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MANAGEMENT INFORMATION AND LOGISTICS  
IN THE INTEGRATED HEALTH  
AND FAMILY PLANNING PROJECT  
OF THE GOVERNMENT OF INDIA:  
  
AN ASSESSMENT OF NEEDS

A Report Prepared By:  
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## EXECUTIVE SUMMARY

This report on a consultancy for the United States Agency for International Development, India (USAID/India), undertaken in November 1981, is intended to clarify the need for improved and expanded management support for the Integrated Health and Family Planning Project (IHFPP). In addition, it is meant to guide project managers in the five states in their dealings with the Indian management institutes and the consultants to be engaged to develop logistics and management information systems.

Rather than attempt to convey in the report the theoretical background and details of the management systems, the author emphasizes their broader functions and objectives, as well as the logicalness with which the systems must be developed so that the objectives of management can be met. An assessment of the management consultants who were encountered either directly or indirectly through their product reveals that there is adequate mastery of the technicalities. The major challenge is to ground the managers in the details of the systems and then train them to use those systems so that the efficiency and effectiveness of the IHFPP can be increased.

Several necessary policy decisions which impinge on the successful implementation of improved management support and the viability of the IHFPP are delineated, and it is hoped that they will be addressed by central- and state-level project managers. The concerns include the compatibility of information systems, the free dispensation of medicines, and rural transportation. Special studies to support policymaking in these and other areas are described in the attached report, and they are included in the recommended scopes of work that were prepared for the state project coordinating committees for use in the requests for proposals which they will issue. The author has included in an appendix to his report estimates of the consultant effort required to complete the scopes of work.

## ABBREVIATIONS

APHA	American Public Health Association
CBR	Crude Birth Rate
CMC	Christian Medical College
CMO	Chief Medical Officer
FCMR	Fertility and Child Mortality Reduction
GOI	Government of India
HPN	Health, Population, and Nutrition
IIM	Indian Institute of Management
IMR	Infant Mortality Rate
IRHPP	Integrated Rural Health and Population Project
IHFPP	Integrated Health and Family Planning Project
MBO	Management by Objectives
MIS	Management Information System
MO	Medical Officer
MOFHW	Ministry of Health and Family Welfare
PHC	Primary Health Care
POL	Petrol, Oil, and Lubricants
RFP	Request for Proposal
SEARO	Southeast Asia Regional Office
USAID	United States Agency for International Development
USICA	United States International Communication Agency
WHO	World Health Organization

## I. INTRODUCTION AND BACKGROUND

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### Description of the Project

The consultancy described in this report was undertaken at the request of the Office of Health, Population, and Nutrition (HPN), the United States Agency for International Development, India (USAID/India). By mid-1980, USAID/India had completed negotiations with the Government of India (GOI) on what is now known as the Integrated Rural Health and Population Project (IRHPP). Through the IRHPP, the USAID will assist the GOI in implementing its model plan for primary health and family planning services in thirteen districts in five states.

Ten years would have been the designated period of implementation in districts where only GOI inputs are provided; however, with the award of \$40 million in USAID grants, the government will be able to implement the model plan within five years in the project districts.

The stated goals of the IRHPP are consistent with those of the GOI's model plan: a significant decline in the crude birth rate (CBR), a decline of 15 percent in the infant mortality rate (IMR), and a decline of 20 percent in the mortality rate for children between the ages of 1 and 4. These will be referred to in this report as fertility and child mortality reduction (FCMR) goals.

The stated purposes of the project are in accordance with the model plan. To accomplish the goals, the project must succeed in:

- improving access to health and family planning services that promote fertility and mortality reduction, and
- improving and expanding the services and support systems of the model plan.

Of critical importance at this level of planning is a subsidiary purpose: to increase access to and use of the system by groups that suffer from the highest rates of mortality and fertility. These groups are the poor and disadvantaged classes, and young children and women in particular.

### Implementation

Agreement has been reached on those sub-programs and specific activities which will ensure the fulfillment of these purposes. They are

described in the Project Paper. Objectively verifiable indicators have been selected also to monitor progress toward the sub-goals. One of the sub-programs is "Improved and Expanded Management Support" (see Appendix C). This activity calls for an improved management information system (MIS) to monitor services and support systems, including logistics, several practical research studies, and baseline surveys and evaluations by project staff.

By mid-1981, implementation of the model plan had begun in the five project states. Administration of the project at state and district levels was functioning. An operations-research approach to maximize the effect of the available inputs on project outputs was conceived and described. This approach relied on baseline surveys and various needs assessments of training, communications, and management.

The draft of a proposal entitled Management Needs Assessment for Fertility and Mortality Reduction in Projected-Assisted Districts was prepared in June 1981 by HPN staff. Several areas of management needs and possible strategies to meet those needs were suggested in this proposal. Also, the logistics (supply) system was described as a distinct entity; it was not, as in the Project Paper, included in the overall management information system.

#### Purpose of Consultancy

The consultant was requested to assist the USAID in developing the concepts described in the proposal to assess management needs into concrete programs which can be conducted by the states. One aim of the effort was to accomplish the sub-objectives of management support. The initial activities in MIS and logistics were selected on the basis of their critical importance and the availability of Indian management consultants and theoreticians who have enough experience in the respective areas to be able to offer the state project committees immediate and practical assistance.

Under the terms of the Project Agreement, the USAID will fund the development of MIS and logistics in several states, in addition to a number of other practical special studies. Governing boards in each state will contract for the services of Indian consulting firms and institutions to perform the tasks.

The tasks ultimately assigned to the consultant were to analyze the environment and need for management information and logistics systems in the Integrated Health and Family Planning Project (IHFP), specify as many parameters of the desired system as possible, and prepare scopes of work for the outside consultants. The results would become the basis for requests for proposals (RFPs) from the individual states.

### Methodology

The consultant was in India from October 27, 1981, to November 29, 1981. During his stay, he performed three kinds of activities: background research, discussions with USAID staff involved in the IHFPP, and field visits. It should be noted that, although the consultant's visits to GOI health facilities in the field were intensive and worthwhile, fewer visits than were originally planned were made because of technical complications beyond the consultant's control.

The conclusions and recommendations presented in this report are based on a limited amount of first-hand observation. (A list of documents reviewed by the consultant and a list of persons interviewed are attached as Appendices A and B.) A strong effort has been made to avoid generalizing from limited direct observation and to consider the views of knowledgeable parties and experiences in other primary health care settings. The purpose of this report is to guide those responsible for the success of the project toward additional practical research and the experience of learning about management by managing.

## II. OBSERVATIONS AND RECOMMENDATIONS

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Certain assumptions and extrapolations about conditions in the project districts had to be made during the consultancy. Had the staff of the IHFPP been able to visit each project district to assess its management needs, the store of baseline information would have been increased, and the additional data would have been invaluable. But this was not possible. Until further action is taken to improve and expand management support, one must work with the information that is available. The assumptions that were made will have to be verified as subsequent work is undertaken.

What one can say about the current state of the information and logistics systems is that systems are in use and that most of them do work--to a degree--although they are not particularly well-suited to the needs of managers. Given certain other conditions, improvements in the systems will probably facilitate the achievement of the purposes and goals of the project.

### Management Information Systems

A characteristic common to all the information systems is the substantial amount of resources and time expended to collect, record, process, and transmit data, data that are put to minimal use only. To illustrate: Related pieces of information often are collected by several different workers in a manner that is uncoordinated, often redundant, and inefficient. The method of collection seems to be a vestige of the old vertical programs. The raw data often are used in an interesting display in the offices of responsible officials, but rarely are they recent enough or presented in a form useful for management control. More often than not, the data are transmitted several levels higher than the level at which management control can be exercised, and they end up as statistical tables published months, sometimes years, after the events they represent have occurred. In few cases is information fed back to the workers or lower-level managers in such a way that the staff understand why the data are collected.

There are exceptions. Some excellent recording and reporting systems were seen in both project and non-project districts. The best of these should be analyzed and used as starting points to develop a new system.

Beyond the recording and reporting functions of any management information system is a fundamental function which distinguishes the MIS from all other efforts which yield statistics on health conditions and program

activities. That function is the use of collected information in management control. It is here, in the failure to apply collected data to system management, that several exceptional cases may be observed.

One cannot state unequivocally, without further study, that the management of the model plan system is either good, bad, or indifferent. Nonetheless, everyone should be able to accept the notion that both the efficiency and the effectiveness of the system can be improved. It is the principal purpose of this report to suggest that improvements can be made by introducing a MIS which provides appropriate and readily interpretable indicators of program activities, status, and progress to planners, managers, and supervisors at all levels, by training managers in the correct use of indicators for management control, and by training planners in target-setting. The MIS should be planned around the decision-making functions of managers and supervisors, but before it is designed, a thorough study should be made to identify the optimal pattern of managerial decisionmaking and control in the organization. From his observations, the consultant would suggest that certain important decisions and corrective actions have not been taken where and when they would have been beneficial. He would add, however, that it is difficult to say that these gaps are a result of either lack of information, lack of resources, lack of authority, or lack of initiative to take action.

Managers in the IHFPP are usually doctors, who, by virtue of their training, tend to spend more of their time on technical supervision and the training of workers than on what a professional manager might recognize as management activities. Whatever the reason for this state of affairs, the introduction of a MIS without simultaneous training in management philosophy and technique will probably bear few fruit.

Target-setting in the management system of the IHFPP is deficient. Wherever statistics on program accomplishments are displayed (e.g., in administrative centers), annual target figures for the activities usually appear also. Usually, the targets are derived directly from gross target population data, without regard to resources available to the program or past levels of achievement, and they are, therefore, not particularly useful for management control. Rarely are data available, or are targets set, on the basis of smaller functional units or individual workers, and rarely are they for a period of time that is less than a year.

Three aspects of management--the establishment of useful targets, management control over scarce resources, coupled with positive feedback to workers, and the timely availability of appropriate management indicators--are necessary to successfully practice a logical system of management that is sometimes called management by objectives (MBO).

This consultant is not alone in suggesting that an information system built in a vacuum, and without regard for the need for related management skills, is insufficient. In some states and districts in India, only

minor changes may be needed to make the existing system into a suitable MIS. For example, it may be necessary only to train managers and show planners how to set targets. The system in each state which undertakes the MIS development program should be studied in detail to identify such needs.

Here, what is assumed is the need for more than a mechanism to merely monitor the progress of a project. Monitoring systems generally detect departures from expected performance long after corrective action should have been taken, and they are of little use in pinpointing problems. However, a sensibly designed MIS, when it is used by knowledgeable managers, should ensure the rapid attainment of objectives and the best use of available resources.

Some additional comments on MIS and logistics development are required. The question of the desirability of uniform systems in the project states should be addressed. If the states independently contract with different teams of consultants to develop information systems, one can expect the result to be the implementation of statewide systems which will use different forms and indicators and require different reporting responsibilities. A uniform set of information from each state will be needed for evaluation by the Central Project Advisory Committee. The desired form and content of outputs should be decided at the central level before much work is done at the state level.

The environment in which the MIS will be developed is rather unusual, because professionals from two disciplines, management and health, who have few common points of reference, will be interacting. Assuming the highest standards of competence on both sides, the venture can be expected to be successful only if the client, the health management personnel, and the management consultants communicate constantly and work together to solve the problems that may arise in developing support systems. One must anticipate that knowledge and experience will flow in both directions at once, resulting in the creation of new teams of specialists in primary health management consulting and new teams of management-oriented medical officers. Some importance should be given to the health-services experiences of the personnel of a prospective consulting firm, because the provision of on-the-job training for consultants to the IHFP is not a primary objective of the effort.

### Logistics Systems

From his observations of logistics systems in project and non-project districts, the author reached conclusions similar to those about MIS: Some systems seem to be working well, and most supplies usually are available where services are delivered, depending on budgetary limitations. In districts and blocks where a materials-management system can be said to exist, where there are storage facilities, an auditable inventory system,

trained personnel, transport, and resupply schedules, the problems of availability of materials at the point of service delivery often can be attributed to insufficient budgets for petrol, oil, and lubricants (POL), vehicle maintenance and replacement, and medicines. To correct these common problems, either simple or intricate policy decisions about the allocation of scarce resources will have to be made.

A common problem is the maldistribution of those resources which are available. Resources such as a POL budget and medicines have not been allocated in all cases on the basis of demand and use. The result has been shortages in some localities and surpluses in others. The design for new logistics systems should include provisions for an initial supply, and the periodic resupply, of expendable materials for each health facility (down to the subcenter) on the basis of individually calculable factors, including use rates, planned changes in staffing patterns, and known seasonal morbidity patterns. Provision should also be made for the physical transfer of surplus materials, especially products with a limited shelf life.

It is recommended that separate consulting teams be employed to help develop the MIS and logistics systems. At several obvious points (e.g., when estimating future requirements for supplies, or when using incidence of stockouts of critical supplies as a MIS indicator), it will be necessary to integrate the two systems. These points of integration can be identified before the implementation begins, and steps can be taken to ensure compatibility and efficient integration.

In developing an improved logistics system for the IHFPP, one feature should be assiduously sought: the ability to ensure adequate and timely quantities of those medicines and contraceptives that are judged to be essential to the project's FCMR goals. A list of these critical supplies should be prepared and agreed upon at the central level. In addition, the use of these products in the IHFPP, courses of treatment, etc., should be specified clearly. The selection of these critical supplies is a technical matter with which the management consultants need not be concerned. It should go without saying, however, that a cost-benefit analysis should be done when there is a choice of medicines to treat a given condition.

Some predictive capability should be built into the logistics system to allow sufficient lead time to procure materials which may be unavailable or in short supply in India. Until a reliable base of utilization data is created, the demand for individual medicines will have to be estimated, and the estimates will have to be aggregated into totals for states. (Decisions will have to be made about the degree to which non-project districts will be integrated into the logistics system, whether these districts will use the same list of critical supplies, and whether they should be included in new central procurement schemes.)

The provision of additional supplies and the period of resupply should be based on utilization and consumption data as information is accumulated, as well as on staffing and seasonal patterns.

If the items on the list are defined as essential, other items which are supplied to the IHFPP may be considered non-essential. It is now recognized that the demand for medicines which are dispensed at no cost may be unlimited. This situation poses an unbearable financial burden on any health care system.

It is suspected that if free, non-essential medicines are not available, the use of health facilities may decline and, in turn, the rate of decrease in fertility and child mortality may be lowered. This hypothesis requires careful and immediate study, because it is of crucial importance to the financial viability of the IHFPP. The results of such a study should make it possible to formulate, for any given budget for non-essential medicines, a policy on the dispensation of drugs which maximizes the use of facilities for FCMR visits.

Two other studies related to logistics suggested themselves following field observations and a review of available background material. The first would involve determining the optimum configuration of intermediate stocking and distribution points. Specifically, the researcher would determine whether or not district-level stores should be enlarged and made into pivotal handling points for project supplies. Reliance on district-level stores would appear to have advantages over reliance on state-level stores, although the costs almost certainly would be higher in the former arrangement. The solution to this problem depends also on how materials are procured; thus, part of the study should address the possibility of improving the efficiency of existing procurement systems in which responsibilities are now distributed among district, state, regional, and national agencies.

The second study would explore alternative methods of transportation for the rural health system. Dissatisfaction with the current policy of supplying jeeps is fairly widespread, because the initial costs for these vehicles are high, as are their requirements for maintenance and POL. The substitution of low-cost, light-weight vehicles, including two- and three-wheelers, should be explored, and specifications should be developed for one or more kinds of vehicles that are more ideally suited than jeeps to the transportation requirements of the IHFPP.

#### Use of Consultants

Management consulting in India is on the rise as a legitimate profession, and the growing awareness of its usefulness to business has spawned a burgeoning number of private firms, including affiliates of internationally-known houses, and management professionals employed in

the field. In addition, several institutions have been established in the public sector.

The private consulting firms have acquired most of their experience and personnel through the private industrial sector and in those state enterprises which tend to be run as though they are profit-making businesses. The management institutions, foremost among which is the Indian Institute of Management (IIM), have served primarily as consultants to the public sector. The IIM has acquired considerable experience while working on management problems in primary health care.

The private consulting firms seem to be well-oriented in the philosophy of attacking problems in discrete segments and producing practical results in the form of implemented changes, but they may lack the depth and breadth of experience required to conduct some of the studies called for in the scopes of work included in this report. The management institutes seem to be more academically oriented than the private consulting firms, but, although they can deploy qualified and experienced personnel to perform sophisticated analyses and management training, they may not be as well-suited as the private companies to perform the difficult, but less intellectually challenging, tasks of implementing new systems.

### III. SCOPE OF WORK TO DEVELOP MIS

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The consultants who are hired to help develop the management information system will undertake the project in a series of logically-ordered steps which comprise major blocks of achievement. An evaluation should be performed after each phase has been completed so that progress can be verified, problem areas identified, and all parties assured that the development effort is proceeding in accordance with the stated objectives of improved management support. Those objectives are the enhanced effectiveness and efficiency of the project and simultaneous reductions in fertility and child mortality by means of improved management knowledge of and control over resource inputs, activities, and outputs.

The recommended steps to develop the MIS are listed below.

#### The Environment for the Project

1. Consultants hold a series of introductory meetings with state and district project officers to discuss their approach to the task, planned activities, and official action that is needed.
2. Consultants observe the IHFPP and related activities in one or more districts to obtain the information that is needed to proceed with MIS development. The emphasis is on the functions of the peripheral workers who deliver most project services. The following issues will be addressed:
  - What are the workers' activities? To what extent are the activities useful in achieving the project's objectives?
  - Can the coverage and utilization rates required under the model plan be achieved with the planned complement of workers and their current job configurations? If not, what changes will be required?
  - Are the supervisory functions adequate? Are the kind and intensity of supervision authorized at this time appropriate? What additional resources are needed by supervisors and managers at the periphery?

- Other projects which could have an effect on the FCMR goals of the IHFPP and which are operating in the same geographical areas should be studied, and sources of relevant information should be identified. The effort might include a study of the ICDS Programme and the network of rural dispensaries and taluka hospitals which are not included in the IRHPP.
  - Job descriptions for supervisors and lower-level managers should be developed. Areas of responsibility and authority in planning, operation, evaluation, and control should be defined clearly.
3. A baseline survey of management skills, management-related problems, and some measures of program efficiency is made.

#### Identification of Information Needs

4. Proceeding with the planning of the new MIS, the consultants analyze the information requirements of the supervisors and lower-level managers and reduce these requirements to the minimum needed. They determine the periodicity and form of presentation of appropriate indicators. The form in which information should be fed downward to workers and supervisors also is determined.
5. The management decisions of higher-level managers are compiled and analyzed to determine if all the necessary control loops are present in the system. The managers' needs for information on program inputs, activities, and outputs are determined, and recommendations for "filtering" the information are made.
6. The need for information for such non-routine purposes (e.g., to monitor progress and evaluate a project) is studied. A set of indicators is developed. Consideration is given to the appropriate degree of aggregation of data, form of current action, and periodicity.

### Sign

Working backwards from the known information needs for management, supervision, and evaluation, and the activities of the workers, the consultant plans and designs the recording system for peripheral workers. Other systems in use in other areas, either experimentally or routinely, are studied to incorporate knowledge and experience gained elsewhere. The guiding principle which must be observed is: No information should be recorded which will not be used. The recording process represents a drain on resources at the most important level of the system and therefore should be simplified as much as possible.

The problem of integrating needed inputs from other programs, or externally-derived information about project inputs, is addressed. The end result should be the minimum number of forms, registers, diaries, etc., needed to provide required information to supervisors and managers and to personnel responsible for the clinical management of cases.

Responsibilities for recording data are defined, and a chart of the entire MIS is prepared which specifies in detail, for each level, the information outputs of all program activities, their sources, frequency of collection, action authorized by each worker and supervisor, the chain of upward reporting, and downward feedback.

Details of the reporting system are worked out following the review of the information needs of all levels of management and the determination of appropriate indicators, sources of information, and processing. The additional resources (if any) that are required to provide this information are specified by the consultants. A brief analysis is made of the necessity or desirability of using sophisticated data processing techniques at the state level.

The training needs of the peripheral-level supervisors and the block, district, and state-level project managers are assessed with regard to the use of the MIS, supervisory actions, interpersonal relations, motivation, and management by objectives.

Courses which have been given by the IIM are reviewed, and a new set of training courses is prepared. Training for higher-level managers is as intensive as time constraints allow. Case studies are used wherever they are available or whenever they can be prepared by the consultants.

#### Preliminary Testing

12. The new recording forms, diaries, and registers are prepared for testing, and workers in one district are trained in their use. A trial is conducted, and any necessary changes in the forms or procedures are noted.

#### Final Implementation and Follow-up

13. Under the supervision of the consultants, project staff implement the entire system in all districts. Implementation includes the final printing and distribution of forms, etc., the establishment of reporting schedules, and the preparation of progress reports and evaluations using the MIS. The consultants monitor the implementation and use of the MIS and make any additional, necessary modifications.
14. The entire system is fully documented by the consultants in a format useful at all levels of the IHFPP.
15. The consultants continue to monitor the system in operation, discuss problems in detail with the users of the system, and recommend whatever actions are needed to ensure the viability and enhanced usefulness of the MIS, including additional training.

#### IV. SCOPE OF WORK TO DEVELOP A LOGISTICS SYSTEM

#### IV. SCOPE OF WORK TO DEVELOP A LOGISTICS SYSTEM

The consultants who are hired to help develop an improved logistics system for the IRHPP will undertake the project in a series of phased steps. An evaluation should be performed after each phase has been completed so that progress can be verified, problem areas identified, and all parties assured that the development effort is proceeding in accordance with the objectives of improved management support. These objectives are the enhanced effectiveness and efficiency of the project and the simultaneous reduction in fertility and child mortality. The goals are achieved by ensuring that the materials and services which workers and managers must have to perform program activities are present in sufficient amounts wherever and whenever they are needed.

The recommended steps to develop a logistics system are listed below.

##### Preliminary Survey and Technical Inventory

1. The consultants survey in one or more districts the current system to procure, store, and distribute drugs, supplies, and equipment in the IRHPP.  
  
A brief report on the findings is prepared. Special emphasis is given to the bottlenecks that exist at this time and which are likely to exist under conditions of greater utilization.
2. The problem of predicting the demand for essential medicines and supplies is addressed. Working closely with the consultants responsible for MIS development, staff devise a permanent linkage from the MIS to procurement channels which makes use of historical data on utilization, disease patterns, family planning acceptance rates, demographics, planned changes in program activities, personnel, etc.
3. The consultants develop a method to determine optimum quantities of reorders of all essential medicines and supplies at all key stocking points. Features are designed into the resupply system to automatically ensure the correct use of reordered quantities.
4. It has been hypothesized that whenever the supply of an essential item is depleted, critical FCMR problems

go untreated and clients lose confidence in the system, and perhaps never use it again. A study which addresses this question is made to try to scientifically determine optimum reordering levels by calculating the probabilities of stockouts according to the net cost of stocking individual items.

#### Additional Studies in Logistics

5. The consultants undertake a study of state and procurement procedures that bear on IHFPP supplies and recommend modifications, if changes are necessary.
6. In connection with the above study, another study is performed to determine the optimum levels (PHC, district, state, region) for establishing or augmenting IHFPP medical stores. Existing stores, transportation facilities, the cost of different resupply intervals, and other relevant parameters are considered. The results of the study are used to prepare a proposal to improve the system of IRHPP stores.

#### System Redesign

7. At the discretion of the consultants and the project officers, a new set of forms, registers, inventory cards, etc., is developed to facilitate the efficient flow of materials to the points of service delivery; new stocking points are established; resupply schedules are made; etc. Other systems are examined so that unnecessary duplication of effort can be avoided. Due consideration is given to the problem of auditability, security, and man-hours required to operate the system. Budgets for recurring system costs are prepared for each district.

#### Testing and Other Studies

8. The new system is tested in one or more districts, and any necessary changes are made. The revised system is thoroughly documented, and new forms, cards, etc., are printed. Training courses are developed to teach system personnel the details of the new

system and other relevant aspects of materials-management.

9. Another study to investigate alternative modes of transport in the rural areas is undertaken. The costs of existing vehicles, including life-cycle costing, are compared. Specifications for ideal vehicles, or systems of transport, for the rural areas are prepared.
10. An appropriate cold-chain technology is recommended.

#### Full-Scale Implementation

11. The improvements in the logistics system are fully implemented in all project districts. The indicator for the incidence of stockouts of essential supplies, which should have been built into the MIS, is used to monitor and evaluate the logistics system.
12. Consultants continue to monitor the system in operation, discuss problems in detail with system personnel and users, and recommend whatever actions are needed to ensure the viability and enhanced usefulness of the logistics system. All storage facilities are visited several times to ensure that physical conditions are satisfactory.

## APPENDICES

**Appendix A**  
**LIST OF DOCUMENTS REVIEWED**

## Appendix A

### LIST OF DOCUMENTS REVIEWED

- Albrecht, Karl, A Guide to Successful Management by Objectives, Prentice Hall, 1978.
- Ammer, S., Purchasing and Materials Management for Health Care Institutions.
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**Appendix B**  
**LIST OF CONTACTS**

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Christian Medical College, Ludhiana

Dr. H.N.S. Grewal, Director, Department of Community Health and  
Social and Preventive Medicine

Dr. M.L. Chugh, Professor, Social and Preventive Medicine

Dr. (Mrs.) P. Zacharia, Professor, Social and Preventive Medicine

Rohtak Medical College and Hospital

Dr. Om Parkash, Medical Superintendent, Haryana State

Dr. Vasudeva, Head, Department of Social and Preventive Medicine

United States International Communication Agency

Mr. A.V. Ambekar, Director, Computer Operations, New Delhi

United States Agency for International Development

Dr. J. LeSar, Office of Health, Population, and Nutrition

Dr. P. Diesh, Office of Health, Population, and Nutrition

Dr. S. Thomas, Office of Health, Population, and Nutrition

Ms. Maryanne Anderson, Office of Health, Population, and Nutrition

Mr. M.G. Singh, Office of Health, Population, and Nutrition

Medical Officers

- Dr. Parvinder Kaur, Medical Officer, Phullan Wal Subsidiary Health Center, Ludhiana District
- Dr. G.L. Lall, Deputy Chief Medical Officer, USAID Project, Bhiwani District
- Medical Officer, PHC, Dighal District, Haryana State
- Dr. Saxena, Medical Officer, Primary Health Care, Lalton Kalan, Ludhiana District
- Dr. M.L. Sharma, Chief Medical Officer, Bhiwani District, Haryana State
- Dr. R.P. Sharma, Block Medical Officer, Primary Health Care, Bond Kalan, Bhiwani District

Others

- Dr. A.S. Ahluwalia, Project Director, Punjab State
- Mr. P.J. Bahadur, ABC Consultant, New Delhi
- Dr. A.C. Jain, Project Director, USAID Project, Haryana State
- Dr. Ganesham Sharma, Deputy Director of Health Services, Haryana State
- Mr. Sheshinath, ABC Consultant, New Delhi
- Dr. Prithipal Singh, Civil Surgeon, Ludhiana District
- Mr. Tharan Singh, Planning Officer, Directorate of Health Services, Haryana State
- Staff, Subcenter and Anganwadi, Madhana Village, Dighal District
- Dr. Yagav, Family Welfare Officer, Bhiwani District

Appendix C

DESCRIPTION OF IMPROVED AND EXPANDED MANAGEMENT SUPPORT  
(Excerpt from Project Paper)

## Appendix C

### DESCRIPTION OF IMPROVED AND EXPANDED MANAGEMENT SUPPORT (Excerpt from Project Paper)\*

The states have indicated great interest in strengthening their management capabilities both within the districts and between the districts and other level units. They are particularly interested in the improved monitoring of service and support system activities; in improving program operations through altering management procedures and patterns and by conducting practical research studies; and in evaluation of the impact of their programs.

Monitoring will be improved by the development of a management information system that will assess both services and support systems performance. For services, outputs by type of service, age, sex, and income distribution of users will allow program managers to decide if people in need, particularly women and children from poor families, are using the government health system. For planned programs with targeted objectives, progress toward the targets can be monitored. For support systems, the management information system will give priority to improvement in logistics management at the periphery (ordering, inventory control, ensuring that critical drugs, equipment, and supplies are usually available. In addition, the system should assist in personnel management (vacant posts, transfers); in quality control (improved supervision and reporting); and in planning (workload analysis, investigating why deficiencies occurred). The data should be collected and analyzed on a short interval, periodic basis so that program managers have timely information that can help change the program if necessary. An important part of the program will be to reduce the data collected to a form that is necessary for decisionmaking and improve the data analysis at the block, district, and state levels.

Program operations will be improved by altering management procedures and patterns where appropriate as a result of the baseline needs assessments and improved monitoring system which will have indicated the problem areas. In addition, practical research studies will be done to improve program operations. These studies will arise from perceived needs of decisionmakers, during or by the results of the baseline needs assessment phase, and from implementation itself. The states have suggested that these studies include the following broad categories: studies used as baseline data for planning; studies related to project

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\* From Section 4, "Improved and Expanded Management Support."

implementation strategies; studies in the field of management and training; related to service delivery; and studies related to communication, and community involvement. Special attention will be given to groups with low utilization and to strengthen the prediction of receptive demand.

Implementation capability will be improved by increased staffing of the Evaluation Cells at both state and district levels, by training of the Evaluation Cell personnel, and by involving the Evaluation Cell in the baseline follow-up surveys and in analytical studies.

QUANTITATIVELY VERIFIABLE INDICATORS FOR EXPANDED AND IMPROVED MANAGEMENT SUPPORT

1. An improved management information system is in use in project-assisted districts and between project-assisted districts and higher-level management units.

2. All states have carried out at least one practical research study in each of the following areas: baseline data for planning; project implementation strategies; management; training; service delivery; and communications, education, and community involvement.

3. All levels of Evaluation Cell workers are improved at both the district and state levels in comparison with findings during the baseline analytical surveys.

4. Output Project

Several categories of outputs are based on the following pages with their specific output and the quantity target for the project. Three categories relate to purpose 1, improved access, and four categories relate to purpose 2, improved and expanded services and support systems. It can be seen from the categories of purpose 2, the outputs are not yet specified. The outputs can only be determined after the baseline needs assessment is completed. At that time, a second planning round will occur and other outputs will be specified.

Improved and Expanded Management Support	Management information system developed for monitoring of services and support systems	5
	Practical research studies completed	30 (minimum of 5 per state)
	Baseline surveys, mid-term evaluation, and end-of-project evaluation	1 each

Appendix D

ESTIMATES OF CONSULTANT EFFORT REQUIRED

## Appendix D

### ESTIMATES OF CONSULTANT EFFORT REQUIRED

<u>Step/Number</u>	<u>Consultant-Months</u>	<u>Input of Project Coordinating Committee and District Project Directors</u>
<b>A. <u>Environment</u></b>		
Step 1	2	High
Step 2	6	Medium
Step 3	3	Medium
Evaluation	<u>0.5</u>	High
Subtotal	11.5	
<b>B. <u>Identification of Information Needs</u></b>		
Step 4	3	Low
Step 5	3	High
Step 6	3	Low
Evaluation	<u>0.5</u>	High
Subtotal	9.5	
<b>C. <u>System Design</u></b>		
Step 7	4	Low
Step 8	2	Medium
Step 9	3	Medium
Step 10	4	Medium
Step 11	15	High
Evaluation	<u>0.5</u>	High
Subtotal	28.5	
<b>D. <u>Preliminary Testing</u></b>		
Step 12	5	Medium
Evaluation	<u>0.5</u>	High
Subtotal	5.5	
<b>E. <u>Final Implementation and Follow-up</u></b>		
Step 13	6	Medium
Step 14	4	Low
Step 15	10	Medium
Final Evaluation	<u>1</u>	High
Subtotal	21.0	

TOTAL MIS = 76.0 Consultant-Months

<u>Step/Number</u>	<u>Consultant-Months</u>	<u>Input of Project Coordinating Committee and District Project Directors</u>
<u>A. Preliminary Survey and Technical Inventory</u>		
Step 1	6	Medium
Step 2	4	High
Step 3	4	Low
Step 4	6	Low
Evaluation	<u>0.5</u>	High
Subtotal	20.5	
<u>B. Additional Studies in Logistics</u>		
Step 5	2	High
Step 6	4	Low
Evaluation	<u>0.5</u>	High
Subtotal	6.5	
<u>C. System Redesign</u>		
Step 7	10	Medium
Evaluation	<u>0.5</u>	
Subtotal	10.5	
<u>D. Testing and Other Studies</u>		
Step 8	10	Medium
Step 9	2	Medium
Step 10	1	Low
Evaluation	<u>0.5</u>	
Subtotal	13.5	
<u>E. Full-Scale Implementation</u>		
Step 11	10	Low
Step 12	10	Low
Final Evaluation	<u>1</u>	High
Subtotal	21.0	

TOTAL LOGISTICS = 72.0 Consultant-Months