

MID-PROJECT EVALUATION
INTEGRATED RURAL HEALTH AND FAMILY PLANNING SERVICES
NEPAL
(367-0135)
NOVEMBER, 1984

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TABLE OF ABBREVIATIONS

AID/W	Agency for International Development/Washington
A&E	Architectural and Engineering
C.C.C.	Construction Coordinating Committee
C.P.	Condition Precident
CSC	Construction Service Coordinator
DHO	District Health Office
DHS	Department of Health Services
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPI	Expanded Program of Immunization
FM	Financial Management Office of USAID
FP/MCH	Family Planning/Maternal and Child Health
FX	Foreign Exchange
FY	Fiscal Year - U.S. - October 1 - September 30; Nepali - July 15 - July 14
GON	Government of Nepal
HFP	Health and Family Planning Office of USAID
HMG/N	His Majesty's Government/Nepal
HPD	Health Planning Division
ICHSDP	Integrated Community Health Service Delivery Project
IEE	Initial Environment Examination
IOM	Institute of Medicine
IRH/FP	Integrated Rural Health/Family Planning
JSI	John Snow Incorporated
LC	Local Costs
MOH	Ministry of Health
NMEO	Nepal Malaria Eradication Organization
NR	Nepali Rupees - Currency
PBHW	Panchayat Based Health Worker
PDIS	Project Development & Implementation Support Office of USAID
PIO/T	Project Implementation Order/Technical
PSC	Personal Services Contract
RFP	Request for Proposal
RS	Nepali Rupees - Currency
TEMO	Transport Equipment Maintenance Office of MOH
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations International Children's Emergency Fund
USAID/N	United States Agency for International Development/Nepal
VHW	Village Health Worker
VSC	Voluntary Surgical Contraception
WHO	World Health Organization

PREFACE AND OVERVIEW

An evaluation of the Integrated Rural Health and Family Planning Services (IRH/FPS) was undertaken as initially envisioned and scheduled in the Project Paper. As indicated in the scope of work, the overall objective of measuring the effect of the project on improving the delivery of health and family planning services in Nepal, the purpose of the evaluation was three fold. First, as specified in the project paper, the evaluation measured progress against planned targets (objective verifiable indicators) and identified operational constraints. Second, the evaluation assessed the feasibility of these targets together with analysis and guidance on possible target revision occasioned by changes in Royal Nepalese government policy during the life of the project. Third, the evaluation reviewed the project in the larger context of Nepal's current health and family planning policies, goals and requirements. An examination of AID's role in relation to other donors was performed particularly with reference to alternatives for other donor assistance to health and family planning. The evaluation examined four key areas of project support as had been detailed originally in the project paper, namely:

- (1) Management and planning.
- (2) Rural health services.
- (3) Family planning services.
- (4) Malaria control.

These four key areas of the project were examined in the context of the Country Development Strategy Statement FY 1986 which set forth explicitly the constraints impacting any project undertaken in Nepal and against which any project can only be fairly judged.

The members of the evaluation team were:

James E. Banta, MD, MPH, Team Leader, Epidemiologist
(Tulane University)

Dana B. Copp, MD, MPH, Public Health Administrator (USPHS)

David T. Allen, MD, MPH, Public Health and Family Planning
(Private Consultant, Kentucky)

Bimala Shrestha, MBBS, MPH, Public Health Physician
(Private Consultant and IOM Nepal)

Aychut Acharya, MBBS, MPH, Public Health Physician
(MOH, HMG)

Richard Handler, BA., Assistant Program Officer (USAID/N)

The evaluation was carried out during November 1984. There was excellent and extensive documentation of the project and many specialized and technical evaluations had been conducted during the life of the project; these pertinent documents were thoroughly reviewed by members of the team. In addition interviews of the respective senior Ministry of Health officials were conducted (see Appendix B). Field visits were undertaken at selected sites around the country including, inter alia, a number of Health Posts, District Medical Offices, District Malaria Control Offices, the National Malaria Research and Training

Center, Voluntary Surgical Contraceptive Centers, the Contraceptive Retail Sales Company headquarters, etc., etc. The agencies of Nepal, both voluntary and official, concerned with family planning were visited. There is considerable activity by international donor agencies in Nepal and their directors were consulted, i.e. UNDP, UNICEF, UNFPA, WHO, IBRD, and CEDA. The US Peace Corps works closely with USAID in Nepal in health and family planning activities. Therefore, the Peace Corps was consulted in this regard.

Because of the specialized knowledge, experience, and interest of the respective team members in particular aspects of the program, the members devoted specific attention to these key areas. In addition, numerous discussions were held so that the project was examined closely by the team. Dr. Allen examined family planning particularly, Dr. Copp rural health services, Dr. Banta malaria control, Mr. Handler management, planning, and finance issues, while Dr. Shrestha and Dr. Acharia examined respectively nutrition programs and nursing manpower.

An evaluation was conducted during the period January 26 - March 26, 1980 by Robert Y. Grant, et al, entitled "An Evaluation of AID - Financial Health and Family Planning Projects in Nepal" under the auspices of American Public Health Association on behalf of USAID/N, Authorization Ltr. AID/DS/HEA 8/14/80 Assignment Number 582015/583008. Because this evaluation document contains the basic data relating to the project and includes

relevant data of the years antecedent to 1980; it seemed prudent and desirable to build upon this 1980 evaluation report so that the 1984 evaluation could provide continuity and a picture of ongoing effort rather than disjointed and intermittent activity. Furthermore, it would not be necessary to repeat again descriptive information and basic data. By referring to the 1980 evaluation report and the 1984 evaluation report together one can hopefully grasp the progress of the USAID effort in health and family planning since 1975 with a minimum of confusion. The same format and report outline is adopted by the 1984 evaluation to facilitate comparison and continuity with the 1980 evaluation.

From reading previous reports it appears that the USAID Mission in Nepal has a tradition of cordiality and support for visiting consultants. This time was no exception, the excellent support and helpfulness of the mission enabled the team to conduct its work with ease and efficiency.

The many Nepalis both within and outside the government were generous with their time. They discussed problems frankly, presenting both the positive and negative aspects of their respective enterprises. All of this contributed to an objective evaluation and the evaluation team wishes to thank these many Nepalis for their assistance.

Chapter I

ANNOTATED RECOMMENDATIONS OF HIGHEST PRIORITY

1. Integrated Community Health Service Delivery Project should be functionally decentralized to the district level, with line authority for implementation and USAID/N should support the program of integration determined by HMG. There should be power to reward the most productive, prod the least productive, and relieve the non-productive.
2. Continue support of Panchayat Based Health Worker program to facilitate community health education, enlistment of family planning and sterilization acceptors, and awareness of local sanitation importance - with more gradual transition to HMG maintenance support.
3. Give top priority to control of population growth, with +/- 8 years intensive support of Voluntary Surgical Contraception activities to balance population growth with Nepal's economic capacity to absorb that growth.
4. Institute reward/incentive systems based on quantitative measures wherever possible.
5. Emphasize constant monitoring of progress by posting on visible bulletin boards at all posts annual targets and progress to date on multiple projects.

6. Set local targets for services to be delivered and tie them into a recognition/reward feedback loop.
7. Must support continued supply of commodities for malaria control program, to avert tragedy.
8. Technical Assistance contract consultants should be integrated into AID staff function, with assignment of specific tasks/objectives under Health of Family Planning Office of USAID section.
9. Utilize every health facility with refrigeration capacity for delivery of immunizations.
10. Give priority for resources to disease prevention and health promotion efforts, - placing limits on investment in the curative care systems. Focus planning on:
 - a) control of population growth
 - b) environmental disease control
 - c) improving immunization level
11. Provide quarterly AID financial reconciliation of fund usage, with notification to Secretary of Health/HMG.
12. Continue to strengthen Health Planning Division and organizationally relocate it as a staff arm of the Secretary of Health.

13. Put a Charpi at every health post and school, and make home sanitation a major educational agenda for Panchayat Based Health Worker's Village Health Worker's, Community Health Leader's and all other health post staff.
14. Add home/school sanitation supplies, especially soap, as an add-on product to contraceptive Retail Sales program (CRS).

Chapter II

EXECUTIVE SUMMARY: FINDINGS AND RECOMMENDATIONS

During the month of November 1984 the evaluation team was asked to address the status of the Integrated Rural Health and Family Planning Services Project No. 367-0135. The project was designed to improve and expand delivery of rural health services by means of an integrated management system. Having been built upon previous projects, it supported Nepal's long-term health plan to deploy multi-purpose village level health and family planning workers and assisted in the development of an integrated management system for rural health and family planning services. A.I.D. support was provided through technical assistance, training, commodities, construction, equipment, and through other components (e.g., Contraceptive Retail Sales Program) potentially contributing to the achievement of the objectives of the project. The support was directed to (1) management and planning, (2) delivery of rural health services, (3) delivery of family planning services, and (4) malaria control. The team examined the relevant Nepalese Government (HMG) health and family planning programs in order to assess the impact of the USAID/N project and to ascertain how USAID/N might better assist HMG in improving their health and population programs.

Key findings and recommendations of the evaluation are summarized in the following section.

A. USAID/N Financed Health and Population/Family Planning Projects - Goal Achievement

Finding:

The goals of the USAID/N Integrated Rural Health and Family Planning Services Project No. 357-0135 have been partially met and there is evidence of steady progress against very substantial constraints when compared with the situation of five years ago.

Recommendation:

USAID/N should continue to provide support to HMG's health, family planning and population activities. USAID/N should assiduously coordinate its programs, projects and support with the activities of other donors.

B. The Demographic Setting

Finding:

The demographic crisis in Nepal has not abated, (see Appendix E), nor is it likely to in this century, unfortunately, without drastic intervention. The population growth rate remains at 2.66 percent annually. It is a crisis because of the ecological impact of the growing population upon resources, land use, nutritional status and the quality of life already constrained.

Recommendation:

Population must be the number one priority of USAID/N. USAID/N must assure that population concerns are appropriately addressed in all USAID/N supported development projects. Surely without population stabilization virtually all other development goals are likely to be frustrated. USAID/N must encourage HMG and all donor agencies to address the population growth problem at every opportunity.

C. National Population and Health Policy

Finding:

The National Commission on Population (NCP) has, since 1982 , been vigorous in examining and defining Nepal's national population targets. The NCP has established a national total fertility rate goal of 2.5 by the year 2000 which is a population growth rate of 1.18. In addition HMG has made a commitment to provide basic health and family planning services to all.

Recommendation:

USAID/N should continue to assist HMG in its efforts to implement Nepal's national population and health policies. It should encourage and continue to encourage the National Commission on Population. It should continue to support Ministry of Health efforts to strengthen health and family

planning programs, particularly those emphasizing outreach and education. USAID/N must urge and support HMG in efforts to raise the level of awareness and encourage the population to practice family planning as a means of averting demographic disaster. If there is an increase in demand for family planning service, as we avidly hope, then USAID/N should continue and increase its support. Family planning must exploit every target of opportunity, the program in voluntary surgical contraception is showing remarkable growth and should be strongly supported, while temporary contraception should be enhanced also, especially through social marketing.

D. The Nepal Context

Finding:

The difficult topography, narrow resource base, severe economic constraints, socio-political environment, and traditional cultural values all contribute to a development environment where obstacles are more severe than those found in many developing countries.

Recommendation:

Because of the obstacles to development in Nepal which must be overcome, USAID/N should expect that the cost of its efforts are going to be relatively higher than is the case in other LDC's. It is also reasonable to expect the program

outputs to be less cost effective and the impact to be less dramatic. Therefore USAID/N should anticipate the need for sustained contribution over a period of decades and not expect a "quick fix" cheaply purchased.

E. Service Delivery

Finding:

Inadequate coverage by health and family planning service delivery systems continue to be the norm compared with previous evaluations. The quality of services also continues to be a matter of concern and clearly requires improvement. However, systems are expanding with 26 districts under either full or partial integrated management systems; an additional 200 health posts were established during the project period for a total of 744 health posts. Unfortunately, because of vacancies and absenteeism some 20 - 45% of the supervision posts are unmanned. The concept of community participation has been initiated by means of a community health leader program within one-half of the partially or fully integrated districts together with some 2,600 ward health committees.

There has been a rise in the distribution of temporary contraceptive materials and as of 1983 there were 149,898 couple years of protection being provided by temporary contraceptive methods. In addition there were 164,180

voluntary surgical contraceptive (VSC) procedures performed during the 1980-1984 period. Last year's national target of 65,000 procedures was exceeded. Unfortunately, the demographic impact has remained minimal but there is definite promise for the future as the social marketing of contraceptives through the Contraceptive Retail Sales Program has increased the pill acceptor rate and the voluntary surgical contraceptive program shows evidence of dramatic growth.

The status of the prevention and treatment of pediatric diarrhea remains unsatisfactory as it is estimated that the nationwide use of oral rehydration therapy for severe diarrhea is less than 5%. There is little evidence of an effort to provide privies or education concerning personal hygiene and excreta disposal. Pre-natal care activities appear to be provided inconsistently and are poorly reported upon because there is no data concerning the provision of iron or folic acid to women of reproductive age. The percentage of women receiving tetanus immunizations ranges from 5% in the integrated districts to 0% in the FP/MCH districts. It is estimated that only 42% of active tuberculosis cases are under treatment. Immunization remains inadequate with only 12 to 14% of children under one having been completely immunized against diphtheria-pertussis-tetanus and less than 5% having been immunized against measles.

Malaria continues to be a problem especially in certain areas of the Terai with an annual parasite incidence rate (API) of some 2.17 reported in 1983. On the other hand, in the integrated districts where control has been more effective, the annual parasite incidence (API) dropped from 1.6 cases/1,000 population for 1981 to 1.0 in 1983. At present integrated programs provide malaria control activities in 15 districts. The Malaria Research and Training Center is grossly inadequate for the task ahead in meeting research and training needs of the MOH.

Recommendation:

Continuing and, indeed, increased USAID/N support for Nepal health and family planning services is strongly recommended. HMG should be encouraged to increase service availability for both health and family planning programs. The quality of service must be enhanced through improved supervision, motivation, and incentives aimed at the service providers. Family planning motivation must receive a very high priority to both expand and retain family planning acceptors. More women should be included in the service delivery system. The success of voluntary surgical contraception (VSC) has been demonstrated, it must be strengthened and expanded, especially at static sites and in urban and peri-urban settings. Client follow up must be stressed and improved. Immunization programs must be vigorously pursued. The level of immunity must be improved

among women and children and there must be increased cooperation between the expanded immunization program (EPI) and other parts of the MOH, rather than limiting immunization services to the "vertical" EPI program. USAID/N should exercise any sanctions available to encourage increased cooperation and the level of immunization. There must be a vigorous campaign to build privies/latrines and educate the populace in their usage. There must be renewed emphasis on sanitary excreta disposal, and the use of excreta in biogas generation. Personal hygiene should be emphasized and a national campaign of soap distribution added to the products distributed through the Contraceptive Retail Sales Program. Malaria control will require continued support and encouragement. USAID/N is urged to support completion of the National Malaria Research and Training Center and support training of an adequate research staff for the facility. USAID/N should encourage the NMEO to work closely with and provide technical support to the rest of the MOH.

F. Financing of Programs

Finding:

The contribution of HMG to the financial support of health and family planning programs continues to be substantial. HMG support has been increasing through the years from 150 million Rs. in 1978/79 to 318 million Rs. in

1982/83. Donor support has covered roughly 36 percent of total program cost. Unfortunately, the demand and requirement for funds has not been fully met. Difficulty in assuring a timely release of funds and efficient fiscal management have contributed to making a difficult situation worse. If the health and family planning program really begins to expand effectively, especially programs like VSC, it will surely be impossible for the financial resources of Nepal to meet the increased demand.

Recommendation:

Highly important interventions are for USAID/N and other donors the assurance of sound financial management and accounting by all parties concerned, and together with other donors and HMG, USAID/N should ensure that increased support is available for health and family planning programs from all sources. Currently the system is fragile, but improving; however, any cut-back at this juncture is very apt to lead to a collapse and severe regression in the system with dire consequences to health and family planning. Nepal must be urged to be rigorous and realistic in setting long term priorities and goals and to insure adequate financial resources are available.

G. Program Supply and Logistics

Finding:

While most contraceptive supplies are adequate there are occasional lapses in delivery to remote health posts because of the severe logistic constraints of the environment. There appears to be a continuing problem with the delivery of medicines, though there has been an improvement in recent years aided by a logistics system instituted by JSI. It is anticipated that regionalization, together with the completion and functioning of the regional medical warehouses, will further improve the medical supply situation. The current distribution of refrigerators will greatly enhance a functioning "cold chain", thereby making an effective immunization program more feasible. Transportation availability remains a problem in effective performance, supervision, and logistic support.

Recommendation:

USAID/N, other donors, and HMG must continually address the problems of supply and logistics as they are likely to remain ongoing. Obviously without contraceptives, medicine, and supplies being available in a timely manner the programs cannot function. USAID/N should continue to provide assistance to HMG in improving commodity and logistic management support.

H. Technical Assistance

Finding:

Technical assistance appears to have been a major and effective effort by USAID/N. The USAID financed program by JSI has provided assistance to integration and to the development of a sound logistic support system. JSI has demonstrated effective family planning techniques, i.e., VSC, and primary health care management. Technical assistance has enhanced the commercial sale of contraceptives. Unfortunately, the service networks remain weak technically and require improvement in management. USAID/N health and family planning staff are committed and hard working and effective in spite of being handicapped by being insufficiently staffed to provide the level of management, program stimulation, coordination and monitoring that is desirable for optimal performance. The limited staff precludes adequate monitoring and program surveillance without external consultant assistance.

Recommendation:

USAID/N should continue to provide intense technical assistance to help correct service delivery problems. This should be accomplished by integrating the TA contract professional staff into AID/N staff program activity under the direction of its Health/Family Planning Office in order to assure a closer working relationship between HMG and

USAID staff. The Health/Family Planning office of USAID/N must make every effort to work with HMG on improved management, scheduling and the attainment of time-oriented project targets. The increased activity in health and population efforts in Nepal will require additional skilled staff.

I. Program Staff Development and Training

Finding:

HMG has been encouraged and supported by USAID/N and other donors in efforts to train and develop staff serving health and family planning programs in Nepal. USAID/N has provided large scale overseas technical training for program personnel. The AID participant training program has been essential in the development of staff capability for the health and family planning service delivery programs. The returnee retention rate has been moderate but the application of skills learned in many of the overseas programs has been frustrated by inappropriate assignments. In-country short term training requires strengthening and steps should be taken to assure training slots are appropriately distributed. There is a great need for training malaria field research personnel for the National Malaria Research and Training Center and if the Health Planning Division of the MOH is to fulfill its vital and essential role, then additional epidemiologic, social

science, biostatistical, and computer skilled individuals will have to be trained to staff the operation.

Recommendation:

Support for participant training of personnel to man the health and family planning programs of HMG should remain a high priority for USAID/N. Selection for training should be a reward for service and merit, and free from nepotism. Final selection for training abroad should be made from a pool of eligible candidates by a panel from expatriate donor agencies. Nominations should be made by the candidates supervisor with seconding by higher MOH authority. Special attention should be given to the needs of the Malaria Research and Training Center and to the Health Planning Division of the MOH. USAID/N should encourage and support HMG staff training efforts as well as encouraging and working with other donors to assist their efforts. Particular note should be taken of the strength of the Peace Corps in providing motivated and effective manpower in enhancing program staff development and training efforts, USAID/N should continue to work closely with Peace Corps Nepal in furthering this effort.

J. Non-Government Service Delivery

Finding

The AID/W and USAID/N financed Contraceptive Retail Sales Project for contraceptives has been a genuine success and sales continue to increase along with the size of the sales distribution network. This has been an innovative and effective non-governmental service delivery mechanism. The Family Planning Association of Nepal (FPAN) with support by the International Planned Parenthood Federation continues to play an important and effective leadership role in family planning in Nepal. The FPAN continues to cooperate with the Voluntary Surgical Contraception program and to aid its effectiveness and expansion.

Recommendation:

USAID/N should continue to encourage HMG to foster non-government groups to enter health and family planning service delivery programs. HMG should promote innovative service delivery and seek a variety of inputs. USAID/N should support continuation and expansion of the CRS project as long as it is effective.

K. Population Growth

Finding:

HMG appears to be increasing in its awareness of the importance of population stabilization for the well being of Nepal. It has adopted a national population policy and currently it is apparent that most Nepali citizens do not recognize the peril of the present population growth rate or the serious consequences to their lives and their families if this continued growth rate remains unchecked. Other than at high levels of government, there appears to be a lack of sense of urgency inconsistent with the gravity of the situation.

Recommendation:

USAID/N and other donors must, at every opportunity encourage HMG to raise the awareness level of the service delivery systems, government officials, and all citizens to the peril of unchecked population growth. At this juncture there can be no higher priority.

General Discussion of Findings:

The evaluation team spent considerable time discussion among themselves their individual observations from interviews, field trips and review of documents provided.

Among the observations made by the evaluation team were recognition of great differences between stated purposes or intended actions in 1980 and what appeared to the team to be reality in 1984. Some of these differences have been caused by changes in the system over time that were perfectly appropriate - but the original stated intent may not have been updated in current project objectives to reflect the necessary and desirable changes that have been made. Items that have been changed substantially either in action or intent which should be redefined or re-assessed include:

1. The universal integration by 1985 for all service delivery units.
2. The necessity of leaving the Kathmandu area to serve the poor of Nepal - clearly the biggest return on investment of the health dollar (as was positively identified in the World Bank Report) would be to put heavy emphasis on health and family planning in the Kathmandu, Pokhara, and Terai areas.
3. The position of the government relative to a universe of services for which all areas and citizens are equal contrasted with a differential level of services as a function of population density, proximity to service centers, etc.
4. The role of a supervisor relative to rewarding the very productive worker and retrieving the non-productive one.

5. The anticipated utilization of trained personnel upon their return from training - particularly the higher echelons that spend a year or more away for graduate level training.

Chapter III
MANAGEMENT ISSUES

FINANCIAL MANAGEMENT

The Integrated Rural Health/Family Planning Services project was authorized by the AID Administrator on August 21, 1980 involving planned obligations of \$34,200,000 in AID funds. Of this amount, \$18,000,000 was authorized to be provided from the Health appropriation account and \$16,200,000 from the Population Planning account. As of September 30, 1984 a total of \$23,522,000 had been obligated. This amount includes \$13,051,000 from Health and \$10,471,000 from Population Planning, see Table 1, including central procurement of contraceptives. Thus, at the point of the evaluation, with only 10 months remaining until the project assistance completion date (9/30/85), only 69% of the funds authorized had been obligated. The Government's contribution to the project was set at \$70.1 million equivalent per the 8.31.80 Grant Agreement. As a measure of the Government's commitment, \$60.8 million equivalent, or 87% of the total, had been provided as of July, 1984.

Obligations, earmarkings, expenditures and pipeline data for funding categories are contained below:

Table 1.

CUMULATIVE EXPENDITURES AS OF 9/30/84
FOR IRH/FPS PROJECT 367-0135 (\$000)

	Cumulative Obligations	Funds Earmarked	Cumulative Expenditures	Pipeline
HEALTH FUNDS				
Local Budget Support	3,415	3,275	1,327	2,088
Commodities	4,908	4,664	3,440	1,468
TA & Training	2,277	2,277	1,944	333
Construction	2,035	2,033	336	1,699
Other Costs	416	360	219	197
SUB TOTAL	13,051	12,609	7,266	5,785
POPULATION PLANNING FUNDS				
Local Budget Support	4,913	4,913	3,145	1,768
Commodities	874	703	594	280
T.A.	2,145	1,699	1,444	701
Construction	288	195	87	201
Contraceptives (Including Central Procurement)	1,797	1,797	1,475	322
Other Costs	454	142	89	365
SUB TOTAL	10,471	9,449	6,834	3,637

Table 2.

FUNDING STATUS OF IRH/FPS PROJECT 367-0135 (\$000)
AS OF SEPTEMBER, 1984

	Cumulative Obligations	Funds Earmarked	Cumulative Expenditures	Pipeline
TOTAL FUNDS				
Local Budget Support	8,328	8,188	4,472	3,856
Commodities	5,782	5,367	4,034	1,748
T.A. Training	4,422	3,976	3,388	1,034
Construction	2,323	2,228	423	1,900
Contraceptive (Including Central Procurement)	1,797	1,797	1,475	322
Other Costs	870	502	308	562
TOTAL	23,522	22,058	14,100	9,422

A review of Table 2 above clearly illustrates that, as of September 30, 1984, virtually all funds obligated had been fully earmarked (94%).

It appears evident, however, that the Project Paper was overly optimistic in expecting the project to absorb and effectively utilize the full \$34.2 million in AID funds in only a five-year project period. The estimated financial obligations contained in the Project Paper and shown in Table 3, show obligations occurring at an unusually high rate.

Table 3.

ANNUAL OBLIGATIONS FOR IRH/FPS PROJECT 367-0135 (\$000)

	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85	TOTAL
PP	4,800	5,400	6,600	6,800	6,100	4,500	34,200
Actual	4,800	2,800	6,972	4,900	4,050	(3,800)+	27,322
+Projected							

The annual obligations and expenditure projections, shown in Tables 3 and 4 which also appear unduly optimistic, were based on proposed obligation rates and the implementation schedule contained in the Project Paper. The Implementation Schedule, in retrospect, condensed too many activities in too short a time frame. For example, the schedule called for Project authorization in May, signing of the project agreement in June, meeting of initial conditions precedent in August and arrival of the fully staffed TA team in December, 1980. In fact, the project was only authorized and the agreement signed in August, initial conditions precedent to disbursement were only met in November (precluding FY 1980 expenditures) and the first member of the team, the Chief of Party, did not arrive until September, 1981. The TA Team was not fully staffed until July 1982. Thus, obligation/expenditure patterns, based in part upon the implementation schedule did not fit the realities of the "real world". The schedule anticipated no major problems and expected all events to follow a well-

coordinated, tightly timed sequence. It did not. The estimated financial obligations contained in the Project Paper (PP) (Table 3) showing obligations occurring at an unusually high rate. The readers attention is directed to the disparity between actual versus PP expenditures for FY 80 and FY 81.

Table 4.

EXPENDITURES FOR IRH/FPS PROJECT 367-0135 (\$000)

	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85	TOTAL
Project paper	1,643	6,366	7,196	7,825	5,587	5,582	34,200
Actual	-	794	4,444	3,876	4,986	(5,500)*	19,600
*Projected							

Projections also anticipated no major problems with regard to absorptive capacity or to the Health Ministry's financial management capability to effectively monitor, report, and account for funds utilized as local budget support. In this regard, the Ministry of Health is already two months late in submitting its third trimester expenditure report to Finance for the current fiscal year. This submission is required to account for funds released and expended and to apply for release of additional AID funds for operating expenses. In addition, ICHSDP personnel told the Evaluation Team that they have a continuing problem accounting for Rs. 3,000,000 of prior year funds advanced to the

project. The project knows the funds were spent but is having problems preparing vouchers for necessary reimbursement. The AID Mission, according to its comptroller, applied these unaccountable funds against new releases. Thus, it is no longer a problem for AID. However, this inability to account for released funds remains an outstanding issue between the Ministry of Health and the Ministry of Finance. According to AID's Financial Management office, the Comptroller General reported that, of the line ministries, Health causes the most problems in regard to financial management. It has continuing difficulty doing so in a timely fashion.

As of September 30, 1984, AID had released a total of \$8.328 million for local budget support. Of this amount, \$4.472 million has been duly expended leaving a pipeline of \$3.856 million. This line-item accounts for 40.9% of total project pipeline. However, due to the Ministry of Health's inability to submit third trimester expenditure reports on time, one can assume that the pipeline figure would decrease to an extent. The pipeline, however, for this line-item appears to be at an excessive level. The team recommends, therefore, that the Project undertake two important steps. First, that a review be initiated to identify those funds earmarked for budget support that have not been utilized in a timely manner. After proper consultation with the Ministry of Health, an appropriate timeframe should be provided to allow the Ministry to account for unused funds. After this process is completed, the AID Health office should initiate

procedures for re-earmarking of those funds not being utilized through a Project Implementation Letter to more appropriate assignment in health and family planning. It is not the intention of the Evaluation Team to penalize the Ministry of Health for its perceived lack of appropriate financial management capability. It is, however, the sense of the team to make the Ministry of Health responsible and accountable for funds received under the Project and to ensure that AID funds are utilized in a prompt and effective manner. The team is aware that the Ministry and vertical projects have been upgrading their financial management capability and improvement has been accomplished to some degree. However, further improvement is required as the MOH has continuing difficulty in providing required expenditure documentation and in doing so in a timely fashion. Therefore, a second recommendation is that the Project should identify appropriate Ministry and project personnel for financial management training. Consideration also should be given to sending appropriate Health Ministry personnel to Finance to ensure that the Ministry understands exactly what Finance expects from them.

Serious consideration should be given to the possibility of AID/N assigning a fulltime finance person to work in the MOH to provide technical assistance and facilitate improvement in the timely submission of vouchers for reimbursement and enhanced accountability for released funds.

The evaluation team recognized that there are problems of inadequate information flow regarding financial information at many points in the system. But it seemed reasonable to suggest that at least from the AID end there should be a consistent set of numbers given for the financial status of the project at predictable frequencies, and then those figures should be reconciled with an HMG response as to their desire and intent to spend them as earmarked.

When the project was written there was a projected expenditure of \$34.2 million for the life of the project, and leadership within the USAID/N Mission had to fit that into a projection of total AID funds for the same period. Therefore there should have been no cause for USAID/N to have committed the same dollar twice. Before that project was signed it is reasonable to assume that priorities were set and this project had earned a very high priority. But even if that relative priority had not been fixed in 1980, it certainly would have been desirable to clarify any changes in true availability of dollars from the original projection as newer financial information became available, and that information should have been made known to the Nepalis on a regular basis in a format that they and the evaluation team could understand. The status of funds in the pipeline is very unclear yet today, but it is clear that USAID/N has no intent to spend the full \$34.2 million by September 30, 1985. Project expenditure rates would not justify full obligation of remaining life-of-project funds by that date, in any case.

In November of 1984 the financial messages are very difficult to interpret relative to the current status of dollar availability, and yet there are urgent needs that should now be addressed - and could presumably be addressed within current dollar ceilings -or else the message must be made clear now that new funds must be sought. What a distasteful situation if USAID/N were to contribute to unrealistic expectations by allowing any action program to be interrupted, or slowed down, to wait for dollars that aren't there, when energy could be directed in other places to seek further funding if necessary.

Clearly the central government cannot provide all things to all people, and one major agenda which should be addressed continuously - and is well-identified in the project - is the maximization of individual commitment and local involvement. There are several experiments underway in the country which emphasize payment for services, local commitment for facilities, or local dollars to restock medicines, etc. We would encourage continuing pilot projects and full implementation of operational plans that spur local initiative and involvement. Further, any parts of the project that would lend themselves to a commercial opportunity for the private sector should be nudged in that direction, e.g. the entire CRS operation.

The new procedures for indent and procurement of drugs, along with the regional warehouses, should lessen the historic problems associated with drug supplies. However, careful attention should be given to the desirability of giving to each

of the regional warehouses a start-up supply of essential medications which would serve as a buffer for the periods when the government organization procedures have left the cupboard bare in the past.

Further, it seems appropriate to provide each center with a basic supply, independent of historic performance, but it seems equally as prudent to arrange the system so that a significant portion of the total drug supply system would flow as a function of number of patients, number of visits for specific services, etc.

Data Processing

The new era of data processing may sound at first blush to be terribly out of synchrony with the problems in Nepal, but the review team - which knows practically nothing about computers - found that not to be the case. In fact, we took advantage of an Osborne micro-computer with Wordstar software to complete this report. And there are many comparable needs in HMG. Surely one of the success stories of this project (as a by-product perhaps) is the degree to which program planning, management, and evaluation efforts have been enhanced through micro-computer applications. The two areas perceived by the team to be most beneficial for intended program activities are data-base management and word-processing. Although substantial strides have been made already, it seems prudent to assure the continued growth in local competencies for both of these areas by pursuing additional

technical assistance for trouble-shooting, background education, on available software, development of specific applications, and the institutionalization of computer skills in key divisions of the Ministry of Health.

PLANNING MANAGEMENT AND ADMINISTRATION

The evaluation team was very favorably impressed with the high level of knowledge and skill displayed by many key personnel in the Ministry of Health and its various divisions. With few exceptions, there is no lack of expertise or active interest in the many disciplines. We were also pleasantly surprised to find the degree to which modern technology and methods are being utilized to more efficiently manage the various programs. There has been a steady improvement in manpower and staffing patterns as indicated in Table 5, Health Facilities and Personnel.

There seemed to be some difficulty in terms of the duration of tenure in key posts. Understanding that there have likely been good reasons for several reassignments which may have improved the management of individual programs, we wish only to express our concern that HMG attempt to stabilize those key positions to the extent possible during the next several years, in order to provide the continuity of purpose and maturity of experience which is so necessary to successful development.

Table 5.

HEALTH FACILITIES AND PERSONNEL

<u>Facilities:</u>		
Hospitals	1961.....	34
	1971.....	52
	1981.....	75
	1984.....	76 (with 3,048 beds)
Health Posts	1961.....	24
	1971.....	193
	1981.....	533
	1984.....	744
<u>Personnel:</u>		
Doctors	1961.....	160
	1971.....	311
	1981.....	487
	1984.....	571
Health Assistants/ Auxiliary Health Workers/Nurses	1961.....	324
	1971.....	1259
	1981.....	3229
	1984.....	4165
Village-level Health Workers	1961.....	
	1971.....	800
	1981.....	3654
	1984.....	6245 (2610 PBHWS / 3635 CHLs)
<u>Per Capita Ratios:</u>		
Doctor/Population	1961.....	1/59,375
	1971.....	1/37,621
	1981.....	1/30,185
	1984.....	1/28,1021
Health Post/ Population	1961.....	1/395,833
	1971.....	1/60,622
	1981.....	1/27,580
	1984.....	1/21,505
<u>ESTIMATED % OF POPULATION SERVED BY A HEALTH FACILITY:</u> (defined as within 4 hours walking distance)		
	1961.....	7%
	1971.....	16%
	1981.....	46%

Source: Ministry of Health, HMG

We especially laud the efforts to expand and develop the Health Planning Division (HPD) as a staff advisory arm of the Secretary of Health (SOH) and urge USAID/N and HMG to continue to support further expansion of this vital function, through additional personnel, equipment, budget and technical assistance. HPD is rapidly developing the capacity to provide the ongoing picture of the overall health status and comprehensive health program data, without which the SOH cannot make timely and rational decisions. Organizationally, we support moving the HPD from its present line division position to being the principle staff support to the SOH's office and feel this would greatly strengthen the entire system.

In matching functional effectiveness to organizational location, we would further suggest that the ICHSDP office is improperly located as a separate central line project. The integration of Health Services is not properly a project which can be forced on the several vertical programs through the efforts of a separate administrative team. Such a concept is doomed to failure and should be dismantled at the earliest possible date.

Integration of services must be the agreed intent of every program chief and his staff, with the active participation of the field personnel in integrating their services at the point of delivery - in the districts and Panchayats. Effective functional integration of services will require the development of the necessary infrastructures and the local negotiation of

cooperative agreements in each district which are tailored to the unique circumstances of the particular staffing, facilities, personalities and needs of that District. That task cannot be accomplished from a Central Office.

Thus, we believe it is imperative that the initiative and authority for integrating the program functions be delegated by the Secretary of Health to the District level, probably to the District Health Inspectors, for implementation. These individuals carefully chosen for leadership abilities, should be given the line supervision authority over the field personnel of each program scheduled for integration in their district so that they can negotiate an effective coordination of resources, work schedules, task assignments and the many other logistical considerations to bring about the desired results.

Additionally, it seems appropriate to mention the communication difficulties between USAID/N and HMG over the past several years, which have resulted from the personnel policies of the U.S. Government, putting ceilings on the number of direct-wire staff who can be employed. These restraints on direct-hire for professional advisors has necessitated the use of contract consultant groups to fill the advisory requirements.

This is not intended as an indictment of the presently contracted consultants, who display real competence - but rather a criticism of a policy which results in an additional layer of structure between HMG and USAID/N staff direct communications,

which undermining the close relationships required. It is vital that consultants be selected on the basis of individual qualities and merit that make them most effective, and that they demonstrate experience in cross-cultural settings experience which would make them more effective communicators.

We suggest that contract consultants be hired as technical assistance personnel directly responsible to the H/FP division of USAID/N, in support of GON programs.

In our discussions with many of the other donor agencies in Nepal, there was evidence of a widely-held view that coordination between the various donor agencies was less than optimal. Key staff in the MOH also expressed a lively interest in a better coordinated effort to eliminate the overlapping difficulties and to more effectively utilize the available resources to support .MG's overall health strategies.

We suggest the development of a small informal consortium of representatives of the major donor agencies to meet, at least monthly, with the SOH and the Chief of HPD in an on-going effort to more effectively coordinate the use of resources with the established GON strategy for health care programs.

Lastly, the evaluation team observed a very wide disparity of supervisory relationships throughout virtually all the field operations on its site visits. Acknowledging specific exceptions to the rule, we noted a general lack of accountability at all levels of the system, in all programs. Field workers frequently

did not have performance goals, or if they did, felt that no one would hold them accountable if the goals were not met. There were no apparent sanctions or penalties if a worker failed to show up for work. And there were no anticipated rewards for workers who exceeded objectives or performed particularly well.

As a result of having no incentives, work schedules (attendance) are unreliable, reporting of clinical data in some programs is late and/or grossly incomplete, and worker morale is frequently low.

One of the greatest contributions that HMG could make to management of the health programs would be to establish a simple, but clear-cut policy of superior - subordinate relationships which involve:

- (a) Well-defined job expectations for each individual, in terms of time and attendance, objectives with time deadlines, reporting requirements, and performance standards.
- (b) A system of rewards/sanctions which are to be expected (and delivered) for exceeding objectives or for failing to perform.
- (c) Supervisors being held accountable for the performance of their subordinates.

This should be as simple as possible, involving an individual face-to-face negotiation between each supervisor and subordinate, to negotiate that worker's objectives for the month or year. The agreed upon objectives are written down along with the clearly defined rewards or penalties for success or failure. The supervisor must then simply monitor the performance, - providing encouragement, guidance or assistance in improving performance.

We believe this type of direct and simple supervisory discipline would provide important benefits to the entire system in terms of morale and improved job performance.

Chapter IV

TRAINING

In the development process training assumes a major function as the instrument for organizational change and institution building. Furthermore it is likely to have a lasting impact. Training has been a major determining factor in the achievement of targets. Because of the continuing need for all types of health manpower training must continue to receive a high priority if future objectives are to be attained.

From the onset of USAID/N activities aimed at strengthening health services and family planning it was evident that trained and skilled manpower would be needed in order to achieve the targeted goal. To this end all training arrangements through AID and RTSA were mobilized, including long term academic training abroad, short term training abroad, and considerable emphasis on short term in country training. These endeavors have been reasonably successful.

During the period of the project, the objective was that 80% of the MOH non-academic and paramedical manpower training requirements were to be met. This meant that a target of approximately 1,600 new health and family planners workers were to be trained. Happily the target appears to have been exceeded as 2061 health and family planning workers have received initial training and an additional 2174 have received refresher training.

Refresher training has become a regular part of the training program in all divisions of the MOH. The training process is effectively planned, supported and implemented as evidenced by the fact that training cells of the various divisions within the MOH continually prepare annual training plans and schedules.

A major objective of training, particularly incountry short term training, was to upgrade the knowledge and skills of staffs and field workers engaged in health and family planning programs, thereby reaching project objectives in efficient and reliable ways. These training sessions concentrated on the following subjects:

1. Management and training
Including: financial management, administrative management, recordkeeping, and reporting
2. Logistics management
3. Clinical Training
4. Training for trainers

The goals of management training were highly relevant to strengthening management throughout the MOH. The training sought to upgrade skills and knowledge of the staff involved in administrative management, including the uniform accounting policies of HMG and enhancement of financial management skills. In addition, the training was designed to improve the recording and reporting system of the FP/MCH service delivery system thereby enhancing the quality of data used for planning and evaluation of activities. The main objective of logistics

management training was to provide knowledge and skills for proper determination of supply needs, warehouse management, and accurate record keeping and reporting. Logistics management training was primarily aimed at assistant level staff of FP/MCH. The general purpose of clinical training was to train a cadre of nurses within FP/MCH and the Department of Health Services structure to provide family planning services to women at as many district center clinics as possible. Finally, and perhaps most important, was training of trainers. The objective of this endeavour was to develop high quality trainers who in turn are able to effectively train and prepare qualified health and family planning workers for increased delivery of family planning services to the people.

An evaluation of the RTSA training was undertaken at the Institute of Medicine, reported in September 1984. The evaluation found that generally training had been very useful in enhancing the day to day performance of trainers and that in only a few cases was it found that training was not appropriate to the job being performed by the former trainers. It was generally agreed that the training period should be lengthened for short term sessions.

As of November 1984, thirty-three participants have completed training in the USA. Of these 15 were sent for academic degree training and 15 have completed, while 18 were sent for short term non-degree academic training and 16 have completed.

Many participants have been sent for short term training in third-world countries and of these 67 have completed the training.

The training programs have been successfully carried out with the assistance of two training modalities: one, the Regional Training Service Agency/Asia at the University of Hawaii, and two, JSI/Nepal. Under an AID-W contract support for a Regional Training Service Agency for Asia at the School of Public Health, University of Hawaii assisted with the short term training program with the development of training materials, curriculum consultation, etc. This agency together with the Tribhuvan University Institute of Medicine conducted the follow-up study noted above of the in-country short term training program which demonstrated that training was helpful to MOH personnel and that most of the personnel were functioning with improved capacity on the job. The study also found that future training needs of the program will be immense and that there is an especially pressing need for more training of field level personnel. Needs for future training in the following areas were identified. (1) financial management at the district and central level, (2) administrative management for Administrative Assistants, (3) logistics and supply management for district and health post personnel, (4) training for trainers. If services in primary health care and family planning are to be enhanced and extended, the training of traditional birth attendants (TBAs) could be an important vehicle

for extension. However, if this is to be accomplished, financial support must be forthcoming for the extension of TBAs training throughout rural areas in a properly phased training program.

In order to improve training management, support for the training of trainers and managers is required.

In country training is vital to progress for all programs of the MOH, certainly health services delivery and family planning. It must continue to receive a high priority of support. One problem has been the inadequate HMG per diem support available to students. There must be appropriate per diem support identified so that training will not be unduly burdensome financially, and training will be actively sought. Training sufficient numbers of competent personnel is required for the improvement and success of the health and family planning services of Nepal.

The contractor, JSI/Nepal, was responsible for providing a training health education adviser. This responsibility was filled by an adviser in Nepal from November 1981 through November 1984. A major portion of the Adviser's time was consumed with facilitating and shepherding participant training, both short and long term. As noted above, sixteen short-term participants completed programs in the USA. Of these, four programs were structured through other U.S. training institutions, and the remainder were individually developed by the adviser.

Regional Training Centers

Given the Ministry of Health's goal of support to rural health activities, and HMG's policy for decentralization, considerable effort has been spent in attempting to strengthen the MOH's training capability at the regional level. As indicated by Dr. Kanno in her end of term report activities have included:

- Provision of technical assistance in site selection for ICHSDP Regional Training Centers in Pokhara and Dhankuta.
- Assistance in arranging for a more adequate temporary site for the Dhankuta Center until such time as the KARDEP-funded construction of the permanent site can be completed. Arrangements were also made for a British volunteer to provide support to training staff in Dhankuta.
- Provision of technical assistance in site selection and funds solicitation for the ICHSDP Regional Training Center in Surkhet, and arrangements with CIDA to use their Surkhet campus for training until the new Center is completed.
- Assistance in relocation of the FP/MCH Regional Training Center in Dharan.
- Assistance to the Pathalैया Regional Training Center, which does not have adequate kitchen, water facilities or privies, to initiate renovations. To date, no contractor has been willing to undertake this work.

- Discussions with staff of FP/MCH, ICHSDP, and HPD in an effort to establish a single, joint training facility in Pathalaiya, under the management of a neutral administrator. Although both Projects' training facilities share a single site in Pathalaiya, they are independently managed, and coordination of training programs and activities is minimal. To date these discussions have not been productive, and the training programs in Pathalaiya remain independent. This obviously should be corrected.

Health Education

Though not under the IRH/FPS Project, major efforts to strengthen the health education activities of the Ministry of Health have included the following:

- Through collaborative efforts with UNICEF, development, organization, and implementation of the first National Conference for Health Educators, held in July, 1983.
- Holding of joint meetings with training cell chiefs and staff of the Health Education Division to facilitate the various training cells.
- Establishment of a "Resource Room" for training materials in the Health Education Division to house training materials for use by all units of the Ministry. The Health Education Division can provide both a neutral site for such materials and a reasonable accountability system for their use and retrieval.

The team agrees that future training should give priority to grass roots level workers in the field and to financial managers at the central level. Management training should be given to the field level workers with some management responsibility. Training should be based on the infrastructure available at the field level. In light of this, future training needs of the MOH are identified as:

- (1) Training of lowest level field workers with community based approach in family planning, maternal and child health.
- (2) Training of financial managers at the central level, not only in procedures and bookkeeping, but enabling them to project and estimate the financial sources that are to be mobilized for the expansion and continuation of the project. This requires a longer period for training and could be organized in Nepal with the help of local and international experts, or a selected number of personnel may be sent abroad where such specialized training is available.
- (3) As RSSA/A has already supported this training to FP/MCH staff at the central and district level, priority should now be given to staff of the MOH not previously exposed, such as ICHSDP, when future financial and administrative training is given.
- (4) Training for trainers should be designed specifically by the training officers of the various divisions of the MOH. There is sufficient room for improvement, as the trainers

themselves expressed their interest, in this type of training. This training should be designed in such a way that gives ample time to develop curricula appropriate to the context of Nepal. Duration of training should be at least 2 weeks, and organized in a very selective manner. It is further suggested that trainers should be invited from abroad who are well known in the subject.

- (5) The training of a Scientific Director and scientific staff to the doctoral level for the National Malaria Research and Training Center is urgent. This represents the training of four individuals in research skills relevant to tropical medicine and epidemiology in order to provide sustained essential national direction for the Malaria Control effort.

The training of eight physicians as MOH epidemiologists to provide a central staff of three epidemiologists and one epidemiologist for each of the five zones to provide a national response capability for epidemiologic surveillance and control of epidemic disease outbreaks, such as the recent serious epidemic of meningitis. Such a cadre could address such serious epidemiological issues as the national problem of goiter, hypothyroidism and cretinism.

If funds are not immediately available for all training needs, higher priority should be given to training the scientific staff for the Malaria Center.

One of the weaknesses of the training organization evident from the coordinations is that it is often regarded as non-scheduled work, and an additional burden to their regular work. Because training is a continuing process to expand and strengthen the organization, it should be scheduled as a regular function and well designed prior to the organization of training and before the training is conducted.

Chapter V

RURAL HEALTH SERVICES AND THE INTEGRATED COMMUNITY HEALTH SERVICES DELIVERY PROJECT (ICHSDP)

I. PROJECT SUMMARY

In the early '70s, the Government of Nepal (GON) undertook an experiment in the Bara and Kaski Districts, aimed at integrating various special interest (vertical) activities such as tuberculosis control, leprosy control, malaria control, family planning, and immunizations with a revised and expanded system of curative health services. The experiment was intended (1) to expand the number of trained health workers serving at the periphery of the system, in District Health Offices and Village Health Posts, and (2) to improve efficiency of service delivery by eliminating duplication of administrative support for each of the separate vertical projects.

An evaluation of this experiment in 1974 indicated gains in volume of services provided and cost-effectiveness, prompting His Majesty's Government (HMG) to adopt a long-term goal of integrating health services throughout the country. In 1980, HMG and AID/Nepal entered into joint support of the Integrated Rural Health/Family Planning Services (IRH/FPS) project as part of the effort to further these goals, which had become the formal policy of HMG.

The planned new integrated health delivery system called for major revisions:

HEALTH POSTS, serving an average 20,000 population and frequently understaffed, were to be strengthened in Government salaries and support, with staffing as follows:

- 1 - Health Assistant (HA), with 2-1/2 years training
- 2 - Auxiliary Health Workers (AHW), 1 year or less training
- 2 - Auxiliary Nurse Midwives (ANM), - 2 years training
- 6-8 Village Health Workers (VHW), the number varying according to the population and terrain served.
- XXX Volunteer Community Health Leaders (CHL) - locally selected for each village.

The health posts and field health workers fall under the management of their District Health Office (DHO), and refer patients with significant health problems to their district hospital.

DISTRICT HOSPITALS retain their same function as inpatient service providers and referral centers for curative care in the District, and are staffed with at least one physician. They no longer have supervisory responsibilities for the health posts.

DISTRICT HEALTH OFFICES were to be established in each integrated district, responsible for the overall management of health posts, integration of health services and are staffed by a Health Inspector as well as 15 to 20 additional support personnel. The

DHO has a reporting relationship with the District Hospital as well as reporting directly to the central integration office. The DHO is intended to provide the vehicle for effective decentralization of the management of health services.

REGIONAL DIRECTORATES are part of the long-term plans of the Ministry of Health (MOH), but have not yet been initiated and will, therefore, not be considered in this evaluation.

In addition to the revised personnel structure and management relationships, the IRH/FPS project calls for substantial contract technical assistance and training to improve financial and administrative management skills, improvement of the supply of drugs and essential commodities, and for the construction and renovation of health facilities and supply warehouses.

Overall, the objectives of the IRH/FPS project have proven to be somewhat ambitious and elusive, necessitating several mid-project revisions in order to maintain some realistic prospects of being attainable.

II. REVIEW OF HEALTH STATUS/RURAL HEALTH CARE IN NEPAL

Any consideration of the health status of a population and the health care system which attempts to improve the public welfare must, necessarily, examine a variety of issues which are not generally considered to be health-related. For instance, it

is now widely accepted, though poorly understood, that the educational level of a mother has a strong positive correlation to the health status of her children, as well as to her own. Thus, educational opportunity and achievement is an indirectly substantial component of health.

Likewise, technological improvements such as the use of biogas or improved cook stoves with chimneys for preparation of meals may not seem the legitimate concern of a health care review, but the elimination of high concentrations of smoke in the home may be a more significant component of health care (by reducing pulmonary and eye disease) than is the access to treatment for those infections through a village clinic and practitioner.

In view of these principles, our consideration of health care services in Nepal will deal with a number of related issues regarding environment, population, education and social customs inasmuch as they have a very substantial effect on the health of the people.

Our task is to evaluate the present health care system and hopefully, to provide some insights on more effective and efficient means of upgrading the health status of the Nepalese within the resource limitations as they currently exist.

Extensive data on the incidence of disease, the distribution of resources, mortality, demographics, workloads, etc., have been reviewed in the process of reaching our conclusions. Since this

statistical information is readily available, it serves no useful purpose to reiterate those data here, and this report will confine itself to the conceptual conclusions which derive from that review. In addition, the evaluation team members engaged in numerous conversations with the residents of several rural villages, workers in non-health development programs, Peace Corps volunteers and others to gain a perspective of health care from the recipient's point-of-view, as well as the perspective of the providers who are part of the system.

The GON has formulated a strategy which calls for the expansion and maintenance of a formal system of local health posts (HP) throughout the Kingdom in order to provide initial access to health care for the widely dispersed rural population. The plan describes gradual integration of the various "Special Interest" field workers in Family Planning/MCH, immunization and focal disease control programs (tuberculosis, leprosy, malaria, etc.) with the network of curative care facilities.

In reality, the network of GON-sponsored facilities represents only a part of the "De Facto" curative primary care system. Since there is no regulatory control of the healing arts practitioners in Nepal, most villages have one or more compounders or chemists who operate small pharmacies wherein they diagnose illness and prescribe cures in support of their retail sales of medicines. There are also numerous other traditional birth attendants and traditional healers who attend to the acute care needs of the rural population. While the licensed Government

practitioners often regard these informal diagnosticians and practitioners with disdain, they are nonetheless highly active in first-line curative services, giving injections and dispensing medicines with inconsistent competence, and supplementing the limited capacity of the formal curative health care facilities in dealing with the acute needs of the people.

In contrast, the preventive services and health promotion efforts evident in the rural areas are virtually all dependent on the presence of GON programs which teach self-reliance skills (oral rehydration/nutrition), do case-finding (leprosy/tuberculosis), promote public awareness (immunizations/family planning) and improve the environment (mosquito control) as well as initiating efforts to improve personal living conditions through clean water supplies, better cook stoves, cheaper biogas units, human waste disposal, etc.

The people of rural Nepal, like those in all other nations, still associate their health care needs with acute curative services and express their health care priorities in terms of more doctors and better clinical facilities. While there is both necessity and merit in providing a network of access points to deal with basic emergency services, the implementation of a truly competent curative health care system is an extremely costly undertaking which results in minimal health status benefit to the people it serves. It is through the disease prevention and health promotion programs that Nepal has achieved its principle gains and will continue to do so.

The GON does not have the fiscal resources to bring about an appreciable improvement of the traditional curative care system and should resist the temptation to invest its limited resources in the development of sophisticated capabilities in this arena when voluntary professional skills and NGO resources are readily available to develop this capacity. The obligation of any Government to its people is in the area of Public Health, the provision of services which most demonstrably improve the health of the population and which are not usually forthcoming unless provided by the Government.

Under this philosophical approach, the GON might well direct its efforts in the following areas:

1. Control of excessively rapid population growth.
2. Environmental control of disease.
3. Achieving significant immunization levels.
4. Nursing in IRH/FPS.
5. Improved nutrition.

These points of emphasis are substantially in accord with the MCH strategy outlined in the "Draft Strategy for Maternal and Child Health - Nepal" for 1984/85 to 1986/87.

CONTROL OF EXCESSIVELY RAPID POPULATION GROWTH OR MAKING THE RATE
OF POPULATION GROWTH LESS THAN THE RATE OF ECONOMIC GROWTH

It requires no more than a basic understanding of fundamental economics and development principles to interpret the undeniable evidence which faces the GON. With its 16.5 million residents, Nepal reportedly has a greater population density per hectare of arable land than its overcrowded neighbors in India and Pakistan. Even if outside resources and the political will of the Government proves sufficient to successfully abate the current rate of population growth, projections indicate that Nepal will have a population of 22 to 24 million in the next 15 years. It is difficult to imagine that the Kingdom of Nepal can maintain any semblance of self-sufficiency under those circumstances.

In a recent survey of two districts, less than one third of the families could grow enough food on their own land to feed themselves for a year, forcing them to seek employment outside the village in order to purchase additional food. With an expanding population, this dependency on imported foodstuffs will only become greater. Other developmental activities put a similar burden on the national economy.

The increasing pressures of a growing population on wood for fuel has resulted in destructive deforestation and the erosion of fragile top soil assets throughout the Kingdom. Two districts are already showing indications of vegetation loss which will leave

them as partial deserts, like much of the Himalayan terrain west of Nepal. Reforestation efforts have not yet been able to keep up with this process.

Nepal has always been a country of modest means and little material wealth. The tragedy which faces the Kingdom is not that it will simply be overpopulated or remain economically disadvantaged, but that Nepal is becoming irrevocably dependent on outside resources to sustain itself. The history of numerous other Third World countries provides clear evidence of what can be expected. As dependency on external resources increases, the Government loses the autonomy and independence which goes with self-sufficiency, - and the opportunity to control its own destiny.

Without an effective program to control the population growth in Nepal, there will be little chance of improving the health status of its people. Thus, an absolutely essential component of future health care planning should be an aggressive population control program which should include:

- (a) Widespread promotion of family planning education and distribution of materials for temporary contraception, encouraging 3-year spacing of children and limited family size.
- (b) Increasing the number of acceptors of voluntary sterilization after the birth of their second or third child,

- (c) Examining all possible means of controlling immigration, particularly into the Terai and lower valleys, and
- (d) Considering the relative merit of immediately implementing national population policies which would utilize rewards and sanctions for influencing family size, as per POPCOM's 1983 "National Population Strategy".

Due to the critical nature of controlling population growth, we believe that GON may not have the luxury of time which would permit the development of a balanced population control program. It may be necessary to go "all out" with the VSC operations during the next 8 to 10 years. Then, gradually convert to a balanced maintenance program.

There were several other basic issues on which consensus was readily forthcoming:

The project design, while overly ambitious, was both laudable and responsive to the perceived needs of Nepal. In particular areas it has achieved substantial gains even though progress seems less impressive in the improvement of management and the integration of services. The major obstacles to effective integration of services are probably multiple, ranging from lack of infrastructure to attitudinal resistance and concerns about "Loss of Turf" by vertical programs. Perhaps the greatest barrier to effective integration of services lies in the fact that the responsibility for implementation was given to a "Project Group" with no authority or control beyond their persuasive powers. The

integration effort was seen by the vertical programs as "Someone Else's" project, - something that would be accomplished without their active collaboration.

Integration of Health Services is an organizational philosophy, a concept of how the entire health care system was to work, and not just an added project. Without full commitment and involvement by all programs toward accomplishing that end, which obviously was not present, the ICHSDP staff never had a chance.

There is also considerable question as to whether or not functional integration of services can or should be organized "from the top down". Our experience with other delivery systems would indicate a greater chance of success if the preparatory discussions and implementation took place much closer to the point of service delivery. Those who will ultimately be coordinating work schedules, negotiating the best use of field workers, sharing positions or resources, and problem-solving on local issues will not have a commitment to making integration a reality unless they have been involved in the preparations and have adopted the idea as their own.

ICHSDP's central staffing and identification as a project should be abandoned. The Secretary of Health (SOH) should bear the primary responsibility for implementation of the proposed integration of health services, and delegate that responsibility (along with the authority to make decisions and act on them) to the district level, - probably the District Health Officer. This

would allow for the needed adjustments and/or flexibility to adapt the integration of services to the specific conditions of that district. We believe strongly that the integration effort must be immediately decentralized to the district level, put under the guidance of a skilled organizer/manager who has a commitment to preventive services, and that the district organizer must be given the line supervisory authority for the workers in the various "Vertical" programs in that district in order to effectively coordinate their work.

We recommend that, where it is practical, integration of services should include:

- (a) Acute curative/emergency services.
- (b) Family Planning/MCH .
- (c) Immunizations (EPI)
- (d) Tuberculosis control.
- (e) Leprosy control.
- (f) CHL/Community self-help participation.

Closely related, but not necessarily integrated, might be

- (g) Environmental sanitation/vector-borne disease control.
- (h) Epidemiologic surveillance system.

Where local circumstances dictate, the District Health Officer should have the option of altering the make up of the integrated services (adding or deleting) with the approval of the SOH.

The evaluation team is cognizant of the pressures for expansion of the curative care facilities and services, both at the Panchayat (health post) level and centrally, in the form of requests for hospital improvements, training centers and improved technological capacities. We suggest that severe limits be put on the construction of additional facilities unless they will serve, primarily, as a base for preventive functions. The limited resources in this area should be directed toward renovation of some existing facilities. The elimination of "turnkey" construction projects in which the local community has no planning role or investment of their labor and resources is recommended. Psychological ownership is an important aspect of successful utilization in any service program.

There is also frequent reference to inadequate drug supplies. Despite the obvious truth of these comments, the GON should limit its investment in the distribution of curative medicines to basic essential items only, and actively pursue the charging of nominal fees for curative services and medicines with the objective of making drug supply a self-supporting program. However, this should not preclude front-end capital investment by AID/N in the "Revolving Supply System for the Regional Medical Stores", should that need be apparent. Capital investment in drugs should be specifically tied to changes which will create a self-supporting system, and should be "one time only" assistance.

It should be noted that we witnessed several instances of the drug supplier "dumping" almost out-dated medicines on the smaller rural health posts. Drugs received in June/July 1984 bore expiration dates of Sept./Oct. 1984. This should not be tolerated.

We encountered evidence of many focal operations and individuals which warrant special commendation. There are too many to list, but a few should be mentioned, including the investigation and prompt control of the meningitis outbreak, the pursuit of the iodine-deficiency problem and recognition of its significance, an extremely concerned and well-versed District Health Inspector in the Terai, a disciplined and dedicated Health Assistant in the Dang district, some skilled and energetic people in key MOH positions, and a display of ingenuity in the local design of an inexpensive biogas unit in the Rapti Zone IRD program.

These examples convince us that the people of Nepal have the skill and capacity to overcome the problems they face, given the resource support and the political will to do the job.

An impressive aspect of Nepal's activity in health care is that it consists of so many fragmented individual components, projects and special elements. A multitude of donor groups are participating in hundreds of isolated special interest activities, making the complete picture an incredibly complicated jigsaw puzzle. In some respects, it is amazing that it manages to function at all.

With regard to health planning, there is hardly any area of concern which has not been studied, evaluated, and reported on, and for which some plan or strategy developed. We found it impossible to assimilate fully the collection of printed materials on the variety of health subjects and adequately comprehend the status of current activities in the short time we had to review this material. All of which brings us to some rather sweeping general conclusions.

- (1) Many of the necessary components of an effective health program already exist in a variety of forms, but there is relatively little in the way of organizational "bridges" which link them together into a coherent whole.
- (2) It is probably time to reduce the emphasis on studies, evaluations and analyses - and get on with the task of selecting a few major affordable objectives, and getting the job done.
- (3) We believe these major thrusts should be evident in rural health services delivery by focusing upon the priorities noted on page 53 and implementing the following recommendations:
 - (a) Integration of health and population services should continue through a decentralized authority, at a pace to be determined by HMG (SOH and Planning Offices).

- (b) Environmental disease control should be a high priority, targeting on (i) interruption of the fecal-oral contamination cycle and (ii) control of vector-borne diseases.
- (c) The GON/USAID should limit its resource investment in support of curative care services (new construction/drug supply/training for curative services), but continue to control population growth.
- (d) HMG should make every effort to establish clear supervisor-subordinate relationships with well-defined performance expectations and a reward/sanction system based on job performance.
- (e) The immunization program should receive higher priority for additional resources and more lofty objectives.
- (f) USAID/N should seek to regain direct-hire authority for professional consultants or rewrite contracts to have contract consultants supervised by USAID's H/FP staff.
- (g) HMG should request USAID assistance to establish a regional EIS network.

ACHIEVING SIGNIFICANT IMMUNIZATION LEVELS

One of the most beneficial products of medical technology has been the opportunity to immunize individuals against infectious diseases. This is a relatively low-cost, low-risk means of bringing about dramatic improvement in the health status of large populations. The proper use of this capability through an intensive and well-designed program resulted in world-wide eradication of the long-dreaded disease, smallpox.

We have the opportunity to make equally dramatic advances in the control of other infectious diseases if we direct our energies toward achieving high levels of immunization among our populations. As we increase immunization levels, we not only provide individual protection against the disease, but also reduce the exposure to infection for those who are not immunized, so that the benefits of our efforts are compounded as the immunization levels are increased.

The expanded program of immunization (EPI) has developed the required network of field workers, refrigeration capacity and trained supervisors in most of Nepal for implementation of an improved program. However, several constraints have limited the current effectiveness of the program despite the sincere and conscientious efforts of the EPI field staff:

- (a) The distribution system has not availed itself of every possible service delivery point through which vaccines could

be administered, such as health posts, health centers, hospitals, family planning centers, etc. This can be accomplished through local integration of services.

- (b) The "Cold Chain" needs to be more carefully monitored and periodic vaccine samples from the periphery of the system tested for potency.
- (c) The logistics of supplies (needles, syringes, guns, vaccines) has not produced a uniform distribution to the rural areas of Nepal.
- (d) The public awareness of the benefits of immunization has not reached significant levels.

Our cursory examination of the EPI system in the field locations produced some anecdotal material which reflects a few of the problems in the vertical program. One EPI distribution point for vaccines had two refrigerators for storing vaccines, one of which was not working. The staff "thought" it broke down during the previous night and had transferred the vaccines to the cold unit. There was no means of determining just when the refrigerator had stopped functioning, but even the freezer unit was no longer cool to the touch. When pressed for some documentation which would verify the viability of the vaccines, they admitted that no biological testing of vaccine samples was ever done from that distribution point, much less from the peripheral EPI centers in the Panchayats where they were administered.

None of the health posts we visited in the Rapti Zone (unintegrated districts) had the capacity to provide any immunizations, though almost all of them expressed a desire to do so. Even the District Hospital had made offers to the EPI program to become an immunization access point, without results.

Most mothers we talked to in villages along the road admitted that their children were unimmunized, and explained that they had never seen an EPI worker in their village.

There seems to be a significant problem of opportunity and access, which is compounded by the general lack of understanding by mothers, of the importance of immunization. There is enough belief in the "curative" power of the needle which derives from antibiotic injections, that this opportunity for effective prevention of communicable diseases should be a high priority for implementation.

The objectives for this effort should include tetanus immunization of all expectant mothers, and the full immunization of 80% of all preschool children between the ages of one year and five years, with:

DPT (Diphtheria/Pertussis/Tetanus)

Polio

MMR (Measles/Mumps/Rubella)

with delivery of vaccines through as many health care facilities as possible, in addition to the field worker teams. This should be an early goal in the integration of health services.

ENVIRONMENTAL CONTROL OF DISEASE

Perhaps the single most frequent cause of morbidity and mortality in Nepal is the group of infectious diseases which produce diarrhea, dehydration, and death. The vast majority of these illnesses require only one simple mechanism for their persistence in the population, - the human fecal-oral contamination cycle. The feces of an infected person, indiscriminately excreted, contaminate the soil, water and environmental surfaces from which they then enter the new host and the infection is spread.

Interruption of that cycle is technologically simple and very inexpensive. It requires a difficult behavioral change, in that the people at risk understand the route of infection and have the will to prevent its continuation through:

- (a) Defecating in properly built privies/latrines.
- (b) Boiling of water for consumption, and
- (c) Frequent hand washing.

These control measures do not require significant capital investment, extensive training or elaborate logistics. It is precisely the kind of health activity to which the GON should be devoting its time and energy.

This effort should involve a massive country-wide campaign, promoted by all levels of health workers, community leaders, sanitation workers and volunteers. We would suggest enlistment of

a special cadre of Peace Corps Volunteer (PCV) with training in community sanitation principles, construction of privies and practical water purification techniques, since the PCV's have an excellent record of community acceptance and effectiveness. The PCV's could multiply their impact by making this an integral part of the Community Health Leader (CHL) Program. Further, the CRS program could add to their line of contraceptives and ORS packets the distribution of low-cost soap to assure access and promotion of this important part of the effort.

In the more remote parts of the country it might be desirable and/or necessary to introduce soap-making as a local industry.

At the present time, the health care system sets a poor example since many, if not most, of the health posts do not have a latrine, bathroom or privy. Every health facility should have such a facility and clearly set the community standard through its use and maintenance, as well as through frequent visible hand-washing by the staff.

The other major components of environmental disease control are the efforts to interrupt transmission of vector-borne diseases, - particularly malaria and encephalitis.

The malaria program is discussed in detail elsewhere in this report, but special mention should be made of the close functional relationship between the field effort to break the

fecal-oral contamination cycle, assure clean water supplies, general community sanitation and the interruption of vector-borne disease transmission.

We believe that this relationship argues for an administrative affiliation of the malaria program with environmental sanitation/engineering, rather than with the health services delivery system. In HMG's enthusiasm for integration of health services, the vertical malaria program has been scheduled for inclusion in ICHSDP, and we would suggest that this decision be reconsidered (see General Discussion of Findings).

Potentially, the environmental control of disease holds the greatest promise for short-term, inexpensive, large-scale benefit to the health of the Nepalese in all parts of the country.

As an adjunct to the control of vector-borne diseases, the Evaluation Team also feels it would be highly desirable for HMG to pursue the development of an epidemiologic Intelligence Service (EIS) officers, public health doctors with special training in epidemiology. These medical officers would be responsible for monitoring infectious disease outbreaks in their respective regions, mobilizing the investigation and response to such outbreaks, and for conducting more routine epidemiologic studies of health problems such as the incidence and demography of iodine-deficiency problems (Goiter/Cretinism) and the most desirable response to such problems.

USAID/N might properly provide training funds for sending selected candidates to EIS training at the Centers for Disease Control (CDC) in Atlanta, Georgia. It is also likely that CDC would be happy to provide consultants to HMG for technical assistance in developing an EIS system in Nepal.

NURSING IN INTEGRATED RURAL HEALTH/FAMILY PLANNING SERVICES

INTRODUCTION

In Nepal there were no trained and graduate nurses prior to 1956. HMG/WHO jointly sponsored the first batch of nurses trained in the country since 1956. With the expansion of the health services in the country, the country needed more nursing personnel and now the country produces different categories of nurses from different nursing campuses established in various parts of the country. The total number of nurses produced in the country through June 1984 is given in Table 6.

Table 6.

NURSING PERSONNEL IN NEPAL, 1984

Class of Nurse	Number
ANM	1,975
Certificate nursing	609
Senior ANM	20
Bachelor of Nursing in Midwifery	24
Bachelor of Nursing in Community Health	7

(Source: Nursing Division D.H.S. Nepal)

At present, the Department of Health Services has about 1,900 nursing personnel working in various Health Institutions throughout the country. The sanctioned posts for various categories are shown in Table 7.

Table 7.

DEPARTMENT OF HEALTH SCIENCES POSTS FOR NURSES, 1984

Class of Nurse	Number
ANM	1,558
Staff and Senior Staff Nurse	301
Public Health Nurse	11
Senior Public Health Nurse	51
Matrons	7
Chief Nursing Administrator	1
TOTAL	1,929

(Source: Nursing Division, D.H.S. Nepal)

The long term Health Plan projects an estimated requirement of 741 nurses and 2,261 ANMs by the end of 6th plan period of HMG.

Nursing Curricula

The objective of producing the lower level Nursing Manpower (ANM) is to meet the requirements of the Village Health Post to deliver Nursing and Midwifery services to the Community.

The basic requirement for admission is the 8th class pass. The courses for mid-level nursing manpower staff nurses are tailored according to the need of hospital services. This course is of 3 years duration and the admission requirement is an S.L.C. pass. The higher level nursing courses are designed to produce a nurse with management, teaching and supervisory skills for work in the hospitals and community health. The requirements for admission are a Certificate of Nursing and 3 years of service in the field of nursing.

Nursing Personnel

Sanctioned and filled posts for each region; as of end of May 1984, Division of Nursing, Ministry of Health, are shown in Table 8.

Table 3.

SANCTIONED AND FILLED POSTS FOR NURSES BY REGION, MAY 1984

Region		Nurse	ANM	% Filled
Eastern	SP	56	364	87.4%
	FP	42	325	
Central	SP	208	445	85.4%
	FP	191	366	
Western	SP	39	332	90.6%
	FP	38	298	
Mid Western	SP	17	245	55.7%
	FP	15	131	
Far Western	SP	12	119	61.8%
	FP	7	74	

SP = Sanctioned Post FP = Filled Posts

(Source: Division of Nursing)

Nursing personnel deputed to Kathmandu as of June 1984, included 25 nurses and 78 ANM's for a total of 103.

Deputation internal and external (In 13 districts as per Annex 11.1 Nursing Seminar Report: June 11.14.1984)

- A. From health post to hospitals 51%.
- B. From hospitals to another district 20%.
- C. From health post to another district 29%.

Status of Sanctioned Nursing Posts: (Source as above)

- A. 59% present. B. 15% Not filled.
C. 20% deputation. D. 6% Absent or on Study.

Of all Categories of Nursing personnel, PHN's and ANM's are those most involved in Integrated Rural Health and Family Planning Projects.

Provision of at least one Public Health Nurse for each integrated district has been made. Responsibility of PHN is to supervise ANM's working in the Health Post. They are also responsible for arranging training programs for traditional birth assistants (TBA).

The ANMs are the most important part of the nursing personnel for Rural Health Service. ANMs meet the need of the Village Health posts to deliver the basic nursing and midwifery services to the Community. There are 2 ANM posts sanctioned for each I type health post. They not only provide service at the health posts, but also do home deliveries if requested by the villagers. O type and E type health posts are staffed by one ANM, but their presence depends upon the location and living facilities available in and around the Health Posts. ANM's are also utilized in training of CHL's and TBA's at the Health Post level. FP/MCH employs SPHN, PHN and ANM partly to assist with surgical sterilization procedures and partly for MCH activities in urban areas.

Problems identified in Nursing

- a. Lack of accurate data on individual Nursing assignments.
- b. Unmanned posts caused by deputations.
- c. Long term Health Plan contains - inadequate recommended posts.
- d. Lack of suitable nursing quarters in many hospitals and health posts.
- e. Low pay of Nursing professionals.
- f. No system for refresher training.
- g. No career ladder for ANM's.
- h. No supervision by Senior Nursing Personnel on the job.
- i. Assignments cause separation of family members.
- j. Lack of proper security for young nurses in rural posts.

It should be clear from the above picture of nurses in the country, that the Nursing Service cannot meet the real demand at the present time. It is clear that most of the categories of nurses are involved in curative health service. The existing manpower with its described problems (both organizational and personnel) will not be able to take care of the maternal and child health services in the country for the immediate future.

It is understood that the traditional birth attendants perform over 80% of the deliveries in Nepal. They form not only a critical group in influencing the health and Family Planning related behaviors, but are essentially the major source of service and information to women in the child-bearing age group. TBA's in some form are available in every village of Nepal.

Recommendations

1. Train TBA's for maternal care. Training should be directed to reduce maternal and neo-natal morbidity and mortality. Training for one TBA per 1,000 village population would be an ideal circumstance to pursue.
2. At the Health Post level the present staffing of ANM's becomes adequate if the above levels backed up by TBA's can be provided. Filling of vacant ANM posts is very desirable but before sending them to HP, it is necessary to ensure that the physical facility and quarters are adequate. ANM's should be mobile so that they can supervise and help TBA's when necessary.
3. Increase the supervision of the ANMs at the Health Post. Supervision is to be provided by district PHN and she should be able to provide required administrative and logistic support through routine field visits.
4. The long-term projection of requirements for Nursing Personnel should be developed.
5. Refresher training for all categories of nursing personnel should be arranged every 3 or 4 years.
6. Additional ANM's will be required, in addition to training the TBA's. Training should be practical and job-oriented so that Health Posts can retain them.

7. A career ladder should be developed for various categories of nurses working in rural integrated health and F.P. Programs.

IMPROVED NUTRITION

Nutritional well-being derives from individual decisions in the face of resource availability and the whole ecological setting of the household and village. It is important that nutrition receive high priority in government policy, but it is equally important that the context of nutritional problems be correctly understood.

The Extent of Malnutrition

Reliable and direct data about the nutritional status of the Nepalese population are extremely rare, although all available reports suggest that malnutrition in many forms is widespread and severe. See Table 9. These surveys show that protein-energy malnutrition in preschool children is a large problem, while nutritional malaria, endemic goitre and vitamin A deficiency are also serious. Almost two thirds of the total child population in the country, under 5 years of age, are affected with moderate to severe degrees of protein-energy malnutrition. The extent and severity of these problems varies with different regions, economic classes, and ethnic groups. Malnutrition is, perhaps, an associated or underlying cause of about 60% of all deaths in the child population of Nepal.

Table 9.

NUTRITION STATUS OF THE CHILDREN IN NEPAL
AS REPORTED BY THE TWO SURVEYS

Nutritional Status (Weight-for-Age Classification)	Pourbaix (1974) (Percent)*	HMG/USAID (1975) (Percent)**
Normal (80% and above, of standard)	30.0	29.3
First degree malnutrition (70-79.9% of standard)	29.0	41.5
Second degree malnutrition (60-69.9% of standard)	25.4	24.1
Third degree malnutrition (below 60% of standard)	15.6	5.1

* Comparisons are to Harvard Standards used in international nutritional assessment studies.

** Comparisons are to Indian Academy of Pediatrics standards.

Longitudinal evidence to support this interpretation comes from a study by Farquharson (1970). She examined the growth pattern of 2,315 Nepalese children and found that the Nepalese infants displayed normal weight gains during their first six months of life while exclusively breast fed. Then they experienced a marked slowdown of growth, once the weaning food was introduced. During the second year, they grew very little, falling progressively further and further behind. After age two some catch-up occurred

but well below the median. The children then continued to grow but were permanently stunted, keeping one in wonder about the impact on their future mental and emotional development.

Nutritional Anaemia, Vitamin A Deficiency (Xerophthalmia), Goitre and Cretinism

Other nutritional deficiencies that plague the population of Nepal are anaemia caused by iron-folate deficiency, (exacerbated by clinical diarrhoea, which in turn is caused and affected by malnutrition). According to the HMG/USAID Survey findings, nutritional anaemia is affecting 19.5 percent of the 6-13 months age group and 25.9 percent of the 24-72 months age group (1976). All young women, but especially those who are pregnant or lactating, are most vulnerable to nutritional anaemia. The accepted minimum haemoglobin level for women is 7 gm (Normal 12-14 gm). Unfortunately precise information is not available. However the fact that hookworm infestation is highly prevalent in Nepal and that it can aggravate nutritional anaemia makes the problem of anaemia a matter of concern.

A nationwide sample survey of Nepalese children in 1980-81 revealed that Vitamin A deficiency and xerophthalmia affect a sizable percentage of preschool children, as indicated by .03 percent prevalence of corneal ulcer among those sampled. Xerophthalmia, in its severe form, is a common cause of blindness

among children. The confirmatory evidence is not available, but a recent estimate indicates that about 100,000 children go blind every year, mostly in Asia due to Vitamin A deficiency.

In the 1960's and 1970's several investigations collected data on the prevalence of goitre and cretinism in Nepal and related this to the absence of iodine in available water and foods. The geographical location of Nepal in the heart of the Himalayan Goitre Belt, and data from surveys carried out in different parts of the country, confirmed that Nepal has one of the highest incidences of endemic Goitre and Cretinism in the world, particularly in the mountainous areas. There are many areas where virtually all the population are afflicted with goitre. Much more alarming is the fact that cretinism characterized by deaf-mutism, growth and mental retardation, affects 10% of some populations (eg. Wapsa in Solu Khumbu). The irony is that, although it is preventable, nothing tangible has yet been done.

Food Aid Programs and Problems

International Food Aid Programmes channelled through the World Food Programme (WFP) have been providing food aid to infants, mothers, and young children since 1972. The programmes are co-ordinated with MPLD (Ministry of Panchayat and Local Development) through existing maternal-child health clinics. The food stuffs have been dried skim milk, wheat, wheat-soy blend

(WSB) and corn-soy-milk. Logistical obstacles have prevented the program from serving many remote rural areas. Although food targeting to reach the most malnourished has been attempted, in reality this has been difficult to achieve. An evaluation of nutritional impact has so far not been possible.

The geography of the country remains an obstacle. Long delays occurred due to central office's inability to predict when a food shipment will reach a remote border crossing, and because internal communication is slow. Customs clearance is still another obstacle, which nobody has been able to do anything about.

Food Aid Programmes faced problems similar to those of many other countries. Leakage, corruption, losses due to spoilage and lack of adequate storage. Due to the shortage of trained staff, educational efforts were often curtailed.

Nutritional Intervention Based on Local Foods

This program took place in Lalitpur district in Kathmandu Valley as part of the Mission Hospital Community Health Program. Community Health workers conducted a year-long nutrition survey in two villages in Lalitpur district in 1973 to identify foods available in the homes and current infant feeding practices. The nutrition workers observed that virtually all mothers knew how to prepare a very nutritious and popular traditional snack by

roasting and combining a whole "puke", (such as wheat, soyabeans, corn, beaten rice etc.). The "Sattu", is prepared by grinding the roasted ingredients into a powder and mixing it with milk or water to make a thin gruel.

"Sarbotaur Pitho" the "Super Flour" (Two bowls of soybean, one of corn, and one of wheat, (rice and other beans may be substituted), became popular infant food. The youngsters soon began to gain weight and thrive.

We suggest that USAID/N consider utilizing the temporary services of a nutrition consultant in its future project design, to assist HMG in developing a scheme for growth monitoring and nutrition education through local health workers.

We also recommend that it would be better not to consider involvement in food distribution programs for the foreseeable future.

Chapter VI

SERVICE DELIVERY: FAMILY PLANNING AND MATERNAL AND CHILD HEALTH

In the area of Family Planning and Maternal and Child Health especially the evaluation team was faced with a tidal wave of paper from earlier project descriptions, demographic studies, program evaluations, special studies, conference reports, work plans, etc. It is clearly apparent that the crisis of exploding population in Nepal is of major significance to the leadership in His Majesty's Government, the World Bank, UNFPA, UNICEF, WHO, and many bilateral donors, and it should remain equally as significant to the AID/Nepal mission leadership. Clearly this one area of assistance is of ever-increasing importance for many reasons, and should therefore get the highest priority both in attention and funding from USAID, i.e., financial support to the greatest extent possible, and with the greatest flexibility possible.

Although there has been support for family planning as a concept for over 20 years, it has had to grow from a very small nidus of concern in Kathmandu to a broadly-based and publicly supported concept. In 1976 only 2.3% of all married women in the reproductive age range were practicing contraception, and that grew to 7.0% by 1981. Only now are there program activities in a scale that might possibly have an impact on the demographics of the country, but proof of that will still take several years to pull together.

The broad-based conceptual support necessary for a significant service delivery program had been obtained prior to the writing of the Project Paper on Integrated Rural Health/Family Planning Services in 1980, and that paper laid out a very appropriate outline of strategies to approach the overwhelming problems of rural health service delivery, integration of services, education and motivation, initiation of new cadres of workers at the local level, significantly increased levels of management and accountability, and critical thresholds for basic MCH and family planning services. The project was written in general terms so that flexibility could be exercised along the way. This project paper certainly demonstrated a firm USAID/N commitment to address the most significant problem of Nepal, excessively rapid population growth, that was undermining all other development efforts.

It would be totally inappropriate to attempt to cite all of the pertinent literature on the demographic circumstances in Nepal. However, it would be helpful to note a few details about the demographic situation. On November 9, 1984, the Rising Nepal (the major newspaper of the country) quoted the National Commission on Population's projection of the population of Nepal as 16,423,070. That is a growth of almost 2.5 million since 1980, and 5 million since 1971 (an increase in the population of almost 50% in only 13 years). The 1980 APHA report gave the following key demographic measurements as shown in Table 10.

Table 10.

KEY DEMOGRAPHIC MEASUREMENTS IN NEPAL, 1980

Annual population growth rate	2.6%
Infant Mortality rate	152/1,000
Median Age	22.3 years
Total Fertility Rate	6.1

And there is no appreciable change in these figures today.

The 1980 APHA report also gave a superb overview of the culture, the economic situation, the health status, health system in place, recent history of the health system development, and specific insights into the constraints to be faced by anyone wishing to initiate improvements in the system. A review of USAID/N's role in past program development was given along with an outline of future alternatives for USAID/N. At that time HMG viewed the assurance of safe drinking water as the cornerstone of the public effort to improve health status in Nepal, to be pursued along with a major national commitment to curb the runaway population growth.

The scope of work of our evaluation focuses on the changes that have occurred since the Project Paper and the APHA Report were written (1980), and there are many positive achievements to

report. Unfortunately, many of the constraints identified in 1980, and again in later evaluations and reviews, still remain as constraints today.

One of the most important changes since the project paper was written was the confirmation of the national will to address the population problem through the establishment by HMG of the National Commission on Population (NCP).

The family planning program is moving very rapidly now, and this success must be recognized and supported. Because of the magnitude of excessively rapid population growth, and the growing acceptance of the voluntary sterilization program it is clear that sterilization procedures will remain as the major contributor to any demographic effect for several years. But that should not lead one to reduce emphasis on temporary methods. To the contrary, renewed emphasis on all temporary methods must be stressed, to be given with two maternal health messages:

1. The health of the baby, the mother, and the family would be improved if the first pregnancy were delayed until age 17 or later. (Currently the law of the land is that a girl may marry at 16 with the consent of the parents, and at 18 without parental consent, but the actual average age of marriage is 15.1).
2. A spacing of at least 3 years between pregnancies would greatly enhance the health of the mother and the health of all subsequent children.

In this push for improved use and effectiveness of temporary methods one should also expand the education and emphasis on injectable methods.

The plan for continued family planning and maternal health services that was written during the summer and fall of 1983 by the ad hoc committee chaired by Mrs. Pancha Kumari Manandhar (NCP) is a very reasonable approach. Clearly if USAID/N were to concur with it and commit continuing major support it could be done with an extension of the current IRH/FP project through 1988, assuming that funds under that project heading are adequate. If more funds are needed, it is clearly indicated to initiate a new project paper within AID to address whatever shortfalls in funding are identified.

A major part of that plan is the establishment of service delivery objectives that are directly correlated with the policies and targets established by the National Commission on Population. Those targets are shown in Table 11.

TABLE 11.

PRESENT STATUS, SHORT-TERM, MID-TERM AND LONG-TERM
POPULATION REDUCTION GOALS

	Total Fertility Rate	Total Births to be Averted	Population Growth Rate
Present Status	6.3		2.66
Short-term Target, 1985	5.4	359,000	2.18
Mid-term Target, 1990	4.0	1,161,000	1.9
Long-term Target, 2000	2.5	2,322,000	1.18

To achieve these fertility goals the family planning program would have to achieve the contraceptive goals given in Table 12.

TABLE 12.

SERVICE DELIVERY TARGETS FOR FAMILY PLANNING

Year	Sterilization	Pills	Condoms	Depo	IUD
1982/83*	45,000	67,000	1,78,000	4,900	1,500
1983/84	65,000	90,000	2,20,000	15,000	7,000
1984/85	65,000	1,00,000	2,36,000	21,000	9,000
1985/86	79,000	97,000	2,15,000	28,000	11,000
1986/87	1,10,000	1,23,000	2,53,000	41,000	14,000
1987/88	1,14,000	1,29,000	2,59,000	48,000	15,000

*Preliminary Actual

These ambitious goals are well beyond the realm of possibility for HMG without significant donor support. On the other hand, the commitment and intent of HMG are clear, and should be supported by USAID/N.

There is a broad consensus in Nepal that significant increases in family planning will not take place until significant improvements are made in basic infant care to assure survival of most children to age 5. But the MCH effort in infant care has never been selectively targeted to high-impact services. It is very important to note that a carefully thought-out MCH

strategy was also drafted in 1984 through a collaborative effort of many agencies, which does focus on a limited number of high impact services, i.e., oral rehydration, immunizations, child-spacing, and basic first-aid/curative care and nutrition.

Included in the delivery network for expanded FP/MCH will be community volunteers, e.g., the Ex-Servicemen's Club, and traditional birth attendants (TBA's). Since TBAs attend 80%+ of all deliveries in the country it is a critical step to fold them into the legitimate service delivery chain. They could augment the health education team tremendously if they were educated about the four high-impact service areas, and if they were to refer on to others any complications they encounter which exceed their levels of knowledge and competence.

Program successes are evident in many of the charts and tables prepared by the Evaluation Division of the FP/MCH Program Office. A selected group of these is presented in Appendix E with the knowledge that such a presentation is just skimming some of the cream from evaluation done over the last four years.

Many significant objectives of the program have been achieved since 1980:

1. A dramatic increase in the numbers of sterilizations done, and a commitment to raise that number substantially over the next few years.

2. Establishment of a nationwide network of health workers who are now completing training and will be able to provide motivation, education and direct service delivery at the village level.
3. Successful, semi-autonomous, rapidly expanding retail sales of contraceptive supplies through Contraceptive Retail Sales (CRS).
4. Initiation of the regional medical stores concept, and a building/staffing program designed to make it work.
5. Reduction in the essential drug list to the most important drugs, with each health post being asked to order its own supplies.
6. Recognition and utilization in a few selected situations of the great power and managerial control that can be obtained with micro-computers, which are so much more effective than armies of clerks.
7. Increasing availability of Oral Rehydration Solution throughout Nepal in health posts and through commercial outlets (through CRS).
8. Weekly informal meetings of the major donors to coordinate activities.

The evaluation team was very disappointed in the failure to activate the static VSC's - now named the FPC's. Surely those situations could be resolved more effectively if there were in each case a local person given responsibility and authority to

complete construction where necessary and staff appropriately for specific numbers of sterilization procedures and specific numbers of acceptors of temporary contraceptive methods with a given budget.

The team did not think it appropriate to demand that the staff assigned to such centers would have to be 100% family planning staff. Rather the demand should be placed on the numbers of services delivered and not the pedigrees or affiliations of the staff within specific vertical program hierarchies. Furthermore, since the care of complications is very significant, and that is often the responsibility of the local hospital staff, it was the opinion of the team that the local physicians should have the first choice at being trained to do the sterilization procedures, and then to earn the special incentives available to the operating physicians. Then they would also be much more willing to care for any complications which might follow.

Evaluation is a necessity for any good program, but the value thereof often lies in the eyes of the beholder. The evaluation team was convinced that there are very few areas of health service delivery in Nepal which operate with any degree of specificity in their evaluations. Perhaps the most successful evaluation is achieved in the malaria program where one can deal with actual case counts and concrete numbers of individuals screened. Admittedly there are still problems identifying the denominator, i.e. the population at risk, because of tremendous migration through the Terai, but one still has an advantage of measurable end points to count.

Family planning offers a solid endpoint with the sterilization procedures, but the impact of the temporary methods of contraception on fertility is elusive. Presumptive estimates of couple-years of protection can be made from total sales of pills and condoms, but such numbers are very soft. One hundred women taking pills three months a year could still produce 100 babies - but the retail sales for one hundred women times three months would suggest 25 couple-years of protection. At the same time it is not practical to suggest longitudinal record-keeping for the universe of consumers of temporary methods in Nepal at this time. That leaves the evaluation division with the challenge of selecting the best alternate techniques for evaluation, given the constraints of the current information systems. Among the choices are:

- a. Periodic censuses to determine population changes, either for the universe or selected areas.
- b. Vital registration, either for the universe or for selected areas.
- c. Sample surveys of known users to determine continuation rates.
- d. Reviews of birth records to determine spacing intervals.

The key to many of the best evaluation techniques is record-linkage through computers, and it is possible to do significant evaluation studies with the micro-computers that are already available. This certainly is an area that is appropriate for expanded T.A.

Similarly, in the MCH area evaluation has been difficult because no one was sure what the primary endpoints were supposed to be. Now with the new MCH strategy and 5 target areas more precise evaluation processes can be put into place. Numbers of women receiving their tetanus immunizations, iron and folic acid supplements, and blood pressure checks can be counted. This would be overwhelming on a universal basis, but for selected locations it would be quite practical.

In summary, significant progress has been made over the last four years in building the infrastructure of local personnel for service delivery, identifying major problems in the supply chain and initiating solutions to these problems, solidifying the national policies on population growth control, and securing higher levels of planning and managerial competence. But the demographic problem is clearly a long-term one, and the greatest steps in service delivery have been achieved in the last two years.

Therefore, it is critically important to capture the momentum that has been building and make major, on-going commitments to address this cornerstone problem of demographics for Nepal. The evaluation team believes this problem alone is worthy of major increased AID assistance to the country, and urges careful consideration of this investment in Nepal's future.

Chapter VII

SERVICE DELIVERY! MALARIA CONTROL AND ENVIRONMENTAL SANITATION IN NEPAL

Malaria has been, historically, one of the major health problems of the Kingdom, contributing an estimated two million cases annually with a mortality rate of some 10%. This situation prompted the establishment of the Nepal Malaria Eradication Organization in 1958 which successfully led to the freeing of large zones from the grip of malaria, especially in the Terai. By 1970 there were only 2,500 cases detected, but the program has since deteriorated. Unfortunately, by 1980 the incidence of malaria had increased to approximately 12,000 cases annually.

In spite of the relative success of the program, nevertheless 50% of Nepal's population remains at risk of acquiring the disease. Areas above 4,000 feet in elevation are not at risk but the most productive agricultural lands are in the malarious zone, principally the Terai.

The malaria control program was initiated as a result of the joint effort of the World Health Organization and the Government of Nepal. A plan of operation was instituted which included (1) spray operation to kill the mosquito vector (2) surveillance to identify sources of infections and treat persons infected, thereby eliminating malaria reservoirs among the population. The NMEO program, while directed and headquartered in Kathmandu, was

regionalized and decentralized as far as possible to field areas. At the beginning of the project the authorized staff was approximately 3,134 personnel.

The target of the 1980-1985 Five Year Plan was to reduce malaria to the level of one case per 1,000 population or an annual parasite rate (API) of 1.0 on a national basis. As a result of comprehensive studies in Pakistan, Sri Lanka, and Thailand it was determined that the environmental impact of DDT and malathion spraying was not deleterious.

The national malaria control program currently has a full time national safety officer. He is responsible for insuring that all field workers are properly instructed in safe spraying operations and that they are carried out according to safety protocols. This indeed appears to be the case as NMEC reports that they have experienced only one or two mild cases of malathion exposure per year. This is reassuring as the potential for accidental exposure is rather high.

The estimated cost of the NMEC five year program was \$29.6 million, of which \$13.3 million was for local costs and \$16.3 million was for imported insecticides. Technical assistance, participant training and other costs were estimated at \$240,000 and funded by USAID. The Government of Nepal supported all local costs as well as that portion of imported commodities not paid for by USAID or other donors.

An excellent in depth analysis of NMEO activities in 1983 was undertaken by a joint HMG/WHO/USAID/United Kingdom group and released in July 1984. This report forms the basis for much of the technical knowledge of the current status of malaria activities in Nepal. This report, together with data obtained by interviews with HMG/NMEO officials and observations in the field serve as the basis for recommendations by the evaluation team.

Malaria control is certainly one of the great success stories of Nepal. Because of malaria control the annual parasite incidence (API) has dropped from 1.6 cases per 1,000 population in 1981 to 1.0 in 1983 in those districts which are integrated under ICHSDP. Those districts which remain unintegrated are more hyperendemic for malaria; they remain under the control of the NMEO and the API has been 2.02 in 1981, 2.44 in 1982, and 2.17 in 1983 for an average of 2.21 during the three years. During this time period of 1981 through 1983 there has been an average of 16,569 cases annually in both NMEO and ICHSDP areas, with a 1983 annual incidence in the NMEO areas of over twice the incidence occurring in the ICHSDP areas.

While on the whole malaria remained relatively under control and annual incidence relatively stabilized, there were during 1983 increases in incidence in Bara, Parsa, and Septari Districts, and in Dhading District malaria incidence increased by more than 30% as compared to 1982. Another exception to the relatively good status of malaria control has been the increasing emergence of Plasmodium Sfalci-parum malaria. Indigenous cases

have increased from an annual occurrence of 67 in 1981 to 325 in 1983, an increase of 4.8 times. Imported cases have increased from an annual occurrence of 517 in 1981 to 1,305 in 1983, an increase of 2.5 times. Note that imported cases account for over four times the number of cases produced by the indigenous population. Indigenous vivax malaria has decreased over the same time period and imported cases have remained relatively stable. The increased occurrence of falciparum malaria is alarming both because it is a more deadly form of the disease and it is more difficult and expensive to treat than vivax malaria.

The NMEC has been under the capable direction and leadership of Dr. M. Parajuli who, together with his organization, has achieved a good degree of success in spite of a number of handicaps. In 1983 malathion ordered by NMEC was not delivered and there was a decrease in anti-malaria activity. Eight additional districts were transferred from NMEC to ICHSDP control and because of inadequate coordination and management they experienced a sharp decrease in malaria control activities. Fortunately, mother nature contrived by means of both drought and larvicidal rains to help decrease malaria transmission.

Malaria control is often the step child of development agencies, Ministries of Health, and Ministries of Finance. A principal reason is that once the epidemic is abated and the more severe impact of the disease is controlled there still remains the ongoing, seemingly never ending, commitment to control the disease and prevent recrudescence. This effort continues to cost

money, the disease is not causing much social consternation, and scarce resources are urgently needed elsewhere. But beware, the spark is still there for a new conflagration. The marvelous adaptative capacity of mother nature helps insure both the survival of the mosquito vector and the malaria parasite. If the disease is not totally eradicated then it must continue to be controlled or it will burst forth with renewed vigor, often enhanced by resistance to anti-malarial drugs by the parasite and insecticide resistance by the mosquito vector. This means there is no escape from a long term committment by the government to malaria control, unpleasant though this financial reality may be. This fact is especially true for Nepal because of the continuing threat of the introduction of the disease from India, especially the introduction of the more deadly and expensive falciparum malaria. To this end there are no better recommendations than those suggested by the Joint HMG/WHO/USAID/ODAUK Team, i.e.:

Seventh Five-Year Plan

OBJECTIVES for malaria control during the seventh five-year plan.

1. To maintain the level of malaria control already achieved, and to reduce morbidity from malaria.
2. To stop spraying in those hilly areas where transmission is low.

3. In low risk areas of the Terai, where malaria control has been achieved to transfer districts to integration. (Note: The Evaluation Team recommends an expanded role to include environmental sanitation, q.v.).
4. To control the spread of chloroquine-resistant *P. falciparum*.
5. To adopt alternative methods of malaria control.
6. To strengthen the Research and Training Centre for training manpower.
7. To ensure better co-ordination between sectors and departments.

METHODS TO BE ADOPTED TO ACHIEVE THE OBJECTIVES

1. To decrease dependency on insecticides, steps will be taken to reduce spraying in the low receptivity areas of the Terai. Only those areas will be considered for spraying where indigenous cases have increased.
2. To devote more effort to case finding and case treatment, and to continue surveillance as before.
3. To increase both community participation and health education with the aim of facilitating the control of malaria.

4. To undertake environmental management so that dependence on insecticide is reduced.
5. To train and retrain personnel.
6. To study other vector-borne diseases, and to control certain of those diseases.
7. To improve coordination between sectors and other agencies involved in this programme.

RECOMMENDATIONS

General Recommendations

Adequate local currency support, with timely release for NMEO, should be assured by HMG in order that activities can be carried out as planned and not reduced due to a shortfall in one or more of the various budget codes.

HMG should seek donors for necessary insecticides and other commodities, bearing in mind that a nine month lead time is required for delivery after agreement is made between HMG and the donor agency. Insecticide for moderately receptive areas is a particularly urgent requirement.

As recommended in the previous external SAT, NMEO should be given regular Government status under the Ministry of Health as a Directorate or Division, with increasing responsibility for controlling other vector borne diseases and

environmental sanitation. With regular governmental status the number of vacancies in important supervisory posts would be greatly reduced, as qualified staff could then be promoted and new people would be willing to join the NMEO in jobs with a secure future. The team believes that overall programme performance would improve if the vacancies among supervisory posts were expeditiously filled.

For economy of insecticide use, the program should consider changing nozzle tips at least every month or 3 times/cycle. These nozzle tips and required replacement sprayers plus sprayer parts should be made a part of HMG requests from donors.

During the seventh five-year plan, when regular spraying is stopped for 4 cycles during 1987 and 1988 in the Outer Terai, a sufficient supply of insecticide, at least 10% of the total amount required for a regular cycle, should be on hand for focal spraying.

The Team agrees with the suggestion in the Internal Assessment Report that external assessment of NMEO's activities should be undertaken less frequently than in the past, and recommends that external assessments are undertaken twice during the period of a Five-Year Plan.

Technical Recommendations

It is recommended that special studies should be initiated to discover the reasons for the increasing relapse rate in bordering areas of the country and in the low receptive areas of the Terai. In the meantime the possibility should be considered of administering anti-relapse treatment during the winter months to all *P. vivax* cases detected during the previous year.

Studies should be undertaken on the increasing relapse rate among both indigenous and imported cases in the Moderate Receptive Area, and anti-relapse measures should be considered for implementation during the winter months. To prevent any further increase and spread of *P. falciparum* infections, there should be an intensification of case detection and radical treatment from October through December, when the effectiveness of the Autumn Spray Cycle has deteriorated and *An. fluviatilis* density is often high:

The Director of NMEO, Dr. Parajuli has been aware for sometime of shrinking resources available for the program, particularly the availability of insecticide both because of production cuts, increase in cost, and decrease in money available. He has adapted to this reality by developing control strategies that rely on less insecticide. This includes reduction in spraying in low receptive areas, less frequent spraying, strip spraying, and limiting spraying to where indigenous cases have

occurred. In addition he is trying to improve non insecticide control by means of environmental management and drainage. This approach requires the full cooperation of engineering personnel, especially those engaged in road construction. Another promising approach is the use of mosquito larval eating fish. These activities are quite promising but they require considerable research and development before being used as a primary control measure. This is why support of the National Malaria Training and Research Center is so vital at this time. This Center is essential to producing alternatives to the present insecticide dependent system of mosquito control.

At the present time (November 1984) the National Malaria Research and Training Center at Hetauda is not completed. The physical facilities are at this point entirely inadequate. There is room for teaching not more than 30 Malaria Assistant students at one time, and because of the need for microscopes, not more than 20 Laboratory Technicians at one time. The classroom is not satisfactorily equipped for teaching because the room cannot be darkened for slides or overhead projection and the blackboard is in such poor condition that it cannot be written upon satisfactorily with chalk. Fortunately, the desks and chairs are satisfactory and in good condition. In spite of the handicaps there was a class of Malaria Assistants enrolled in a class on the occasion of the site visit. The housing facilities were even less adequate. All the students were housed in a make shift domicile which, with all their gear, had the appearance of an

overstuffed army barracks, prisoner of war camp, or perhaps concentration camp. There was usually less than a foot of space between the beds. A number of the beds were makeshift, having been made of tables borrowed from elsewhere at the Center. There appeared to be no room for food preparation or dining. Because of the crowded conditions in the barracks, if there were to be an occasion for respiratory disease outbreak, the physical facilities could not be better suited to insuring a high incidence.

The research activities appeared to be desultory and minimal. The Malaria Research and Training Center is apparently currently collecting base line ecological data in four geographic areas, comparing the impact of malathion spraying, DDT spraying, and environmental control (i.e., removing weeds and grass from potential mosquito breeding site). Impact will be assessed by noting the mosquito count and observing the difference in malaria incidence in the respective areas. The Center was unable to produce a scientific protocol for this research endeavour and, as yet, there were insufficient data generated to permit evaluation. There was a functioning insectarium at the Center with several colonies of mosquitos being maintained in various stages of development from larvae through adults.

It would seem that the scientific direction of the MRTC could profit by considerable strengthening. There are multitudes of epidemiologic and field questions that can be addressed without the presence of a fully functioning laboratory, but this

can only be undertaken by an adequately trained malariologist who understands rigorous research methodology and can undertake the scientific leadership required to insure valid experiments, field work, data collection, statistical analysis, etc., etc.

It is urged that the research laboratory be completed at the earliest possible time to provide the kind of facility required to support field research and training. This capacity becomes particularly urgent in view of the fact that there is a desire to cut back on spraying operations as the primary means of control. This cannot be rationally undertaken without the kind of scientific data base and sophisticated malariology represented by a strengthened malaria research center. A candidate for scientific director should be identified and sent abroad to obtain advanced training in malariology, research methodology and epidemiologic field research. He (or she) should be assured of stability of assignment, e.g., ten years, so that a soundly based long term program can be launched. In addition three others of similar capacity should be trained to the doctoral level to insure an adequate scientific staff and continuity. With the adoption of a sound scientific program, it will be much easier to attract operational and research support from such bodies as Special Program for Tropical Disease Research of WHO and from private industry, i.e., pharmaceutical manufacturers.

As pointed out by the Joint HMG/WHO/USAID/ODAUK Team, the overall program performance (both effectiveness and efficiency) would be improved if vacancies among supervisory posts were

expeditiously filled. Leadership and supervision are essential to ongoing program effectiveness or outputs will not be reached.

It is essential that NMEO maintain technical responsibility for supervising the malaria control activities of all MOH programs. Because responsibility for malaria control may be shifted to an integrated approach does not alleviate the need for continuous ongoing technical expertise and backstopping. There appears to be an attitude, as expressed by some NMEO personnel that they no longer have a responsibility in this regard, yet they are the only national high level technical resource available. It should be made explicit in their mandate that they maintain responsibility for technical supervision and backstopping of malaria control operations, whether by "integrated" or "vertical" operations. If this is not done, then surely malaria will eventually slip out of control and again become a major problem.

There are important vector borne diseases other than malaria in Nepal, notably virus encephalitis, e.g., Japanese B. Encephalitis. While this disease is transmitted by the Culex rather than the Anopheles mosquito, mosquito abatement is a principal means of control and the skills are much the same as for malaria control. This is a reasonable responsibility for the NMEO to assume. Indeed, the Evaluation Team suggests that serious consideration be given to enlarging the scope of work and role of NMEO to assume responsibility for general vector control including mosquitos, flies, lice, etc. as well as environmental

sanitation. In many ways the skills are generic, i.e., insecticide application, breeding site abatement, environmental sanitation, environmental drainage, and health education concerning vector and filth borne diseases. Besides malaria the other major environmental diseases are enteric and diarrheal, diseases which account for enormous morbidity and mortality, especially among children. This would represent major MCH impact if these could be abated. Environmental sanitation, drainage, waste disposal, and excreta disposal are the major ways of controlling vector, water, and oral-fecal transmitted diseases. This is a very natural extension of present NMEO activity and the Evaluation Team urges this extended approach. Activity by personnel of an expanded NMEO (Vector Control and Sanitation Technician) would not be totally dependent upon insecticide availability and spraying operations to maintain productivity, since there are many tasks to be performed besides insecticide spraying. This expanded role should enhance both effectiveness and efficiency in relation to a measurable objective of decreased infant morbidity and mortality from diarrheal disease and arthropod borne disease. In this regard, the Evaluation Team is in disagreement with the Joint Team's recommendation concerning NMEO phasing into ICHSDP. In an expanded role of Vector Control and Sanitation Technicians it is recommended that the program remain essentially a resource for all MOH programs because of the strong need for technical expertise and backstopping. The program

is concerned with the environment, Panchyat government, Ward Health Committees and backstopping community health workers conerned with environmental projects such as privy building.

APPENDIX A

Integrated Rural Health and Family Planning Services (IRH/FPS) Evaluation

Scope of Work

Within the overall objective of measuring the effect of the project on improving the delivery of health and family planning services in Nepal, the purpose of this mid-project evaluation is three fold: first, as specified in the project paper (page 31), the evaluation will measure progress against planned targets and identify operational constraints. Second, the evaluation will reassess the feasibility of and provide substantive analysis and guidance for revision of the project's planned targets, outputs and implementation schedule, e.g., in view of changes in GON policy which have occurred since the project paper was originally drafted. Third, the evaluation will review the project in the larger context of Nepal's current health and family planning policies, goals and requirements, examining AID's role vis-a-vis other donors and assessing alternatives for other donor assistance to the health and family planning sector. Each of these separate purposes is discussed below.

The evaluation will review appropriate background information, identify the present relevant programs carried out by the Ministry of Health (MOH), assess these programs in terms of MOH, USAID, and other donor capabilities and strategies, and

formulate recommendations addressing general assistance needs and, if possible, suggest specific activities for USAID and other donor support. The results of the evaluation will be used to guide both AID/Nepal and the MOH in making necessary changes in project design, and in reformulating strategies to enhance the attainment of general project goals. The evaluation will also serve as a program-planning reference document in health and family planning for other international donors.

A. Progress to Date: The first purpose of the evaluation will be to measure the extent of progress against planned targets, to reassess the feasibility of these targets and to identify implementation constraints encountered to date. These tasks should be conducted in the context of the four key areas of project support which are detailed on pages 4 and 5 of the project paper. They are:

- (1) Management and planning - including the provision of technical assistance, support for the health planning division, participant training and special field studies:
- (2) Rural Health Services - including the strengthening and expansion of the Integrated Community Health Services Development Project (ICHSDP), the renovation and construction of rural health facilities, support for procurement of drugs and support for strengthening logistics management, the construction of regional warehouses, the improvement of cold-chain capability for immunization and local-cost support;

3. Family Planning Services - including support for the Panchayat Based Health Worker (PBHW) and Voluntary Surgical Contraception (VSC) programs, the ICHSDP, the expansion of family planning services and continued commodity support; and
4. Malaria Control - including provision of commodities and technical assistance.

Each of these areas of support, and their initially planned inputs and outputs, should be reviewed by the evaluation team. Emphasis should also be placed on the following specific areas of project activity:

- (1) Adherence to and performance against the conditions and covenants detailed in Article 5 of the project agreement;
- (2) Appropriateness and effectiveness of long and short-term technical assistance provided under the project;
- (3) Appropriateness and effectiveness of the support provided to the health planning division;
- (4) Utility of the participant and in-country training provided under the project;
- (5) Appropriateness of support provided to the ICHSDP project, in light of the issues discussed in section B below. Of particular interest is progress toward improving financial management;
- (6) Progress in implementing construction activities and the usefulness and appropriateness of these activities;

Best Available Document

- (7) Progress towards improving logistics management, including issues of local reimbursement for drugs and in-country drug production through Royal Drug Ltd.;
- (8) Appropriateness of the local cost support and commodity support provided under the project;
- (9) Progress toward developing community cost sharing and involvement of the private sector under the project;
- (10) Implementation of the GON national population growth and action plan as it relates to the objectives of this project; and,
- (11) Appropriateness of AID centrally-funded projects and operational program grants as they relate to the project (0135).

B. Revision of anticipated project targets, outputs, and implementation schedule - The project paper specifies as a central issue the continued integration of the health services delivery system and the development of unified or coordinated management systems (see for example, Page 2 of the project paper). The project paper acknowledges, however, that this integration process is "controversial" (Page 3), and states further that: "..... the Office of the Secretary of Health, Ministry of Health, will be responsible for the integration process. The decision to have integrated management is firm, but the exact format and mix will depend upon further experience in development and implementation" (Page 4).

At present, integration remains the official policy of the GON. However, as foreseen in the project paper, the "exact format and mix" have changed. The project paper states that the GON's goal is to "combine by 1985 all rural health services into a system of integrated management," and, further, that "this project considers an attainable objective for 1985 to be integration of 48 of Nepal's 75 districts" (Page 4). These are no longer the GON's nor the project's de facto goals. Rather, the Ministry has pursued a much slower course for integration, attempting to strengthen the integration program in existing integrated districts before substantially expanding it. Moreover, the question of whether multi-purpose workers can meet the total demand for services in highly populated areas or whether special-purpose workers will continue to be required indefinitely has not been answered.

Although no final conclusions have yet been reached, the Ministry of Health has addressed these issues in the recently completed management review of integration services. The project paper foresaw such issues, stating, for example, that "legitimate questions arise about how far integration can go and what organizational and operational form the integrated approach should take" (Page 28). Several project documents, including the technical assistance contractor's contract and workplans, have been updated to take account of these changes in implementation strategy. However, the project paper itself has not been similarly updated. Assessment of the issues listed in Section A

above should contribute to the analysis of the integration questions. The evaluation team should provide guidance for revising the projects targets and outputs, including suggestions for revised indicators for the logical framework (Annex F to the project paper). In addition, the evaluation team should work on an assessment of the potential of community participation in the provision and financing of PHC services under the project and means to increase it and an assessment of MOH data collection activities and means to improve them.

The preface to the project implementation schedule of the project paper (Page 28) states, in part, that: "it is imperative that the implementation schedule be examined and revised during each operational year of the project".

Although such revisions have been made as needed and documented in GON annual workplans, contractor and AID/Nepal workplans and progress reports, no formal revision of the project implementation schedule has been made in a single document. The evaluation team should provide written suggestions for updating the project implementation schedule.

C. Review of project vis-a-vis other donors and Nepal's health and family planning requirements - At present several international donors are assisting the GON in the health and family planning field (e.g., UNFPA, UNICEF), The World Bank and other donors have expressed interest in becoming active in the health and/or population sectors. The evaluation should

therefore, review the project in context of Nepal's overall goals and requirements in health and population, taking into consideration other donor support and identifying areas for continued or expanded assistance from these donors in coordination with AID. A critical assessment of Nepal's population strategy and related implementation plans and resource requirements will be an important subject of this review.

APPENDIX B

KEY PERSONNEL CONTACTED

Ministry of Health

Mrs. Chandra Kala Kiran, Acting Secretary, MOH
Dr. D.N. Regmi, Director General, MOH
Dr. Tara Bahadur Khatri, Chief, FP/MCH Project
Dr. B.R. Pandie, Chief, Health Planning Division
Dr. K.B. Singh, Chief, EPI, MOH
Dr. M.B. Parajuli, Chief Officer, NMEO, MOH
Dr. Y.M.S. Pradhan, Deputy Director General, MOH

Population Commission

Mr. Shanker Pathak, Vice-Chairman
Dr. Prakash Upreti, Secretary

Social Service National Coordinating Council

Mr. Chandra Bir Gurung, Secretary

Family Planning Association of Nepal

Mr. Shanker Shah, Chief Executive

Contraceptive Retail Sales Project

Mr. Hem Hamel, General Manager

Royal Drugs

Mr. A.B. Shrestha, General Manager

Institute of Medicine (IOM)

Dr. Gopal Acharya, Dean

Prof. Mathura Shrestha, Dept. of Community Medicine

Dr. Thomas Achard, SATA

United Nations Development Program

Mr. Toshiyuki Niwa, Resident Representative

Mr. Andrew S. Geair, Deputy Resident Representative

United Nation Family Planning Association (UNFPA)

Mr. Toshiyuki Niwa, Representative

Mr. Michael Heyne, Dep. Rep. and Senior Advisor on Population

United Nations Children's Fund (UNICEF)

Mr. Malcolm Kennedy, Director

World Health Organization

Dr. P. Micovic, WHO Director

United Missions to Nepal

Dr. Carl Friedrichs, Medical Officer, Prof. of Community
Medicine, IOM

Canadian International Development Agency

Ms. Connie Swinton, RN, MPH, Team Leader
(Dhankuta Community Medicine Auxilliary Training Center)

International Family Planning and Parasite Control Project
(Japan)

Dr. D.P. Upadhaya, Project Director

United States Agency for International Development Agency/Nepal

Dr. Gerold V. Vander Vlugt, Health and Population Officer

Ms. Barbara Spaid, Assistant Health and Population Officer

Mr. Joseph Anderson, Public Health Advisor

Mr. John Pinney, General Engineer Officer

U.S. Peace Corps

Mr. Lane Smith, Director

Mr. Kelly Miller, Program Officer, Health Projects

JSI-Boston

Dr. Nils M.P. Daulaire, Chief of Party

Dr. Noel MacIntosh, Family Planning Specialist

Mr. Richard C. Owens, Jr., Logistics/Field Management Advisor

Ms. Nellie Kanno, Training/Health Education Advisor

National Planning Commission

Prof. U.M. Malla, Member..PN 126

APPENDIX C

LIST OF PUBLICATIONS REVIEWED BY THE
IRH/FPS PROJECT EVALUATION TEAM

1. Integrated Rural Health/Family Planning Services Project Paper (0135), April 1980.
2. Project Grant Agreement (0135).
3. Project Implementation Letter (PIL) Book.
4. Mid Term Health Review (2035).
5. IRH/FPS Project (367-0135): A Survey dated December 2, 1983.
6. IRH/FPS First Joint Annual Evaluation dated October 22, 1981.
7. IRH/FPS Mid-term Evaluation: Statement of Work.
8. Cooperative Agreement between AID/N and Nepal CRS Company private Limited.
9. Integrated Rural Health/Family Planning Services Workplans - 2040/2041 and 2041/2042.
10. Panchayat Based health Workers Evaluation, New ERA.
11. JSI Contract.
12. JSI Work Plans.
13. JSI Monthly Reports.
14. JSI Quarterly Reports.
15. JSI Other Reports.
16. Nepal Contraceptive Prevalence Survey Report 1981.
Westinghouse

17. Nepal Contraceptive Prevalence Survey Report 1981 - Dang District Westinghouse.
18. Nepal Contraceptive Prevalence Survey Report 1981 - Gorkha District. Westinghouse.
19. Nepal Contraceptive Prevalence Survey Report 1981 - Piuthan District. Westinghouse.
20. Nepal Contraceptive Prevalence Survey Report 1981 - Rukum District. Westinghouse.
21. Health and Utilization of Health Services/Facilities, IDS, 1984.
22. Report of an Analysis of NMEO's Activities in 1983.
23. An evaluation of AID-Financed Health and Family Planning Projects in Nepal, APHA, 1980.
24. Nepal FP/MCH Data Analysis Final Report.
25. Report of Workshop on Strengthening Community Participation in Health Through the Community Health Leader Program.
26. Profile of the Panchayat Based Health Worker Program Focusing on the Role of Women.
27. A Report on Activities to Strengthen the Financial Management of the FP/MCH and Integrated Community Health Projects of Nepal, APHA, 1981.
28. Summary of Nepal FP/MCH Data Analysis, The Population Council.
29. Work Development Report 1984.
30. Internal and International Migration in Nepal.
31. Kingdom of Nepal Report on Population Strategy, World Bank, Report No. 4291-NEP, 1983.

32. Community Health Leader Training-cum-Working Manual.
33. Britain Nepal Medical Trust Bi-Annual Report.
34. Population and Family Planning in Nepal, Tuladhar, Gubhaju, Stoeckel, 1978.
35. Nepal Nutrition Status Survey 1975.
36. Nepal Development Performance and Prospects, World Bank, 1979.
37. National Population Strategy, National Commission on Population, 1983.
38. A Profile, National Commission on Population, 1982.
39. Primary Health Care in the Hills of Nepal, Achard, 1983.
40. Report of Mid-Term Review HMG/UNFPA Population Programme Nepal, UNFPA, 1983.
41. Follow-up Study on Voluntary Surgical Contraception, FPAN, 1984.
42. Draft Strategy for Maternal and Child Health, Nepal, 1984.
43. Summary of Project 1980-1984, AID, Draft, 1984.
44. Final Report Contract No. 367-0135-C-00-3018-00, Royce Jones, 1984.
45. An Inventory of Apple II Micro-computer Systems and Applications in Nepal, Royce Jones, 1983.
46. Analysis of Sterilization Data: FPAN (1979-1983), McIntosh, 1984.
47. Suggestions for Improving the Delivery of Selected Family Planning Services by ICHSDP, McIntosh, 1984.

48. Preliminary Report: Model for the Development and Systematic Expansion of Priority Family Planning and Mutual and Child Health Services in Nepal, Ad Hoc Task Force, 1984.
49. Current Status of Family Planning Communication and Services, Kingdom of Nepal, McIntosh, 1984.
50. Family Planning Communication Needs Assessment and Country Profile for Nepal, Lediard, 1983.
51. Planning Workshop for the Training, Production, and Use of Printed Materials: Nepal FP/MCH project, IEC Division, Zimmerman, 1983.
52. IEC Workshop: Preparation of IEC Kit for FP and MCH in Nepal, UNFPA/DTCP, 1984.
53. Mid Year Review and Recommended Changes in the PBHW Program, FP/MCH Project Research and Evaluation Division, 1984.
54. Project Agreement between the Government of Nepal and UNFPA, NFP/83/POI, 1983.
55. Technical Report of Mid-Term Evaluation Review of UNFPA Supported Projects in Health and Family Planning in Nepal, 1982.
56. Survey Report: Impact of Integrated Health and Family Planning on Fertility Behaviour in Two Districts of Nepal, Uprety, 1982.
57. Country Development Strategy Statement, FY1986, Nepal, USAID, 1984.
58. Community Participation in Improving Situation (A Case Study of Panchkhal), Integrated Family Planning and Parasite Control Project, 1982.

59. Integrated Family Planning and Parasite Control Project: Its Relevance to Health Problems Family Planning Association of Nepal Integrated Family Planning and Parasite Control Project, 1984.
60. His Majesty's Government of Nepal, Ministry of Health, Nepal Malaria Eradication Organization: Plan of Action F/Y 2041/2042 (1984/85) October 16, 1984.
61. Report of an Analysis of NMEO Activities in 1983 by the Joint HMG/WHO/USAID/ODA(UK). External Situation Analysis Team, Kathmandu, July 1984.
62. Community Health Leader Development Program Annual PCV-CHLD MID-SERVICE Conference July 9-11, 1984, Peace Corps.
63. Memorandum from Richard C. Owens, Jr., Logistics/Field Management Advisor to Nils M.P. Daulaire, Chief of Party, JSI, Re: Rationale for Utilization of IRH/FPS Grant Funds for Purchase of Drugs, November 1, 1984, JSI.
64. Country Development Strategy Statement FY 1986 Nepal, January 1984, USAID.
65. Report on Personnel Procedures and Filing System of Nursing Administration in Nepal - Sept. 1984, Kathmandu.
66. Strengthening of Nursing Manpower Management Meeting/Seminar Report - June 11-14, 1984, Kathmandu.
67. Long Term Health Plan - Janch Boojh Kendra Royal Palace 1976.

APPENDIX D

Site Visit Report

The Evaluation Team divided into two groups to facilitate wider field survey coverage for the evaluation. One team with Dr. Dana Copp undertook the field survey of the mid-western region (Nov. 7 - Nov. 13) which covered Dang District and Pyuthan District, and Western Region, which covered Rupendehi District. The various Health posts, Projects, etc. visited are as follows -

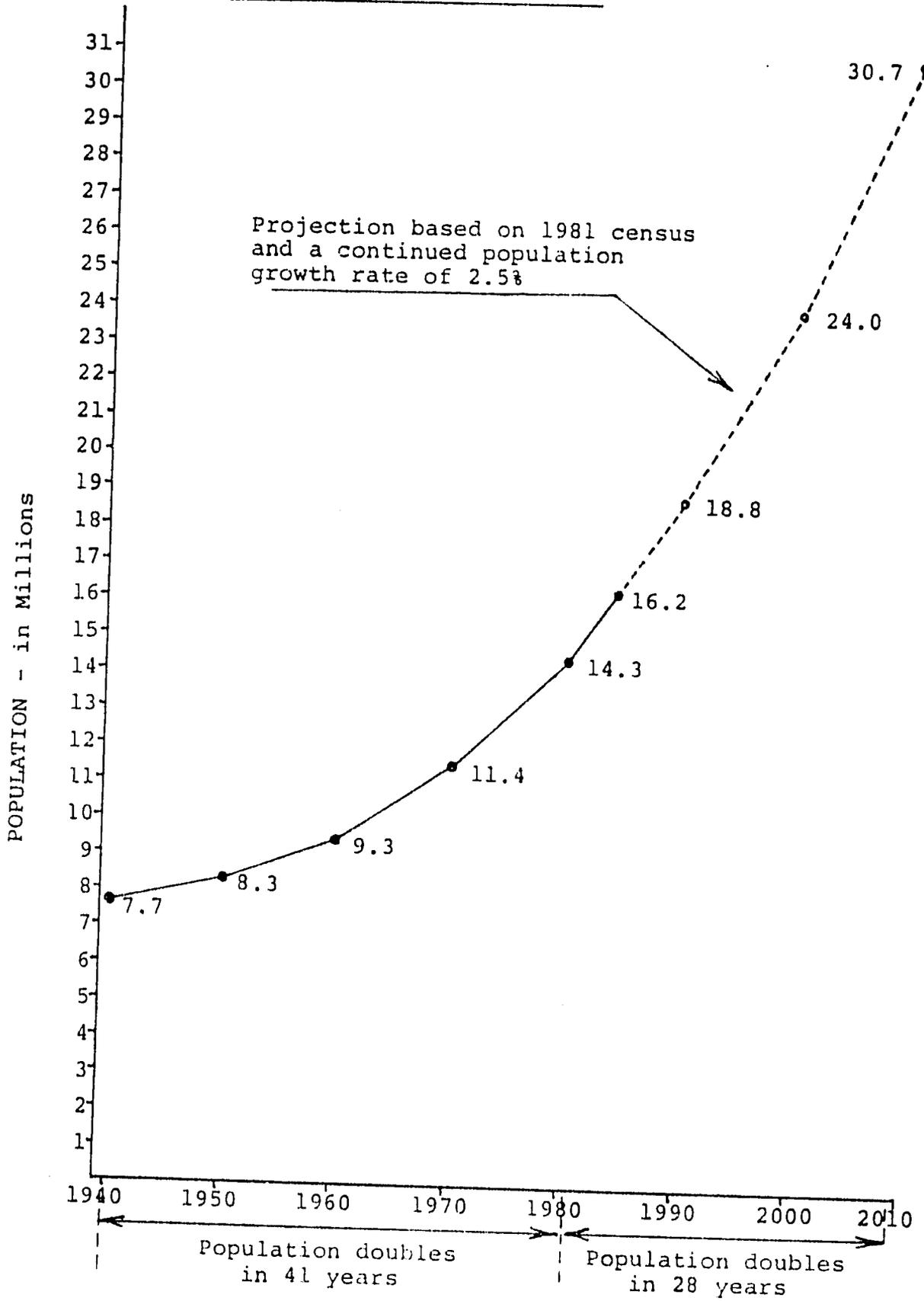
- i. Tulsipur Health Post/FP Project.
- ii. Tulsipur IRD Project, Appropriate Technology Office. Biogas Installation.
- iii. Manpur Health Post/FP Project.
- iv. Gorahi District Hospital.
- v. Gorahi Leprosy Control Project.
- vi. Gorahi Tuberculosis control Project.
- vii. Laxmipur Health Post.
- viii. Kabrhe Health Post.
- ix. Tiram Health Post.
- x. Devasthan Health Post.
- xi. Butwal District Hospital.
- xii. Dumkoli Health Post.
- xiii. Pitaujha Health Post.

Another team with Dr. James Banta undertook the field survey of Central Region, Narayani Zone. The team covered Makawanpur District and Bara District, and Chitwan District. Sites visited are as follows:

1. Patalaiya Training Centre.
2. HMG Warehouse, Hetauda.
3. USAID financed warehouse, under construction, Hetauda.
4. Malaria Research and Training Centre. Hetauda.
5. Malaria Control Project. Regional Office, Hetauda.
6. District health Office, Makawanpur
7. Makawanpur Health Post.
8. Chandranigahpur Health Post, Bara District.
9. Fetah Health Post, Bara District.
10. Parsaiya Health Post, Bara District.
11. Kalaiya District Health Office, Bara District.
12. Narayani Zonal Hospital, Birjung.
13. District Hospital, Kalaiya
14. District Hospital, Baratpur, Chitwan District.

APPENDIX E

NEPAL'S GROWING POPULATION



Source: Population Commission, Nepal

Comment: The HPU could not oversee such surveys and studies due to lack of manpower. Such surveys and studies have been carried out, however, by a number of other organizations, e.g. the PBHW Survey by New Era, the Health Post team functioning analysis by the IOM, the study on treatment of women in family planning clinics by JSI, the study on women's measuring of oral rehydration solution by FP/MCH and JSI, the effectiveness and efficiency of natural family planning by SATA's Integrated Hills Project, operations research on different ways of teaching oral rehydration to mothers by ICHSDP, effectiveness of different kinds and doses of insecticides by NMEQ, etc. A special study on the incidence of meningococcal meningitis in the Kathmandu epidemic was carried out in 1983 under the auspices of the Department of Health Services' Epidemiology Division, with the technical assistance of the Communicable Disease Centers (Atlanta, Ga.) and JSI, and the effectiveness of the mass immunization of a target population with a bi-valent A-C polysaccharide vaccine was subsequently evaluated.

It is in fact more important for the Health Planning Division to review the results of the several surveys and research projects in order to be able to interpret for the Ministry of Health lessons and practical applications, and less important that the HPD itself supervise or manage such studies. Nonetheless, HPD's objectives for the coming fiscal year include a larger and more active role in such studies.

C. MANAGEMENT SYSTEMS FUNCTIONING EFFECTIVELY

Indicator 1. Adequate supply of essential drugs available in at least 48 districts.

Status: Considerable progress has been made toward ensuring adequate supply of drugs nationally. Until Nepali Fiscal Year 2039/40, the drug budget for health posts had been constant at a low level sufficient only to supply most health posts for three to six months of the year. In FY 2039/40, HMC increased the drug budget to 1.5 times its previous level, in addition to providing monies for "buffer stocks" and emergency medicines. This commitment was expanded further in FY 2040/41, and has been increased again in FY 2041/42. All these additional funds have been provided by HMC, not by foreign donors.

With the assistance of several technical analyses, the MOH in 1983 formalized a smaller list of essential drugs for health posts than had been used for years. The new list contains approximately eighty items, of which half are included in "Class 1". Effective with the annual delivery which was just completed, health posts have been supplied with only "Class 1" items, which will mean larger quantities of a much smaller number of effective drugs will be available in the health posts. Beginning in the just-completed fiscal year (2040/41), health posts in the three

westernmost regions were allowed to choose quantities they desired from the standard list within their approved budget. In the current fiscal year, all health posts will have this option. posts (i.e. in rural areas). Two systems for better indenting, storage and distribution of drugs (and potentially for their eventual purchase by peripheral health facilities) were designed in 1982/83 and began initial phases of implementation in 1984: the Regional Medical Stores System and the District Medical Stores.

Experiments in community purchase of drugs and first-aid items through the Community Health Leader Program began in 1981. Results of this CHL program, along with those of NGO-sponsored health post level user payment schemes, were assessed in an ICHSDP workshop in 1984.

Comment: Although good progress has been made against this long-term goal, it is a complex challenge that will require the working out of local financing, control and purchase mechanisms as well as improved organizational efficiency and flexibility in the indent, procurement and supply functions of the MOH. Achieving "adequate supply" in Nepal, even in the 48 districts with DHO's, will probably take at least five years. The efforts described above are aimed at improvement nationwide, not just in the 48 districts targeted by the Project Paper; this more global strategy is more technically appropriate as well as politically necessary.

Indicator 2. Unified methods of distribution, storage, use, reports and resupply of drugs effectively performed in at least 48 districts.

Status: Progress toward this goal, through the Regional and District Medical Stores, is now aimed not just at the 48 districts with DHO's but at the entire country, as mentioned above. Implementation is just beginning; workshops to develop the rules and procedures for the Regional Medical Stores began in July 1984. Current plans call for inclusion of ICHSDP in the Regional Medical Stores System as quickly as possible, but the exact interface between ICHSDP and the Indent and Procurement Division of DHS remains to be worked out.

Comment: Considering the complexity of the task and the organizational constraints, progress in this area has been satisfactory. Given the communication and logistical difficulties of rural Nepal, general good functioning of a unified supply system, however, is not likely to be achieved in less than five years.

Indicator 3. Systems for local reimbursement for drugs and services being tested.

Status: The Drug Resupply Scheme of ICHSDP's Community Health Leader Program has been testing, since 1981, ward level community willingness to pay for drugs and supplies. In the roughly three thousand wards where this approach has been tried, about 20-35% of communities have collected significant funds for local resupply of first-aid materials and a few basic drugs. Approximately a dozen different ways of collecting funds have been devised locally by different Ward Health Committees in collaboration with their Community Health Leaders. Although provided only aspirin in their initial stock, CHL's are allowed to add other medicines after the first year provided that communities will pay for them and that the local health post will provide training and oversight in their use. Most communities -- and especially those that are in areas remote from the health post, hospital or other health facility -- have chosen to add additional drugs including antibiotic eye ointment, anti-ameobic drugs, piperazine, sulfadimidine, etc.

Non-governmental organizations have been testing systems for local reimbursement of drug costs at the health post level:

- the United Missions to Nepal is testing an insurance scheme using one fixed premium for all enrolled households
- the Swiss Agency for Technical Assistance's Integrated Hill Development Project is testing both a fixed fee per health post prescription and a fee per prescription item as alternative methods for reimbursement and for braking unnecessary polypharmacy
- the British Nepal Medical Trust is testing fixed fee per prescription payments (Bhoipur Drug Scheme) and ways to encourage rural, low cost retailing of essential medicines (the Hill Drug Scheme).

Comment: The results of this active, intelligent testing of ways to recover drug costs at the periphery are being examined with considerable interest by both the MOH and the National Planning Commission.

Indicator 4. Supervisory systems and personnel in place at Central, District and health post levels that coordinate all health services in 48 districts.

Status: Supervisory systems and sanctioned personnel are in place at central, district and health post levels in all integrated districts. The staffing is more complete in the 6 fully integrated than in the 25 partially integrated districts, and thinner yet in the 17 districts that have District

Public Health Offices and Health Inspectors but remain to be integrated. In terms of manned posts, however, there are many vacancies, particularly in the more remote and difficult areas. Transfers and special leave status result in perhaps 20-45% of supervisory posts being unmanned.

Despite the presence of a reasonably designed supervisory system and the presence of a large number of personnel, it is generally recognized that supervision in the integrated district is inadequate. In an effort to improve ICHSDP supervision, new check-lists and schedules were developed in 1983/84. To assure better supervision of CHL's, who are visited by their VHW's only 20-50% of the time, a new system of centripetal supervision has been introduced in 1984/85. CHL's will come in small groups to health posts at regular intervals for supportive discussions with each other, with VHW's and with the other health post staff.

In the vertical programs, as well, supervision has been a problem: during the IRH/FPS Project period technical supervision has deteriorated in NMEO secondary to a sizeable percentage of unfilled technical supervisory positions. This is due to the relative undesirability of these positions which lack opportunity for advancement.

Comment: Even when posts are manned, supervisors unfortunately often do not travel to find and work with their supervisees, sometimes due to delayed or unobtainable travel and daily allowances, sometimes because they themselves are not supervised, sometimes because they have become discouraged at their inability either to discipline or to obtain support at higher levels for the problems they encounter during supervisory visits. NMEO has proposed, as a solution to deteriorating supervision, that it be converted from a special development project to a regular Ministry of Health Division, thus converting malaria workers to regularized public service commission civil servants. ICHSDP work suffers most from the poor functioning of its reasonably well structured supervisory chain (HI & Assistants > NPIC > AHW > VHW > CHL; PHN > ANM > VHW > CHL & TBA). This is because integrated services require teamwork and because a multiplicity of tasks must be performed by multipurpose workers, a difficult situation even in developed countries.

Indicator 5. Development of unified management information system

Status: Although the several services and projects in the MOH all have their own particular needs for managerial information, considerable collaboration and unified efforts have developed during the project period in the areas of logistics, training, financial management, monitoring indicators, and reporting formats. The computerized monitoring by HPD of progress of projects and services, and by the DHS's Nursing Division of personnel inventories (both developed in 1983/84) have served to standardize reporting and increase the central

availability of information managerially important to a number of services.

Comment: During the period of the IRH/FPS Project, the organizational structure and operation of ICHSDP, the nature of decision-making within it and the MOH, and the prickly nature of the relations between ICHSDP and the vertical projects have conspired against full development, proper functioning, and effective use of an Integrated Services Management Information System. Considerable progress has been made, however, in increasing coordination, collaboration, information sharing, and consensus on common formats for reporting among functional units within the several projects. It should be noted that development of a single, Ministry-wide information system is not a reasonable objective: the needs for information of the diverse units of the MOH require diverse responses. It is reasonable, however, to attempt collection of consistent information across the various units.

Indicator 6. Institutionalization of special field operations studies as a management tool.

Status: A number of special field operations studies have been conducted (See Indicators B2 and B5 above), but it is not clear exactly what their "institutionalization as a management tool" should mean. Both ICHSDP and FP/MCH have conducted field studies on the kinds of oral rehydration solutions mothers would prepare when given different kinds of instructions. FP/MCH has conducted family planning clinic observational studies on the kinds of treatment received by clients of different castes or apparent economic status. FP/MCH has also studied the effect of decentralizing planning authority to district or panchayat committees (Decentralization Pilot Project). ICHSDP is evaluating the results at community level of establishing a policy and training personnel for a ward drug resupply scheme. NMEO is testing the effects on vectors of using different areal concentrations of sprayed insecticide, of using different insecticides, and of combining various forms of larval control with spraying. All of these studies produce information that is useful in management of the several programs and projects.

Comment: The Project Paper is not clear on what kind of "institutionalization" of such useful "special field operations studies" might be possible or meaningful as a "management tools" in Nepal. Field trials of new techniques or administrative procedures before they are generalized has certainly been useful. However, it is the very nature of field operations studies that they are devised ad hoc to made headway against a particular, identified problem, or to test in practice a solution that seems feasible. What is needed to make such studies "management tools" is to have their results considered carefully by those with the appropriate decision making power. There is not a sufficient excess of technical expertise in ICHSDP to make it feasible to constitute a special "operations research division". Only in NMEO, where there is a sufficient collection

of appropriate expertise and also a focussed arena of discrete operational problems in need of field investigation, is there cogent reason to create a special organizational unit for conducting "special field operations studies as a management tool". A small field investigations/training unit was established in 1979, and proposals for strengthening the unit to make it adequate were formulated and submitted to AID/Nepal in 1980/81. Needed field operations studies in the other services and projects can be adequately planned, conducted and used on an ad hoc basis.

Best Available Document

II. COMMUNITY PARTICIPATION IN HEALTH SERVICES ESTABLISHED

A. 50% OF DISTRICTS WITH INTEGRATED MANAGEMENT HAVE FUNCTIONING COMMUNITY HEALTH SERVICES, INCLUDING VILLAGE HEALTH COMMITTEES. (Indicator)

Status: In 13 of the 26 integrated districts there are more than 2,600 Ward Health Committees that functioned at least to the point of selecting a Community Health Leader.

Comment: Whereas Health Post Health Committees have rarely functioned effectively, approximately one third of Ward Health Committees have seemed to be activatable by the CHL they chose. At least this many of them have been able to raise some money to purchase resupply of drugs and supplies in the CHL's kit. In more remote areas, many WHC's have shown active interest in what they can do to improve health care through their CHL, and some have been willing to mobilize community effort to protect health, as in building latrines.

B. MOH AND COMMUNITY LEVEL HEALTH PROGRAMS HAVE EFFECTIVE SUPPLY, REPORTING AND SUPPORTIVE SUPERVISION/RETRAINING LINKAGES ESTABLISHED. (Indicator)

Status: In half the integrated districts the MOH linkage to community level programs has been established through almost three thousand Ward Health Committees and their chosen Community Health Leaders. The CHL's are trained and retrained by the local health post staff, and are supervised by the house-visiting Village Health Workers attached to the health post. These VHW's, in turn, are supervised by the health post's Auxiliary Health Workers, and occasionally by the Health Assistants (Health Post In-charge) or the Auxiliary Nurse Midwife present in the fully manned, integrated health posts. The health post staff, in turn, are supervised by visits from the District Public Health Office of the Health Inspector, or his assistant for family planning, health education, etc. During training the CHL's receive guidance manuals and kits containing a start-up supply of first-aid supplies and aspirin from the Regional Training Centers or the ICHSDP Logistics Section sent via the DHO. Resupply is up to the Ward Health Committee and the CHL, both for collecting community funds and for finding commercial sources of supply.

FP/MCH has just begun a field experiment in Morang District, creating CHL's who will be supported by PBHW's. FP/MCH, in collaboration with JSI, has managed a Decentralization Pilot Project since 1982. This attempt to increase the involvement of both District and Panchayat committees in the FP/MCH program has

proven to be difficult, time-consuming, and only marginally productive.

In NMEC in 1983, there were 2,012 community volunteer posts, whose responsibilities include passive case detection, reporting of fevers, and so forth, organized by the NMEC unit officer in charge. These volunteers collected 74% of the slides, and detected 60% of the positive cases in the NMEC program for that year.

Comment: ICHSDP has discussed selling low cost resupply items to CHL's, notably at the MRIHS Workshop in October 1983, but has decided not to do this. The Regional and District Medical stores might eventually become sources for purchase of low-cost essential drugs and supplies needed by CHL's for their Drug Resupply Scheme. Using a standard form, the DHO is supposed to report to the ICHSDP central office on the CHL program every two months. The DHO receives monthly reports for each health post, which currently collects information on CHL/WHC activities through the VHW's, who are supposed to visit and supervise them monthly. Currently, VHW's only see and hence report on about 20-50% of their CHL's. Many CHL's are not currently seen by their VHW's because the latter are "overloaded" and too busy checking off house visits. Sometimes neither the VHW nor his supervisory staff at the health post accord much priority to support of the CHL program. Through the new centripetal system of gathering CHL's periodically in their health posts in small groups it is hoped that a larger proportion of their activities will actually get reported.

Although it is only a transient feature of this initial phase of the CHL program, the presence of 5-10 Peace Corps Volunteers in particular health posts or DHO's has been very important in establishing effective links between the community programs and the central administration of the MOH. They have been able to concentrate on the CHL/WHC program (which is usually a divided responsibility of ICHSDP personnel at both DHO and central levels), to send candid three-monthly reports to ICHSDP, to hold annual reviews of progress and problems in implementation, and to summarize their findings and recommendations in excellently prioritized reports, the last of which was verbally presented to the Secretary of Health. The IRH/FPS Grant support of the training of these PCV's and of a few of their local initiatives for development of the CHL program, along with JSI assistance to their efforts, have been significant project inputs into the morale and quality of the CHL program.

The community workers of the FP/MCH project, the PBHW's, are supposed to work regularly with the panchayat committees that nominated them. However, this approach has not been consistently well implemented. Whereas the CHL is unsalaried and can expect benefits, other than small training stipends, only from the Ward Health Committee, the PBHW is a salaried worker of the FP/MCH project. Also, the CHL/WHC relates to a local community of about 500 persons while the the PBHW/Panchayat Committee must

consider a frequently scattered population of about 4,500. Five PBHW's are supervised by one Intermediate Supervisor, who reports to the Family Planning Officer. These supervisory links were weak prior to reforms in the PBHW salary, and the selection criteria and procedures in 1983; often personal appointees of the Pradhan Panchas, they were little accountable to either panchayat committees or to FP/MCH supervisors. This accountability is now increasing in both directions.

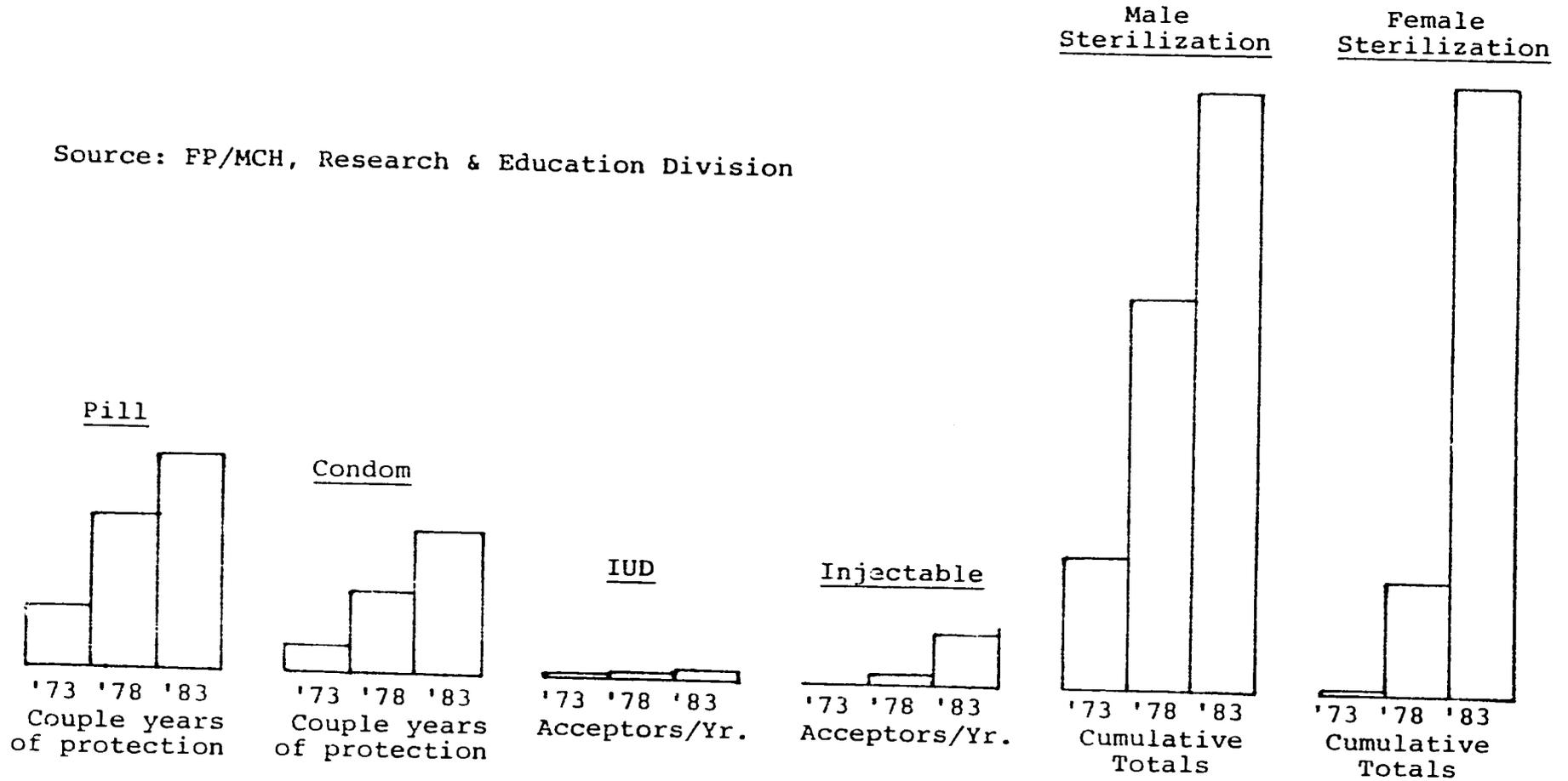
C. ADEQUATE EVALUATION MECHANISM FUNCTIONING AND INVOLVING VILLAGE INPUTS AND VILLAGE HEALTH COMMITTEE. (Indicator)

Status: At the ward level program progress, needs, and new directions are being evaluated adequately through the existing WHC/CHL mechanism. This is seen in the widespread requests for approval of and training in the use of additional drugs that communities will purchase using the diverse ways of collecting money that they have worked out. It is also seen in the latrine construction (e.g. Dolakha district) and other public health programs that particular WHC's have launched. However, the assessments, judgements, and evaluations of WHC's have rarely been forwarded for consideration by decision makers at higher levels in ICHSDP or the MOH. Notable exceptions are 1) the recommendations from the assembled CHL's of Kaski District in their 1983 workshop conducted with technical assistance of Peace Corps Volunteers and the Regional Training Center of ICHSDP, and 2) the opinions of WHC members, pradhan panchas, and CHL's gathered at the 1984 workshop on Local Financing of Health Services at Pokhara.

FAMILY PLANNING ACCEPTORS
BY METHOD

1973-1983

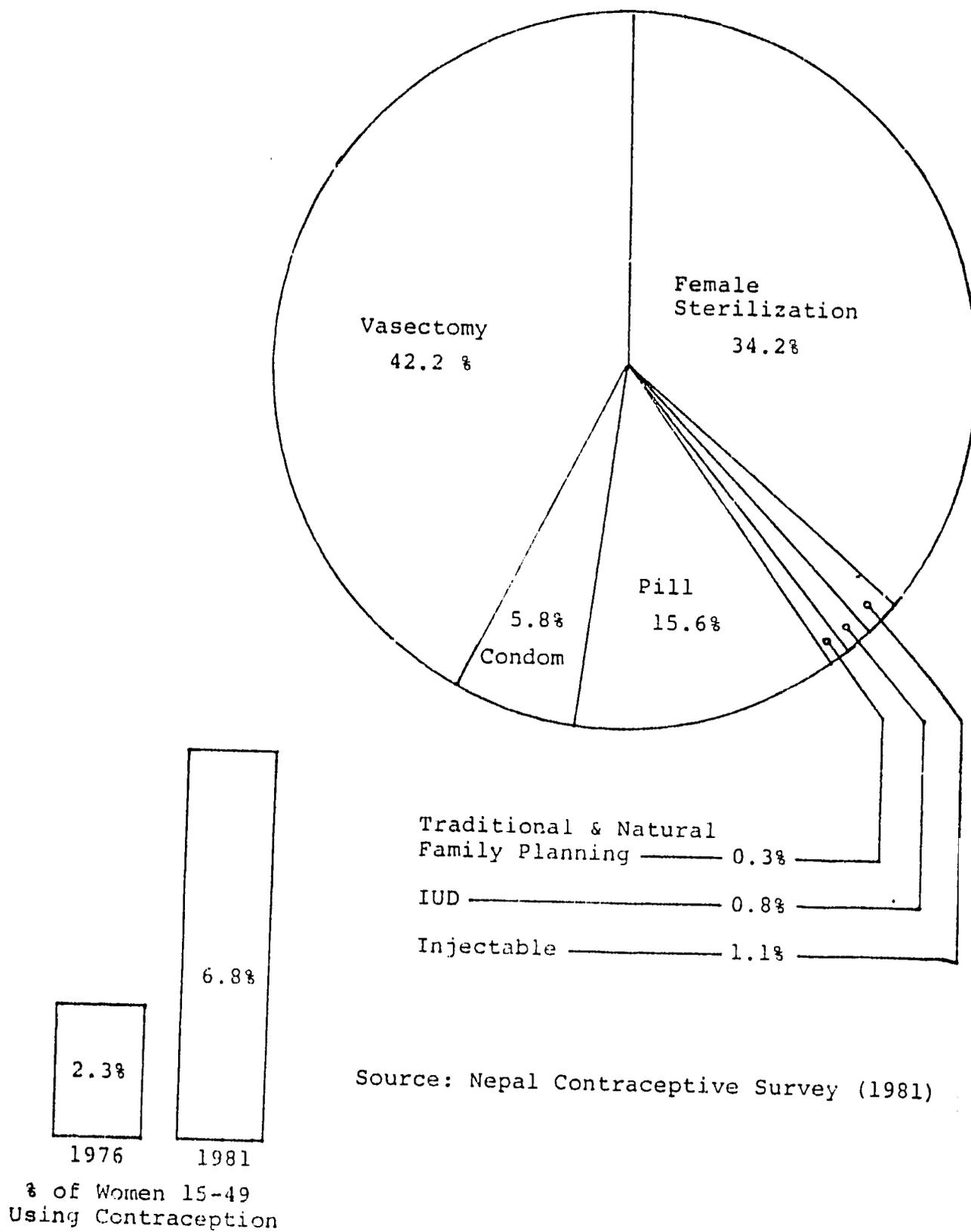
Source: FP/MCH, Research & Education Division



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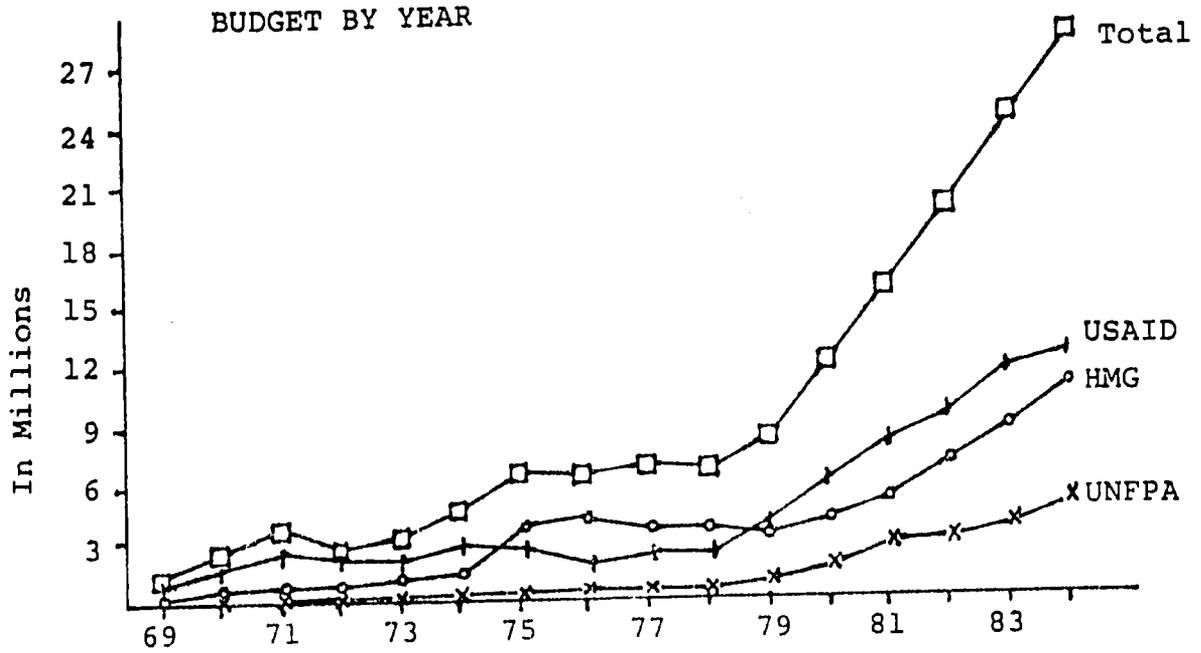
APPENDIX E

1981 CURRENT USE OF CONTRACEPTION BY METHOD

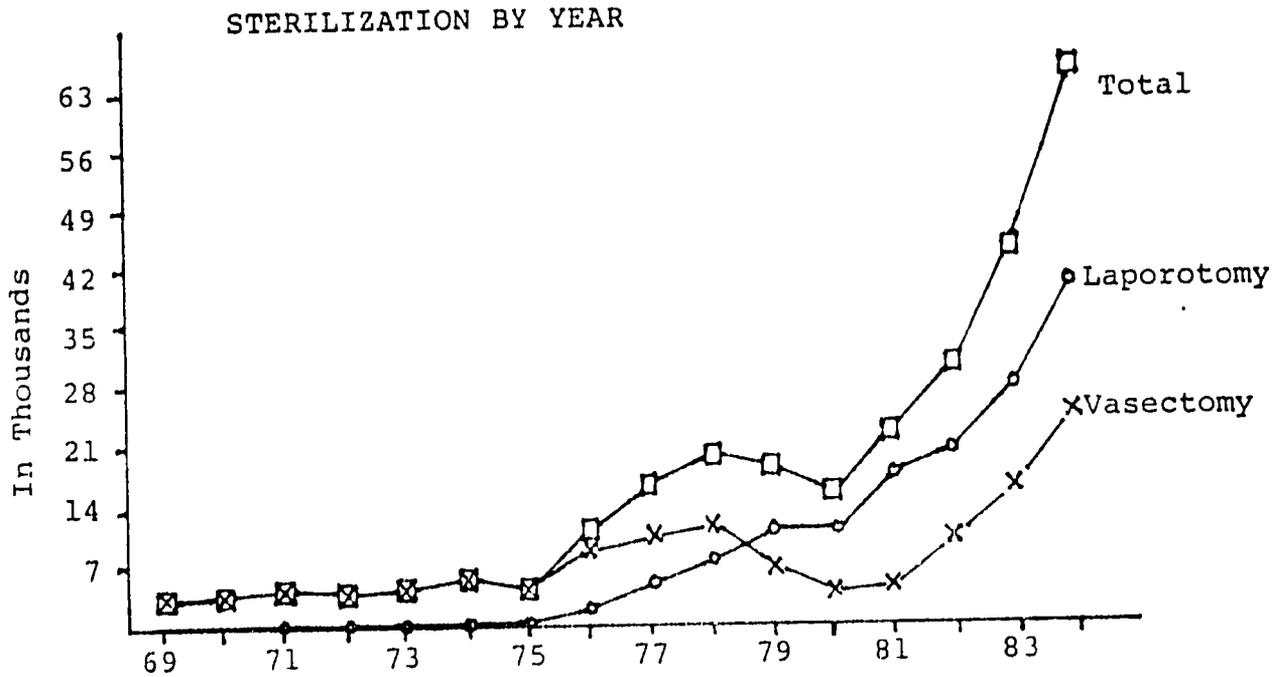


Source: Nepal Contraceptive Survey (1981)

APPENDIX E

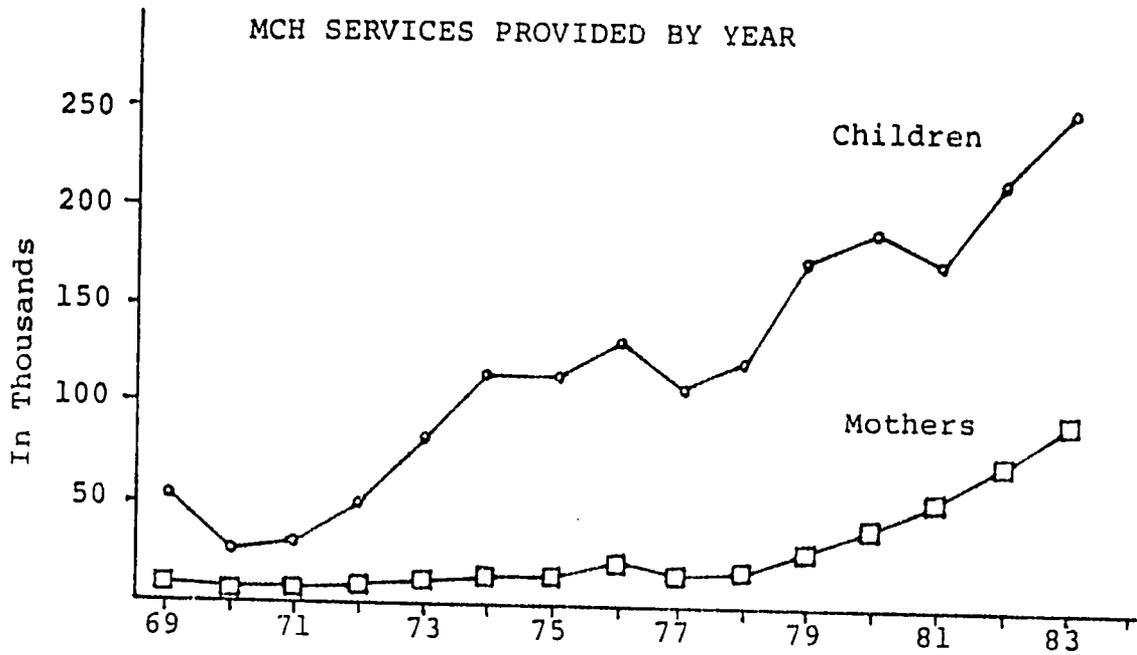


Source: FP/MCH Project, Ministry of Health

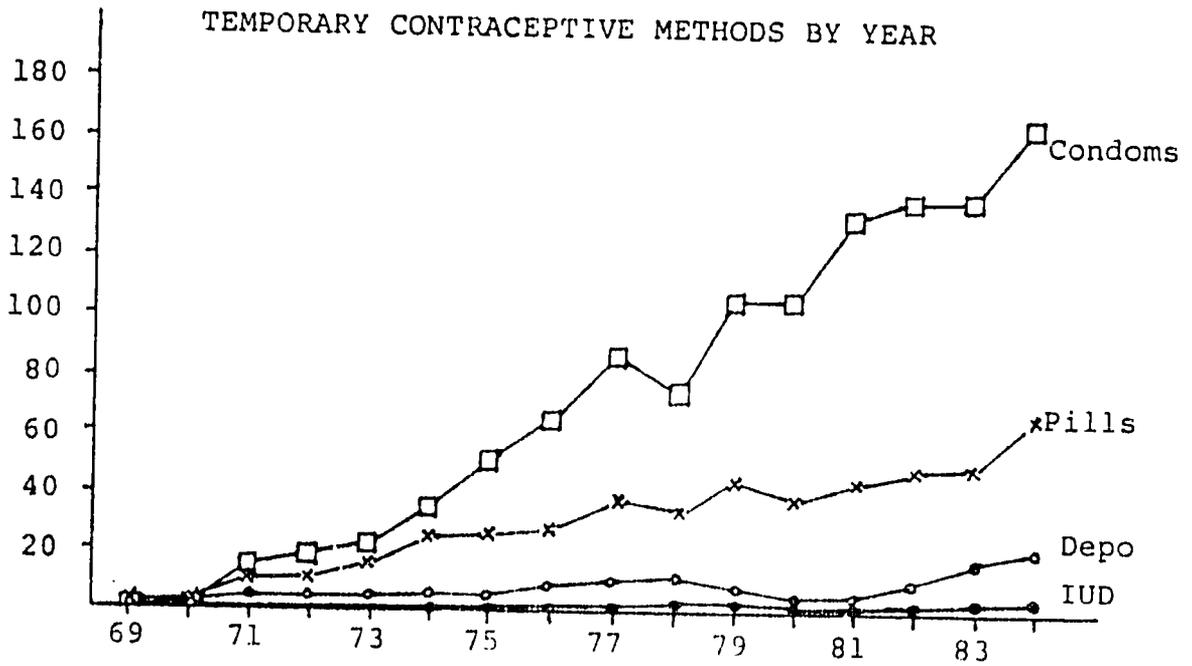


Source: FP/MCH Project, Ministry of Health

APPENDIX E



Source: Evaluation Division, FP/MCH Project, HMG



Source: FP/MCH Project, Ministry of Health

(S000)

	<u>FY 78</u>	<u>FY 79</u>	<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u>	<u>FY 83</u>	<u>FY 84</u>
IRH/FP	-	-	4,800	2,800	6,972	4,900	4,050
Pop. Policy	-	2,000	-	-	-	-	-
Integrated Health Services	685	725	-	-	-	-	-
Malaria Control	93	-	-	-	-	-	-
Population/Family Planning	1,058	1,575	-	-	-	-	-
PVO Co-Financing - WEI (Pop.)	-	-	-	200	299	-	100
PVO Co-Financing - SCF Jumla (Health)	-	-	-	300	43	-	200
Total	1,836	4,300	4,800	3,300	7,314	4,900	4,350

PRM:11/19/84

1/1/2

APPENDIX F

August 22, 1984

STATUS OF
KEY INDICATORS SELECTED FOR THE IRH/FPS PROJECT 367-0135

The indicators listed on the following pages were drawn from the PROJECT OUTPUTS section of the April 1980 Nepal Project Paper Integrated Rural Health/Family Planning Services, No. 367-0135, pp. 5-9.

Each of the indicators is addressed in terms of current status as of July 1984; additional comments, clarifications, and considerations are added as appropriate.

I. INTEGRATED PLANNING AND MANAGEMENT OF EFFECTIVE SERVICES

A. EFFECTIVE FUNCTIONING OF OPERATIONAL PLANNING AND MANAGEMENT FOR DELIVERY OF SERVICES.

Indicator 1. 48 districts under integrated management system

Status: In addition to the 6 fully integrated and 17 partially integrated districts that existed at the outset of Project 0135, 8 more districts were taken into partial integration in 1983. District Public Health Offices have been created and manned by Health Inspectors in all 48 of the districts designated for integration during the sixth five-year Plan.

Comment: It was clear from the time of arrival of the JSI team in September 1981 that the original targets for integration of additional districts were unrealistically rapid. No new districts were integrated for several years because: 1) problems of management in the 23 partially integrated districts could not be resolved by the central ICHSDP organization, 2) Chiefs of the Vertical Projects have been reluctant to have districts taken away from their direct authority, and 3) multiple actions of agencies in several different Ministries (i.e. Ministry of General Administration, Civil Service Commission, Ministry of Finance) were required to convert personnel from the Vertical to the integrated pattern. HMG's current, and more realistic, policy is to integrate at a slower pace, both to allow consolidation in already integrated districts, and to allow the above difficulties to be addressed.

Indicator 2. 200 additional integrated health posts established during project period for a total of about 800

Status: A total of 744 health posts were established by 1981/82, of which 450 were "integrated". This is 149 more than the 595 health posts established by HMG as of fiscal year 1980, according to the Project Paper. During 1982-84 a list of 99 additional health posts was approved, and 50 more have been proposed for 1984/85. Approval of personnel for health posts on both of these lists is still in process.

Comment: The need to improve management of already existing health posts has led the National Planning Commission to emphasize consolidation and improvement of such management as being more important than rapid expansion beyond the existing facilities.

Indicator 3. Adequate and timely staff and budget allocations to districts

Status: Sanctioned posts at the district level have been reasonably adequate except for the lack of Public Health Nurses and Malaria Assistants in the newly integrated districts. Twenty-three accountants have been recruited and trained for district service. Common guidance/training manuals for accounting have been developed in conjunction with the FP/MCH Project. In 1983 HMG decentralized the budget offices to the district level, and Health Inspectors have since applied directly to the local district office of the Ministry of Finance for their budget releases. Delayed receipt of approved budget, however, continues to be a problem for the several projects, particularly ICHSDP.

Comment: Getting posts sanctioned in the newly integrated districts has been slow. Capturing for ICHSDP the experienced personnel who had been working in the vertical projects in a district just prior to integration has been difficult. In some instances, because of the confounding multiple layers of authority over personnel, Civil Surgeons have recruited new personnel before the local vertical project workers could be considered for change of status from Temporary to Regular employees. The greatest problem in personnel management, generally recognized but still unresolved, is that of absence of an actual worker from a post that is both sanctioned and filled but nevertheless vacant due to transfer, or special leave. During the Management Review of Integrated Health Services, for example, Group Two found that the following percentages of sanctioned posts in partly integrated districts actually had staff in place: Health Assistant or Senior Auxiliary Health Worker (92%), Auxiliary Health Worker (50%), Auxiliary Nurse Midwife (33%) and Village Health Worker (30%). Handling requests for transfer consumes a large amount of the time of central administrators.

Financial management capacity has improved significantly in FP/MCH, ICHSDP and HPD from 1980 to 1984. Blocked multi-year backlogs of unsatisfactorily accounted expenditures were finally resolved. In 1983-84, however, an extraordinary political event complicated financial management for all the projects. During four months or more of that year, budgets were frozen in the wake of a change of government at a crucial time for fiscal allotments. All budgets were frozen until they could be thoroughly rescutinized and debated by the new government, which accounts for lower expenditure rates and delayed schedules in some projects in the just-ended Nepali fiscal year.

Indicator 4. Planning and management control effectively decentralized to districts due to Health Planning Unit assistance.

Status: A WHO sponsored workshop on health planning for the training of district level personnel was conducted by the Health Planning Unit in Pokhara in December 1981 with JSI assistance. District level planning for the training of personnel was increased with the creation of the four regional ICHSDP training centers in 1982. District planning for and management of sterilization camps was strengthened through the annual meetings, for this purpose, of Health Inspectors with Family Planning Officers that was begun in 1982. Prior to 1983/84, however, the Health Planning Unit had too little manpower and influence to be of significant practical assistance to district level planning and management.

During that Nepali fiscal year, a senior public health administrator was appointed as Chief of an upgraded Health Planning Division with a large increase in budget, sanctioned manpower, and influence on the several services and projects in the Ministry of Health. A strategy for increasing the credibility and usefulness of the HPD was developed, and a National Workshop for improvement of district managers' planning and management skills was planned for August/September 1984. The Decentralization Act of 1983 provides the policy basis of expanded control over planning and management at district level, but the specifics of its application have been debated nationally for a year and guidelines have not yet been issued.

Comment: Downward delegation of power and authority that would be necessary to increase control of planning and management of ICHSDP services at the district level awaits clarification of the implementation guidelines and regulations for the Decentralization Act, as well as clarification of the authority over health personnel between the ICHSDP's Health Inspector and the Department of Health Services' Senior Medical Officer. In the meantime, effective steps are being taken through annual workshops to increase the skills and capacity of Health Inspectors and Family Planning Officers for planning and management at the district level. In the integrated districts the Health Inspectors are responsible for the management of all rural health facilities and services below the hospital level.

Indicator 5. Effective program evaluation capability.

Status: Indicators and formats for evaluation of the progress and effectiveness of each project in the MOH were developed by the National Planning Commission and the MOH in 1981. Using them, reports are prepared by each of the services and projects every four months. These are reviewed by and discussed with the Health Planning Division, and then the National Planning Commission. The annual conjoint workshop of HI's and FPO's has become an effective instrument for evaluating VSC

program capability. With regard to capacity of personnel, several senior public health administrators, who actively participated in the Management Review of Integrated Health Services, and who are now in decision-making positions in MOH agencies, are quite capable of conducting program evaluation, as are a number of other MOH senior administrators and section chiefs. Currently, the operation of integrated health services in Nuwakot district is being thoroughly evaluated by all-Nepali teams fielded by ICHSDP, with technical assistance from WHO and JSI.

Comment: A sizeable number of MOH personnel have the capability of judging whether programs are functioning effectively or not, and what might be done to improve them. However, these trained and experienced personnel are frequently 1) overburdened by many routine administrative tasks, and 2) aware that many options for improving services are not feasible due to multiple constraints in the system. The best example of the capability for program evaluation is the excellent internal assessment of the National Malaria program conducted annually by NMEO.

Indicator 6. Construction completed on 12 new rural health facilities, 3 regional warehouses, and the rehabilitation of at least 20 existing health posts.

Status: At the formal request of AID/Nepal, JSI has no involvement in construction activities.

Comment --

B. HEALTH PLANNING UNIT FUNCTIONING EFFECTIVELY.

Indicator 1. Effective monitoring of programs and progress of overall integration.

Status: The Chiefs of ICHSDP and the other projects and services meet every four months with the HPD to review progress against indicators. During the 0135 Grant period, to date, 8 additional administrative districts were transferred to ICHSDP (in July 1983). A review of the problems and progress in integration was conducted in the fall of 1983, the Management Review of Integrated Health Services. A National Workshop of Health Personnel to review the progress of integration was held, under WHO sponsorship, in 1982, another, to focus on management analysis at district level, is to be held in August 1984 under AID/Nepal sponsorship. The Health Planning Division in 1983 set up a system of indicators to monitor the major programs in the MOH. It is currently updating progress against targets every four months with aid of a computer program designed, with JSI assistance, for its now functional microcomputer. At the end of

NFY 1983/84, the HPD conducted an unprecedented five-day review of the proposed programs and budgets of all services and projects in the form of a plenary of Chiefs, their deputies and key staff.

Comment: Progress in terms of additional districts being integrated has been slow due to the reasons mentioned above. In terms of programs, monitoring is good for several, and minimal for others, and the role of the Health Planning Division in this monitoring varies from program to program. Monitoring is excellent for malaria control because of the well devised and implemented annual internal assessment of malaria performed by NMEC with the collaboration of ICHSDP. It is good and improving for family planning because of the annual workshop of FPO's-HI's-EPAN officers that looks closely at performance of sterilizations in all districts, and is beginning to monitor temporary methods of contraception and, from 1984, aspects of maternal and child care. This year, the Health Planning Division will have an increased role in this process. Prior to 1984, coordination of the immunization program was not formalized between the Expanded Immunization Program and ICHSDP, but takes place sporadically and informally between the officers of both agencies, with some input from the HPD. Tuberculosis and Leprosy control programs in the past have not been well coordinated with ICHSDP, due to insufficient manpower in ICHSDP.

The role of the Health Planning Unit in monitoring progress either of programs or overall integration was minimal before 1983. With the increased staff, budget, computerized program-tracking capacity, mandate and credibility of the Health Planning Division, however, it should be able to accomplish effective monitoring of programs and progress of overall integration during 1984/1985.

Indicator 2. Planning/management surveys, including Mid-term (Mid Plan) Review, designed and implemented.

Status: The Management Review of Integrated Health Services was conducted in 1983 with collaboration of the HPD. In the same year, the Health Planning Division initiated, and is now completing, a management survey of sanitation and infection control in hospitals. In 1982 the Health Planning Unit designed a form to assess progress and management problems in the seventeen projects and units of the MOH that reported to the National Planning Commission through the HPU. The mid-term health review of the 1980-85 Five-Year Health Plan was conducted in 1983/84 by the MOH, and did not involve a major national survey as did the 1979 Mid-Term Review.

Comment: Planning/management surveys of the HPU in the past have been designed and managed mostly by foreign advisors due to HPU's limited staff, capacity, and resources. This has hindered their use for improvement of policy and admin-

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istrative decisions. Current development of manpower and technical capacity of the HPD, and its increasing collaboration with other units and projects in the MOH, encourages hope that it may in the next several years have Nepali staff able to design and implement such studies. The just-completed Five-Year Plan Review, which did not utilize outside assistance, is a first major step in this direction.

Indicator 3. Health Sector Input to the 7th (Five-Year) plan prepared.

Status: The HPD has provided input to the National Planning Commission in development of the health sector policy guidelines for development of the 7th Plan, and will provide continuing assistance in development of the plan itself. This process will extend through much of the coming year. The HPD is also revising the Long Term (15 year) Health Plan, with assistance of WHO and JSI.

Comment: The capacity to provide such assistance did not exist prior to the just-completed Nepali fiscal year. The past six months have seen the HPD assume its proper role in the annual, five-year, and long-term planning processes.

Indicator 4. Decentralized planning and administration operative in all integrated districts.

Status: The role of district Health Inspectors, Family Planning Officers, and officers of the other vertical projects in decentralized planning is still being defined. All districts have sanctioned posts for such officers, hence the administrative structure necessary for such decentralization has been created. A sizeable amount of routine administration is handled directly by these district officers. Regional health offices are scheduled for a slow phase in from 1984/85.

Comment: How to implement the Decentralization Act has been under debate nationally for a year, and procedures are still not formalized. The respective roles of these officers together with the Civil Surgeons and Senior Medical Officers of the DHS is under active discussion but remains to be clarified. Although the HPD is an active participant in these discussions, only higher authorities can finalize the respective roles of the several units.

Indicator 5. Disease-specific surveys and field operational studies performed under HPU supervision and management.

Status: No such surveys or studies have been performed under HPU supervision and management from 1980-84

III. TRAINING AND HEALTH EDUCATION NEEDS MET

A. 80% OF MOH NON-ACADEMIC PARAMEDICAL MANPOWER TRAINING REQUIREMENTS MET (APPROXIMATELY 1,600 NEW HEALTH AND FAMILY PLANNING WORKERS TRAINED (Indicator))

Status: Details of training activities for the various units of the Ministry of Health are appended to this report. In summary, since Nepali Fiscal Year 2037/38 (1980/81), the following in-country new and refresher training has been provided for field staff of the various units:

	Initial Training	Refresher Training
FP/MCH	2,061	2,174
ICHSDP	1,233	545
NMEO	144	380
Leprosy Project (Combined)	2,467	
TB Control Project (Combined)	672	
EPI (Combined)	610	
Health Education (Combined)	774	

Comment: The target for new workers trained has been exceeded. Effort is still required, however, in improving the quality and content of training in several areas, and in ensuring consistency between the types of training provided to field workers in different units who have similar field responsibilities.

B. ROUTINE REFRESHER TRAINING PROGRAM FOR ALL FIELD STAFF INSTITUTIONALIZED (Indicator)

Status: As indicated by the attached in-country training statistics, refresher training is a regular part of the training program of all units of the Ministry. This indicator has been met.

Comment: It is still necessary, however, to

increase the flexibility and responsiveness of the refresher training courses of the various units of the MOH, in order to allow such courses to be more responsive to the individualized needs of staff receiving the refresher training. This is particularly difficult in light of the weak communications channels between the field and Kathmandu.

C. TRAINING PROCESS EFFECTIVELY PLANNED, SUPPORTED, AND IMPLEMENTED (Indicator)

Status: Training cells of the various units of the Ministry of Health now routinely prepare annual training plans and schedules. Copies of the current plans for the various training units are attached. While changes in these schedules as the year progresses are inevitable, training cells in general meet their training targets. In terms of support, the training effort suffers from the same budget delays and administrative difficulties as other activities of the Ministry.

Comment: There is still a need for more effective and frequent collaboration among the various training cells. JSI has attempted to foster such collaboration in its technical assistance activities, and AID/Nepal support under the Grant has also furthered this effort. For example, the current training effort for logistics staff will include trainers (and trainees) from various vertical projects, in addition to regular DHS staff.

D. HEALTH POSTS AND VILLAGE HEALTH WORKERS SUPPLIED WITH AT LEAST 50% OF RECOMMENDED BASIC HEALTH EDUCATION MATERIALS (Indicator)

Status: There is not a standardized "recommended" list of basic health education materials for either health posts or village health workers, so this indicator cannot be measured as written. Significant progress in this regard has been seen over the past several years: audio visual equipment, slide projectors, film strips, slides, and more basic training materials such as charts and markers, pads, pencils, and so forth have been distributed and set up at regional training centers. JSI has assisted with significant revisions to various field worker training manuals (PBHW, Hospital Sanitation, Financial Management, Logistics) in coordination with AID/Nepal and other donor agencies. Training materials produced by other donors (e.g. UNICEF Nepali version of "Where There Is No Doctor") have been distributed to training centers and health posts and from there to the field workers themselves.

Comment: Considerable effort in this area is still required. The current collaboration between the various training cells of the MOH, JSI, and other donor technical assistance personnel is effective. Important at this stage is better collaboration with agencies outside of the MOH: for example, coordination of the Institute of Medicine curriculum and training materials with the MOH job descriptions and training

efforts for its field workers. As a "recommended" list of health education materials would change continuously, this indicator needs to be rewritten in a measurable form.

E. 75% OF PARTICIPANTS (U.S. AND THIRD COUNTRY TRAINED) ^{AM}
ASSIGNED (Indicator)

Status: Of fifteen long-term U.S. participants to be trained under the Grant through JSI, all have been placed in U.S. institutions. As of June, 1984, eight had returned from training and resumed their duties in the Ministry; the other seven are expected to return within the year. Of the eighteen short-term U.S. training slots, fifteen had been used as of June, and tentative assignments had been made for the remaining three. It is expected that this activity will be completed by the fall of 1984. Of 80 short-term third-country participants scheduled under the Grant, 58 had completed training by June 1984, and tentative plans had been made for an additional nine trainees; most of these third-country training slots have been used in Asia.

Comment: This activity is ahead of schedule. By the fall of this year, no out-of-country training slots will remain, except for approximately thirteen slots for third-country training.

IV. HEALTH AND FAMILY PLANNING SERVICES DELIVERED EFFECTIVELY

A. FAMILY PLANNING TARGETS

Indicator 1. 500,000 continuing acceptors of temporary contraceptive methods

Status: Temporary contraceptive method service statistics for 1983/84 are not yet available. While the exact meaning of this indicator is not clear, the intent is clearly to demonstrate the success of the program in promoting the use of temporary contraceptive methods by a sizable population. As one measure of such success, the following attempts to calculate the total couple-years of protection afforded during 1983 by all the different temporary methods. This resultant approximate total current protection in 1983 from all forms of temporary contraception promoted during the Project period is based on the reported pills, condoms, and foaming tablets dispensed that year, on the number of women protected that year by Depoprovera, and on the women under protection from IUD's inserted during 1980-83.

	FP/MCH	ICHSDP	FPAN	CRS	TOTAL
Couple-years of protection (CYP) by oral contraceptives	35,600	5,519	3,240	8,112	52,471
CYP by condoms	38,412	7,207	14,650	26,212	86,481
CYP by foaming tablets	-	-	-	1,618	1,618
Women protected by Depoprovera	4,939	-	-	-	4,939
IUD acceptors ('80-83)	4,065	-	324	-	4,389
TOTAL COUPLE YEARS OF PROTECTION	83,016	12,726	18,214	35,942	149,898

In the first three years of the IRH/FP Project, over 700,000 acceptors of temporary methods were reported by the several services. Continuation rates of pills and condoms are known to be very low in Nepal. Implied one-year continuation rates in 1981 were estimated by IBRD to be: 16% for pills, 3% for condoms,

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34% for IUD's, and 39% for Depoprovera. However, a continuation study done by the FP/MCH Evaluation Division in 1973/74 showed the following one-year continuation rates, according to the Deputy Chief of FP/MCH: 36% for pills, 66% for IUD's, and 80-90% for Depoprovera. The table above shows that, during 1983, the maximum total couple-years protection for all temporary methods rose to about 150,000. This is a considerable (300%) rise from the estimation made by IBRD of the number of couples protected by temporary methods in 1981, which was less than 50,000.

Comment: Between 1980 and 1984 there was a considerable rise in the distribution of temporary contraceptive methods. Their impact on fertility is still quite limited due to high discontinuation rates. Many person-hours are required to promote them. It has been estimated that temporary methods account for 50% of program expenditures in Nepal, but that they account for only 30% of births prevented. It is not known what the additional cost would be in this environment to double these continuation rates. Of course, temporary methods require continued promotion for younger couples who wish to space their pregnancies.

The return in births prevented, however, is considerably greater for additional expenditures on voluntary sterilization at the current ages and parities of VSC acceptors. The most promising temporary method in terms of potential for rapid expansion, good acceptance in the rural population and good protection against pregnancy, is Depoprovera. This would require a reinforced medical referral backup, however, if the occasional complications are not to be mishandled. If such backup is established through the Family Planning Service Centers built under the IRH/FPS Grant, then it is likely to be possible to regain credibility and increased acceptance of the IUD.

Indicator 2 230,000 voluntary surgical contraceptive procedures carried out in the plan period.

Status: During 1980-84 there were 164,180 voluntary surgical contraceptions performed in Nepal. Total sterilizations have expanded rapidly in each of the past four years (by 48%, 34%, 47%, and 46%). In 1983/84 a surprisingly high 65,773 were done. If the same number were performed in 1984/85, the plan period total to date would be almost exactly 230,000. However, although the national target for 1984/85 is formally set at 65,000, current discussions are being held regarding the possibility of raising the target to 100,000. If this were achieved, the 1980-85 total would be 264,160.

Comment: Since budget for the high target of '84/85, which was based on further augmentation of the unexpectedly high VSC performance of the past three years, is not currently available, it is likely that the indicator will be met but not exceeded.

B. MALARIA ANNUAL PARASITE INCIDENCE (API) IS 1.0 PER 1,000 OR LESS (Indicator)

Status: The total API in districts controlled by ICHSDP dropped from 1.6 in 1981 to 1.00 in 1983. In the more hyperendemic areas controlled by NMEO the total API was held to slightly over 2, varying from 2.02 in 1981, to 2.44 in 1982, to 2.17 in 1983.

Comment: These results were obtained despite non-delivery to Nepal in 1983 of malathion ordered by NMEO, and a sharp fall-off in anti-malaria control activity, especially spraying, in the 8 additional districts that passed from NMEO to ICHSDP control on 6 July 1983. The latter was due to poor coordination, preparation and management of districts abruptly integrated for malaria. In the face of these set-backs, the surprisingly favorable outcome in terms of total API's is due, in part, to both drought and then prolonged, larvicidal rains, and also to increased emphasis on detection and treatment of cases.

These total API's, however, mask the alarming increase in Plasmodium falciparum malaria, the killer form that develops resistance to the cheaper anti-malarial drugs. From 1981 to 1983, P. falciparum indigenous cases in NMEO areas rose almost seven-fold, while imported cases rose 2.5 times.

Collaboration between ICHSDP and NMEO has increased since 1980. Specific mechanisms for consultation between the services are being worked out, e.g. the recommendation, submitted at the 6 July 1984 Malaria Board meeting, that provides for automatic consultation between the NMEO Regional Office and the district HI when his reported ABER falls below a pre-agreed minimum performance level for that integrated district.

The major problems for malaria control in 1984/85 will be 1) the exhaustion of the last supplies of DDT, the least toxic and least expensive of the effective insecticides, 2) the lack of budgetary support for insecticide beyond 1985, and 3) lack of an adequate unit to mount a strong field research program to test alternative and cheaper approaches to vector control and treatment of resistant cases. Another problem is the relatively low political priority accorded to the control of malaria, perhaps because no dramatic malaria epidemic crisis has occurred in recent years, and because the services have been successful in maintaining reasonably low prevalence levels of malaria. This may put the expensive gains of the malaria control program in jeopardy.

C. ORAL REHYDRATION FOR DIARRHEA--30% OF ALL CASES OF PEDIATRIC DIARRHEA IN DISTRICTS COVERED BY INTEGRATED OR FP/MCH PROJECT SERVICES TREATED WITH REHYDRATION SOLUTION (R. D. SOL). (Indicator)

Status: There are no reliable nation-wide figures for the coverage of childhood diarrheas with oral rehydration therapy. In the ORT KAP survey conducted by ICHSDP in Pokhara in 1981 ORT had been prepared in less than 5% of households. Several experts working in the control of diarrheal diseases guess that the national use of ORT for severe diarrheas in the home is surely less than 15%, and probably less than 5%. Of childhood diarrheas presented for treatment in HMG health facilities, however, probably more than 30% currently receive education and instruction in the use of ORT. In 1983/84 ICHSDP received reports of 269,146 "persons taught" ORT in an area with a 0-5 age population of about 700,000; this might be optimistically construed to indicate that 38% of children had parents who were instructed in ORT. However, there is not any necessary connection between this report on the number of persons "educated", with the number of children treated for diarrhea, or with the number who had "pediatric diarrhea" and were thus in need of education. In the FP/MCH program, FPO's report monthly numbers under "rehydration"; this, too is vaguely defined, and not routinely totalled by the FP/MCH statistical service. In Gorkha district, for example, 3,002 "rehydrations" were reported in 1983/84 in a population with about 40,000 children 0-5 years old. Assuming an average of one dehydrating diarrhea per child per year, this would mean a coverage of roughly 7%.

Comment: Despite active radio promotion of ORT and large numbers of workers in all districts armed with assignments, job descriptions, and training for ORT outreach (i.e. 1,800 PBHW's in 52 districts, 2,800 CHL's in 13 districts, and 4,000+ VHW's, AHW's, ANM's in 26 districts) the impact on population knowledge, attitudes and practices regarding ORT in diarrhea remains minimal. Outreach work for ORT by front-line health workers, although "part of the program", has received short shrift. In 1983/84, in response to the apparent need to revitalize this life-saving program, a number of new initiatives were launched: ICHSDP, supported by WHO, launched a national program for control of diarrheal diseases, starting the training of physicians and other service providers from the top down; FP/MCH, with the assistance of JSI, examined the ORT performance of its PBHW's and developed a strategy for improving it; the Commercial Retail Sales Ltd. organization began the commercial marketing of ORS packets; field studies were done to determine the most effective, safe ways to instruct mothers for "pinch and scoop" home preparation of sugar-salt ORS; and FP/MCH, with UNFPA help, tackled the problem of developing a National Strategy for MCH with appropriate emphasis on ORT. Hence, although ORT use in the population remains very low, promising initiatives for improving it and for improving ORT services within the existing MOH infrastructure were begun in the last 1 1/2 years. Through the IRH/FPS Grant, effective consultation on improvement of the ORT

program was provided by Dr. N. Hirschhorn (JSI) and William Bowers (Hesperian Foundation), with continuing follow-up by JSI/Nepal.

D. RUDIMENTARY PRENATAL CARE

Indicator 1. 40% of pregnant women receiving iron and folic acid treatment in integrated or FP/MCH covered districts.

Status: This information is not reported for ICHSDP districts. "Anemia" is reported from FP/MCH districts, but these statistics are only vaguely defined and have not been routinely totalled. According to the FP/MCH Supply Division, approximately 3,000,000 tablets (ferrous sulphate 200 mg plus folic acid B.P. 80, 0.25 mg) have been distributed from the central supply depot to the 250 family planning clinics during each of the last several years. Assuming the usual prescription of 28 tablets to each pregnant woman, this would represent approximately 100,000 women covered. In the PBHW evaluation of 1981, only 11% of PBHW's actually had iron tablets in their kits, a shortcoming which has probably not improved.

Comment: Since both malnutrition and anemia are widespread in rural Nepal, greater attention should be given to providing this service. These blood building fortifiers are currently provided in the health posts and hospitals, but are not being as widely distributed by front-line health workers (i.e. the PBHW, CHL, VHW, ANM, AHW), as they might be.

Indicator 2. 20% of women age 15-44 receiving regularly scheduled tetanus immunizations in integrated or FP/MCH covered districts.

Status: In '83-84, the approximately one million women of reproductive age (in a population of 5,034,000 in the integrated services districts) received 89,346 first tetanus toxoid and 51,500 second tetanus toxoid immunizations. Thus about 5% of women 15-44 years old received a second tetanus toxoid immunization in one year. The ICHSDP achievement in tetanus toxoid 2 had progressed from 8,885 in 80/81 and 67,324 in 81/82. In Expanded Immunization Program districts the 82/83 tetanus toxoid 2 totalled 238,144 against a targetted 542,000, up from 138,284 in 81/82 and 102,060 in 80/81. Tetanus toxoid has not been supplied in the FP/MCH districts, thus coverage of reproductive age women has been close to 0%.

Comment: Current rates of tetanus immunization of women of reproductive age fall far short of targets, but coverage and volume of service is increasing. In 1984/85 increased collaboration between EIP and ICHSDP has been planned. Also, FP/MCH has reached an accord with EIP to provide tetanus toxoid in about twenty of its districts starting in 1984/85.

E. TUBERCULOSIS AND LEPROSY: 40% OF THE ESTIMATED ACTIVE CASES DETECTED AND UNDER ACTIVE TREATMENT AND FOLLOW-UP IN INTEGRATED DISTRICTS (Indicator)

Status: In 83/84 the number of active cases treated in integrated districts was 7,764 for tuberculosis. Due to the joint effort of Leprosy Project and ICHSDP staff, 3,875 active cases of leprosy were under treatment. Assuming an annual incidence of smear positive of tuberculosis of 9,061 new cases, and a prevalence of 18,324 persons with active TB in ICHSDP areas, 42% of active cases would have been under treatment last year, as reported. Assuming a prevalence of about 35,240 cases of leprosy in the integrated areas, about 11% were under treatment.

Comment: In ICHSDP districts, it appears that greater progress has been achieved for control of tuberculosis than for leprosy. In fact, ICHSDP management of both these service components is hampered by insufficiency of technically competent central staff to oversee them. There is only one senior public health administrator to cover malaria, control of diarrheal and other communicable diseases, immunizations, tuberculosis and leprosy. These prevalent, ubiquitous, disabling and lethal diseases thus cannot receive the organizational attention they merit. Analysis of the role of the control of these diseases in the development of primary health care under ICHSDP is complex, but it is analyzed in the JSI report for HMG, "Tuberculosis and Leprosy Services in Integrated Districts", prepared by Dr. Andrew Cassels in July 1983.

F. KEY PEDIATRIC IMMUNIZATIONS

Indicator 1. In 48 integrated districts, 60% of children receive DPT, measles, and BCG immunizations on scheduled basis.

Status. In ICHSDP districts in 1983/84 the following immunizations were given to children under one year of age:

DPT 1--79,616	BCG--99,804
DPT 2--45,907	MEASLES--9,950 (only in district centers, ages 9-35 months)
DPT 3--26,574	

Assuming a crude birth rate of 42/1000 population and an infant mortality rate of 120 deaths/1000 livebirths, approximately 190,300 children aged 0-1 years received these immunizations. Hence 42% received a first DPT, and 14% completed the DPT series. BCG was received by 52% in the first year of life, while the costly and fragile measles vaccine was made available to less than 5% of infants and young children.

Comment: Problems of refrigerator and cold chain maintenance have hampered ICHSDP, and there has been inadequate central staff to manage the district effort for immunization. When districts have been taken by ICHSDP from EIP there has frequently been a rupture in the resumption of immunizations. Increased collaboration planned between EIP and ICHSDP in '84/85 hopefully will upgrade achievement in pediatric immunization. ICHSDP recently communicated immunization targets for its districts to EIP for the first time. Measles is a feared major killer of children in Nepal, many of whom are made fragile by malnutrition; extension of measles immunization would effectively lower infant mortality. The definition of populations targeted for immunization in Nepal has (sensibly) changed since the project paper was written. from '77-80 it was < 5 years, then in '81-82 it became < 15 months, and since 82/83 has been < 1 year for DPT, and at birth for BCG. For measles it is 9-35 months.

Indicator 2. In FP/MCH covered districts, 30% of children receive DPT, BCG, and measles immunizations.

Status: In 11 of the 52 FP/MCH districts appreciable immunization work has been carried out by FP/MCH. In these 11 districts, with a 1981 population of 3,112,128, the following total immunizations were given in 1983/84: DPT1 -- 18,637, "old DPT" (DPT2 + DPT3) -- 13,854, BCG -- 18,216. Thus, less than 12% of 0-1 year olds received complete DPT immunizations, and about 14% of newborns got BCG last year from FP/MCH in the 21% of its districts where immunizations were provided. In the 41 other districts, FP/MCH coverage was close to 0% for both DPT and BCG.

Comment: In most FP/MCH districts immunizations are given either by EIP or scarcely at all. FP/MCH negotiates with EIP for limited supplies of vaccine, and has provided immunizations through a few of the larger clinics, but not through an outreach effort in the community. FP/MCH has renegotiated with EIP to obtain larger amounts of vaccine for 1984/85, however, and has planned to increase considerably the areas covered and the number of immunizations.

Section I: Summary of Project 1980-84

The Integrated Rural Health/Family Planning Services (IRH/FPS) Project was designed to assist the Government of Nepal (GON) in improving general health and reducing fertility rates throughout Nepal, but especially among the rural poor. The specific purpose of this project is to improve the management of health delivery systems and to expand the delivery of rural health and family planning services throughout Nepal.

The GON's goal, as stated in Nepal's Long Term Health Plan, was to combine by 1985 all rural health services into a system of integrated management, with deployment of multi-purpose village level health workers. This goal was identified because, despite the achievements of each of the five single purpose vertical programs (Nepal Malaria Eradication Organization (NMEO); Tuberculosis Control Project; Leprosy Control Project; Expanded Program in Immunization (EPI); Family Planning/Maternal and Child Health (FP/MCH)), the multiplicity of vertical projects has also had dysfunctional effects. These include duplication of efforts within the same geographic areas and the waste of scarce management resources caused by the simultaneous operation of several administrative structures on frequently similar tasks. Nepal saw an integrated health/family planning system as the most

cost effective way to serve the people's needs. This integrated system was based on the premise that a multi-purpose worker supported by one organizational structure will be more cost effective than a series of uni-purpose workers attacking single problems and supported by separate organizations. Hence, after integration, the functions, staff and resources of the presently relatively autonomous vertical projects would be absorbed by a larger emerging administrative structure in a series of gradual steps. This project considered an obtainable objective for 1985 (project completion) to be the integration of ongoing health and family planning activities under one administrative/management organization in 48 of Nepal's 75 districts.

In cooperation with other international donors, this project aimed to provide technical assistance, participant training, commodities, construction assistance and local cost support to the Ministry of Health in the following four key areas:

1. Management and Planning

- Provision of technical assistance (222-person months of long term and 34-person months of short term assistance);
- Local cost support to strengthen the Health Planning Division (HPD) of the MOH;

- Participant training (15 long term and 18 short term in the United States, plus 80 short term in Asia, plus 20 long term and 75 short term in India);
- Special field operations studies.

2. Rural Health Services

- Strengthened central offices and expansion of the ICHSDP project from 13 partially integrated districts to 48 fully integrated districts;
- Support for HMG renovation and construction of rural health facilities;
- Support for strengthening logistic management within the Ministry of Health;
- Support for construction of three regional warehouses;
- Support to improve the "cold chain" capability for an expanded immunization program;
- Local cost support for training and administration of rural facilities and Village Health Workers.

3. Family Planning Services

- Local cost support to FP/MCH activities, including Panchayat-Based Health Workers (PBHW) and Voluntary Surgical Contraception (VSC) - both hospital and camp based;

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- Expansion of improved family planning services to all 75 districts of Nepal through both the integrated and non-integrated service programs;
- Continued commodity support through centrally-procured temporary contraceptives as well as some medical equipment support.

4. Malaria Control

- Provision of commodities (including insecticides);
- Provision of a technical advisor for Malathion Safety considerations;
- Malaria surveillance and control in both integrated and non-integrated districts.

It was anticipated that the major outputs as summarized in Table I, would indicate improved management and expanded delivery of rural health and family planning services.

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TABLE I - Project Targets and Accomplishments

Desired Outputs	Major Output Indicator	Major Achievements
<p>1. Integrated planning and management of effective services.</p>	<p>a. 48 districts under integrated management system.</p> <p>b. 200 additional integrated health posts established during project period for a total of 800 health posts.</p> <p>c. Adequate and timely staff and budget allocations to districts.</p>	<p>a. There are currently <u>six fully</u> integrated districts, and an additional <u>twenty</u> districts are partially integrated, (i.e. their service delivery systems do not yet include all components of FP/MCH, immunization, malaria control, leprosy and TB detection and treatment activities).</p> <p>b. To date, 744 health posts have been established, of which 450 are integrated; 99 additional health posts have been approved and are in the process of being established.</p> <p>c. Supervisory systems and personnel have been sanctioned and assigned to most central, district and health post levels in all integrated districts, although vacancies and absenteeism due to transfers and special leave status result in perhaps 20-45% of supervisory posts being unmanned. District Public Health Offices have been created and Health Inspectors have been assigned to all 48 districts designated for integration during the sixth five-year plan. Budget allocations to the districts continue to be somewhat less than adequate and timely.</p>

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TABLE I (cont'd...2)

Desired Outputs	Major Output Indicator	Major Achievements
	<p>d. Planning and management control effectively decentralized to districts due to HPD assistance.</p> <p>e. Effective program evaluation capability.</p>	<p>d. Planning and Management Control effectively remains centralized. Through a series of project sponsored workshops, district planning for management of sterilization camps has been strengthened and district officer's planning/management skills have been expanded.</p> <p>e. Capability to monitor and evaluate program progress and achievements exists within the MOH, although it varies among divisions. Indicators and formats for evaluation of the progress and effectiveness of each MOH program were developed in 1981. Each project meets periodically with the Health Planning Division (HPD) to review progress against indicators and reports are prepared by each project every four months. The internal assessment of the National Malaria program which is conducted annually is a good example of the capability which exists within the MOH for program evaluation.</p>

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TABLE I (cont'd...3)

Desired Outputs	Major Output Indicator	Major Achievements
<p>2. Health Planning Division (HPD) functioning effectively.</p>	<p>f. Construction completed on 12 new rural health facilities, 3 regional warehouses, and the rehabilitation of at least 20 existing health post.</p>	<p>f. Construction of three regional warehouses is underway and scheduled for completion in the spring of 1985. In addition two health centers and 7 health posts are under construction; and an additional health center and three more health posts are planned.</p>
	<p>a. Effective monitoring of programs and progress of overall integration.</p>	<p>a. John Snow Inc. (JSI), technical assistance contractor is currently providing assistance in this area.</p>
	<p>b. Planning/management surveys, including Mid-Term (Mid Plan) Review, designed and implemented.</p>	<p>b. A Management Review of Integrated Health Services was conducted in 1983 with collaboration of HPD, the vertical projects, and DHS. The review recommended consolidation and strengthening of efforts in already integrated districts as well as deliberate and carefully planned expansion. A recently carried</p>

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TABLE I (cont'd...4)

Desired Outputs	Major Output Indicator	Major Achievements
	<p>c. Health Sector Input to the 7th (five-year) plan prepared.</p> <p>d. Disease-specific surveys and field operational studies performed under HPD supervision and management.</p>	<p>out management survey of Sanitation and Infection Control in Hospitals in Nepal provided recommendations and proposals for improving environmental management systems at various levels of health facilities in Nepal.</p> <p>c. HPD has provided input for health sector policy guidelines for the Seventh Five-Year Plan. In the past six months, the HPD has assumed a strengthened role in both the annual and the long-term planning process.</p> <p>d. To date, no disease-specific surveys nor field operational studies have been performed under HPD supervision and management.</p>
<p>3. Management systems functioning effectively.</p>	<p>a. Adequate supply of essential drugs available in at least 48 districts.</p>	<p>a. The MOH has made some progress toward ensuring adequate supplies of drugs nation-wide, both through increases in the drug budget and the provision of "buffer stocks". It is still the case, however, that drug supplies are not adequate and only a three to four month supply is available each year. The MOH has also formalized a streamlined list of</p>

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TABLE I (cont'd...5)

Desired Outputs	Major Output Indicator	Major Achievements
	<p>b. Unified methods of distribution, storage, use, reports and resupply of drugs effectively performed in at least 48 districts.</p> <p>c. Systems for local reimbursement for drugs and services being tested.</p>	<p>essential drugs for health posts which will mean that larger quantities of a smaller number of effective drugs will be available at health posts.</p> <p>b. Unified methods of distribution, storage, use, reporting and re-supply of drugs are under development for the entire country. Procedures for operating five regional medical stores have been developed and staff for these stores are currently being trained.</p> <p>c. Experiments in community purchase of drugs and first-aid items through the Community Health Leader (CHL) Program began in 1981. Results of this CHL program, along with those of NGO-sponsored health post level user payment schemes, were assessed in a Community/Local Cost Financing Workshop held in 1984</p>
<p>4. Participation in Health Services established.</p>	<p>a. 50% of districts with integrated management have functioning</p>	<p>a. The concept of community participation in health service delivery has been established through the CHL program within 13 (50%) integrated and partially integrated districts. There are</p>

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TABLE I (cont'd...6)

Desired Outputs	Major Output Indicator	Major Achievements
	<p>community health services, including Village Health Committees.</p> <p>b. MOH and community level health programs have effective supply, reporting and supportive supervision/retraining linkages established.</p> <p>c. Adequate evaluation mechanism functioning and involving village inputs and Village Health Committee.</p>	<p>presently 2,600 Ward (village) Health Committees (WHC) that function primarily to select and support the CHLs.</p> <p>b. Approximately one third of these WHCs have been able to raise some money to resupply the basis drugs and supplies in the CHL's kit. Few WHCs have succeeded in mobilizing community effort to build latrines or otherwise promote the health of the community. CHLs receive only sporadic training and supervision by health post staff.</p> <p>c. To date, WHC-produced assessments and evaluations have not been forwarded for consideration by decision makers at higher levels within ICISDP or the MOH. However, feedback from the WHCs has received attention from decision makers through Peace Corps Volunteers (PCVs) working with the CHL program.</p>

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TABLE I (cont'd...7)

Desired Outputs	Major Output Indicator	Major Achievements
<p>5. Training and Health Education needs met.</p>	<p>a. 80% of Ministry of Health non-academic paramedical manpower training requirements met (approximately 1,600 new health and family planning workers trained).</p> <p>b. Routine refresher training program for all field staff institutionalized.</p> <p>c. Training process effectively planned, supported and implemented.</p>	<p>a. During the project period to date, 2,061 health and family planning workers have received initial training and an additional 2,174 have received refresher training.</p> <p>b. Refresher training has become a regular part of the training program in all divisions of the MOH.</p> <p>c. Training cells of the various divisions within the MOH now routinely prepare annual training plans and schedules.</p>

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TABLE I (cont'd...8)

Desired Outputs	Major Output Indicator	Major Achievements
	<p>d. Health posts and village health workers supplied with at least 50% of recommended basic health education materials.</p> <p>e. 75% of participants (U.S. and Third Country) trained and assigned.</p>	<p>d. Progress has been made in supplying basic training materials and supplies to field workers, however, no standard "recommended" list of these materials exists.</p> <p>e. All fifteen long-term US participants to be trained under the project have been placed in US institutions and eight have returned from training with degrees to resume their duties within the MOH. To date, 74 participants have received short term training in various areas of program management in the US or other third countries, and an additional 76 participants have received long or short term training through the India Training Program.</p>
<p>6. Family Planning Services delivered effectively.</p>	<p>a. 500,000 continuing acceptors of temporary contraceptive method.</p>	<p>a. There has been a considerable rise in the distribution of temporary contraceptive methods during the project period. It is estimated that as of 1983, 149,898 couple years of protection were being provided by oral contraceptives, condoms, foaming tablets, Depo-provera (not AID funded) and IUDs.</p>

TABLE I (cont'd...9)

Desired Outputs	Major Output Indicator	Major Achievements
<p>7. Health services delivered effectively.</p>	<p>b. 230,000 voluntary surgical contraceptive procedures carried out in project period.</p>	<p>b. There were 164,180 voluntary surgical contraceptive (VSC) procedures performed in Nepal during the 1980-84 period. In the past year alone, the national target of 65,000 procedures was exceeded (65,773 total).</p>
	<p>a. Malaria Annual Parasite Incidence (API) of 1.0 per 1,000 or less.</p>	<p>a. In malaria control, the annual parasite incidence (API) in ICHSDP districts dropped from 1.6 (cases per 1,000 population) in 1981 to 1.0 in 1983. In the more hyperendemic areas controlled by NMEO, the total API was 2.17 in 1983. Collaboration between ICHSDP and NMEO has increased considerably since 1980. At present, ICHSDP provides malaria control activities in 15 districts.</p>
	<p>b. 30% of all cases of pediatric diarrhea in districts covered by Integrated or FP/MCH Project services treated with Oral Rehydration Solution (ORS).</p>	<p>b. Despite active radio promotion of ORT and approximately 8,600 outreach workers in all districts who have received training in ORT, the impact on population knowledge, attitudes and practices regarding Oral Rehydration Therapy (ORT) remains minimal. Nation-wide use of ORT for severe diarrheal diseases is estimated at less than 5%.</p>

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TABLE 1 (cont'd...10)

Desired Outputs	Major Output Indicator	Major Achievements
	<p>c. 40% of pregnant women receiving Iron and Folic Acid treatment in Integrated or FP/MCH covered districts, 20% of women age 15-44 receiving regularly scheduled tetanus immunizations in Integrated or FP/MCH covered districts.</p> <p>d. 40% of the estimated active cases of Tuberculosis and Leprosy detected and under active treatment and follow-up in integrated districts.</p>	<p>c. Percentages are not available for provision of iron and folic acid treatment to women of reproductive age. The percentage of women receiving regularly scheduled tetanus immunizations ranges from 5% in ICHSDP districts to close to 0% in FP/MCH covered districts. Both are rudimentary pre-natal care activities and both are provided inconsistently and are poorly reported nation-wide.</p> <p>d. In 1983/84 the number of active tuberculosis cases treated in integrated districts was 7,764. Due to the joint effort of the Leprosy Project and ICHSDP staff, 3,875 active cases of leprosy were under treatment. Assuming an annual incidence of smear positive for tuberculosis of 9,061 new cases, and a prevalence of 18,324 persons with active TB in ICHSDP areas, 42% of active cases would have been under treatment last</p>

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TABLE I (cont'd...11)

Desired Outputs	Major Output Indicator	Major Achievements
	<p>e. In 48 Integrated Districts, 60% of children receive DPT (diphtheria, pertussis and tetanus) measles and BCG immunization on scheduled basis. In FP/MCH covered districts, 30% of children receive above immunizations.</p>	<p>year, as reported. Assuming a prevalence of 35,240 cases of leprosy in the integrated areas, about 11% were under treatment.</p> <p>e. In ICHSDP districts in 1983/84, approximately 14% of children under one received the complete DPT series, 52% received BCG and less than 5% of all infants and young children received measles vaccine. In 11 of the 52 FP/MCH covered districts less than 12% of those children under one received the complete DPT series and about 14% received BCG; coverage in the remaining 41 FP/MCH districts was close to 0%.</p> <p>Assistance has been provided to both ICHSDP and EPI in strengthening and expanding cold chain capability through provision of 72 refrigerators and freezers and maintenance training. In addition, vaccines and technical assistance were provided through CDC for a major MOH meningitis immunization campaign in 1984 which immunized approximately 330,000 persons in the Kathmandu Valley.</p>

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Section II: Project Progress to Date

To date management capability has been strengthened within various divisions of the MOH and expansion of health and family planning services has occurred. This progress, however, has not occurred solely within the context of integrating health service delivery as envisaged at the start of the project. Progress to date has occurred as much through the vertical projects as through the integration effort.

In effect, the organizational change from vertical projects to a system of integrated service delivery has proven to be a difficult and time-consuming process. Vertical Project Chiefs have been reluctant to have districts taken from their direct authority, especially given the threat of reduced effectiveness of their single-purpose efforts under the integrated system. In addition, significant management problems have developed in those districts already integrated which are not easily resolved. The GON has therefore adopted a policy of integrating districts at a slower pace in order to gain more widespread support for integration and to allow adequate time to establish workable procedures for integrating districts and dealing with management issues.

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Major project achievements in strengthening management systems within the MOH and in expanding health and family planning service delivery are summarized in Table I, against project targets.

Project expenditures to date in comparison to original PP estimates can be found in Table II, as well as projected expenditures through the end of the project.

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TAB II Projected and Actual And Project Expenditures (\$ 000)

	Projected in PP		Actual Expenditures through 9/30/84		Project Expenditures 10/1/84 - 3/31/88
		% of Total		% of Total	
Technical Assistance		<u>2,787</u>	8.2	<u>2,442</u>	17.2
Long term advisors	2,405				
Short term advisors	382				
Training		<u>1,003.5</u>	2.9	<u>666</u>	4.7
Participant In-country	1,003.5				
Commodities		<u>7,770</u>	22.7	<u>4,047</u>	28.5
Medical Supplies	1,686				
Malaria Insecticides	4,600				
VSC Equipment	192.8				
Other equipment/supplies	1,291.2				
Contraceptives		<u>4,200</u>	12.3	<u>1,768</u>	12.5
Construction Activities		<u>1,939</u>	5.7	<u>423</u>	3.0
Support to Rural Health Oper.		<u>6,819</u>	19.9	<u>4,472</u>	31.5
Budget Support	-				
Other	-				
Other Costs		<u>9,681.5</u>	28.3	<u>364</u>	2.6
Miscellaneous	300				
Inflation	6,803.7				
Contingency	2,577.8				
TOTAL		34,200	100.0	14,182	100.0

Section III: Issues to be Addressed in Evaluation

The issues discussed below should be resolved before extending the current project or considering a follow-on effort.

A. The Process of Integration and the Structure of the MOH

The Ministry of Health suffers from a confused organization structure. Traditional curative services are provided through fixed facilities by the DHS, while public health services involving community outreach are largely the province of the vertical projects (FP/MCH, EPI, NMEQ, and ICHSDP). Although all these entities are under the authority of the Secretary of Health, all enjoy a substantial degree of autonomy as well.

The MOH has been trying to integrate the services provided by the DHS and the vertical projects since the early 1970s when an experiment in two districts indicated that by combining duplicative management structures under a unified District Public Health Office and increasing the number of field workers, more and cheaper (on a cost-per-service basis) services could be provided. Progress in implementing the integration effort has, however, been extremely slow, at least in terms of the expectations set forth in the Project Paper. At present, only six of Nepal's 75 Districts have fully integrated health services, while an additional 20 districts are partially integrated.

The reasons for this lack of progress are two-fold. First, initial expectations were optimistic. Managing the integration process and the integrated services themselves has been more difficult than the MOH expected. It has been difficult to convert the contract employees of the vertical projects to civil service status under the DHS and to keep persons physically present at their posts in rural areas. Supervision and support has been poor, and multi-purpose workers have not always been able to provide all the services offered by the vertical projects. The MOH has thus been hesitant to dismantle the vertical projects.

Second, the MOH has pursued integration by creating, in 1975, the ICHSDP project. This project has suffered from less than effective leadership and from equality with the other vertical projects, lacking the authority over them that its purpose would seem to require. It relies primarily on negotiation with powerful competitors to effect integration and has often been seen bureaucratically as a threat to the status of the other projects (and their chiefs) whose status is lessened as they are absorbed into the regular Ministry.

Whether due to the managerial weakness of ICHSDP or to the strong competition among the vertical projects, there is no detailed plan specifying how, when, and where

integrated should and will occur. Implementation appears to be on an ad hoc basis and the product of fierce negotiation among various factions of the MOH, but without a clear vision of how the system should function once integration is accomplished in a given district. For example, workers in integrated health posts are currently supervised by both the DHS via the District Hospital and the ICHSDP via the District Public Health Office. In addition many trained and experienced vertical project personnel are simply let go and their services lost when a district is integrated. Program disruptions and hard feelings inevitably result.

Although AID/Nepal believes that integration is still, potentially, the most cost-effective means of providing primary health care in Nepal, we question whether, under current and anticipated Ministry-of-Health conditions, we should continue to support both integration and the vertical projects, or whether it would be a more efficient use of resources to work only with vertical projects. If AID/Nepal is to support both, we believe that the MOH needs to consider more carefully the process under which integration will be carried out in the future and establish clear procedures through which this process will be implemented. The evaluation team should consider the following:

1. What internal processes must the MOH adopt in order

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to effectively carry out district-by district integration? Is it realistic to expect that such processes can be worked out and implemented within a time frame consistent with the IRH/FP project extension?

2. What are realistic goals for the MOH's integration efforts, i.e., how many districts could effectively be integrated within a five year period? a ten year period?

B. Project Focus

The current project supports a number of activities with the general intent to improve management and expand the delivery of health and family planning services. However, specific constraints to the attainment of this purpose are not noted, nor are specific interventions designed to overcome such constraints. Possibly in the interest of flexibility, support is rather concentrated on subsidizing the routine operating expenses of various units of the MOH in accord with annual workplans, a fairly open-ended technical assistance component, training and the construction of health facilities. Commodity support, chiefly for contraceptives, surgical contraception equipment and insecticides, has also been important.

The issue which needs to be addressed is whether this strategy is appropriate, given the objectives set forth

in the Project Paper, and whether it is a cost-effective way of expanding and improving rural public health services in Nepal. The evaluation team should consider the following:

1. Has the current mix of project-financed activities had the effect envisioned in the Project Paper?
2. What would be the effect of a substantial reduction by AID/Nepal of funds available to the MOH, particularly to the FP/MCH project, for general operating expenses? Is it reasonable to expect that programs currently supported by AID can become self-sufficient within the time-frame of an extended project?
3. What are workable alternatives to the present strategy given the funds remaining in the project and the level of effort to date on activities funded by the project?

C. Technical Assistance

The project has provided technical assistance in the management of PHC services, logistics, training and family planning. As noted above, this assistance has been fairly open-ended in order to provide assistance to wide variety of MOH concerns, as well as to allow flexibility in responding to needs not envisioned in the

Project Paper. The TA contractor's current annual workplan contains 10 to 12 major objectives, with approximately 10 sub-objectives for each. Thus the contractor (which is currently providing an annual level of 3.5 person years of expatriate consulting services, soon to be reduced to 2.5 years) is involved in over 100 activities encompassing a substantial portion of the total operations of the MOH.

In any extension of the IRH/FP project, the Mission believes that technical assistance should continue and be extended to coincide with the new PACD. The evaluation team should address the following:

1. What is the appropriate level of technical assistance and what mix of TA services would be optimal, given program emphasis; MOH manpower levels, strengths and weaknesses; and the funds remaining in the Project?
2. Should technical assistance be more sharply focused on the types of specific constraints referred to in B above, shifting from the type of generalized assistance currently provided to more limited, problem-specific assistance? If so, which are the critical areas which need assistance?

3. What should be the relationship between the technical assistance contractor and the MOH and between the contractor and AID/Nepal?

D. Training

A wide variety of training activities has been supported under the project, ranging from graduate study in the U.S. to short-term courses in third countries to workshops and seminars in Nepal. The evaluation team should look at the level and range of training which has been provided to date and assess its effectiveness in achieving the Project's purpose. Specifically, the evaluation should consider the following.

1. How useful has the training been? Are trainees working in positions consistent with the training provided? Are tangible results of their training apparent?
2. Should the project continue to support a similar training strategy? Should it concentrate resources on training to remedy specific deficiencies or constraints to health services delivery (as per B above) or, as has been the case, on training in functional areas? What specific selection criteria are needed to ensure that the best candidates for training are selected?

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3. Should the project maintain the current mix of training abroad and in-country, or should it emphasize one rather than the other? What are the cost implications of either strategy?
4. Should the project consider supporting the development of indigenous training institutions rather than training for individuals?
5. What has been the impact and what should be the future role of centrally funded training activities in relation to the Project?

E. Construction Activities

Construction activities conducted under the Project have proved to be more costly and more difficult to implement than originally expected. High design and construction costs have resulted in the cancellation of plans to renovate 20 health posts, and none of the nine health centers and posts which are under construction have been completed.

The MOH has a limited capacity to build its own facilities, and the project has, therefore, undertaken "turn key" construction, i.e. AID finances the design of the buildings, contracts for and supervises their construction, and turns the key over to the MCH on completion. Criteria for locating health facilities

have not been developed by the MOH and construction activities have not always been pursued in conjunction with manpower planning for staffing the facilities when complete

The evaluation team should consider the following:

1. How important is the construction of health facilities for the expansion of basic rural health and family planning services in Nepal? If important how can it best be accomplished, considering the problems outlined above?
2. If continued assistance in construction is deemed necessary, how can it be linked with manpower development planning and what site-selection criteria should be adopted?
3. Is turn-key construction appropriate, or should AID concentrate on developing the MOH's own institutional capacity to locate, design and build health facilities, using standard designs and procedures? Should technical assistance be provided to the MOH for this purpose?

F. Malaria Control

Malaria has been brought under control in most parts of Nepal but 18-20,000 cases are reported annually, making continued efforts important to prevent a major resurgence of the disease.

Support under the current project has consisted of the provision of insecticide and spraying and safety equipment, as well as a full-time safety consultant to advise the NMEO on the proper uses of insecticide. AID/Nepal believes that malaria control should remain a priority for the MOH, but we question the extent to which we can and should continue commodity support over the long term. The evaluation team should consider the following.

1. What would be the implications of AID's withdrawing support in this area? Does the GON have the financial and logistic ability to procure insecticides on the scale necessary and the facilities to ensure their timely and proper application?
2. If a new assistance package were to be designed for NMEO, how could AID best channel resources into improving NMEO's capacity to design and manage a self-sufficient program which would reduce reliance on spraying?
3. Review the NMEO requests for a National Malaria Training/ Research Center and assess the design ability and funding sources for such a center.

G. Supply of Contraceptives

The project has provided, to date, \$1.3 million worth of temporary contraceptives to the MOH and the CRS project, and an increase in this level is contemplated under a project

extension. However, given the GON's emphasis on voluntary sterilization, contraceptive requirements should be carefully analyzed. Additionally, the Mission is concerned with the quality of the MOH's supervision of workers responsible for contraceptive distribution, and currently has no mechanism of its own for tracking AID contraceptives once they are turned over to the Ministry. The evaluation should consider the following:

1. Given GON emphasis on voluntary sterilization, what emphasis should AID give to provision of temporary contraceptives?
2. Given the physical difficulties of reaching and motivating/instructing people in the use of temporary methods in Nepal, are these methods as cost-effective as sterilization or injectables?
3. How can AID best assess realistic requirements for contraceptives, and what steps can the Mission take to insure that they are being effectively utilized?

H. MCH Services

Mission experience, supported by specific studies, indicates that the Panchayat-Based Health Workers of the FP/MCH Project (the principal community-level health workers in Nepal) devote most of their time to family planning (especially motivating people for sterilizations) and virtually ignore the basic MCH care which should be

a valuable component of family planning programs. For example, despite the existence of a national diarrheal disease control program, with a full-time WHO advisor, ORT is not widely utilized. Nutrition activities are particularly lacking. There is considerable debate as to how many services of any kind these workers, who are generally considered to be underpaid and responsible for geographic areas which are too large, can realistically be assigned. The evaluation team should consider the following.

1. What is a realistic and desirable balance between family planning activities and basic MCH care, and can the PBHW program be altered to achieve this balance?
2. Should AID/Nepal alter its package of assistance to the FP/MCH project to foster this balance? How can AID assist in the expansion of basic MCH services in rural areas, especially in ORT and nutrition?

I. Immunizations

The project has assisted the EPI program by supplying refrigerators for health posts and cold rooms for vaccine storage at regional warehouses. Commodity support for a goiter-control program in the Rapti Zone is planned for CY 85. The bulk of external support for EPI has been provided by UNICEF and WHO, with the latter providing a full-time advisor. The evaluation

should consider whether additional support for EPI would be useful? If so, what might that support consist of?

J. Data Collection

Despite its purpose of improving management and expanding the delivery of health services, the project has not specifically established a mechanism within the MOH for the routine collection of basic data to indicate whether or not this purpose is being achieved. Although technical assistance and one micro-computer (two more on order) has been provided to the Health Planning Division to upgrade its data collection and analysis capability, the HFP does not presently provide data on the project's impact on health-service delivery. The current computer is fully utilized, but primarily in routine matters, and there is little indication that the HPD has improved its analytic capabilities.

The evaluation team should consider the following.

1. Is it feasible for the HDP to provide data on the Project impact on service delivery or would it be preferable for each vertical project (FP/MCH, ICHSDE EPI, NMEQ) to collect this data itself, possibly with HPD assistance?
2. What types of assistance might AID continue to provide to facilitate data collection and analysis?

3. How could the computers provided to the FP/MCH project, the HPD, and the CRS projects be most effectively utilized.

Section VIII: Measuring Project Impact

Project impact will be measured at the purpose level, i.e. we will attempt to measure the effect of the project on expanding the delivery of primary health care services and improving management and planning capability within the MOH. We do not believe it feasible to measure goal attainment (improvements in health status and fertility reduction) since it relies on multiple project and donor efforts and especially given the difficulty of isolating the effects of the project from a variety of 'non-health' factors (e.g. changes in income, education, weather, availability of food and shelter, etc.) which influence health. In addition, assessments of health status in LDCs typically involve rather complex studies conducted with heavy input from expatriate consultants, which Ministries of Health can not replicate on a regular basis. While health and fertility status information provided by such studies would be useful, it would perhaps be more useful to the MOH in its day-to-day project monitoring activities if the project concentrated on measurements which the MOH could undertake on its own and institutionalize as basic measures of its own performance in providing services.

The project objectives assume that the project purpose will not be substantially revised following the evaluation. In addition, specific benchmarks and targets assume that increased emphasis will be placed on MCH, financial and data management, as already tentatively approved by the Project Committee in earlier meetings.

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1. PROJECT OBJECTIVE: IMPROVED PLANNING AND MANAGEMENT CAPABILITY ESTABLISHED WITHIN THE MOH.

A. Planning/Management Capability

1. Improved rates of expenditure within each project workplan

	<u>FP/MCH</u>	<u>ICHSDP</u>	<u>HPD</u>	<u>IPD</u>
1983	84%	43%	54%	-
1984 (est.)	87%	50%	88%	30%
1985	90%	60%	90%	50%
1986	92%	75%	95%	75%
1987	95%	90%	95%	90%

2. HPD 100% staffed against staffing plans and MOH funded by 1988.

	<u>Positions filled</u>	<u>MOH Funding</u>
1984	60% (25 out of 42)	8%
1985	80%	25%
1986	90%	50%
1987	100%	75%
1988	100%	100%

3. Development and implementation of unified methods of distribution, storage, use, reporting re-supply of drugs for entire country, including operation of 5 Regional Medical Stores by 1986.

B. Data Systems Management Capability

1. Development of accurate CYP data collection/generation capability for temporary methods within FP/MCH by 1987.

2. Development of FBHW tracking/monitoring system within FP/MCH by 1987 (including number, location, sex, household visits/mo, cases of diarrhea treated etc.).
3. Development of Immunization tracking system for entire country by 1988.
4. Development of MCH capability to conduct major nation-wide surveys on health status, contraceptive prevalence by 1988.

2. PROJECT OBJECTIVE: EXPANDED DELIVERY OF HEALTH AND FAMILY PLANNING SERVICES.

A. Family Planning

1. 500,000 voluntary surgical contraceptive (VSC) procedures performed through 1988.

1984	164,180
1985	234,180
1986	315,000
1987	405,000
1988	500,000

2. 300,000 CYP provided during 1988 by temporary methods:

1983	149,898
1985	200,000
1986	230,000
1987	265,000
1988	300,000

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3. 70% of women know at least one method of modern contraception by 1986.

1981	-	52%	1985*	-	65%
1982*	-	55%	1986	-	70%
1983*	-	58%	1987*	-	74%
1984*	-	61%	1988*	-	78%

4. 15% of women currently using (protected by) a modern contraceptive method by 1986.

1981	-	6.8%	1985*	-	13%
1982*	-	7.5%	1986	-	15%
1983*	-	9%	1987*	-	17%
1984*	-	11%	1988*	-	19%

5. 11,000 retail outlets providing contraceptives by 1988.

	<u># retail outlets</u>	<u># Pill Cycles</u>	<u># Condoms</u>
1984	10,359	105,000	2,042,000
1985	10,500	120,750	2,348,000
1986	10,650	138,900	2,700,000
1987	10,800	160,000	3,106,000
1988	11,000	184,000	3,570,000

6. 5 Family Planning Service Centers staffed and providing year-round delivery of FP services and follow-up by 1986.

*Figures for these years are extrapolated from 1981 and 1986 data. Only 1981 and 1986 figures are/will be verifiable through Contraceptive Prevalence Surveys carried out in 1981 and 1986.

B. Maternal and Child Health

1. 11,000 retail outlets (CRS) providing 143,420 ORS packets per year by 1988.

	<u># of retail outlets</u>	<u>#s of packets</u>
1984	1,029	82,000
1985	4,000	94,300
1986	6,000	108,445
1987	8,000	124,710
1988	11,000	143,420

2. _____ malnourished children identified and mothers instructed.
3. _____ pregnant women receiving iron and folic acid treatment.
4. _____ women, aged 15-44 receiving regularly scheduled tetanus immunizations.
5. Yearly targets for immunization (in number of children).

	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
DPT					
BCG					
Measles					
Typhoid (possibly)		50,000	100,000	200,000	3000

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C. Health and Family Planning Outreach/Facilities

1. _____ PBHW visits
2. _____ health and family planning outreach workers trained and operating in field (PBHWs, BHWS, CHLs) by 1988, 50% female.
3. 10 Health posts constructed by 1985 and fully staffed, supplied and operating by 1986.
4. 2 Health Centers constructed by 1985 and fully staffed, supplied, and operating by 1987.

Once project objectives and targets are confirmed, following the November evaluation, project progress against these targets, as well as specified workplan and project input targets will be followed within the HFP Office by means of specially prepared chronograms (see sample attached), MOH "trimester" reports and contractor reports. Sources of Data will be MOH, AID/Nepal - HFP and FM, 1981 and 1986 Contraceptive Prevalence Surveys, others as available.

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