

**THE ROLE OF BLOCK GRANT FUNDING
FROM
INTERNATIONAL AND BILATERAL AGENCIES IN ORGANIZING
BASIC HEALTH SERVICES FOR DEVELOPING NATIONS**

(Position paper : with particular reference to Nepal)

by

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[While studying for the MPH in the Harvard School of Public Health, the writer had been given excellent opportunity by the various departments and the Center for Community Health and Medical Care to discuss the role of Block Grant vs. Categorical Grant in different seminars. This paper has been prepared by accumulating the information from different seminars especially seminar on "The Role of International and Bilateral Agencies in Developing Health Programs for Developing Nations" guided by Dr. A. S. Yerby, Professor of Health Services Administration and Dr. John Karefa-Smart, Visiting Professor of International Health, and "Information Requirement for Neighborhood Health Center," guided by Dr. Paul M. Densen, Professor of Community Medicine, and Director, Harvard Center for Community Health and Medical Care.]

INTRODUCTION

During the last two decades, many developing nations had organized special health programs and have considerably improved the health status of the country by controlling major communicable diseases and combating other diseases of public health importance.

Much credit for this achievement goes to the International and Bilateral agencies which provided the technical and financial support. Without these achievements the countries might not have embarked upon other programs directed towards their socio-economic development.

In the present decade, these developing nations are confronted with the problem of trying to maintain the achievement of the various health projects without a basic health infrastructure. In addition, it is necessary to develop an adequate mechanism to provide for the present health needs of the people and also to carry out a population control program designed to fit the social and cultural needs in the countries. While attempting to carry out these tasks, the countries have felt all these different services could be delivered to a wide community more economically, effectively, and rationally, if the available resources were pooled together. Services could be rendered through an integrated approach without duplication of effort and expenditure by the various special programs which are functioning on a categorical basis and missing potential derivative benefits that would increase utility of limited health funds available to developing countries.

Some countries have already established as their national policy a plan to integrate related health programs and to develop basic health services. Recently, Pilot Projects have been developed and initiated to demonstrate the efficacy and economy of the integrated health program covering the entire population of a defined geographic area. One such Pilot Project has been initiated in Nepal. During the implementation of the project, Nepal has been supported by a categorical fund granting system for individual health programs from International and Bilateral agencies, and this has posed a major problem for the planning and development of the integrated basic health service that will continue to meet the needs of the granting agencies and at the same time move toward the achievement of national health program objectives.

This paper includes general background information, the existing health situation, the problem of categorical funding, the role of block grant funding in the delivery of the integrated basic health service, methodology and implementation procedures in the utilization of the Block Grant Fund effectively enough to meet the criteria of the various health programs, and lastly, evaluation techniques in the measurement of the impact of the integrated health program to the entire people of the area covered.

Pilot Project for Integrated Basic Health Services, Nepal, has been initiated from an early period of 1972 by pooling the categorical funds together. If the project should succeed in delivering integrated basic health services even under the restrictions of this funding procedure, there should be no doubt as to the positive role which Block Grant Funding from International and Bilateral agencies could play in further expansion of the organization of Basic Health Services for Nepal as well as other developing countries which resemble Nepal and depend on external assistance for their developmental programs.

GENERAL BACKGROUND INFORMATION

Nepal is a small mountainous country in the Himalayas lying between China and India. Sixty percent of the people live in the mountains. Communication is very difficult with classical mode of transport being by foot.

The main religions are Hinduism and Buddhism. The literacy rate is very low, about 11%. The population includes at least 15 major ethnic groups and there are 36 local dialects.

The majority of the people (11.3 million, census 1971) are farmers (92%) and they live in the rural areas which cover about 92-95% of the country. The dependency ratio is 45%. Per capita income was approximately \$80.00 per annum in 1971.

The present political system is a three-tiered Panchayat Democracy with the village Panchayat (village local-self government) at the base.

The country is divided into 14 politico-administrative zones, 75 districts and 3538 village panchayats.

HEALTH SITUATION

Nepal is largely a tropical country and, hence, the majority of the people are faced with most of the tropical endemic diseases like malaria, as well as other communicable diseases including smallpox, tuberculosis, and leprosy. The Nepal Health Survey by Worth & Shah also indicates poor environment hygiene standards and a high prevalence rate of fecal-borne diseases. It is, however, quite difficult and to-date impossible to define specifically the size and distribution of health problems due to the lack of statistical data and the incomplete coverage of the health services by institutions and personnel.

The health needs of the people have been met through three types of services:

- (1) General health services provided by government, e. g., hospitals, health centers and health posts, Ayurvedic Hospitals¹ and dispensaries;
- (2) Special health programs, e. g., malaria, smallpox, tuberculosis, leprosy, family planning and maternal child health; and
- (3) Other through non-profit, private and mission hospitals, and clinics.

General Health Services

Hospitals, Health Centers and Health Posts:

In the F. Y. 1970/71, there were 53 hospitals² with 1875 beds, 36 health centers, 153 health posts, an Ayurvedic hospital, 77 Ayurvedic dispensaries, and one homeopathic

¹ Indigenous Medicine

² Includes all the non-profit, private, and mission hospitals.

hospital in the country. This averages out to approximately one hospital for a population of 200,000, one hospital bed for 6,700, one health center / health post for 57,000 (one health center / health post / Ayurvedic dispensary for 40,000). The distribution of these facilities however, varies enormously from zone to zone.

Table I summarizes the data about the health facilities and shows extreme variation in different zones. The detailed zone-wise information about the distribution of hospitals, health centers, health posts and dispensaries is given in Annex I, II, and III.

TABLE I
Summary of Health Facilities Showing Extreme Variation
in Different Zones

TYPE	Zones with facilities for population				Average
		Most		Least	
Hospitals	Bagmati	(1:126,000)	Rapti	(1:664,000)	1:200,000
Hospital Beds	Bagmati	(1: 1,900)	Rapti	(1: 44,000)	1: 6,700
Health Centers / Health Posts	Narayani	(1: 23,000)	Bheri	(1:200,000)	1: 57,000
Health Centers / Health Posts / Ayurvedic Dis- pensaries	Narayani	(1: 21,000)	Bheri	(1:103,000)	1: 40,000

During the fourth five-year plan (1970-1975), His Majesty's Government of Nepal (HMG/N) has planned to strengthen the existing hospitals and health centers and to establish 225 new health posts. Forty new health posts were established in the F. Y. 1970/71 according to the plan.

Health Manpower: (Available and Need)

(a) Physicians, nurses, auxiliary health workers

In the F. Y. 1970/71, the available information shows the following average estimates of different health professionals¹ - population ratio :- one doctor for a population of 45,000, one nurse for 73,000, one assistant nurse midwife for 55,000, one senior auxiliary health worker for 111,000, and one auxiliary health worker for 33,000.

Most of these health personnel except auxiliary health workers (AHW) are concentrated in the capital.² Fifty-four percent of the doctors serving in Civil Service are in

1. Civil Service only. Does not include non-profit, private, and mission hospitals and clinics.
2. This includes the 20% of total number of doctors who are undergoing postgraduate training abroad and a few other / serving international agencies.

Bagmati zone; 74% of the nurses and 40% of the assistant nurse midwives (ANM) are in the same Bagmati Zone. In contrast to the distribution of doctors, nurses and assistant midwives, only 20% of the senior auxiliary health workers (SAHW) and less than 20% of the auxiliary health workers are in the capital zone. In other words, the vast majority of the people in the rural areas are served only by the auxiliary health workers—one auxiliary health worker for a population of 40,000 on the average. In one area, there is not a single auxiliary health worker for more than 100,000 people.

TABLE II

Comparative Summary of the Health Personnel
Population Ratio in a few Zones, Nepal, 1970 / 71

Personnel	Health Personnel Population Ratio				
	Highest		Lowest		Average
	Zone	Ratio	Zone	Ratio	
Doctor : Population	Bagmati	1:11,000	Sagarmatha	1:144,000	1: 45,000 ¹
Nurses : Population	Bagmati	1:13,000	Rapti	0:617,000	1: 73,000
ANM : Population	Bagmati	1:18,000	Karnali	0:203,000	1: 55,000
SAHW : Population	Narayani	1:33,000	Seti	1:740,000	1:111,000
AHW : Population	Narayani and Bagmati	1:17,000	Dhaulagiri	1: 64,000	1: 33,000

(b) Mobile Basic Health Workers² (Junior Auxiliary Health Worker)

Recently, Junior Auxiliary Health Workers have been introduced as mobile basic health workers in the district of the Project for Integrated Basic Health Services. They are mostly Malaria house visitors doing the surveillance work but also include all the senior vaccinators and health aides from Smallpox and Family Planning and Maternal Child Health Projects. These workers come from the local area and understand the local culture, custom and beliefs. The area covered by each basic health worker is usually within walking distances, and each worker is responsible for an approximate population of 1,000—5,000 depending upon the terrain.

(c) Single Disease and Health Program Oriented Health Workers

In addition to the above mentioned health personnel, there are a large number of other auxiliary health personnel trained in either single disease control program or other health promotion activities, who are trying to meet the community need in their own way.

1. Doctor : Population ratio is 1:32,000, if all the available doctors including outside Civil Service are considered.

2. Basic Health Services : WHO / PHA 69,39.

(d) *Baidyas* (Ayurvedic Physicians)

The health personnel working in the Ayurvedic hospital and dispensaries constitute another group who provide traditional indigenous health care to the community.

(e) Priest-healers, witch doctors, indigenous midwives, village physicians :

It may be worthwhile to mention here that the huge mass of illiterate people who live in the remote rural areas, who have little or no access to these limited health facilities, depend heavily on priest-healers, witch doctors, indigenous midwives, and so-called village physicians who are locally available.

His Majesty's Government of Nepal (HMG / N) has planned to achieve a target of health personnel population ratio as given in Table III by the end of the current fourth Five-Year Plan (1970-1975): It is estimated that an additional number of 160 doctors, 200 nurses, 900 assistant nurse midwives, 950 senior auxiliary health workers and auxiliary health workers and 1350 junior auxiliary health workers (basic health workers) will be required to implement the Five-Year Plan successfully.

TABLE III.
Targetted Health Personnel Population Ratio
at the End of 4th Five-Year Plan (1970-75), Nepal

Personnel	Health Personnel Population Ratio		
	¹ F. Y. 1968 / 69	² F. Y. 1970/71	² F. Y. 1974/75 (Target)
Doctors	1: 43,000	1: 45,000	1: 27,000
Nurses	1: 75,000	1: 73,000	1: 32,000
AMN	1:115,000	1: 55,000	1: 10,000
SAHW	{ 1: 39,000	{ 1:111,000	{ 1: 31,000
AHW		{ 1: 40,000	{ 1: 11,000
JAHW		1: 29,000	1: 8,000
Doctor-Nurse Ratio	1: 0'56	1: 0'62	1: 0'86
No. of Hospitals	38 ⁴	53	57
Hospital Bed Population Ratio	1: 8,200 ⁴	1: 6,700	1: 4,800
Health Center / Health Post Population Ratio	1: 78,000	1: 57,000	1: 29,000

1. Richards, Henry, *Assignment Report on Public Health Administration*, SEA-69/122, 1968.

2. (1) Population estimate is from the estimate for the year 1968 by Central Bureau of Statistics Nepal. (2) Fourth Five-Year Plan 1970-75 and Information from Department of Health Nepal.

3. During the fourth five year approximately 50% of the Nepalese people should be served basic health workers.

4. One major hospital and its 300 beds included.

Education and Training

Training facilities are available for nurses, assistant nurse midwives, auxiliary health workers, laboratory technicians and Baidyas (i. e., Ayurvedic physicians) within the country. *Adhoc* courses are organized for other categories of health workers such as health aides, supervisors in specific disease control programs and x-ray technicians.

The existing number of different health schools and their capacities of training personnel and estimated annual output are given in Table IV.

TABLE IV
Number of Health School and Annual Capacity
of Students' intake, Nepal, F. Y. 1970/71

Name of School	No. of Schools	Annual Capacity of Training Students	Estimate No. of Students to Qualify F.Y. 1971/72
Graduate Nurses ²	1	40	25
Assistant Nurse Midwives	3	80	40
Auxiliary Health Workers	1	130 ¹	65
Laboratory Technicians	1	12	12
Ayurvedic College	1	25	15

There are no training facilities for preparing junior auxiliary health workers (i. e., basic health workers), senior auxiliary health workers and health inspectors.

All the medical officers are trained abroad. During the last decade, the medical officers joining the civil service have been estimated to be 18 per annum. In the year 1972, about 65 medical graduates are expected to be available for the government service, and a sufficient number of newly qualified doctors are expected to return to Nepal in time. These doctors need to be given orientation courses relevant to the health problem and program of the country.

It is, thus, clear that the education and training facilities are grossly inadequate. There is a dire need of a combined teaching complex to train all categories of health personnel who will be responsible for carrying out an integrated health program at various levels in different capacities. The training should be based on a realistic long-term manpower study relevant to the health program of the country. (Annex VII illustrates the acute shortage of health personnel.)

1. Including students from specific disease control program.
2. Shanta Bhavan Nurses School is not included in the above list.
About five students graduate annually from this school.

Health Budget

The health budget for the fourth Five-Year plan (1970-75) is estimated to be approximately twenty-five million dollars which includes both regular and developing expenditure (\$ 10 and 15 million respectively). This is estimated to be 5.3% of the total national health budget for the fourth five-year plan.

Approximately 62% of the total health budget in the developmental sector is allotted to special health programs which include Family Planning. A study of F. Y. s 1969/70 through 1971/72 (refer Annex V) shows that approximately 50% of the developmental budget is from International and Bilateral agencies. This external assistance has been provided to different special health programs on a categorical grant basis.

Special Health Programs¹

There are a number of special health programs that have come up, within the last twenty years, in the form of either an autonomous board, semi-autonomous board or as an integral part of the general health services. Experience has shown that many of the activities carried out by different projects are simply duplicated, involving unnecessary expenditure in administration, transportation and technical matters as well as repeated contacts in the community by the staff of the various programs without being able to satisfy their needs.

All the above programs have been developed in collaboration with and with the assistance of the different International and Bilateral agencies. They are in various stages of development. Program like *Malaria Eradication* is in the terminal phase (deadline for assistance from USAID—1973?). *Smallpox Eradication* is planned to continue until 1977. *Family Planning* is expected to expand and continue indefinitely, *Tuberculosis* and *Leprosy Control* is being expanded, while a program like Integrated Basic Health Services is in the infant stage and is carrying out Pilot Project for development of an integrated health program for fulfilling the total health need of the entire community in an area which has the available resources. This integrated approach of health care delivery system should be able to meet the health need of the community more rationally, economically and effectively.

The Problem of Categorical Fund Granting System

During the third five-year period, Nepal made an effort to develop integrated basic health services to meet the health needs of the country. However, the authorities were not in a position to apply the integrated approach due to the fragmented assistance made available by the International and Bilateral agencies.

1. Refer to Annex VI, and Report on Health Administration in Nepal, Department of Health HMG/N, 1969.



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In the fourth five-year plan (1970-75) HMG/N has adopted the policy of integrating all health programs with concomitant development of basic health services to provide minimum health care conducive to maintain a sound health status of the maximum population. The experience gained while trying to coordinate and integrate the different programs during the F. Y. 1970/71, has revealed that the Bilateral agencies are much more interested in categorical approach which is often not conducive to assist the country in achieving its desired objective of an integrated health program.

The Nepal government must put up matching funds and use the manpower and facilities for these categorical programs. Thus, as long as the constraint of a Categorical Fund Granting System exists, it is felt that HMG/N will not be able to utilize its own funds for the necessary manpower training program. In other words, this system of categorical funding by the Bilateral agencies is posing a major problem in the successful implementation of the health activities during the fourth five-year plan.

Under such circumstances, HMG/N must, of necessity, consider the usefulness of the assistance provided by the International and Bilateral agencies and take those measures which will further the interest of the country. This will mean that Nepal should request the assisting agencies to provide Block Grant assistance which can be utilized according to the priority need of the country in consultation with the agency representative in the country. The principle here is that whatever the source of funding, programs must be developed in a manner consistent with the overall national health policy of HMG/N.

The Role of Block Grant Funding from International and Bilateral Agencies in Organizing Basic Health Services :

The main purpose of the assistance from International and¹ Bilateral agencies for developing nations has been to assist them in their development processes and to help bring these countries to a level of self-sufficiency.

During the last decade, Nepal has achieved remarkable success in single disease control programs like malaria and smallpox under categorical grant funding from different international and bilateral agencies. This successful achievement has paved the way for the overall economic development of Nepal. However, an infrastructure was not developed, and funds are not available to develop it at the present time. This infrastructure is necessary to maintain control of malaria and smallpox, and to provide health services to meet other health needs of the community. Rather than dilute the available resources and funds for different categorical programs, Nepal has adopted the policy of integrating all the special health

1. "A. I. D. carries out U. S. overseas programs of economic and technical assistance to less developed countries designed to bring countries to a level of self-sufficiency," — U. S. Government Organization Manual 1970/71. Revised July 1, 1970.

programs into the General Health Services in the current five-year plan and developing a basic health infrastructure to carry out the maintenance activities of the special health programs, to reduce the prevalence of other endemic diseases of public health importance, to provide basic health care to a wider community and also to improve family health by providing comprehensive maternal child health services including family planning integrated with the basic health service.

WHO and UNICEF have already signed an agreement¹ with HMG/N for this Comprehensive Health Services Development in Nepal.

USAID has also agreed to initiate a pilot project to study the utility, efficacy and economy of an integrated basic health service.

A Pilot Project for the Integrated Basic Health Service has already been initiated in Nepal. This pilot project encompasses all aspects of health activities covering the entire population of a district. Immediately after the completion of the Pilot Project in the F. Y. 1972/73, it is planned to extend the basic health services to other districts, and the zonal health offices will be delegated the necessary authority as a full-fledged intermediate Health Administration level for managing the peripheral health institutions consisting of district health offices and health posts.

The implementation of the fourth five-year plan for the development of the basic health services is based on the availability of all funds in a pool at the disposal of the Ministry of Health which can then reallocate the fund to the program needs of the country. This pooling together of the funds can be possible only when the assisting agencies will provide Block Grants for the integrated health program instead of categorical grants for individual programs.

This change of funding system from Categorical Grant Funding to Block Grant Funding should play a vital role not only in achieving the objectives of the fourth five-year plan (1970-75), but also in firmly reassuring the country of the sincere efforts of the aid-giving agencies in the past.

Methodology of Implementing the Block Grant Funding

The method to implement the Block Grant Funding from International and Bilateral agencies in Nepal, should consist of strengthening the present Integration Board² and

1. *Nepal Project No. 0000 Comprehensive Health Services Development in Nepal : HMG/N, WHO and UNICEF—1971/72.*
2. *Integration Board consists of Health Secretary (Chairman), Director General (Member cum-Secretary), Finance Secretary or representative (member), WHO representative and USAID public health officer—advisors*

further expand it to include other agencies if necessary. The Integration Board should be responsible for fulfilling the criteria laid down by the various special health programs in consultation with the concerned agencies, whereas these agencies should provide their grants for different health programs into a common pool under the jurisdiction of the Integration Board.

The available common pool of funds from different health programs will be allotted by the Integration Board for the implementation of the different activities according to the Annual Plan of Action prepared for attaining the goals of the fourth five-year plan (1970-75). The allotment of funds should give special attention of Health Planning; Manpower Study; Education and Training; particularly auxiliaries; health status survey; and development of basic health services on a zone-by-zone basis.

Within a few years when the basic health services will be well developed to take up the overall responsibility of the health activities of the community, all the special health programs including the Integration Board should be dissolved in a phased manner. All the International and Bilateral agencies should then be requested to provide Block Grants to the Ministry of Health through the proper channel, until the country can manage to run the health activities with their own local resources.

EVALUATION

The terminal evaluation of the Pilot Project Integrated Basic Health Services should provide adequate information about the impact of the integrated health program on the population of the pilot area with particular reference to :

- (a) Suitability and simplicity of administrative machinery;
- (b) Technical feasibility;
- (c) Acceptability to the people;
- (d) Quality of performance;
- (e) Economy of operation; and
- (f) With a long-term view to the improvement in levels of health.

The successful implementation and completion of the Pilot Project Integrated Basic Health Services should assure that comprehensive health services could be rendered to the community through an integrated approach without duplication of effort and expenditure by the various special programs which are functioning on a categorical basis and minimal potential derivative benefits that would increase the utility of the limited health funds available to developing countries. It should be further considered as the criteria for providing Block Grant Funding from International and Bilateral agencies in organizing Basic Health Services for Nepal and other developing nations which resemble Nepal and depend on external assistance for their development in the health Sector.

Acknowledgment :

Thanks are due to Dr. Yajna Raj Joshi the person to persuade the policy of Integrated Health Program during the fourth five-year plan (1970/75), to Dr. Bharat Raj Baidya, the present Director General, DHS and other national colleagues, and senior staff of WHO, UNICEF, and USAID in the country and regional level and to Mr. Todd M. Frazier, Associate Professor of Biostatistics and Assistant Director, Harvard Center for Community Health and Medical Care, Dr. Jeannette J. Simmons, Associate Professor of Health Education, Dr. Hannu Vuori, Dr. Mrs. Charles Hays, and Dr. Kalyan Mani A. Dixit, who have given valuable guidance, comments and suggestions in the preparation of the article. Special thanks to Dorothy Keir who has kindly assisted in editing and typing the article.

(Annex Overleaf)

ANNEX I

Distribution of Hospitals, Health Centres, Health Posts,
and Ayurvedic Dispensaries, Nepal, F. Y. 1970/71

Zone	Civil		Mission & Others		Hospitals		Health Centers	Health Posts	Ayurvedic Dispensaries	Total	
	No.	Beds	No.	Beds	No.	Beds				(8) & (9)	Total of (8) (9) & (10)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Mechi	2	25	—	—	2	25	3	4	5	7	12
Koshi	5	95 ¹	1	50	6	145	2	8	3	10	13
Sagarmatha	2	30	—	—	2	30	5	10	7	15	22
Janakpur	4	100	—	—	4	100	3	29	7	32	39
Bagmati	5	450 ²	8	550 ³	13	1000	5	15	12	20	32
Narayani	5	130	—	—	5	130	1	41	4	42	46
Gandaki	2	65	2	60	4	125	2	15	13	17	30
Dhaulagiri	1	15	—	—	1	15	2	3	3	5	8
Lumbini	7	132	2	40	9	172	2	7	7	9	16
Karnali	1	15	—	—	1	15	1	2	1	3	4
Rapti	1	15	—	—	1	15	2	9	4	11	15
Bheri	2	58	—	—	2	58	3	0	3	3	6
Seti	2	30	—	—	2	30	3	5	6	8	14
Mahakali	1	15	—	—	1	15	2	5	2	7	9
	40	1175	13	700	53	1875	36	153	77	189	266

1. Does not include the 25 bed expansion in Biratnagar and 10 bed expansion in Rajbiraj.

2. Does not include one Ayurvedic and one homeo-hospital.

3. Does not include 20 bed hospital of T. B. Association.

ANNEX II

Ratio : Hospital Beds / Population, Nepal F. Y. 1970 / 71

Zone	Population	No. of Hospitals	No. of Beds	Bed : Population Ratio
Mechi	506,000	2	25	1:20,000
Koshi	764,000	6	145	1: 5,000
Sagarmatha	1,293,000	2	30	1:43,000
Janakpur	1,023,000	4	100	1:10,000
Bagmati	1,389,000	11	730 ¹	1: 1,900
Narayani	933,000	5	130	1: 7,000
Gandaki	933,000	4	125	1: 7,500
Dhaulagiri	254,000	1	15	1:17,000
Lumbini	1,009,000	9	172	1: 6,000
Karnali	203,000	1	15	1:14,000
Rapti	664,000	1	15	1:44,000
Bheri	617,000	2	58	1:11,000
Seti	740,000	2	30	1:25,000
Mahakali	291,000	1	15	1:19,000
	10,619,000	51	1,605	1: 6,700

ANNEX III

Health Center / Health Post Population and Health Center / Health Post / Ayurvedic Dispensary
Population, Nepal, F. Y. 1970 / 71

Zone	Population	No. of Health Centers	No. of Health Posts	No. of		Health Center / Post:		Health Center / Health Post	
				Ayurvedic Dispensary	Total of (3) & (4)	Population	Ratio	Ayurvedic Dispensary	Ratio
1	2	3	4	5	6	7	8	9	10
Mechi	506,000	3	4	5	7	1: 72,000	12	1: 42,000	
Koshi	764,000	2	8	3	10	1: 76,000	13	1: 52,000	
Sagarmatha	1,293,000	5	10	7	15	1: 86,000	15	1: 59,000	
Janakpur	1,023,000	3	29	7	32	1: 32,000	39	1: 26,000	
Bagmati	1,389,000	5	15	12	20	1: 69,000	32	1: 43,000	
Narayani	933,000	1	41	4	42	1: 23,000	46	1: 21,000	
Gandaki	933,000	2	15	13	17	1: 54,000	30	1: 31,000	
Dhaulagiri	254,000	2	3	3	5	1: 51,000	8	1: 32,000	
Lumbini	1,009,000	2	7	7	9	1: 112,000	16	1: 63,000	
Karnali	203,000	1	2	1	3	1: 68,000	4	1: 51,000	
Rapti	664,000	2	9	4	11	1: 60,000	15	1: 44,000	
Bheri	617,000	3	0	3	3	1: 206,000	6	1: 103,000	
Seti	740,000	3	5	6	8	1: 93,000	14	1: 53,000	
Mahakali	291,000	2	5	2	7	1: 42,000	9	1: 33,000	
	10,619,000	36	153	77	189	1: 57,000	366	1: 40,000	

ANNEX IV

Ratios : Doctors, Nurses, Auxiliary Midwives, Auxiliary Health Workers,
and Baidyas to Population, Nepal, F. Y. 1970 / 71

Zone	Population	¹ Doctors-Ratio	Nurses-Ratio	ANMS-Ratio	SAHW-Ratio	AHW-Ratio	² Baidyas-Ratio
Mechi	506,000	7-1: 72,000	0-0: 506,000	2-1: 253,000	5-1: 101,000	11-1: 46,000	5-1: 101,000
Koshi	764,000	13-1: 59,000	7-1: 109,000	13-1: 59,000	5-1: 153,000	25-1: 31,000	5-1: 153,000
Sagarmatha	1,293,000	9-1: 144,000	1-1: 1293,000	2-1: 647,000	7-1: 185,000	21-1: 62,000	7-1: 185,000
Janakpur	1,023,000	12-1: 85,000	4-1: 256,000	13-1: 80,000	7-1: 146,000	38-1: 27,000	7-1: 146,000
Bagmati	1,389,000	126-1: 11,000	108-1: 13,000	78-1: 18,000	22-1: 63,000	81-1: 17,000	12-1: 116,000
Narayani	933,000	12-1: 78,000	5-1: 187,000	38-1: 25,000	28-1: 33,000	54-1: 17,000	4-1: 233,000
Gandaki	933,000	8-1: 117,000	4-1: 233,000	14-1: 67,000	6-1: 156,000	21-1: 44,000	13-1: 72,000
Dhaulagiri	254,000	3-1: 85,000	1-1: 254,000	1-1: 254,000	3-1: 85,000	4-1: 64,000	3-1: 85,000
Lumbini	1,009,000	17-1: 59,000	7-1: 144,000	16-1: 63,000	5-1: 20,000	24-1: 42,000	7-1: 144,000
Karnali	203,000	3-1: 68,000	1-1: 203,000	0-0: 203,000	1-1: 203,000	5-1: 41,000	1-1: 203,000
Rapti	664,000	5-1: 133,000	0-0: 164,000	2-1: 332,000	4-1: 166,000	13-1: 51,000	4-1: 166,000
Bheri	617,000	9-1: 69,000	6-1: 103,000	12-1: 51,000	1-1: 617,000	12-1: 51,000	3-1: 206,000
Seti	740,000	7-1: 106,000	1-1: 740,000	1-1: 740,000	1-1: 740,000	13-1: 57,000	6-1: 123,000
Mahakali	296,000	3-1: 94,000	1-1: 296,000	1-1: 296,000	1-1: 296,000	5-1: 59,000	2-1: 148,000
	10,681,000	234-1: 45,000	146-1: 73,000	192-1: 55,000	96-1: 111,000	327-1: 33,000	77-1: 138,000

Note :—All health personnel mentioned above are under Civil Service. Health personnel working under other health facilities are not included.

1. Overall Doctor / Population Ratio was one doctor per 32,000 people according to "Health Progress in a Nutshell" by Dept. of Health Services, HMG / N, Feb. 1970.

2. One Baidya estimated for each dispensary. (Ayurvedic).

Note :—There were 119 Baidyas with Civil Service in F. Y.

ANNEX VII

Table Showing Shortage of Health Personnel to meet F. Y. 1974/75 Target

Personnel	Number Needed to Meet F. Y. 74/75 Target	Number ¹ expected from Existing Education & Training Resources	Different
Doctor	160	90 ¹	— 70
Nurses	200	125 ²	— 75
ANM	900	200 ²	— 700
SAHW	253	*	— 253
AHW	697	325 ²	— 372
JAHW	1350	?	—1350

* No training facilities available.

1. Extrapolated for 5 years from the ten years experience of 1961-1970.
2. Extrapolated for 5 years from estimate in Table IV.

IN XENY

[illegible]

ANNEX V

Estimated Health Budget for F. Y. 1969/70 and Fourth Five Year Plan (1970-75)
(Rupees in Million Note U. S. \$ 1.00 = *NC Rs. 10 $\frac{100}{100}$)

Budget Detail	F. Y. 1967/70		F. Y. 1970/71		F. Y. 1971/72		Fourth Five Year Plan (1970/75)					
	National	Health %	National	Health %	National	Health %	National	Health %				
Total	840.9	39.4	4.7	973.0	51.0	5.2	1137.5	52.2	4.6	4730.0	257.2	5.3
Regular	232.7	12.6	5.4	340.0	14.6	4.3	367.7	17.4	4.7	2160.0	100.0	4.6
Development	608.2	26.8	4.5	633.0	3.64	5.8	769.8	34.8	4.5	2570.0	157.2	5.9
Foreign Aid	329.2	14.3	3.6	330.0	?	?	352.3	?	?	1490.0	?	?

Source : Budget Speech 1970/71 & 1971/72; Comprehensive Health Services Development in Nepal, HMG/N, WHO & UNICEF 1971/72.

Note : In 1969/70, out of the total health budget 40% was for malaria and 10% for FP and MCH Programs.

In 1971/72, approximately 62% of the total health budget in the developmental Sector was allotted to special health programs including family planning.

* NCRs : Nepalese currency Rupees

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