0%	33%	2
2T	Syanlgasic		box	10	661.00	6610.00	11.5%	45%	3
1k	Ringers Lactate	IV	bottle	200	21.00	4200.00	7.3%	52%	4
1k	Chloramphenicol	chloramphenicol inj	vial	300	12.50	3750.00	6.5%	59%	5
1k	Polybin syrup 400ml		bottle of 400ml	60	61.25	3675.00	6.4%	65%	6
1k	Albercillin 500mg cap	ampicillin	cap	500	5.40	2700.00	4.7%	70%	7
2T	Methargine tab	methargine	bottle of 100 cap	2	1151.00	2302.00	4.0%	74%	8
1k	Polycaf forte gel		tuba	150	14.00	2100.00	3.7%	77%	9
2T	Polybion	vit	bottle	30	61.35	1840.50	3.2%	81%	10
2T	*Daxorange	vitamins	bottle	30	39.14	1174.20	2.0%	83%	11
2T	Hamup	tonic	bottle	30	38.41	1152.30	2.0%	85%	12
3s	Rcine		tab	200	5.75	1150.00	2.0%	87%	13
3s	Pristozyru		bottle	30	26.60	798.00	1.4%	88%	14
3s	*Daxorange		bottle	20	39.00	780.00	1.4%	89%	15
3s	erothermycin	erythromycin	cap	200	3.25	650.00	1.1%	91%	16
3s	Hepta Slobic		tab	20	32.00	640.00	1.1%	92%	17
3s	Ampicillin	ampicillin	cap	200	2.75	550.00	1.0%	93%	18
3s	Herplex		bottle	15	33.00	495.00	0.9%	94%	19
3s	Ethambutol	ethambutol	cap	200	2.25	450.00	0.8%	94%	20
3s	Sulbocens		tab	200	2.18	436.00	0.8%	95%	21
1k	Ratimol tab		tab	1750	0.24	420.00	0.7%	96%	22
3s	Bactrim DS		cap	150	2.18	327.00	0.6%	96%	23
2T	Autrin cap	vit	bottle of 60 cap	30	10.60	318.00	0.6%	97%	24
1k	Betonin Syrup 200ml	vit	bottle of 200ml	14	18.00	252.00	0.4%	97%	25
1k	Digene tab	antacid	tab	960	0.24	230.40	0.4%	98%	26
2k	+Rosacillin 250mg cap	ampicillin	cap	70	2.85	199.50	0.3%	98%	27
2k	Albacillin cap		cap	70	2.78	194.60	0.3%	98%	28
1k	Autrin cap	vit (Fe/FA)	strip of 15 cap	15					

Suggested dBase III record structure and field definitions are the same as those used in the Drug Estimation Model and the Rx program. These are listed below.

SURVEY FORM NAME	DEM FIELD NAME	TYPE	WIDTH	DEC
Drug Name & Strength:	NOM DOSG	Character	35	
Generic Name		Character	35	
Therapeutic Class Code	THERACLS	Numeric	5	2
Unit Size (PACKAGING)	CONDIT UC	Character	35	
Price	COUT UCI	Numeric	8	
EDL Code	CODE OMS	Character	1	

The DEM field names probably appear odd. That is because the DEM was originally written in French, and the names are French abbreviations. New Era should feel free to use whatever field names are most appropriate for them. The more important constraints are the type, width, and decimal specifications.

#### IV. NEPAL NATIONAL STANDARD TREATMENTS

Nepal is quite progressive in its Essential Drug Program. In 1986 it published its first *National List of Essential Drugs*, and the Government anticipates that very shortly there will be official approval of a list of standard treatments.

During the last trip to Nepal, I was given a draft list of the standard treatments, which contains prescribing guidelines for adult therapies for the most prevalent diseases. We entered these treatments into a computer program called the Drug Estimation Model (DEM), which was written by MSH to aid in the estimation of pharmaceutical needs. For pediatric therapies, we utilized the treatments for children from the Nepal Save the Children Fund (UK).

The Drug Estimation Model allows for three treatment approaches for two age groups, usually under 5 years old and over 5. The DEM automatically calculates the cost/treatment. It therefore can be used to show the economic consequences of the various treatments possible for a disease or symptom, as well to project the pharmaceutical needs.

A copy of the DEM Standard Treatments Report was left with Dr. Kaflic and the DDA for review and comment, as well as for future reference. A copy is in Annex C.

## V. TRIP SUMMARY

By the end of this two-week consultancy, three major objectives had been accomplished. These were: (1) to get a final New Era study proposal to AID/NEPAL for the funding; (2) to test the survey instrument for the importers and see if the data were collectable; and (3) to test the survey form for retailers, chemists, and druggists to get an idea of usual prescribing patterns and top selling drugs.

The results of the importer survey left some doubt as to whether accurate qualitative and/or quantitative data could be collected. The main reasons for these doubts were:

- (1) reluctance of importers to share cost and true sales information;
- (2) potential confusion over package sizes;
- (3) difficulty in extracting the data from importers' records.

New Era will field test a medium and a small importer to see if the same difficulties are encountered and at that point decide whether to proceed with the survey or not.

The results of the retailer survey were much more encouraging. The retailers were cooperative, and the data were much easier to collect. The survey team had no trouble getting information on usual treatments and the store's top selling products. These data can be analyzed to provide insights on which products are being recommended to treat childhood diarrhea, dysentery, fever, cough, and scabies. Additionally, the data can be sorted by product, patient instructions (SIG), and level of education to obtain some parameters on Nepal drug use. Finally, information about the top sales could give us an idea about the top volume products being bought/sold in the commercial marketplace.

A sample of about 300 retailers will be taken (i.e., 10% of the estimated 3,000 retailers). Three districts will be covered: the Greater Kathmandu area, Persa, and Mora.

Finally, we hope that when the study is completed, the results will be used by IOM and DDA in planning future training on the safe and cost-effective use of pharmaceutical products in the health care systems in which they are used.

**ANNEXES**

ANNEX A

CHILD SURVIVAL PHARMACEUTICALS  
IMPORTER STUDY INTERVIEW FORM

IMPORTER NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CITY: \_\_\_\_\_  
LICENSE NUMBER \_\_\_\_\_  
PRINCIPLE CONTACT \_\_\_\_\_

INTERVIEWER(S) \_\_\_\_\_ DATE \_\_\_\_\_

Q1. In fiscal/calendar year 1985/86, what was the total wholesale value of all products you imported? \_\_\_\_\_

Q2. What is the total number of pharmaceutical products you imported in 1985? Do not include medical supplies. \_\_\_\_\_

Q3. What domestic manufacturers do you purchase from and which products?  
\_\_\_\_\_  
\_\_\_\_\_

Q4. Are you a sole representative for any manufacturer and if so, which one(s)?

Q5. Does your company have subsidiary distributors who also import pharmaceuticals? If so, please list which ones.  
\_\_\_\_\_  
\_\_\_\_\_

Q6. What geographic areas do you service (location of sales)?  
\_\_\_\_\_  
\_\_\_\_\_

Questions 6 & 7. Use the attached forms for information on the top 20 selling pharmaceutical products (by volume) and on 5 individually identified products which play a role in child survival.



IMPORTER PRODUCT INFORMATION SURVEY FORM  
 PHARMACEUTICAL PRODUCT SAMPLE

No.	PRODUCT NAME & STRENGTH	MANUFACTURER CODE	BASIC UNIT	PACKAGING & COUNTING UNIT	PACKAGE UNIT PRICE	TOTAL PACK UNIT IMPORTED
	ORAL REHYDRATION SALTS (ORS)					
	STERIODS					
	PROCAINE PENICILLIN INJECTION					
	CO-TRIOXAZOLE					
	CEPHALEXIN					

FILE: INQ.WK1



STORE NAME: \_\_\_\_\_ DATE: \_\_\_\_\_ 1987  
 ADDRESS: \_\_\_\_\_  
 CITY: \_\_\_\_\_  
 PERSON INTERVIEWED: Owner \_\_\_\_\_ Employee \_\_\_\_\_ INTERVIEWER: \_\_\_\_\_ Form Code \_\_\_\_\_  
 Training: 1. Pharmacist Grad, 2. Certificate, 3. Professionalist, 4. Registered Compounder, 5. No training, 6. Other

Q1. ABOUT HOW MANY CUSTOMERS DO YOU HAVE PER DAY? \_\_\_\_\_ Rx \_\_\_\_\_

Q2. What drugs do you RECOMMEND for children with DIARRHEA?

DIARRHEA DRUG & STRENGTH	Generic Name	SIG	Number of units prescribed	Prescription Price	Thera Class	ON EDL?

Q3. What drugs do you RECOMMEND for a child with COUGH & FEVER?

FEVER DRUG & STRENGTH	Generic Name	SIG	Quantity prescribed	Prescription Price	Thera Class	ON EDL?

20

Q4. What drugs do you recommend for SCABIES (LUTO)?

SCABIES (LUTO) DRUG & STRENGTH	Generic Name	SIG	Quantity prescribed	Prescription Price	Thera Class	ON EDL?

Q5. For your TOP SELLING 10 DRUGS, about how much is sold on average PER MONTH

	BRAND NAME & STRENGTH	GENERIC NAME	COUNTING UNIT	QUANTITY SOLD/MONTH	COUNTING UNIT PRICE	THERA CLASS	ON EDL?
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							

# ANNEX B

fg - 11

PREPARED BY NEW ERA  
IN COLLABORATION WITH  
THE DEPARTMENT OF DRUG ADMINISTRATION AND THE INSTITUTE OF MEDICINE  
DRAFT REPORT OUTLINE

1. STUDY BACKGROUND & INTRODUCTION
  - 1.1 Background of Study Development
  - 1.2 Description of Nepal Private Sector Pharmaceutical Supply System
2. METHODS & STUDY DESIGN
  - 2.1 Pharmaceutical products & Price (Part 1)

Have entered 35 (state exact number) manufacturers and 7,100 (insert exact number) products/price & therapeutic class codes into data base. Data Source: Retail Book
  - 2.2 Importers Survey (Part 2)

Data will be entered from DDA files on the licensed importers the manufacturers they import from, and the importers location.

Data directly from importers, if possible to collect, will provide estimate of how much of which products are coming into Nepal at the Wholesale level.
  - 2.3 Retailers Survey (Part 3)

There are about 3,300 pharmacies & chemist shops licensed with DDA with DDA. A survey of the retailers will gather data on what pharmaceutical products are recommended for children with cough, fever, diarrhea, and itching (skin infections). Educational level data will also be collected.
3. STUDY FINDINGS
  - 3.1 Pharmaceutical products & Price (Part 1)

The data entered from the Product file will be sorted by:  
(A) the % number of products in each therapeutic classes  
(B) If products coded generically, estimate the number and % of products which are essential for child survival.
  - 3.2 Importers Survey (Part 2)

This data will be sorted to provide:  
(A) Geographic location of importers (No & %)  
(B) Provide information on which manufacturers are selling products to single or multiple importers (sort by manufacturer)  
(C) By combining files from part 1, information can be listed by importer/manufacturer/product report.

11

PREPARED BY NEW ERA  
IN COLLABORATION WITH  
THE DEPARTMENT OF DRUG ADMINISTRATION AND THE INSTITUTE OF MEDICINE

DRAFT REPORT OUTLINE

3.3 Retailers Survey (Part 3)

(A) the prescribing patterns among retailers for selected child survival symptoms including diarrhea, cough, fever and itching (topical infections).

(B) The top 10 selling pharmaceutical products coded and sorted by therapeutic class and by sales volume.

(C) the educational level of prescribers & percent each level.

4. POTENTIAL INTERVENTIONS IN PRIVATE SECTOR

4.1 Educational/Regulatory

Which products are over/under utilized and direct educational and/or regulatory initiatives.

- o Use data to modify pharmacist training (IOM)
- o Use for Public Messages/social marketing
- o Prescriber training possibilities (workshops)
- o Consumer information directed to change demand

ANNEXES

A. SAMPLING METHODOLOGY

- A.1 Sample Selections
- A.2 Adjustments to Data
- A.3 Sample Survey Forms

B. ANALYSIS METHODOLOGY

- B.1 Product printouts
  - by Therapeutic Class
  - by volume
- B.2 Importer Printouts
  - by Importer & respective manufacturer
  - by manufacturer to respective importer(s)
- B.3 Retailer Survey Printouts
  - By disease listing what products recommended
  - by educational level
  - by top selling products

23

PHARMACEUTICALS FOR CHILD SURVIVAL  
PRIVATE SECTOR STUDY

DRAFT TIMEFRAME

Test Survey Instruments	Aug 15-30	2 weeks
Collect Data	Sept 1-30	4 weeks
Data Entry	Sept 7-Oct 9	4 weeks
Data Analysis	Oct 11-23	2 weeks
Write Report	Oct 25-Nov 6	2 weeks
Draft Report Review by IOM, DDA, MBH, AID	Nov 8-Dec 4	4 weeks
Prepare Final Report	Dec 6-14	1 week
Submit final report to AID	Dec 15	

ANNEX C

Run Date: June 8, 1987  
Version: DEM 2.31

Morbidity Method: Report 4

Page: 1  
Year: 1986  
Location: NEPAL

STANDARD TREATMENTS REPORT

HEALTH FACILITY NAME	AGE GRP		PRODUCT NAME & DOSEAGE	BASIC UNIT	BASIC DOSE		DAYS/		COST/		
	GRP CODE	POI			DOSE	QTY	EPI	EPI	EPI	APP	
Cholera	<S	1	Sulfamethoxazole+Trimethoprim	TAB	1.00	2	5	10.0	6.00	10.05	
			Oral rehyd.salts(Jiwan Jal Powder)	PKG	1.00	3	3	9.0	6.75		
Cholera	>=S	1	Oral rehyd.salts(Jiwan Jal Powder)	PKG	1.00	3	3	9.0	6.75	21.71	
			Tetracycline (Necycline) 250 mg tab	TAB	2.00	4	5	40.0	14.96		
		2	Oral rehyd.salts(Jiwan Jal Powder)	PKG	1.00	3	3	9.0	6.75	21.71	
			Tetracycline (Necycline) 250 mg tab	TAB	2.00	4	5	40.0	14.96		
		3	10 Normal saline i.v. 540 ml.	BOT	1.00	1	1	1.0	12.10	48.40	
Dextrose salain pint (500 ml)	BOT		1.00	1	3	3.0	36.30				
	<S	1	100 Chloramphen.(Nephenicol)250 tab	TAB	1.50	4	12	72.0	2.91	2.31	
			>=S	1	100 Chloramphen.(Nephenicol)250 tab	TAB	3.00	4	12	144.0	5.82
Enteritis & other diarrhoeal d	<S	1	50 Home Mix Oral Rehydration		0.90	0	0	0.0	0.00	0.90	
			2	30 Oral rehyd.salts(Jiwan Jal Powder)	PKG	1.00	3	5	15.0	11.25	18.15
				Sulfamethoxazole+Trimethoprim	TAB	0.50	4	5	10.0	6.90	
	2	10 Metronidazole (Flagit) 200 mg tab	TAB	1.00	2	5	10.0	2.36	13.81		
			Oral rehyd.salts(Jiwan Jal Powder)	PKG	1.00	3	5	15.0	11.25		
Enteritis & other diarrhoeal d	>=S	1	50 Metronidazole (Flagit) 200 mg tab	TAB	1.00	3	7	21.0	4.96	11.71	
			Oral rehyd.salts(Jiwan Jal Powder)	PKG	1.00	3	3	9.0	6.75		
Tuberculosis (Resp. and Non-Res)	<S	1	90 Streptomycin sulfate 0.75gm inj	VIA	0.50	1	56	28.0	93.48	93.48	
			20 Thiocetazone + INH 150/300mg tab	TAB	0.50	1	308	154.0	16.32	16.32	
Tuberculosis (Resp. and Non-Res)	>=S	1	100 Streptomycin sulfate 0.75gm inj	VIA	1.00	1	60	60.0	200.31	239.47	
			Thiocetazone + INH 150/300mg tab	TAB	1.00	1	360	360.0	38.16		
Whooping Cough (Pertussis)	<S	1	80 Erythromycin 250mg tabs	TAB	1.00	1	7	7.0	9.14	9.14	
			2	10 Chloramphen.(Nephenicol)250 tab	TAB	1.00	4	7	28.0	1.13	2.25
				Promethazine (Marzine,Avon)tab	TAB	1.00	1	5	5.0	1.12	
Measles, Chickenpox	<S	1	80 Paracetamol 500 mg tab (Cetamol)	TAB	0.50	4	2	4.0	0.46	0.46	
			2	20 Benzyl penicillin 5 lac/vial inj	AMP	0.50	1	1	0.5	1.25	2.09
				Penicillin VK 250mg tablet	TAB	0.50	4	5	10.0	0.10	
				Paracetamol 500 mg tab (Cetamol)	TAB	0.40	4	4	6.4	0.74	
Malaria	<S	1	80 ** DRUG SPECIFIED NOT IN DRUG FILE **		0.50	3	0	0.0	0.00	0.00	
			20 Primaquine 15mg tab	TAB	0.50	1	14	7.0	0.07	0.07	
Malaria	>=S	1	80 ** DRUG SPECIFIED NOT IN DRUG FILE **		2.00	5	10	100.0	23.10	23.10	
			2	10 Primaquine 15mg tab	TAB	1.00	1	5	5.0	0.05	0.05
				3	10 Sulfadoxine+Primethamine 500/25mg T	TAB	2.00	1	1	2.0	0.02
			Primaquine 15mg tab	TAB	3.00	1	1	3.0	0.03		

65

## STANDARD TREATMENTS REPORT

Location: NEPAL

Page: 2

Year: 1986

HEALTH PROGRAM NAME	AGE APP	GRP	CODE	PCI	PRODUCT NAME & DOSAGE	BASIC UNIT	B.U./QRB	DOSE/DOY	DAYS/EPI	B.U./EPI	COST/EPI	COST/APP
	>5	1	90		Procaine penicillin 4 iac/vial inj	AMP	1.00	1	10	10.0	22.79	22.79
	>5	1	100		Tetracycline (Necycline) 250 mg tab	TAB	2.00	4	7	56.0	20.94	20.94
	>5	1	100		Diethylcarbamazine 50 mg tab	TAB	0.50	2	21	21.0	0.73	0.73
Helminthiasis; Worms	<5	1	90		Mebendazole (Hexacide) 100 mg tab	TAB	1.00	2	3	6.0	3.64	3.64
Helminthiasis; Worms	>5	1	80		Mebendazole (Hexacide) 100 mg tab	TAB	1.00	1	3	3.0	1.82	1.82
Hookworm	<5	1	100		Sephenium (Alccpar) 2:5 gm sac	sac	1.00	1	1	1.0	2.73	2.73
Hookworm	>5	1	100		Mebendazole (Hexacide) 100 mg tab	TAB	1.00	1	2	2.0	1.21	1.21
Ascariasis	<5	1	100		Piperazine Syrup (Pipracite)	ML	1.00	1	1	1.0	0.01	0.01
Ascariasis	>5	1	100		Piperazine (Pipracite) 500mg tab	TAB	10.00	1	1	10.0	0.45	0.45
Dysentery, Aebic	<5	1	80		Home Mix Oral Rehydration Metronidazole (Aegit) 200 mg tab	TAB	1.00 1.00	1 3	1 7	1.0 21.0	0.00 4.36	4.96
Dysentery, Aebic	>5	1	100		Metronidazole (Aegit) 200 mg tab	TAB	2.00	3	5	30.0	7.08	7.08
Dysentery, Bacillary	<5	1	100		Sulfamethoxazole+Trimethoprim	TAB	1.00	2	5	10.0	6.90	6.90
Dysentery, Bacillary	>5	1	100		Sulfamethoxazole+Trimethoprim	TAB	2.00	2	5	20.0	13.80	13.80
Avitaminosis & nutritional def	<5	1	40		Multivitamin tablets Ferrous salt 200mg tab	tab TAB	0.50 0.50	1 1	30 30	15.0 15.0	1.34 0.49	1.33
		2	30		Multivitamin tablets Ferrous salt 200mg tab Folic acid 5 mg.	tab TAB TAB	0.50 0.50 1.00	1 1 1	30 30 30	15.0 15.0 30.0	1.34 0.49 1.48	3.31
		3	30		Vitamin A 50000 IU	TAB	4.00	1	3	12.0	0.12	0.12
Avitaminosis & nutritional def	>5	1	180		Vitamin B complex (Ardiplex) tab	TAB	1.00	1	90	90.0	3.60	3.60
Avitaminosis & nutritional def	>5	1	20		Vitamin A 50000 IU	TAB	4.00	1	3	12.0	0.12	0.12
Anemias	<5	1	50		Ferrous salt 200mg tab	TAB	0.50	3	30	45.0	1.46	1.46
Anemias	>5	1	100		Ferrous salt 200mg tab Folic acid 5 mg.	TAB TAB	1.00 1.00	3 1	30 90	270.0 90.0	9.79 4.45	13.24
Meningitis, Encephalitis	<5	1	50		Chloramphenicol sod.succ. 1gm inj	VIA	0.50	4	7	14.0	1.40	1.40
		2	50		Benzyl penicillin 5 iac/vial inj	AMP	1.00	4	7	28.0	69.30	69.30
	<5	1	100		Phenobarbitone (RO-Sonal) 30 mg	TAB	1.00	1	30	30.0	1.14	1.14
Conjunctivitis/Inflammatory ey	<5	1	80		Tetracycline 1% eye Ointment J.5gm	TUB	1.00	1	1	1.0	2.05	2.05
		2	20		Sulfacetamide (Netrosol 20) Eye	Tub	1.00	1	1	1.0	0.30	0.30

26

## STANDARD TREATMENT REPORT

Location: NEPAL

Page: 1

Year: 1986

MEDICATION FROM NAME	AGE APP		PRODUCT NAME & DOSEAGE	BASIC UNIT	B.U./DOSE	DOSE/DAY	DAYS/CPD	B.U./CPD	COST/CPD	COST/MO			
	GRP	CODE											
Conjunctivitis/Inflammatory ey	>5	1	100 Tetracycline 1% eye Ointment 3.5gm	TUB	1.00	1	1	1.0	2.95	2.95			
Otitis media and mastoiditis	<5	1	80 Penicillin VK 250mg tablet	TAB	0.50	4	5	10.0	0.10	0.26			
			Aspirin 300-325 mg tab	TAB	0.50	3	5	7.5	0.15				
			10 Procaine penicillin 4 lac/vial inj	AMP	1.00	1	5	5.0	11.39	11.39			
		2	10 Sulfamethoxazole+Trimethoprim	TAB	0.50	2	5	5.0	3.15	4.60			
			Paracetamol 500 mg tab (Cetamol)	TAB	0.50	4	5	10.0	1.15				
			80 Procaine penicillin 4 lac/vial inj	AMP	1.00	1	5	5.0	11.39	14.32			
Otitis media and mastoiditis	>5	1	Chloramphenicol(Nephenicol)ear drop	BOT	1.00	1	1	1.0	3.33				
			Aspirin 300-325 mg tab	TAB	1.00	3	3	9.0	0.20				
			10 Procaine penicillin 4 lac/vial inj	AMP	1.00	1	5	5.0	11.39	15.76			
		2	Chloramphenicol(Nephenicol)ear drop	BOT	1.00	1	1	1.0	3.33				
			Paracetamol 500 mg tab (Cetamol)	TAB	1.00	3	3	9.0	1.04				
			10 Sulfamethoxazole+Trimethoprim	TAB	2.00	2	5	20.0	12.30	16.36			
		3	Chloramphenicol(Nephenicol)ear drop	BOT	1.00	1	1	1.0	3.33				
			Paracetamol 500 mg tab (Cetamol)	TAB	1.00	3	5	15.0	1.73				
			50 Gential violet granules sachet	APP	1.00	1	1	1.0	14.74	14.74			
		2	50 Aspirin 300-325 mg tab	TAB	1.00	3	3	9.0	0.20	0.20			
			>5	1	90 ** DRUG SPECIFIED NOT IN DRUG FILE **		1.00	1	90	90.0	25.20	25.20	
		2	20 ** DRUG SPECIFIED NOT IN DRUG FILE **		1.00	1	90	90.0	25.20	41.02			
			** DRUG SPECIFIED NOT IN DRUG FILE **		1.00	1	90	90.0	15.82				
			Heart Disease, Hypertension, O	>5	1	30 ** DRUG SPECIFIED NOT IN DRUG FILE **		1.00	1	30	30.0	9.40	9.40
		2	20 ** DRUG SPECIFIED NOT IN DRUG FILE **		1.00	1	30	30.0	9.40	12.57			
			** DRUG SPECIFIED NOT IN DRUG FILE **		1.00	1	30	30.0	5.27				
			>5	1	80 Aspirin 300-325 mg tab	TAB	1.00	6	10	60.0	1.32	1.32	
		2	10 ** DRUG SPECIFIED NOT IN DRUG FILE **		1.00	3	10	30.0	0.30	0.30			
			10 Procaine penicillin 4 lac/vial inj	AMP	1.00	1	7	7.0	15.95	15.95			
			Acute Upper Respiratory Infect	<5	1	80 Aspirin 300-325 mg tab	TAB	0.50	4	3	5.0	0.13	0.13
		2	20 Paracetamol 500 mg tab (Cetamol)	TAB	0.50	4	3	6.0	0.69	0.69			
			Acute Upper Respiratory Infect	>5	1	50 Aspirin 300-325 mg tab	TAB	1.00	4	5	20.0	0.44	0.44
		2	20 Paracetamol 500 mg tab (Cetamol)	TAB	1.00	4	5	20.0	2.30	2.30			
			Pneumonia	<5	1	80 Benzathine Penicillin 2.4MU inj	VIA	1.00	4	7	28.0	83.83	83.83
				2	10 Benzyl penicillin 5 lac/vial inj	AMP	1.00	4	7	28.0	69.30	71.30	
Chloramphenicol sod.succ. 1gm inj	VIA	0.50			4	7	14.0	1.40					

## STANDARD TREATMENTS REPORT

Location: NEPAL

Page: 4

Year: 1985

HEALTH PROBLEM NAME	AGE APP	SRP CODE	PCI	PRODVCT NAME & DOSEAGE	BASIC UNIT	B.U./DOSE	DOSE/DAY	DAYS/EPI	C.U./EPI	COST/EPI	COST/APP
Pneumonia	>5	1	80	Procaine penicillin 4 lac/vial inj	AMP	1.00	2	5	10.0	22.79	23.23
				Aspirin 300-325 mg tab	TAB	1.00	4	5	20.0	0.44	
	2	10	Procaine penicillin 4 lac/vial inj	AMP	1.00	2	5	10.0	22.79	24.52	
				Paracetamol 500 mg tab (Cetamol)	TAB	1.00	3	5	15.0	1.73	
Bronchitis, acute (include sin)	<5	1	100	Paracetamol 500 mg tab (Cetamol)	TAB	0.50	4	2	4.0	0.46	0.46
Bronchitis, acute (include sin)	>5	1	80	Procaine penicillin 4 lac/vial inj	AMP	1.00	2	5	10.0	22.79	22.79
				10 Tetracycline (Mecycline) 250 mg tab	TAB	1.00	4	5	20.0	7.48	7.48
Tonsillitis	<5	1	100	Penicillin UK 250mg tablet	TAB	1.00	4	5	20.0	0.20	0.66
				Paracetamol 500 mg tab (Cetamol)	TAB	0.50	4	2	4.0	0.46	
Tonsillitis	>5	1	80	Procaine penicillin 4 lac/vial inj	AMP	1.00	1	1	1.0	2.28	7.28
				Penicillin UK 250mg tablet	TAB	2.00	4	5	40.0	0.40	
				Paracetamol 500 mg tab (Cetamol)	TAB	2.00	4	5	40.0	4.60	
				20 Tetracycline (Mecycline) 250 mg tab	TAB	1.00	4	5	20.0	7.48	12.08
Chronic Bronchitis	>5	1	80	Tetracycline (Mecycline) 250 mg tab	TAB	1.00	4	7	28.0	10.47	11.44
				Aminophylline 300 mg tab	TAB	1.00	3	7	21.0	0.97	
				20 Sulfamethoxazole+Trimethoprim	TAB	2.00	2	7	28.0	19.32	20.23
				Aminophylline 300 mg tab	TAB	1.00	3	7	21.0	0.97	
Asthma	<5	1	30	Ephedrine 30 mg tab	TAB	0.50	3	10	15.0	0.75	0.79
				30 Salbutamol 2 mg	TAB	0.50	3	10	15.0	0.15	0.15
				30 Aminophylline 300 mg tab	TAB	0.50	3	10	15.0	0.69	2.13
Asthma	>5	1	60	Aminophylline 300 mg tab	TAB	1.00	3	7	21.0	0.97	0.97
				20 Aminophylline 2.5 mg/ 10 ml inj	AMP	1.00	1	1	1.0	1.23	1.24
				Dextrose 25 % inj	AMP	1.00	1	1	1.0	0.01	
Asthma	3	20	Ephedrine 30 mg tab	TAB	1.00	2	10	20.0	1.06	1.06	
Tooth and Mouth Disease	>5	1	50	Procaine penicillin 4 lac/vial inj	AMP	1.00	1	5	5.0	11.39	11.46
				Aspirin 300-325 mg tab	TAB	1.00	1	3	3.0	0.07	
				50 Gentian violet granules sachet	APP	1.00	1	1	1.0	14.74	15.34
				Vitamin B complex (Ardiplex) tab	TAB	1.00	1	30	30.0	1.20	
Gastritis, Duodenitis, Gastric	>5	1	100	Aluminium Hyd.+Mag.Trisilicate	TAB	1.00	3	21	63.0	6.17	6.17
Acute Abdominal Pain	>5	1	80	Balladone (phenobarbital)(Barbidona)	TAB	1.00	2	2	4.0	0.39	0.39
				20 Atropine 1mg/ml inj	UIA	1.00	1	1	1.0	0.10	0.10
Infections of kidney, bladder	<5	1	1	Sulfastin triple sulfa	TAB	0.50	4	5	10.0	0.19	0.19

28

## STANDARD TREATMENTS REPORT

Location: NEPAL

Page: 5

Year: 1986

HEALTH PROBLEM NAME	AGE APP	DRUG CODE	PGT	DRUG NAME & DOSAGE	BASIC UNIT	Q.U./DOSE	DOSE/DAY	DAYS/EPI	Q.U./EPI	COST/EPI	COST/APP
		2		20 Sulfamethoxazole+Trimethoprim	TAB	0.50	1	5	2.5	1.72	1.72
Infections of kidney, bladder	>5	1		80 Sulfadimidine 500mg tab	TAB	2.00	4	10	80.0	13.28	13.28
		2		20 Sulfamethoxazole+Trimethoprim	TAB	2.00	2	10	40.0	27.60	27.60
	>5	1		80 Gential violet granules sachet	APP	1.00	1	1	1.0	14.74	14.74
		2		20 Metronidazole (Flagyl) 200 mg tab	TAB	1.00	3	7	21.0	4.96	4.96
Complicated Childbirth	>5	1		100 Ergometrine 2 ml inj, .5mg/ml	AMP	1.00	1	1	1.0	2.56	2.56
Normal Delivery without compli	>5	1		100 Ergometrine 2 ml inj, .5mg/ml	AMP	1.00	1	1	1.0	2.56	2.56
Pregnancy cases/antenatal care	>5	1		100 Multivitamin tablets	tab	1.00	1	90	90.0	8.07	15.45
				Folic acid 5 mg.	TAB	1.00	1	90	90.0	4.45	
				Ferrous salt 200mg tab	TAB	1.00	1	90	90.0	2.93	
Eczema	<5	1		100 Hydrocortisone ointment 1%	TUB	1.00	1	1	1.0	0.01	0.01
Eczema	>5	1		90 Chlorphenamine (Antilergan) 4 mg tab	TAB	1.00	3	5	15.0	0.39	0.39
		2		10 Chlorphenamine (Pentemine) inj	AMP	1.00	2	1	2.0	0.02	0.02
Skin & sub-cut Infections	<5	1		80 Gential violet granules sachet	APP	1.00	1	1	1.0	14.74	14.74
		2		10 Procaine penicillin 4 lac/vial inj	AMP	1.00	1	1	1.0	2.28	2.28
		3		10 Penicillin VK 250mg tablet	TAB	0.50	4	5	10.0	0.10	0.10
Skin & sub-cut infections	>5	1		80 Procaine penicillin 4 lac/vial inj	AMP	1.00	1	5	5.0	11.39	11.83
				Aspirin 300-325 mg tab	TAB	1.00	4	5	20.0	0.44	
		2		20 Tetracycline (Macycline) 250 mg tab	TAB	1.00	4	5	20.0	7.48	7.92
				Aspirin 300-325 mg tab	TAB	1.00	4	5	20.0	0.44	
Scabies	<5	1		100 Benzyl benzoate (Scaban) liquid	ML	1.00	1	1	1.0	0.03	0.03
Scabies	>5	1		100 Sulphur sublimid 450g packet	gm	1.00	1	1	1.0	9.32	9.32
Fungal	>5	1		100 Whitfield's ointment	APP	11.00	1	1	11.0	0.11	0.11
Arthritis, rheumatism & spondy	>5	1		80 Aspirin 300-325 mg tab	TAB	1.00	3	5	15.0	0.33	0.33
		2		20 ** DRUG SPECIFIED NOT IN DRUG FILE **		1.00	3	5	15.0	0.15	0.15
	>5	1		80 Aspirin 300-325 mg tab	TAB	1.00	3	10	30.0	0.66	0.66
		2		20 ** DRUG SPECIFIED NOT IN DRUG FILE **		1.00	3	10	30.0	0.30	0.30
Fever of unknown origin	<5	1		50 Aspirin 300-325 mg tab	TAB	0.50	4	3	6.0	0.13	0.13
		2		50 Paracetamol 500 mg tab (Cetanol)	TAB	0.50	4	3	6.0	0.69	0.69
Fever of unknown origin	>5	1		80 Aspirin 300-325 mg tab	TAB	1.00	3	3	9.0	0.20	0.20

## STANDARD TREATMENTS REPORT

Location: NEPAL

Page: 6

Year: 1986

HEALTH PROBLEM NAME	AGE APP	SRP CODE	PCT	PRODUCT NAME & DOSE	BASIC UNIT	B.U./ DOSE	DOSE/ DAY	DAYS/ EPI	B.U./ EPI	COST/ EPI	COST/ SRP
			2	20 Paracetamol 500 mg tab (Cetamol)	TAB	1.00	3	3	9.0	1.04	1.04
Pain (unspec), inc. Headache	)=5	1		80 Aspirin 300-325 mg tab	TAB	1.00	3	3	9.0	0.20	0.20
			2	20 Paracetamol 500 mg tab (Cetamol)	TAB	1.00	3	3	9.0	1.04	1.04
vomiting	)=5	1		80 Promethazine (Marzine, Avoca) tab	TAB	1.00	2	2	4.0	0.90	0.90
			2	20 Promethazine 25 mg inj (Marzine, Pha)	AMP	1.00	1	1	1.0	0.01	0.01
Fractures, sprains, disloc, other	<5	1		80 Paracetamol 500 mg tab (Cetamol)	TAB	0.50	3	5	7.5	0.86	0.86
			2	20 Aspirin 300-325 mg tab	TAB	0.50	3	3	4.5	0.10	0.10
Fractures, sprains, disloc, other	)=5	1		80 Aspirin 300-325 mg tab	TAB	1.00	3	3	9.0	0.20	0.20
			2	20 Paracetamol 500 mg tab (Cetamol)	TAB	1.00	3	3	9.0	1.04	1.04
Cuts, lacerations, etc.	<5	1		80 Gential violet granules sachet	APP	1.00	1	1	1.0	14.74	14.74
			2	20 Penicillin VK 250mg tablet	TAB	0.50	4	5	10.0	0.10	0.10
Burns & Scalds	<5	1		80 Potassium permanganate 450 gm pack	APP	1.00	1	1	1.0	0.07	14.31
				Gential violet granules sachet	APP	1.00	1	1	1.0	14.74	
	)=5	1		100 Atropine sulfate 1 mg/ml inj	AMP	1.00	3	1	3.0	2.22	2.22

WHO THERACLS	WHO TC NAME	NEPAL THERACLS	NEPAL TC NAME	NEPAL COMP. LIST
		1.00	ANAESTHETICS	FILE: NEPT
		1.10	GENERAL ANAESTHETICS AND OXYGEN	
		1.10	Ether, anaesthetic	
		1.10	Diazepam	
		1.10	Halothane	
		1.10	Ketamine	
		1.10	Nitrous oxide	
		1.10	Oxygen	
		1.10	Thiopental	
		1.20	LOCAL ANAESTHETICS	
		1.20	Bupivacaine	
		1.20	Lignocaine	
		2.00	ANALGESICS, ANTIPYRETICS, NON-STEROIDAL ANTI-IN	
		2.10	NON-OPIOIDS	
		2.10	Acetylsalicylic acid	
		2.10	Allopurinol	
		2.10	Colchicine	
		2.10	Ibuprofen	
		2.10	Indomethacin	
	NL	2.10	Naproxen	
		2.10	Paracetamol	
		2.20	OPIOID ANALGESICS	
		2.20	Codeine	
		2.20	Morphine	
	HL	2.20	Pentazocine	
		2.20	Pethidine	
	3.00	3.10	ANTIALLERGICS	
		3.10	Chlorpheniramine	
		3.10	Epinephrine	
		3.10	Hydrocortisone	
	13,18,21.2	3.10	Pheniramine maleate [n].	
	HL	3.10	Prednisolone	
	12.50	3.20	DRUGS USED IN SHOCK OR ANAPHYLAXIS	
	12.50	3.20	Opamine	
	12.50	3.20	Epinephrine	
		4.00	ANTIPOOSES & OTH	
		4.10	GENERAL	
		4.10	Charcoal, activated	
		4.10	Ipecacuanha	
		4.20	SPECIFIC	
		4.20	Atropine	
		4.20	Deferoxamine	
		4.20	Dimercapsol	
	HL	4.20	Nalorphine	
	HL	4.20	Pralidoxime	
		5.00	ANTIPILEPTICS	
		5.00	Diazepam	
		5.00	Ethosuximide	
		5.00	Paraldehyde	
	HL	5.00	Phenobarbital	
		5.00	Phenytoin	
		6.00	ANTIINFECTIVE DRUGS	
		6.10	ANTHELMINTIC DRUGS	
		6.10	Bephenium	
	HL	6.10	Mebendazole	
		6.10	Niclosamide	

WHO THERACLS	WHO TC NAME	NEPAL THERACLS	NEPAL TC NAME	NEPAL COMP. LIST
		6.10 Piperazine		
		6.20 ANTIAMOEBIC DRUGS		
		5.20 Chloroquine		
		6.20 Diloxanide		
		6.20 Metronidazole		
		6.30 ANTIBACTERIAL DRUGS		
		6.31 PENICILLINS		
		6.31 Ampicillin		
		6.31 Benzathine benzylpenicillin		
		6.31 Benzylpenicillin		
		6.31 Cloxacillin		
		6.31 Phenoxymethylpenicillin		
		6.31 Procaine benzylpenicillin		
		6.32 OTHER ANTIBACTERIAL DRUGS		
		6.32 Chloramphenicol		
		6.32 Erythromycin		
		6.32 Gentamicin		
		6.32 Metronidazole		
		6.32 Sulfadiazine		
		6.32 Nitrofurantoin		
		6.32 Nalidixic acid		
		6.32 Neomycin		
		6.32 Sulfamethoxazole & Trimethoprim		
		6.32 Tetracycline		
		6.32 Trimethoprim		
		6.33 ANTILEPROSY DRUGS		
		6.33 Clofazimine		
		6.33 Dapsone		
		6.33 Rifampicin		
		6.34 ANTITUBERCULAR DRUGS		
		6.34 Ethambutol		
		6.34 Isoniazid		
		6.34 Pyrazinamide		
		6.34 Rifampicin		
		6.34 Streptomycin		
		6.34 Thiacetazone & Isoniazid		
		6.40 ANTIFILARIAL DRUGS		
		6.40 Diethylcarbamazine		
		6.50 ANTIFUNGAL DRUGS		
		6.50 Amphotericin		
		6.50 Griseofulvin		
		6.50 Nystatin		
		6.60 ANTILEISHMANIASIS DRUGS		
		6.60 Sodium stibogluconate		
		6.70 ANTIMALARIAL DRUGS		
		6.70 Chloroquine		
		6.70 Primaquine		
		6.70 Sulfadoxine & Pyrimethamine		
		6.70 Quinine		C
		7.00 ANTIMIGRAINE DRUGS		
		7.00 Ergometamine		
		8.00 ANTI NEOPLASTIC & IMMUNOSUPPRESSIVE DRUGS		
		9.10 IMMUNOSUPPRESSIVE DRUGS		
		8.10 Azathioprine		
		8.20 CYTOTOXIC DRUGS		
		8.20 Cyclophosphamide		
		8.20 Oxarubicin		

HL  
13.20

NEPAL ESSENTIAL DRUG LIST, 1986

WHO THERACLS	WHO TC NAME	NEPAL THERACLS	NEPAL TO NAME	NEPAL COMP. LIST
		8.20 Fluorouracil		
		8.20 Mercaptopurine		
		8.20 Methotrexate		
		8.20 Vincristine		
NL		8.20 Pusulphan		
NL		8.20 Chlorambucil		
NL		8.20 Actinomycin		C
		8.20 Bleomycin		C
		8.30 HORMONES & ANTIHORMONES		
		8.30 Prednisolone		
		9.00 ANTIPARKINSONISM DRUGS		
		9.00 Levodopa		
NL		9.00 Trihexyphenidyl		
		10.00 BLOOD, DRUGS AFFECTING THE		
		10.10 ANTIANAEMIA DRUGS		
		10.10 Ferrous salt		
		10.10 Ferrous salt & Folic acid		
		10.10 Folic acid		
		10.10 Hydroxycobalamin		
		10.10 Iron dextran		C
		10.20 ANTICOAGULANTS & ANTAGONISTS		
		10.20 Heparin		
		10.20 Phytonadione		
		10.20 Protamine		
		10.20 Warfarin		
		11.00 BLOOD PRODUCTS & BLOOD SUBSTITUTES		
		11.10 PLASMA SUBSTITUTE		
		11.10 Dextran 70		
NL		11.10 Dextran 40		
		12.00 CARDIOVASCULAR DRUGS		
		12.10 ANTIANGINAL DRUGS		
		12.10 Glyceryl trinitrate		
		12.10 Isosorbide dinitrate		
		12.10 Propranolol		
		12.10 Verapamil		
	ANTIARRHYTHMIC	12.20 ANTIARRHYTHMIC DRUGS		
		12.20 Isoprenaline		
		12.20 Lidocaine		
		12.20 Propranolol		
		12.20 Quinidine		
NL		12.20 Disopyramide		
12.10		12.20 Verapamil		
		12.30 ANTIHYPERTENSIVE DRUGS		
		12.30 Hydralazine		
		12.30 Hydrochlorothiazide		
		12.30 Propranolol		
		12.30 Reserpine		
		12.30 Methylidopa		
		12.40 CARDIAC GLYCOSIDES		
		12.40 Digoxin		
		13.00 DERMATOLOGICAL DRUGS		
		13.10 ANTIFUNGAL DRUGS		
		13.10 Benzoic acid & Salicylic acid		
		13.10 Miconazole		
		13.10 Nystatin		
		13.20 ANTI-INFECTION DRUGS		
		13.20 Gentian violet		

NEPAL ESSENTIAL DRUG LIST, 1906

WHO THERACL8	WHO TC NAME	NEPAL THERACL8	NEPAL TC NAME	NEPAL COMP. LIST
HL		13.20 Acriflavine		
HL		13.20 Marcurochrome		
HL		13.20 Nitrofurazone		
HL		13.20 Silver sulfadiazine		C
		13.30 ANTI-INFLAMMATORY & ANTIPRURITIC DRUGS		
		13.30 Betamethasone		
		13.30 Calamine lotion		
		13.30 Hydrocortisone		
HL		13.30 Methyl salicylate liniment		
		13.40 ASTRINGENT DRUGS		
		13.40 Aluminium acetate		
		13.50 KERATOPLASTIC & KERATOLYTIC AGENTS		
		13.50 Coal tar		
		13.50 Salicylic acid		
		13.60 SCABICIDES & PEDICULICIDES		
		13.60 Benzyl benzoate		
		13.60 Lindane (Gamma benzene hexachloride)		
HL		13.60 Sulphur		
		14.00 DIAGNOSTIC AGENTS		
		14.10 OPHTHALMIC DRUGS		
		14.10 Fluorescein		
		14.20 RADIOCONTRAST MEDIA		
		14.20 Meglumine amidotrizoate		
		14.20 Sodium amidotrizoate		
		14.20 Barium sulfate		
		14.20 Iopanoic acid		
HL		14.20 Metrizamide		
HL		14.20 Sodium iodide		
		15.00 DISINFECTANTS		
		15.00 Chlorhexidine		
		15.00 Iodine		
HL		15.00 Providone		
HL		15.00 Cetrimide		
HL		15.00 Methylated spirit		
		15.00 Gentian violet		
HL		15.00 Fluteraldehyde		C
		16.00 DIURETICS		
		16.00 Furosemide		
		16.00 Hydrochlorothiazide		
		16.00 Mannitol		
		16.00 Spironolactone		
		16.00 Triamterene		
		16.00 Chlorzotidone		C
		17.00 GASTROINTESTINAL DRUGS		
		17.10 ANTACIDS & OTHER ANTILULCER DRUGS		
		17.10 Aluminium hydroxide		
HL		17.10 Ranitidine		
		17.10 Magnesium hydroxide		
HL		17.10 Magnesium trisilicate		
		17.20 ANTIEMETIC DRUGS		
		17.20 Promethazine		
		17.20 Metoclopramide		
		17.30 ANTIHAEMORRHOIDAL DRUGS		
		17.30 Local anaesthetics, anti-inflammatory & astringents		
		17.40 ANTISPASMODIC DRUGS		
		17.40 Atropine		
HL		17.40 Belladonna dry extract		

NEPAL ESSENTIAL DRUG LIST, 1986				
WHO THERACLS	WHO TC NAME	NEPAL THERACLS	NEPAL TC NAME	NEPAL COMP. LIST
		17.50 CATHARTIC DRUGS		
		17.50 Senna		
4.10		17.50 Magnesium sulfate		
	ML	17.50 Bisacodyl		
	ML	17.50 Liquid Paraffin		
		17.60 DIARRHOEA, DRUGS USED IN		
		17.61 ANTIDIARRHOEAL (SYMPTOMATIC) DRUGS		
		17.61 Codeine		
		17.62 REPLACEMENT SOLUTION		
		17.62 Oral Rehydration Salts		
		17.62 Sodium chloride		
		17.62 Trisodium citrate dihydrate		
		17.62 Potassium chloride		
		17.62 Glucose		
	ML	17.63 OTHERS		
	ML	17.63 Lactulose		
		18.00 HORMONES		
		18.10 ADRENAL HORMONES & SYNTHETIC SUBSTITUTE		
		18.10 Dexamethasone		
		18.10 Hydrocortisone		
		18.10 Prednisolone		
	ML	18.10 Cortisone		C
		18.20 ANDROGENS		
		18.20 Testosterone		
		18.30 CONTRACEPTIVES		
		18.30 Ethinylestradiol & Norethisterone		
		18.30 Depot medroxyprogesterone		
		18.40 ESTROGENS		
		18.40 Ethinylestradiol		
		18.50 INSULINS & ANTI-DIABETIC DRUGS		
		18.50 Insulin injection (soluble)		
		18.50 Intermediate acting insulin		
	ML	18.50 Metformin		
		18.50 Glibenclamide		
		18.60 OVULATION INDUCERS		
		18.70 PROGESTOGENS		
		18.70 Norethisterone		
		18.80 THYROID HORMONES & ANTI-THYROID DRUGS		
		18.80 Levothyroxine		
	ML	18.80 Lugol's Iodine		
	ML	18.80 Iodine injection		
	ML	18.80 Carbimazole		
	ML	18.90 POSTERIOR PITUITARY HORMONE		
	ML	18.90 Vasopressin Injection		
		19.00 IMMUNOLOGICALS		
		19.10 DIAGNOSTIC AGENTS		
		19.10 Tuberculin, purified protein		
		19.10 Derivative (PPD)		
		19.20 SERA & IMMUNOGLOBULINS		
		19.20 Anti-O immunoglobulin (human)		
		19.20 Antirabies hyperimmune serum		
		19.20 Antivenom sera		
		19.20 Diphtheria antitoxin		
		19.20 Immunoglobulin, human normal		
	ML	19.20 Hepatitis B immunoglobulins		
		19.20 Tetanus antitoxin		
		19.30 VACCINES		

NEPAL ESSENTIAL DRUG LIST, 1986

WHO THERACLS	WHO TC NAME	NEPAL THERACLS	NEPAL TC NAME	NEPAL COMP. LIST
		19.31	FOR UNIVERSAL IMMUNIZATION	
		19.31	BCG Vaccine (dried)	
		19.31	Diphtheria-pertussis - tetanus vaccine	
		19.31	Diphtheria - tetanus vaccine	
		19.31	Measles vaccine	
	HL	19.31	Poliovirus vaccine (live attenuated)	
		19.31	Tetanus toxoid	
		19.32	FOR SPECIFIC GROUPS OF INDIVIDUALS	
		19.32	Meningococcal vaccine	
		19.32	Rabies vaccine	
		19.32	Typhoid vaccine	
		19.32	Yellow fever vaccine	
	HL	19.32	Hepatitis b vaccine	
		20.00	MUSCLE RELAXANT (PERIPHERALLY ACTING) AND CHO	
		20.00	Gallamine	
		20.00	Meostigmine	
		20.00	Suxamethonium	
	HL	20.00	D-Tubocurarine	
	HL	20.00	Pancuronium bromide	
		21.00	OPHTHALMOLOGICAL PREPARATIONS	
		21.10	ANTIINFECTIVE AGENT	
		21.10	Sulfacetamide	
	6.32	21.10	Chloramphenicol	
		21.10	Tetracycline	
		21.20	ANTI-INFLAMMATORY AGENTS	
	13.30	21.20	Betamethasone	
		21.30	LOCAL ANAESTHETICS	
	1.2,12.2	21.30	Lignocaine	
		21.40	MIOTICS & ANTIGLAUCOMA DRUGS	
		21.40	Acetazolamide	
		21.40	Pilocarpine	
		21.40	Timolol	
		21.50	MYORIATICS	
		21.50	Homatropine	
	4.2,17.4	21.50	Atropine	
	HL	21.50	Phenyl ephrine	C
	HL	22.00	EAR, NOSE & THROAT PREPARATIONS	
	HL	22.00	Ichthammol	
	HL	22.00	Glycerine	
	25.20	22.00	Sodium bicarbonate	
	HL	22.00	Oxymetazoline	
	21.10	22.00	Silver nitrate	
	HL	22.00	Chromic acid	
	22.00	23.00	OXYTOCICS	
	22.00	23.00	Ergometrine	
	22.00	23.00	Oxytocin	
	23.00	24.00	PERITONEAL DIALYSIS SOLUTION	
	23.00	24.00	Intraperitoneal dialysis solution	
	24.00	25.00	PSYCHOTHERAPEUTIC DRUGS	
	24.00	25.00	Amitriptyline	
	24.00	25.00	Chlorpromazine	
	24.00	25.00	Diazepam	
	24.00	25.00	Fluphenazine	
	24.00	25.00	Haloperidol	
	24.00	25.00	Imipramine	
	HL	25.00	Phenobarbitone	
	24.00	25.00	Lithium carbonate	C

NEPAL ESSENTIAL DRUG LIST, 1986

WHO THERACLS	WHO TC NAME	NEPAL THERACLS	NEPAL TC NAME	NEPAL COMP. LIST
25.00		26.00	RESPIRATORY TRACT, DRUG ACTING ON THE	
25.10		26.10	ANTIASTHMATIC DRUGS	
25.10		26.10	Aminophylline	
25.10		26.10	Epinephrine	
25.10		26.10	Salbutamol	
25.10		26.10	Ephedrine	
13.30		26.10	Betamethasone	C
	ML	26.10	Cromoglicic acid	C
25.20		26.20	ANTITUSSIVES	
25.20		26.20	Codaine	
26.00		27.00	SOLUTION CORRECTING WATER, ELECTROLYTE, & AC	
26.10		27.10	ORAL	
26.10		27.10	Oral Rehydration Salt	
26.10		27.10	Potassium Chloride	
26.20		27.20	PARENTERAL	
26.20		27.20	Compound solution of sodium lactate	
26.20		27.20	Glucose	
26.20		27.20	Glucose with sodium chloride	
26.20		27.20	Potassium chloride	
26.20		27.20	Sodium bicarbonate	
	ML	27.20	Calcium chloride	
26.20		27.20	Sodium chloride	
4.10		27.20	Magnesium sulfate	C
26.30		27.30	MISCELLANEOUS	
26.30		27.30	Water for injection	
	ML	27.30	Ethyl alcohol	
27.00		28.00	VITAMINS & MINERALS	
27.00		28.00	Ascorbic acid	
27.00		28.00	Ergocalciferol	
27.00		28.00	Nicotinamide	
27.00		28.00	Pyridoxine	
27.00		28.00	Retinol	
27.00		28.00	Riboflavin	
27.00		28.00	Thiamine	
27.00		29.00	Calcium gluconate	C