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**REPORT ON THE DEVELOPMENT OF THE METHODOLOGY AND WORK PLAN
TO CONDUCT AN IN-DEPTH ASSESSMENT AND DIAGNOSIS OF
HOSPITAL OPERATIONS IN THREE PROVINCES IN INDONESIA**

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1. PREFACE AND ACKNOWLEDGEMENTS

This report will detail my consultancy in Indonesia from 15 August to 3 September 1988 for the purpose of assisting the Project Implementation Office (PIO)-Hospital to conduct an in depth assessment of hospital operations in three provinces.

Although the time period for this consultancy was initially scheduled to be twelve weeks, the final time period was reduced to three weeks. This reduction in time for the scope of work did not permit me to visit any of the three target provinces or the four hospitals in each, where the diagnostic assessment process will take place. However, I did have the opportunity to visit two hospitals in Jakarta, the type A 1200+ bed Cipto Hospital and the 550 bed Husada private hospital and in Yogyakarta, the type B Dr. Sardjito provincial hospital, the type C Telalyoso hospital in Klaten, the type D Bantul district Hospital, the 77 bed private Islamic hospital outside of Klaten and the Muntilan district hospital which is in transition from type D to C. Reportedly the type C and D hospitals seen are quite representative of these classes of hospitals in Indonesia. However the Dr. Sardjito hospital is a more sophisticated type B hospital than those in the three provinces of the Hospital Study.

The design of the Hospital Study is divided into four subject areas, each assigned to different working groups--Quality of Care, Hospital Management, the Costs of Health Care in Hospitals and Social Marketing--and a fifth group consisting of the head and members of the Project Implementatin Office (PIO) which will summarize and analyze the findings of the four subject areas noted.

The majority of the work of this consultancy was carried out in Jakarta where there were many meetings and discussions with project management and the members of all of the study working groups except that for quality of care. The five members of this latter group are posted in Yogyakarta at the Faculty of Medicine at Gadjah Mada University, and the Dr. Sardjito hospital, hence my trip to Yogyakarta to meet with them, accompanied by Dr. Soedibjo Sardadi, the head of PIO Hospitals.

During this consultancy various members of the Hospital Study groups were particularly helpful in orienting me as quickly as possible and in actively participating in the process to review the

project status. Together, I believe we moved the project ahead by sharpening the focus of the inquiry, preparing a Plan of Work for the project and more clearly defining the project's outputs by discussing and agreeing upon an outline of the contents of the final report for the diagnostic portion of the total project.

I am particularly grateful to Dr. Soedibjo who was a splendid facilitator and teacher and a most gracious host.

2. SUMMARY

This report covers the activities and results of my three week consultancy, 15 August to 3 September 1988, in respect of the approach and methodology to be pursued in the conduct of a Hospital Study in three provinces in Indonesia. The study is a component of a six year Health Sector Financing Project which began around mid 1988.

The purpose of the overall project is to expand the program of child survival services in Indonesia by improving the efficiency and cost recovery of services which consume a large share of the Ministry of Health's budget. Of these services, hospitals make up the major portion.

The Hospital Study consists of a diagnostic phase, hopefully to be completed by March, 1989, focusing on quality of care, hospital management, costing of services and social marketing. This is to be followed by designing interventions to deal with identified problems, or of a less than desired situation, then by field testing, demonstrating, and evaluating the remedial interventions.

Training will take place during most of the course of the Hospital Study.

During the consultancy representative government and private hospitals were visited. Meetings and discussions were held with various levels of the Ministry of Health Units managing the Hospital Study as well as the Project Implementation Office-Hospital key staff and the personnel who are developing the methodology and instruments to diagnose the problems related to the four areas of focus noted above.

To initiate the Hospital Study a three day "mini-workshop" was held in late July 1988. This resulted in a draft document describing the diagnostic phase of the Study, elaboration of a time table for activities, and a statement of methodology to be used by each of the four subject area working groups including a preliminary list of problem areas to be investigated. That document has now gone through three drafts. The time allotted to organize the study, including selection and recruitment of implementing contractors has been increased by six weeks (now targeted to be completed by the end of October, 1988). The methodological approach has not been

significantly changed, but its focus has been made much more specific and criteria and indicators related to parameters of hospital activities and functioning are being prepared by the study groups. Examples of such criteria and indicators are found in Appendix B.

To better focus the study, a draft outline of the study final report was prepared by the consultant. This was then thoroughly discussed and modified in a meeting with PIO management and the majority of the study group directors (see Appendix C).

This study is a major and long term undertaking. As such it requires a carefully prepared plan of work to guide its organization, implementation, evaluation and periodic revision. Appendix D is a draft for such a plan of work, covering the basic methodology and format suggested by the consultant. This plan is incomplete. The purpose for its inclusion is as an example. Other equally comprehensive approaches, more familiar to the project team, may be more appropriate.

Along with the plan of work it is recommended that task assignment specifications work be prepared for major activities of each study group. Appendix E provides such a specification for inventorying health manpower and training and its use in projecting staffing needs.

A diagnostic approach to decision making is discussed in the report. Hopefully this will be found to be relevant to the Hospital Study Project. Finally, the report discusses the use of health service studies in management decision making. The rather considerable complexity of the Hospital Study is pointed up, with several sponsoring organizations, a number of layers of study implementation and many facilities involved. To minimize potential conflict and confusion and to maximize the desired outcome from the studies, it is recommended that there be a clear definition of roles, responsibility and authority of the various organizations involved and that their operating processes and procedures be thoroughly understood by all.

3. INTRODUCTION

3.1 Project Overview and Consultant's Assignment

In an effort to increase the financial resources to be used to expand the effort on Child Survival initiatives, the Government of Indonesia (GOI) is undertaking a Health Sector Financing Study. A major thrust of that study will be on finding ways to increase the efficiency of hospitals so as to expand and improve their output of services and also of ways to make government hospitals more attractive so as to enhance their utilization by those able to pay for care. The overall project will run for six years of which the first year will be devoted to identifying and analyzing hospital-related problems. In the remaining five years solutions to problems will be developed and implemented.

The scope of work of this consultancy is to:

1. Review the terms of reference and draft methodology which have been developed by the local team of experts for the hospitals assessment.

2. Revise and finalize the assessment methodology. The final methodology should allow for a systematic and objective assessment of the following features of hospital operations: organization and responsibilities, revenues and expenditures, staffing, standards of care, support services, management systems, regulations and policies.

3. Begin preliminary work on development of a data collection instrument which is sufficiently uniform to allow for comparisons between hospitals and among provinces.

4. Begin preliminary work on development of a plan of action for conducting the hospital diagnosis and assessment in 12 hospitals situated in 3 provinces.

A Hospital Study Project Implementation Office has been established and has begun work on preparing for the diagnostic aspect of the project. A "mini-workshop" was held in Yogyakarta 25-

27 July 1988 at which time those to be involved in the four study groups and the management team met to reach agreement on the design of the protocol and instruments of the over all Hospital Study. Following that meeting each study group has prepared in preliminary fashion, its methodology and proposed instruments to use in collecting the necessary data to analyze the present status of hospital operations and to identify problems which cause low efficiency and low utilization.

Following the mini-workshop three drafts of the "Protocol and Instruments of the Hospital Study-PI0" have been prepared, the last during the period of this consultancy. The time table for early project activities has now been elaborated with more specificity. This has resulted in the addition of about six weeks in the time estimated to prepare for pretesting the studies instruments, now scheduled to commence on 15 November 1988, and to select and recruit contractors who will actually implement the four studies in the field.

3.2 Health Service Studies--Their Use, Potential Benefits and Pitfalls

Some years ago I served as a long term consultant to the Southeast Asia Regional Office of WHO and headed a team that established a health services study unit for the Region. The following comments are based on that and other experiences (see Appendix A).

Health service studies are used to improve the management of a health care system or one or more of its components. The focus of these studies is generally on four principal areas--use of health-related resources and ways to improve the efficiency and effectiveness of their yield, the process of health service programs and activities and the factors that relate to various degrees of success or failure, outputs of service, and lastly, the outcomes of health services in satisfying the patient, effectively dealing with health problems, etc.

The first requirement for designing a health service study is to make a precise statement of the goals and objectives of the service to be studied so that variance between what is the desired state of affairs and what is the deficiency at present, can be determined in some measureable fashion.

Stated another way, the study should be designed to provide information for decision making. The clearer and more specific the decision to be made, the easier it is to design a study to provide relevant information.

Health service studies frequently have many "actors"--those who sponsor the study, those who will use the information derived, those who conduct the study, and those who are related to the service being studied. In general, the more complex and difficult the study and the more chance for confusion, conflict of various kinds and for less than desired results.

The extent to which those related to the facility or service being studied sanction and support the study and are committed to the application of its results, directly impact the conduct of the study, functioning of the study team, and in the final analysis, the success or failure of the study effort.

4. THE HOSPITALS STUDIES METHODOLOGY

4.1 The Diagnostic Process to Decision Making

The process of management involves reducing uncertainty in decision making, i.e., from a situation where the relevant problems or information are not known, one moves to the point where the problems, the solutions, and the reasons for these are known.

The first necessary condition for decision making is the awareness that something is wrong, i.e., that something is happening that should not be happening or that is undesired. The process of diagnostic decision making splits at this point into diagnosis and "treatment". Parenthetically, a frequent mistake that management makes is to prescribe treatment before the diagnosis is complete.

The approach to be described deals with non-structured, non-programmed decision making. The diagnostic process, as in the case of the Hospitals Study Project, begins with the making of lists of all of the symptoms of what is thought to be going wrong or at least is not the desired state of affairs. To do this may require analysis of an entire organization or only certain of its components. As noted below, while the diagnostic process is non-structured, it must be conducted with some framework in mind for dealing with the problems identified.

The first step in the analysis is to identify those symptoms or problems from the lists which are caused by other problems. There may be several levels of causes identified, one causing the other. What we need to develop is a "chain of causality". In general, the more basic the cause of a problem the more difficult it is to resolve. As a prime rule, management should seek those causes which are relatively controllable, causal enough to be significant and are future oriented. These are the priority problems that should be tackled.

To facilitate their resolution, causal problems should be divided into time frames as follows:

1. Up to three months to resolve might be considered an immediate problem.
2. Up to a year might be considered a shortterm problem.
3. A year or longer is an intermediate range problem.

4. Three to five years might be considered a long range problem.
5. Problems that take more than five years to resolve are grave problems.

Immediate, short, intermediate, long and grave problems are all interconnected. None can be ignored. While dealing with long range problems one may also solve the short range problems. However, failing to tackle the short range problems can lead to disaster.

Once problems have been identified and their chain of causality worked out, we can then proceed to solve them. Problem solving techniques are beyond the scope of this phase of the Hospital Study and the present consultancy. However, there are a few important points to be made.

Firstly, environmental factors--political, legal, cultural, economic, etc. greatly influence what solutions are possible and not possible. What can and cannot be done are governed by decision rules. These must all be taken into consideration.

Secondly, once the problems and their causes have been identified, there must be a systematic and organized method of dealing with those problems. The methodology to be used should be made explicit before remedial interventions are planned and implemented.

One approach to planning for the remedial interventions that the consultant has found useful is to divide the problems into five functional areas. These are: (1) marketing; (2) production of and delivery of health services; (3) human resources; (4) finance; and (5) management. If major policy shifts are required, this becomes a sixth area. These areas are now briefly discussed :

1. Marketing

Marketing is concerned with designing the health-related products and services and the delivery system to get them where they will be used, how to promote the use of the products and services and to price them appropriately.

2. Production and Delivery of Health Services.

This involves detailed programming and implementation. It includes all of the activities that have to occur at the right time, rate, place and force to produce the desired services and products. To do this it is necessary to design, locate and operate facilities; provide for maintenance of facilities and equipment; provide and maintain transport, communications and other infrastructure, stores and supplies; supply primary health care and curative services and other programmes--in short, all that needs to be done to provide for health.

3. Human Resources

Human Resources focuses on personnel. More specifically this area deals with the following:

- a. Needs assessment and forecasting of demand and supply of manpower
- b. Staffing
- c. Training and staff development
- d. Evaluation of performance
- e. Rewards and incentive systems
- f. Conditions of service

4. Finance

Finance is concerned with the sources of funds, both capital and operating (recurrent), and their inter-relationship; the use of funds including cost expenditure controls; the costing of facilities and services; and the development of budgets and annual estimates.

5. Management of means of information, production and delivery of services as well as of human and financial resources

Basically, what we have is one area, marketing, that determines the needs of the population and how to satisfy these needs; and three areas that actually get the job done.

The approach to planning the remedial interventions can be likened to a pyramid with each side representing one of the four traditional managerial areas--marketing, production, human resources, and finance--of a production firm that makes and sells goods and services, or of a governmental department which produces services.

Planning for remedial interventions then becomes the process of integrating and managing these four functional areas, within policy guidelines, so that they come together into a common focus or "plan".

In most health organizations what should be done is almost always more than the organization can respond to. Even if there were a health care delivery system that had the services and facilities to satisfy all the needs and demands of the population served, the organization probably would not have enough qualified people available as staff. And even if all the people were available, financial resources would most likely be inadequate.

Planning thus becomes a matter of adjusting objectives and desires to reality.

This means setting priorities. Some needs can be satisfied, others must be ignored or postponed. In the process of setting priorities we begin with what we would like to do "in the best of all worlds", that is, an ideal health care system design. Very rapidly it is clear that the ideal cannot be achieved because the organization does not have the production capability, or because human and/or financial resources are inadequate.

At the macro level the planning process to deal with identified problems begins at the bottom of the "planning pyramid" with marketing and moves through production, human resources and finance, upward, back and forth, narrowing the gap between what is desired and what actually can be produced. In the process, a "constraints analysis" takes place where alternatives are examined and strategies adjusted to conform with available resources and the demands of the market. Where all the functional areas meet, we have the realistic remedial interventions that the organization can undertake.

To summarize, there are several phases or important factors to consider in problem diagnosis and treatment or resolution:

1. Start solving only after finishing diagnosis.

2. A problem has to be specific in nature, controllable, significant and future oriented.
3. Distinguish between immediate, short, long and grave problems.
4. Do not deal only with short or only with longterm problems, treat them both adequately.
5. Identify all decision rules, effects of problem solving on achievement of goals, and positive and negative repercussions of proposed interventions before deciding on actions to be undertaken.
6. Have an organized approach for developing remedial interventions for identified problems to guide the diagnostic process.

4.2 Initial Methodological Approach of the Project Implementation Office-Hospital

The basic objective of those conducting this study is to diagnose why recognized low efficiency and low utilization occur in hospitals, particularly government hospitals, so that root causes may be identified and then to develop and test remedial interventions. It is anticipated that the diagnostic component of the project will be completed before the commencement of the next five year development plan on 1 April 1989. The testing of remedial interventions can then take place over the next year or so, to be followed by instituting the recommended actions and interventions.

Each study group has prepared a general statement of objectives; a methodological approach to the study; the units of measurement and analysis to be used; and the samples to be studied and their selection.

These statements generally refer to the use of surveys, interviews, questionnaires and participative observation and these techniques collectively make up the "instruments" of the studies. However, in the main, these instruments are not further defined or delineated.

While the study groups have compiled lists of known problems or topics which they believe require study and analysis, criteria have not been stated against which indicators to measure the degree of performance can be elaborated. Nor have such indicators been flushed out although several study groups are in the process of doing this now.

4.3 Revisions to the Methodological Approach

There were no significant changes made in the overall approach to the project during this consultancy. However there was considerable effort made to guide and sharpen the focus on required data to be collected and processed by each group along the lines discussed above in the section on the diagnostic processes in decision making.

Toward this end it is recommended that the study groups do the following:

1. List each major subject area and each of its subareas to be investigated.
2. For each of the subareas identify the specific topics to be assessed.
3. For each topic, prepare statements that specify the criteria to be used to evaluate the status of performance and the indicators to be used to measure the degree or adequacy of achievement of these criteria.
4. Begin the data collection by first reviewing all of the many recent studies related to the subject areas assessed. Identify the gaps in what is presently known and what needs to be known. Then design the appropriate instrument to obtain the required information for decision making.

Appendix B is an example of criteria and indicators that might be used to assess some important aspects of the management of hospitals, i.e., organization and structure and policy formulation, planning and evaluation.

4.4 Conduct of the Studies

4.4.1. The Implementing Contractors

As noted, the working groups for the four diagnostic studies will not actually implement the studies. Rather, this task will be carried out by local contractors under the supervision of the PIO. Whether there should be a separate implementing contractor for each subject area covering all three provinces has yet to be decided. I believe that it is generally agreed that if three contractors can be found, each of which has all of the skills necessary to conduct each study, it would be best to engage a single contractor for all studies in one province. This should provide the best coordination of the studies in each province and make supervision easiest. However, it raises the question of comparability of the methodology and approach in conducting the studies in the three geographical areas.

Conversely, having different contractors, each with the requisite skills and experience in a specific subject area, say for example in quality of care, be responsible for assessing this subject in all three provinces, also has both strengths and weaknesses. Comparability of approach and study conduct is maintained but there will be more different investigators running in and out of each province and their health facilities and more possibility for poor control of the study efforts since supervision could be more difficult. Very likely this approach might also be more costly.

An alternative approach would be to have separate contractors each carrying out the bulk of the studies in a single province, but also using specialists covering specific functional areas where contractor skills are lacking or inadequate. Given the reality of the situation, this may be the best way to go.

4.4.2. The Complexity of the Organization of the Hospitals Study

In the introduction, mention was made of the sponsors of health service studies, those conducting studies, the staff in the entities being studied, and those who will actually use the information and other outputs of the studies. It was noted that the more different groups involved, the more the chance for confusion and of various problems to arise while carrying out the study. These may result in delays in getting needed approvals and resources and ultimately may reduce the potential value that could be gained from the study.

To be more specific, in the Hospital Study there are several different sponsors including USAID and the Indonesian Ministries of Health and Home Affairs primarily, but with international organizations, WHO, World Bank, etc., also vitally interested.

Although not directly involved in implementing the study USAID plays a considerable role in selecting and monitoring the expatriate contractor, ISTI, and in the use of funds. Although a Project Implementation Office directs the study and is responsible for its methodology, local contractors will also participate in the study design and will actually carry out the work in three target provinces

Finally, many hospitals will be studied. It will be necessary for their staffs to be oriented, so as to participate constructively and to be threatened and disrupted as little as possible while the studies are on going, and beyond.

It is recommended that careful attention be paid to a clear delineation of roles, relationships, authority and administrative process and procedures so as to facilitate the smooth conduct of the Hospitals Study. Toward this end it may be helpful to develop a matrix chart in which various functions and activities are listed on one axis and the management or organization positions shown on the other axis. A relationship code is then used to relate management/organizations positions to functions/activities. Such a relationship code could include: (1) general responsibility; (2) operating responsibility; (3) specific responsibility; (4) must be consulted; (5) may be consulted; (6) must be notified; and (7) must approve.

5. ACTIVITIES AND OUTPUTS OF CONSULTANCY

My main activities during this consultancy consisted first of meetings and discussions with most of those who will either supervise parts or all of the Hospitals Study and those responsible for the methodological design of the four subject areas to be studied, and second, of visits to the full range of hospital types to be studied. The purpose of the visits was to better orient and acquaint me with the physical appearance of the hospitals; their equipment and its level of sophistication, state of maintenance and functional capacity; and to get some idea of the general functioning of the facilities.

Previous sections of this report generally cover the content of discussions which in the main were directed at better specifying the methodology of the studies. Toward this end several "products" were prepared. Each of these aims at more firmly organizing the Study and/or providing a frame work to guide the work of inquiry, data collection and analysis. These products are as follow:

5.1 Draft Outline of Hospital Study Final Report

This document, Appendix C, was prepared mid-way in the consultancy in a meeting attended by the director of the PIO-Hospital and the heads of all of the study groups except that for quality of care. The purpose of this outline was to gain consensus on the scope of work and the final product of that work.

5.2 Plan of Work

Appendix D is a suggested format for a plan of work to guide and control the conduct of the Hospital Study. This plan of work briefly describes the project and the methodological approach. When completed, it will specify what needs to be done, when and by whom, using what staff from which organizations. No attempt was made to complete the plan of work at this time, given time constraints. This plan of work, or one that is substituted in its place, should be prepared by the management of PIO-Hospital and be thoroughly discussed both with the Project Management Unit of the Health Sector Financing Study and the various groups who will actually carry out the work.

In this suggested draft for a plan of work, I have listed what I believe to be the main tasks to be carried out in organizing the study by the group studying quality of care. In respect of the quality of care, these were the main tasks agreed to in a meeting with this group in Yogyakarta. Further significant supporting tasks also should be identified. No attempt was made to detail tasks for the other study groups. However, for each group I did indicate in an introductory statement what I conceive of as their primary task assignment.

5.3 Example of Criteria of Performance and Indicators to Measure Adequacy of Achievement of a Hospital-related Function or Activity

This example, see Appendix B, has been described in a previous section of the report.

5.4 Project Team/Working Group Assignment Specification

In carrying out the Plan of Work, it is recommended that project team or working group assignment specifications for major tasks to be undertaken by the various study groups be carefully prepared before conducting the assignment. Appendix E is an actual Project Team Specification of a health planning unit of a developing nation. The planning unit consisted of four functional groups, one of which was responsible for human resource planning. Appendix E, which was an attachment to the Planning Unit's plan of work, is the project team specification for inventorying health manpower and training and for defining staffing patterns and training in the future. Much of the activities noted are directly relevant to the present hospital study.

APPENDIX A

Using Health Service Studies in Less Developed Countries

Paul Zukin*

ABSTRACT

A country's health statistics unit ordinarily is responsible for the continuous collection of baseline data with which to establish and monitor general health status. But for much of the decision-making required to manage the health care system, additional information is needed. It is here that health service studies—e.g., controlled field experiments, operational analyses, surveys, etc.—can be of great value provided certain pitfalls are avoided and both management and those conducting studies recognize the role of these studies in the management of health care system.

Introduction

FEW LESS DEVELOPED countries use health service studies to advantage in managing their health care systems. This discussion will identify those areas where studies would appear to have maximum potential to improve the quality, effectiveness, and coverage of health services, and then will recommend ways to increase the yield from these studies.

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"Health service research" is differentiated here from "health service studies," although obviously the methods of scientific inquiry are common to both and the distinction may be more semantic than real. Operationally, however, they are not the same. Health service research is usually applied to searches for new knowledge and to basic hypothesis testing, while health service studies are generally concerned with efforts to find solutions to specific health care problems in specific situations. Thus at the World Health Organization, research is purely a headquarters function while studies are primarily the province of the regional offices. The difference is also important from a practical standpoint. Few less developed countries are really interested in conducting research; hopefully they can be encouraged and assisted in carrying on health service studies.

Developing a Conceptual Framework

In formulating a conceptual framework for the use of health service studies, it is necessary to examine their role in relation to the management of the health care system. One must then begin by looking at the management system itself. Parenthetically, the first thing observed is that most less developed countries lack management competency in their health establishments. Indeed, this management deficiency is increasingly recognized by the countries themselves, and particularly by WHO, as a major constraint limiting improvement and expansion of the health care system. However, efforts to rectify the situation are occurring. Project systems analysis, cost effectiveness analysis and programme budgeting are some of the modern management techniques which have recently been introduced into WHO and which are gradually diffusing into country health establishments.

Data are the heart of the modern management system. To manage the health care system, data are required for a variety of purposes: to determine health status and the availability of resources, as a basis for setting policy and making rational choices among alternatives for planning a strategy for change, for carrying out and controlling health service programmes, and for the evaluation and feedback mechanism to make necessary corrections.

A country's health statistics unit ordinarily is responsible for the continuous collection of baseline data with which to establish and monitor general health status. But for much of the decision-making required to manage health systems, additional information is needed and it is here that health service studies can be of great value.

The role of studies in the planning and delivery of health services may be identified by referring to the simple model in Figure 1, in which the health care system is portrayed in terms of inputs, processes, outputs, and outcomes, and

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by noting some of the kinds of studies which can be used to provide data to assist in the management of this system.

Inputs to the health care system are of two general kinds: health status/health problems and resources. Data for determination of health status are usually obtained from routine reports and statistics, but for specific problems, surveys and case finding studies, etc., may be required.

There are many kinds of studies that yield data pertaining to health resources. For example:

- a. Costs and use of resources of health service programmes in general.
- b. Costs of a specific programme carried out in a particular fashion.
- c. Costs of programmes to obtain a specific output; e.g., to train or produce a nurse practitioner.
- d. Costs of programmes to achieve a specified outcome; e.g., reduce incidence of tuberculosis in a specified population by a specified amount in a specified period of time.
- e. Various mixes of different kinds of inputs to achieve a specific output or outcome.
- f. Sequencing of expenditures for optimum results.

Although time per se is not generally thought of as a resource, time is an important dimension of health service programmes; and the use of resources as a function of time is often considered in studies related to inputs.

Studies of the *process* of health service programmes and projects are concerned with health care activities and with the factors that relate to success or failure—and why. As noted by Suchman¹, process studies may deal with the following:

- a. The *components* of the programme or project—how they are combined and sequenced, and how they interrelate and function. A study of patient flow through a clinic in an effort to reduce patient waiting time or to increase the number of patients seen per session is a good example. Another is a field study of health manpower in which workers' activities are recorded and analyzed in an effort to increase efficiency and/or effectiveness.
- b. Delineation of the *conditions* under which a programme is more or less successful. Such factors as timing, location, sponsorship, etc., may be very important determinants of utilization of services and of programme outcomes.
- c. The *population* exposed to or covered by the programme and who is effected or reached, etc.

Studies of process are carried out by several techniques; for example, observational studies, controlled field experiments, and operations research.

Outputs or programmes are usually expressed as service achievements in numerical terms; e.g., the number of services provided, the number of patients seen or health centers built. Output studies are chiefly concerned with effort and efficiency, and the data are generally obtained from reports.

Among the most difficult of all studies are those concerned with *outcomes*. Outcomes deal with effectiveness, performance, and the adequacy of performance. For example, how effective is a particular health programme in reducing a specific health problem in a population. In order to answer this kind of question, one needs "before and after" data as well as means of determining that the effect observed resulted from the programme interventions. Since health status is subject to a variety of influences, it may be very difficult to quantify the effect of a specific health care activity and hence to measure its effectiveness and performance. In the final analysis, however, outcome studies may be the most important of all studies since they attempt to answer "what did the programme do?"

Priorities for Health Service Studies in Less Developed Countries

Accepting that health service studies form an integral part of the management of the health care system, the priorities for studies then are closely related to the priorities established for the health care system itself. With respect to health, the three main goals in most less developed countries are: (a) to improve basic health services, (b) to increase the coverage and utilization of these services, and (c) to make better use of scarce resources. (Basic health services are understood to include provision of safe drinking water and waste disposal, maternal and child care and family planning, control of infectious and parasitic diseases including immunizations and vector control, access to medical care for simple conditions and emergencies and facilities for the referral of serious problems, health and nutritional education including promotion of means for providing adequate nutrition, and the routine collection of health related data from which a health status or situation can be determined continuously.)

The kinds of studies which are appropriate to improving and increasing effective coverage of services are those which look at wants, needs, and demands; at utilization; at consumer satisfaction; at the health and illness behaviour of a population; and at the process of care. It is often valuable to examine programme and project operations in detail to determine the functions required and the activities to be carried out by whom and how.

USING HEALTH SERVICE STUDIES IN LESS DEVELOPED COUNTRIES

A number of less developed countries have or are presently carrying out studies of programmes and projects in which vertical health services have been integrated. Included in such studies is an analysis of the functional capacity of health manpower. In those countries where most health manpower is in critically short supply, studies which aim at increasing the productivity of health workers clearly have high priority.

Any serious attempt to compare health programmes in terms of benefit or effectiveness must also consider cost, hence accurate cost data becomes a fundamental part of health programme comparisons. Few less developed countries presently have these data, thus studies concerned with costs and resource use also have high priority.

In many of the industrially developed countries, the bulk of health service studies relate to medical care. In less developed countries these studies have relatively low priority. A significant exception, however would be studies of health care facilities where the goal is to increase utility and efficiency. Essentially all less developed countries spend the majority of their health budget on medical care services, and it is important to get the most out of these expenditures despite the fact that for impact on health status the money would be better spent on more basic services.

Requirements for Health Service Studies

The first requirement for designing or even considering a health service study is a precise statement of the goals and objectives of the programme to be studied, noting what is desired and any constraints or conditions which are not to be violated. Programme goals and objectives largely determine the character, scope, and complexities of a study and to a considerable degree indicate who or what organization should carry it out. For example, an attempt to relate changes in a nation's health status with the size of its investment in its health care system would clearly be a job for a health ministry or a national health institute, and not a district health establishment. On the other hand, study of a rural health center might best be carried out by researchers from the local level.

A point to be emphasized is that to the extent possible and consistent with objectivity, studies should be carried out in conjunction with those who need and will use the information derived for decision-making. By adhering to this tenet, the results of studies have the best chance of being used to effect desired change.

It is beyond the scope of this paper to detail all the requirements for successful health service studies. However, there are some important issues and problems to be considered.

The Staff

At the staff level, one must consider both programme staff and the study team (assuming they are not the same). What are the attitudes of the programme staff regarding the study? What is their degree of interest, their involvement, their commitment? Of the study team, one is concerned with their technical competence, their objectivity, their previous experience, etc., and how they relate to the programme staff.

The expertise of many disciplines may be required in health service studies: health science and administration, economics, statistics, operations research, and behavioral and social science. How is this all put together? In a perceptive article, Stringer² emphasizes that a multidisciplinary approach has potential benefits only so long as the group functions as a real team and concentrates on the study as an activity and not as a discipline. It is necessary that a language understood by all is used, and it is particularly useful to have team members who have multidisciplinary backgrounds.

Health Service Studies and Administrative Decision-Making

At the administrative level, there are many concerns. What is the mechanism for carrying out studies? How and under what circumstances are resources made available? What kind of data is available? Who gathers it? Who processes it? What services from non-health agencies are needed to assure timely completion of the study? (In some less developed countries, computer time must be obtained from banks or the national statistical service.) How does the study team relate to the "client"?

Health service study does not take place in isolation; there are always one or more clients. The more clients involved, the more chance there is for confusion and difficulties in the relationship with the study team. A study, for example, may be sponsored (funded) by one organization, another organization may be the object of the study, and a third organization the intended user of the results. Interaction between the study team and the client system covers and affects a range of circumstances and situations. These include the degree to which permission is required to carry on the study activity or to provide access to or the giving of data, etc., all the way to actual participation by the client in the study itself.

The extent to which the client(s) sanctions and supports the study and is committed to the application of its results directly influences the environment in which the study takes place and the functioning of the study team. And in the final analysis, it largely determines the outcome and impact of the study effort.

USING HEALTH SERVICE STUDIES IN LESS DEVELOPED COUNTRIES

Diffusion of the results of health service studies into the health care system must take place if health service studies are to be productive. To this end the study team must understand its role in management decision-making and that its main purpose in conducting scientific inquiry is to effect beneficial change.

Increasing the Yield from Health Service Studies

The discussion so far has pointed out the role of health service studies to provide a part of the management information required for decision-making in the health care system. There is need for at least one focus in each country to carry out studies of health services and with the proper linkages to have results obtained diffused into the health care system. In each country there are isolated individuals and institutions conducting some type of health service study. These are largely scattered and uncoordinated, hence their overall effectiveness is poor. It is important to identify these individuals and institutions and to assist in bringing them together and forming suitable linkages to effect desired change. This is a function that WHO can help perform working through a country's health establishment.

Merely stressing the potential value of health service studies is not enough. Decision-makers must understand how and when these studies should be used. Toward this end, orientation sessions and conference-workshops, either internally generated or WHO or other external agency sponsored, can be helpful. Subjects that might be included are: an overview of modern management concepts as related to the health care system; the role of health service studies, surveys, etc., in finding solutions to problems faced by health systems managers; how and when to use studies to assist planning, implementation, control and evaluation of health programmes and projects; discussion of techniques and methods of health service studies stressing practicality, utility, and limitations specifically geared to country problems and to country reality; organization, functioning and linkages of a health service study unit and operating guidelines.

To date, it must be admitted that the productivity of health care studies has been poor. This is partly attributable to the health sector not being a "managed system," but that is not the whole answer. There are many pitfalls to be avoided. For example, studies tend to grow in size and scope. The research team often has difficulty confining itself to answering a specific question and over a period of time gradually increases the size and complexity of the study.

A classical example of this syndrome is the following. A study was initiated by a health ministry in an Asian country to determine the activities of a certain category of health worker to see if their functional capacity could be increased

to serve additional health programmes. Midway in the study it was suggested that the inquiry be expanded to include an activity analysis of all paramedical workers. Gradually this grew into a total health manpower study of the country, and that into a full health sector analysis which has become mired down by an overwhelming amount of data for which there are inadequate data processing capabilities and capacities. The original question which initiated the study has yet to be answered, and it is dubious that much of value will result from this expensive and time consuming exercise.

Of course there is a dilemma here. One cannot always predict in advance where an inquiry will lead and when vital unanticipated factors which bear on the question under investigation will be uncovered and require delineation; therefore, some flexibility in health service studies must be allowed. None-the-less, since collection, storage, and processing of information is costly and time consuming, to the extent possible, studies should be kept simple and practical and feasible in the context of country reality, and they should provide answers to specific questions. Studies commonly are too ambitious and attempt to answer too much at the same time, and this is a frequent cause for failure.

Conclusions and Recommendations

A conceptual framework has been presented in which health service studies are seen as an important means of providing specific information required for decision-making in the management of the health care system. In less developed countries, the priority areas for studies are those related to improving basic health services, increasing their coverage and utilization, and improving the use of scarce resources.

It is primarily up to management to recognize the need for management information; however, the health establishments of most less developed countries require orientation and guidance in this matter. Orientation sessions, conference-workshops, etc., should be developed and employed to stimulate interest and to improve skills in conducting and using health service studies.

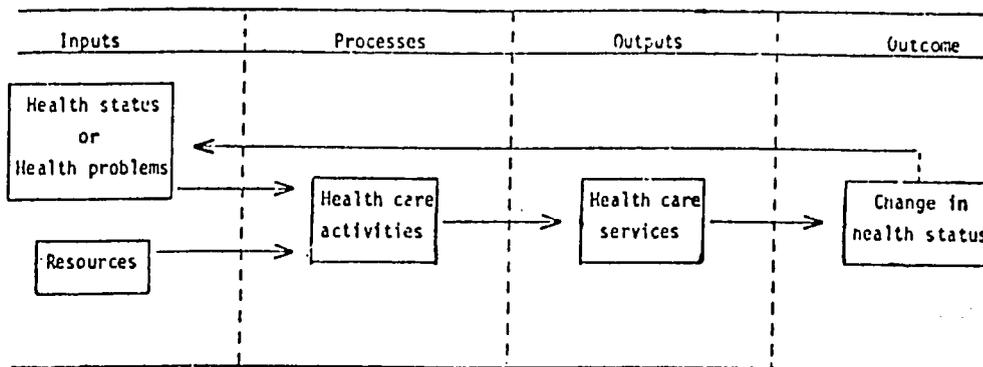
Historically, few studies of health services have resulted in significant change in the service studied. This is often because the study was carried out as an intellectual inquiry, rather than to provide information for management decision-making. Studies tend to be too complex and overtly ambitious. It is important to keep them as simple as possible and to answer specific questions. The study team must relate to the staff of the programme under study as well as to management. And the team must understand how decisions are made by management if

USING HEALTH SERVICE STUDIES IN LESS DEVELOPED COUNTRIES

the results of studies are to produce beneficial change which will be diffused into the health care system.

Figure 1

SIMPLIFIED MODEL OF THE HEALTH CARE SYSTEM



References

- (1) Suchman, Edward A. *Evaluative Research*. Russel Sage Foundation, New York, 1967.
- (2) Stringer, John. "Discipline in Place of Discipline; Some Problems of Organizing Multidisciplinary Research in Health Care Systems," pp. 107-119. In *Outcomes Conference-2, Method of Identifying, Measuring, and Evaluating Outcomes of Health Service Programmes, Systems and Subsystems*. Health Services and Mental Health Administration, Department of Health, and Welfare, Public Health Service, Washington, D.C., 1969.

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Criterion:

1.3. Hospitals have been suitably delegated the authority necessary to carry out their assigned responsibilities.

Indicators:

1.3.1. The scope of authority for each hospital within the system is clearly demarcated in writing.

1.3.2. There is no evidence of conflicting authority among agencies in the health system.

1.3.3. Authority delegations, once made, can be changed only by due process, the procedures for which are clearly spelled out.

Criterion:

1.4. There is a system for hiring managers who are sufficiently competent and experienced to permit them to carry out their duties.

Indicators:

1.4.1. Key administrative personnel are competent managers and have skills exerting influence.

1.4.2. Key administrative personnel are selected primarily on the basis of their ability to manage health and human service programs.

1.4.3. There is a system for the regular and periodic appraisal of the performance of administrative personnel.

2. Policy Formulation, Planning and Evaluation

2.1. Policy Direction and Flow

Criterion:

There is adequate policy direction and flow of policy making to facilitate the purposes of each health agency/facility.

Indicators:

2.1.1. The hospital maintains structural ties, which are suitable and operant, to the following other entities:

- a. Official policy makers;
- b. the chief executive of the jurisdiction;
- c. related departments of government;
- d. private sector health elements as appropriate;
- e. lay and technical advisory bodies, councils, etc.

2.1.2. Public agency policy making is not dominated by one or two professions, and there is a suitable mixture of professional, political and consumer interests involved.

2.1.3. The governmental agencies are clearly responsible to government and not to individual elected officials or outside forces.

2.1.4. The hospitals have major input and influence on local policies which affect it.

2.1.5 There is capacity to prioritize major issues in terms of political demands and implementability while keeping major cultural and traditional priorities in focus.

2.1.6. Rules and regulations of outside sources of funds are not permitted to negatively impact the hospital's ability to plan and manage their functions.

2.2. Policy Planning

Criterion:

There is a clear and distinct locus or entity which has responsibility for health policy planning.

APPENDIX B

Example of Criteria of Performance and Indicators to Measure Adequacy of Performance of a Hospital-related Function or Activity.

Management of Hospitals

1. **Organization and Structure**
2. **Policy Formulation, Planning and Evaluation**
 - 2.1 **Policy Direction and Flow**
 - 2.2 **Policy Planning**
 - 2.3 **Evaluation**

Similar criteria and indicators should be prepared for other relevant aspects of hospital management such as Personnel Management, Financial Management, Data Systems Management, etc.

MANAGEMENT OF HOSPITALS

1. Organization and Structure

Criterion:

1.1. There is an adequate management structure within each hospital to facilitate the delivery of health and medical services.

Indicators:

1.1.1. The hospital has clearly stated objectives and contributes to established policies.

1.1.2. The focus in the hospital is on establishing and achieving objectives.

1.1.3. The hospitals have suitable spans of management control which reflect the diversity and complexity of the local society.

1.1.4. The hospital system has a clear organizational hierarchy.

1.1.5. The hospitals have suitable functional and geographic divisions.

Criterion:

1.2 The hospital utilizes adequate management processes, consistent with its functions.

Indicators:

1.2.1. The hospitals make appropriate use of task forces and a variety of other means for intergrating staff across traditional lines.

1.2.2. Categorical funds are used appropriately and do not bar cooperation between programs.

1.2.3. Hospitals use management processes which provide information for budgeting and control of expenditures.

Indicators:

2.2.1. There is a formally designated unit which has written responsibilities assigned to it for leadership in health policy planning.

2.2.2. The health policy planning unit governing hospitals has a written mission statement which guides its overall activities.

Criterion:

2.3 There exists within the health policy planning locus the necessary skills and capabilities.

Indicators:

2.3.1. Sufficient staff with appropriate prior training and experience in health policy planning are provided to conduct the responsibilities of the planning function.

2.3.2 The policy planning staff has a demonstrated and recent record of data collection and analysis of pertinent health issues.

2.2.3. There is provision of regular staff development and training for policy planning staff.

2.3.4. There is evidence of an ability to link policy planning staff with external skill resources, including consultants, universities and others as a means of expanding staff capacities.

Criterion:

2.4 There is an effective policy planning process in use.

Indicators:

2.4.1. Affected administrators and other management personnel are involved in policy formulation.

2.4.2. Affected non-governmental parties are permitted and facilitated in making inputs to the policy planning process.

2.4.3. Communication and participation with elected governmental officials is incorporated in the shaping of policy proposals.

2.4.4 Consultation is maintained with major interest groups and their leaders in the course of shaping policy recommendations.

2.4.5. The review of preliminary or draft policy analyses by traditional, tribal or other leaders in communities within the jurisdiction is permitted and encouraged when such policies will effect traditional cultural values.

2.4.6. There is an on-going consultation with key executive branch officials, the director of health, and other appropriate cabinet members.

Criterion:

2.5 The policy planning process is linked to the local executive and legislative decision-making process.

Indicators:

2.5.1. There is on-going consultation with key executive branch officials, the director of health, and other appropriate cabinet members.

2.5.2. There is presence of a clearly established, formal, staff relationship between the policy formation entity and key executive branch officials.

2.5.3. The delegation of special policy analyses assignments by the key executive branch officials has been made expressly to the policy formulation entity.

2.5.4. There is an overall executive branch developmental strategy geared in part to policy formulation entity recommendations.

Criterion:

2.6. There is adequate funding for the health policy planning function.

Indicators:

2.6.1. Budgetary commitments to the policy planning over recent years have permitted maintenance of staff at a stable level, adequate in the judgement of the director of the policy formation entity and sufficient to meet regular workload requirements.

2.6.2. A significant percentage of funding for the health policy planning function has been derived in the past several years from local sources. (Percent of the planning budget: _____%).

Criterion:

2.7. Issue analysis is adequately carried out.

Indicators:

2.7.1. Problems are formally analyzed in terms of their precursors or causes, the nature, and their consequences.

2.7.2. The causes and consequences of problems are analyzed to determine the most effective point to intervene in order to ameliorate, control or avoid the problems.

2.7.3. Proposed interventions reflect general societal philosophy, and phrased as policy and take into account fiscal needs, personnel requirements and management and structural requirements.

2.7.4. Operational needs and circumstances, including necessary clients, are taken into account to assure that interventions will give desired results.

3. EVALUATION

Criterion:

3.1. There is adequate program evaluation throughout the health system and the hospitals in particular.

Indicators:

3.1.1. Each agency has an on-going evaluation process for all programs under which each major program is evaluated at least every two (2) years.

3.1.2. Results of evaluation are used to redirect program activities.

3.1.3. Program evaluations assess the adequacy of resources, processes, activities, outcomes and cost-benefits.

3.1.4. Each program contains a clear methodology for program evaluation.

3.1.5. An agency in the jurisdiction is charged with the overall responsibility of evaluating the health programs and facilities from a system-wide perspective.

APPENDIX C

DRAFT FINAL REPORT OUTLINE PROJECT IMPLEMENTATION OFFICE-HOSPITAL DIAGNOSIS AND ASSESSMENT OF HOSPITAL OPERATIONS IN THREE PROVINCES IN INDONESIA

I. EXECUTIVE SUMMARY

II. INTRODUCTION

- A. Mission, Goals and Objectives
- B. Background
- C. Study Approaches and Methodology
- D. Outline of Report

III. DESCRIPTION AND ASSESSMENT OF THE INDONESIAN HOSPITAL SYSTEM

- A. The Health Service Environment--Demographic and Health Status
- B. The Health System--Orientation and Management
- C. The System Structure--Promotive, Preventive and Curative
- D. Current Hospitals' Structure, Policies and Management
- E. Current Hospitals' Services--Delivery and Utilization
- F. Finance
- G. Human Resources

IV. PROBLEMS

- A. Introduction
- B. Problem Lists (Organized according to major subject areas)

V. THE ISSUES

VI. ANALYSIS OF ISSUES AND PROBLEMS, THE PREMISES AND CAUSATIVE FACTORS AND ALTERNATIVE SOLUTIONS/RECOMMENDATIONS

- A. Policy Formation
- B. Organization of Hospital System
- C. Facility Management
- D. Delivery of Health Services
- E. Financing
- F. Human Resources
- G. Priority Problems
 - High Cost of Producing Services

- Low Utilization
- Increasing Competiveness of Government Health Facilities

VII. STEPS TO IMPLEMENTATION

- A. Strategy--Prioritization, Tactics, Tasks, Assignments
- B. Stages

APPENDICES

APPENDIX D

Project Implementation Office,
Hospital

DRAFT PLAN OF WORK
FOR THE HOSPITALS STUDY PROJECT IMPLEMENTATION OFFICE (PIO), DAIGNOSITIC PHASE
HEALTH SECTOR FINANCING PROJECT
July 1988 — March 1989

Zukin-----
29 August 1988

dfw

HOSPITAL STUDY PROJECT IMPLEMENTATION OFFICE PLAN OF WORK

INTRODUCTION

The goal of this Plan of Work is to set out in detail the efforts required to diagnose the problems and their causes for recognized low work efficiency of hospitals in Indonesia, to gain a better understanding of the costs of hospital operations and services and to find ways to increase the utilization of government health facilities by those who can afford to and will pay for care. The work begins with the establishment of a Project Implementation Team to design and carry out the Project and is broadly divided in four specific sub-areas for study and a fifth area which will summarize and integrate the findings, analysis and conclusions of the four sub-areas. The Plan of Work is divided as follows:

- A. Design and Organization of Project Implementation
- B. Quality of Care
- C. Hospital Management
- D. Costing of Services
- E. Social Marketing
- F. Summary and Analysis

In each area, specific functions have been defined. Each function in turn is supported by a series of tasks needed to fulfill the function. Starting and completion dates and estimated professional personnel requirements (in terms of person days) are listed for each task.

Specifically the Plan of Work indicates:

1. What needs to be Done.
2. When it should be done.
3. Who will do it.
4. Where appropriate, how it will be done.

This plan of work is not meant to be a static document. Rather it is to be reviewed at appropriate periods by discussion sessions with key persons carrying out the work, those sponsoring the project and those impacted by the findings and outcomes of the project. The format of the Plan of Work facilitates periodic review and modification.

INSTITUTIONALIZING PROBLEM DIAGNOSIS AND RESOLUTION

An orderly work process has been built into the Plan of Work. It is based on the premise that change must take place in an organization in order to improve levels of effectiveness and efficiency. Further change can best be introduced through a planned series of interventions, each calling for substantial involvement of those responsible for implementation. In large part, these persons are at the operating levels of the Ministry of Health and related agencies in the districts and provinces.

This work process for the study areas consists of five basic actions which recur throughout the Plan of Work

1. Assess (fact-finding and analysis of the existing situation)
2. Design (for improved and strengthened procedures and systems)
3. Test (reviewing and trying out various data collection instruments and systems with operating personnel in the field. In some cases this might call for a pilot program, i.e. installing a system and operating it on a trial basis in a limited area such as a district, a province, a selected hospital or community.)
4. Install (proven systems and procedures through systematic training of operating personnel)
5. Monitor and Evaluate (follow-up and evaluation procedures with appropriate retraining, for on-going improvement and modification.

The output of this work process will build toward the institutionalization of mechanisms for data collection and analysis with respect to problems related to hospitals in Indonesia, and thus facilitate problem resolution, as well as to coordination, scheduling, evaluation, monitoring and costing and budgeting of health services and programs.

PROJECT TEAMS OR WORKING GROUPS

A Project Team approach is recommended to accomplish a specified task within a specific period of time. Whole months generally are used to indicate start and completion dates. Personnel requirements estimated to carry out the functions of the Plan of Work are divided into several categories, depending on the situation and tasks to be undertaken. In the case of the Hospital Study the following categories are identified:

"HSPIT"— Hospital Studies Project Implementation Team

"MOH"— Ministry of Health including the project Management Unit (PMU) of the Health Sector Financing Study, and ISTI

"Other GOI"— Other Government of Indonesia personnel—Ministry of Home Affairs etc.

"Ctr"— Implementing Contractors involved in the studies.

"Cnslt"— Consultants drawn from local institutions or from abroad

In computing "person days" it is assumed that 5 person days equal one person week and 20 person days equal one person month. Dates shown indicate only the Month the work begins and ends. If only one date is shown, it indicates only one Month of work, or less than one Month. Significant brief assignments are indicated in the remarks.

FLEXIBILITY

Any plan of work must maintain flexibility. Priorities and emphasis among functions and tasks may be redirected as work proceeds. Those involved in the situation analysis and problem diagnosis should be sensitive to shifts in policy and changes in the environment and change their plans accordingly. However, this Plan of Work does provide a useful guide to the work content of the Hospital Study Project Implementation Team and many others with whom it collaborates, as well as the basis for scheduling work.

SUMMARY OF PLAN OF WORK

Subject Area	<u>Person Days—estimated</u>					Cnslt	% of Total
	HSPIT	MOH	Other GOI	Cntr			
A. Design and Organization Project Implementation							
B. Study I — Quality of Care							
C. Study II — Hospital Management							
D. Study III — Costing							
E. Study IV — Social Marketing							
F. Study V — Summary and Analysis							
<hr/>							
Total							
Percent of Total Equivalent No. % person month							

FUNCTION AND TASKS	<u>Person Days—estimated</u>					Remarks
	Dates for Starting/Completion		HSPIT	MOH	Other GOI Cntr Cnslt	

A. DESIGN AND ORGANIZATION PROJECT IMPLEMENTATION

The design and organization of the Hospital Study Project begins with the establishment of the Project Implementation Team (PIT) by the Project Implementation Office of the Project Management Unit of the M.O.H. It details the functions and tasks necessary to design the project and to initiate its implementation. Although the PIT will design the project, the actual conduct of the project in three provinces will be carried out by implementation contractors.

- | | | |
|----|---|--------------|
| 1. | Select and recruit team members for study areas. | 7/88 |
| 2. | Conduct "Mini-Workshop" to reach consensus on design of protocol and instruments of study. | 7/88 |
| 3. | Prepare draft of methodology for study. | 7/88 - 8/88 |
| 4. | Develop guide lines for content and preparation of study instruments. | 8/88 - 9/88 |
| 5. | Decide on functions and selection criteria for contractors and arrange for their recruitment. | 8/88 - 9/88 |
| 6. | Prepare for pretesting instruments. | 9/88 - 11/88 |
| | a. Criteria for site selection. | 9/88 - 10/88 |
| | b. "Preconditioning" of site personnel. | 11/88 - 2/89 |

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FUNCTION AND TASKS	<u>Person Days—estimated</u>					Remarks
	Dates for Starting/Completion	HSPIT	MOH	Other GOI	Cntr Cnslt	

B. STUDY I — Quality of Care

Studies of quality of health care concern the optimum use of available resources to deliver health services which are acceptable both to patients and professional staff and consistent with achievable goals.

1. Reach consensus on subject areas to be assessed, i.e. (a) use of resources; (b) process of care; (c) health service outputs; (d) outcomes of care; (e) other.
 - a. For each subject area detail specific parameters to be studied and for each, the specific criteria, the indicators to measure the degree of performance and the data required for measurement and analysis.
 - b. Inventory the needed data that are currently available.
 - c. Specify additional data required.
2. Specify how needed data will be collected and where and how these will be processed.
3. Carry out the tasks.

FUNCTION AND TASKS

Person Days—estimated

Dates for
Starting/Completion

HSPIT

MOH

Other
GOI

Cntr

Cnslt

Remarks

C. STUDY II — MANAGEMENT OF HOSPITALS

The Management of the Hospital Study will examine the organization and structure of various types and levels of hospitals in three provinces. The major areas of focus will include management structure; management process, delegation of authority and responsibility; policy formulation, planning, direction and flow; issue analysis and evaluation. These areas are assessed in the context of relevant environmental factors—legal and regulatory; economic, technical, political and socio-cultural.

- 1. _____
 - a.
 - b.
 - c.
- 2. _____
- 3. Etc.

FUNCTION AND TASKS

Person Days—estimated

Dates for

Starting/Completion

HSPIT

MOH

Other

GOI

Cntr

Cnslt

Remarks

D. STUDY III. — Costs of Health Care in Hospitals

Analysis of the costing of hospital operations and services plays a critical role in preparing realistic budgets and in measuring hospital performance. The emphasis of this study will be on the types, sources and control of funds available to and used by the hospitals studied, and of the total and unit costs of health care in terms of both inpatient and outpatient care by the major functional units of the hospitals.

1. _____

- a.
- b.
- c.

2. _____

3. Etc.

FUNCTION AND TASKS

Person Days—estimated

Dates for

Starting/Completion

HSPIT

MOH

Other

GOI

Cntr

Cnslt

Remarks

E. STUDY IV — Social Marketing

This study is concerned with efforts aimed at enabling hospitals, particularly government hospitals, to increase the degree of cost recovery from paying patients and to increase the "market share" of government hospitals by making these hospitals more competitive. the study will analyze factors related to patient use and non use of government hospitals and their ability to pay for health services.

1. _____
 - a.
 - b.
 - c.
2. _____
3. Etc.

FUNCTION AND TASKS	<u>Person Days—estimated</u>					Cntr	Cnslt	Remarks
	Dates for Starting/Completion	HSPIT	MOH	GOI	Other			

F. STUDY V — Summary of Studies I-IV and Analysis

Study group V will serve to monitor and supervise the work of study groups I-IV so that there is consistency and comparability in the conduct of the studies in the three provinces. Study results from the three provinces will be analyzed, combined and synthesized, to identify modifiable factors responsible for low efficiency and low utilization in hospitals and to recommend remedial changes and interventions to resolve deficiencies and problems identified.

The social financing and drug studies of the Health Sector Finance Study and the Hospital Study are inter-related. Study Group V will collaborate with Project Implementation Offices of the financing and drug studies an the PMU so that there is effective coordination both of effort and consistency in approach.

1. _____
 - a.
 - b.
 - c.
2. _____
3. Etc.

APPENDIX E

ATTACHMENT NO. 1

National Health Planning Unit
Ministry of Health
18 March,

RECEIVED

PROJECT TEAM SPECIFICATION

MAR 11 19

HUMAN RESOURCES

Paul Zukin, M.D.

1. ASSIGNMENT

Inventory existing health manpower and training programmes. Define criteria for personnel needs, staffing patterns, and future manpower forecasts.

2. STARTING DATE

15 March,

3. COMPLETION DATE

31 July, for Results a. through f. Phase 1.

4. PURPOSE

To obtain specific manpower and training data at present and on an on-going basis and to obtain information to form the basis for forecasting manpower needs to support the future health sector design.

5. RESULTS EXPECTED

Phase I

- a. Complete inventory of existing health manpower by job classification, grade, age, length of service, qualifications, geographic location and by facility.
- b. Establish methodology for regular up-dating.
- c. Define the specific tasks to be performed by each cadre of health personnel.
- d. Develop criteria for staffing for each facility, unit, or service.
- e. Complete inventory for existing health manpower training programmes and facilities, determine current and proposed output for each institution.
- f. Develop a mechanism for regular up-dating of the training programmes.

Phase II

- g. Evaluate the training programmes of each institution and compare with the tasks as specified above; make recommendations for alterations of the training programmes.
- h. Develop future manpower forecasts

National Health Planning Unit
Ministry of Health
18 March, 19

2.

6. RESOURCES REQUIRED

- a. Personnel: Project team members as specified.
- b. Person-days required are estimated at a total of 78 with 48 from Planning Unit staff and 30 from other team members in the Ministry of Health and other Ministries, Departments, and the Medical School.

7. ASSUMPTIONS AND CONSTRAINTS

The major assumption to carry out Phase I of the results expected is that the personnel data from the Accountant-General computerized in the salary schedules is reliable. The main concern is that there may be a large number of ghost names, but this seems unlikely to be a major problem since these would be almost all unskilled labourers. The most time consuming part of the activities will be obtaining the necessary additional information from the regions to add to the computer print-outs. It remains to be seen if the mechanism for up-dating can be satisfactorily added to the computer programme at the Accountant-General's office.

8.	<u>TEAM COMPOSITION</u>	<u>Total Expected Time</u>
a.	Dr. Office of the Regional Medical Officer of Health, Greater Region (Chairman).	12 days
b.	Professor Department of Community Medicine, Medical School.	3 days
c.	Mrs. Dep. Director of Nursing (Ed.), MOH	3 days
d.	Miss Post-Basic Nursing Department, University of	3 days
e.	Mr. Manpower and Training, Division, Ministry of Health.	6 days
f.	Mrs. National Health Planning Unit	24 days
g.	Dr. National Health Planning Unit.	12 days
h.	Dr. National Health Planning Unit.	12 days

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CONSULTING MEMBERS

- a. Mr. - Executive
Director, Manpower Board.
- b. Dr. Department of
Community Health, Medical
School,
- c. Dr. Representative,
WHO.

9. LINKAGES

- a. Centre for Health Statistics.
- b. Establishment Secretariat.
- c. Public Services Commission.
- d. Manpower Board.
- e. Medical/Dental Council
- f. Nurses and Midwives Council.
- g. Pharmacy Board.
- h. Technical Divisions of Ministry of Health.
 - (i) Laboratory Technicians, (ii) Radiographers,
 - (iii) Environmental Health Technicians,
 - (iv) Nutrition Officers, (v) Medical Field Units.

10. METHODOLOGY

Computer print-outs from the Accountant-General listing all people by name receiving salaries from the Ministry of Health are now available for each region by pay station. The information presently available by computer includes the staff number, name and pay station but does not include the birth date, job classification, grade, length of service or facility in which the person is working. This additional information will be obtained by taking the computer print-outs to the Regional Medical Offices and obtaining the data from source. The information so obtained will be put on the punch cards and magnetic tape storage. Tabulations will then be made by job classification for each region and each facility.

The definition of specific tasks to be performed will be carried out by the project team in consultation with Divisional Heads, Regional Medical Officers and other appropriate people. The evaluation of the training programmes must be done in relation to the definition of these tasks and will have to wait until these initial tasks have been carried out.

11. ACTIVITIES AND TIME SCHEDULE

ACTIVITY	19 March	19 April	19 May	19 June	19 July
a. Define Tasks and Organise Project Team		x			
b. Collect existing data from Accountant General	x				
c. Obtain additional data for the computer print-outs from the Regions			x		
d. Punch cards for new data. Develop tabulations.		x		x	
e. Establish mechanism for up-dating		x			x
f. Define tasks for each cadre of health personnel		x			x
g. Complete training programme inventory			x		
h. Establish mechanism for up-dating training programme.			x		x
i. Prepare and present reports covering Results Expected.				x	x
j. Institute Phase II					x

12. COSTS

Travel and Accommodation Time to Regions.
 Computer programming, cards, and tape.

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