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**REVIEW OF THE PROTOCOL AND INSTRUMENTS FOR THE ASSESSMENT AND DIAGNOSIS OF
HOSPITALS IN THREE PROVINCES IN INDONESIA**

HOSPITAL OPERATIONS DIAGNOSIS IN THREE INDONESIAN PROVINCES

PROJECT IMPLEMENTATION FOR HOSPITALS

8

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TABLE OF CONTENTS

	Page
Report of Lewis A. Lippner Review of the Protocol and Instruments for the Assessment and Diagnosis of Hospitals in Three Provinces in Indonesia	1
Report of Louis E. Gordon Hospital Operations Diagnosis in Three Indonesian Provinces	12
Report of O. Emy Smith Project Implementation for Hospitals	17

Report of Lewis A. Lippner

**Review of the Protocol and Instruments for the Assessment
and Diagnosis of Hospitals in Three Provinces in Indonesia**

A. ACKNOWLEDGEMENTS

This consultancy was for the purpose of assisting the Project Implementation Office for Hospitals, the Project Management Unit of the Health Sector Financing Project, the Ministry of Health of Indonesia, and the U.S. Agency for International Development to evaluate the Criteria and Indicators set forth in the third draft of the Protocols and Instruments of the Hospitals Study. Unfortunately, the fourth draft was not available in English and I was unable to obtain a translation during my brief visit.

Recommendations contained herein were derived from many meetings, discussions and consultations held during the period October 10-15, 1988, in Jakarta, Indonesia. These consultations were augmented by my professional experience as a Hospital Chief Executive and University Professor specializing in multi-hospital systems.

I wish to thank the members of the Project Management Unit and the Project Implementation Office for Hospitals for orienting and assisting me to understand the study objectives. Drs. Budihartono, Rukmono, Soedibjo, Aziz, D'Agnes, Kartini and Ms. Perla and Boucheri all assisted by extending their courtesy and hospitality to me during my visit.

B. SUMMARY OF RECOMMENDATIONS

Without reiterating the purposes and objectives of the Health Sector Financing Study in detail, we can summarize the goals as increasing hospital efficiency and cost recovery so as to facilitate reallocation of existing resources to enhance child survival services, health promotion programs and decreases in birth rate.

Given the foregoing goals, a framework for measuring medical and hospital performance in the three demonstration provinces is required which permits inter-institutional comparisons and evaluation of performance at a single institution over time.

In order to facilitate comparison and to provide objective, quantifiable indicators, increased precision and specificity is required in developing the protocol and instruments set forth in the hospital diagnosis. As presently written, different contractors operating either on different portions of the study or in different provinces (depending upon whether a horizontal or vertical approach is employed) could develop formats and outputs that would not be comparable for the same subject area. Detailed output specifications for each task are needed to ensure reliability and validity.

Selection of local contractors and the methodology of study organization are two critical path variables that have become the subject of internal debate. Limiting the number of contractors to one for all study hospitals and sub-sets of the study in each province minimizes the likelihood of coordination problems. Moreover, if task specification is precise and PIO-Hospitals' supervision effective, study output should facilitate comparisons between and among institutions both within and across each geographical area studied (see Quality of Care section).

Due to the complexity of the variables being studied and the large number of agencies, institutions and levels of government involved in this undertaking, it is recommended that regular training and consultative meetings be organized. If effective changes in systems, regulations and hospital industry infrastructure are to be achieved, it is essential that leaders of participating institutions be brought together periodically with Ministry of Health leaders as well as study contractors, consultants and staff throughout the study to review progress, offer input and express opinions. In this manner, consistency and feedback can be validated and feelings of participation enhanced.

C. SCOPE OF WORK

Purpose: Consultant will assist the Project Implementation Office for Hospitals, finalize the protocol and instruments for the hospital diagnosis in three provinces.

- Tasks:**
1. Review the draft protocol for conducting the hospital diagnosis.
 2. Review and finalize criteria and indicators which can be used as parameters for assessing hospital function.
 3. Assist in pre-testing data collection instruments and in the final revision of the instruments and protocol. (Due to incomplete status of instruments, consultant was unable to conduct pre-tests during this visit.)

Time: October 10-15, 1988

D. STUDY TOPICS - SUBJECTS

Draft III of the Protocol and Instruments of the Hospitals Study - PIO Hospitals - Health Sector Financing Project identifies four main subject sub-studies to be conducted at a B, C and D level government hospital and one private hospital in each of three provinces (West Sumatra, East Java and Bali). The study topics or subjects are:

- I. Quality of Care
- II. Hospital Management
- III. Cost of Services
- IV. Ability to Pay (Social Marketing).

If a horizontal approach is adopted in contracting for each study topic across the three provinces, a fifth or summary and integration study must be added. If a vertical approach is utilized one contractor will complete all subjects in each geographic area making the fifth integrative study unnecessary. Synthesis by geographic region will be automatic as the contractor will integrate each topic area for all institutions within the province assigned.

E. METHODOLOGY

Use of questionnaires, interviews and/or retrospective record reviews should be specifically linked with each variable identified as a study data element. Subjective observations should be minimized to the extent possible to avoid consultant biases and inconsistency between observers. To the greatest extent possible approaches should target creation of measurable, quantifiable data obtained from routine sources such as statistical or financial reports, medical records and/or operative reports. When interviews are utilized a standard set of questions should be developed and interviewers should be trained to use similar techniques. Some open ended questions are desirable for obtaining situational input at each test site. A section asking for comments and/or suggestions may be useful in conveying

a desire for participation by local leadership personnel but the body of questions should be standardized for each level or topic of inquiry. The protocol and instruments should specify each question to be asked and the specific position incumbent by title or position from whom a reply will be sought.

F. STRUCTURAL REVIEW

Analysis of the organization structure, committees and task forces of hospital management and the medical staff may be employed as a "process" review technique during the survey. While the existence of certain structures may be identified, the functional relationships among the structures and the composition of each will reveal whether the important players within each organizational discipline are participating in decision-making. Methods of governance, management and medical peer review activities can be identified and critiqued during this part of the analysis. For example, does a utilization review committee exist? Are length of stay or cost outlayer cases reviewed by physicians in the same specialty? Are corrective actions taken? Are educational programs developed and implemented when inappropriate utilization patterns are identified? Are all members of the medical staff required to participate? Review of the minutes of a meeting of such a group would indicate attendance and topics covered. Similar approaches can be employed for other topics such as medical records, governance, safety, etc.

These structural process reviews should include review and/or preparation of tables of organization identifying each department or function and review of all committees and their reporting relationships (whether standing or ad hoc). From these evaluations, detailed job descriptions should be prepared for each position summary and detailed specification of duties and responsibilities for the incumbent. In the human resources area (personnel function) for example, detailed wage and salary scales and a relative ranking of all positions or a job grading system should be identified which utilizes an objective job content evaluation methodology.

The charge or purpose of each hospital and medical staff committee should be written and should identify the composition of the membership and means of selection of committee members. Similarly, committee reporting relationships need to be identified and defined in writing.

Governance responsibilities for the organization should be vested in an identifiable body with written minutes of both regular and special meetings. The authority of all parts of the organization flows from the governance structure so the purpose or authority of this body over time should also be available for review.

From the foregoing analysis it should be possible to catalogue the number, type and qualifications of personnel in each job category, their annual compensation and fringe benefits and the responsibilities of each position.

By extending this approach to the medical staff and incorporating such statistics as number of admissions by services, numbers of patient days by services and average length of stay by services for each practitioner, it will be possible to catalogue the number and activity level of each member of the staff.

Review of the management structures and relationships among the parts of the organization should reveal if input and participation from appropriate disciplines has been institutionalized within the organization, and may suggest changes necessary to increase organizational efficiency and effectiveness.

G. DEPARTMENTATION

It is recommended that a standardized list of departments be developed to guide contractors and consultants in evaluating how each function is accomplished in each setting. While not all departments will be found at each study site, the use of a standardized tool will assist in evaluating differences between institutions and will be of assistance in developing a cost matrix. (See Appendix A.) The absence of key departments may also suggest changes required to improve quality of care or managerial efficiency.

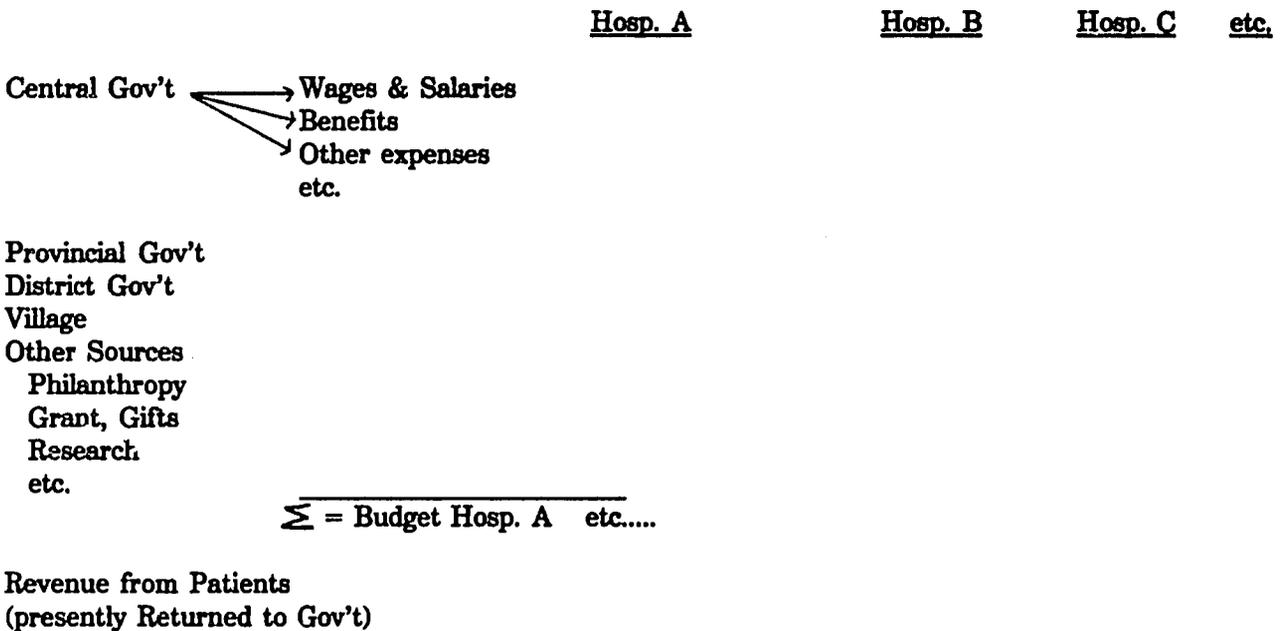
H. COST

Once a list of departments is developed a standard chart of accounts can be employed to provide a methodology for accounting for revenue and expenses by department. An excellent example is a Chart of Accounts For Hospitals written by Truman Esmond (National Health Partner - Peat, Marwick & Main Inc.). Use of a standardized chart of accounts for all study hospitals will make it possible to make comparisons between hospitals and to monitor progress within an institution over several study periods.

I. DETERMINATION OF COST

Since funding from governmental sources is known, and institutional records should reveal patient collections, it is possible to construct a hospital-specific budget for each study institution. By asking each hospital director to allocate revenue and expenses by department (from the standard list) the study group should be able to develop a first pass accounting system which can be uniformly applied to all hospitals in the study. While the first attempt may be only moderately successful, each successive effort should increase the accuracy of this exercise as actual expenses and revenue can be recorded in the same format and an actual historical record developed and used to budget for the following period.

J. SOURCES OF FUNDS:



K. STATISTICAL DATA BASE

Utilization rate, patient activity and physician performance profiles should be developed into a standardized data set to be collected from each hospital. Rate setting and cost finding will be facilitated if a standard measure of productivity can be identified for each hospital function or department. The space allocated to each department should be identified and updated regularly so that space, time or full time equivalent numbers can be used to allocate costs from non-revenue producing areas to revenue producing departments for rate setting purposes.

Examples of the types of precise measures sought by department are identified below:

Nursing unit - square meters - number of full time
of space equivalent (fte's)
personnel

Average occupancy by day (absolute number)
Percentage occupancy $\left(\frac{\text{occupied beds}}{\text{total bed complement}} \right)$

Average length of stay
Total number of beds
Number of beds by class

Labor and delivery - square meters - #fte's
of space

Number of normal deliveries
Number of C-Sections
Average number of deliveries per day

Laboratories - square meters - # of fte's
of space

Total number of lab tests per day, week, months, etc.
number of quality controls & standards (utilized for calibration and quality assurance)
Number of surgical pathology specimens processed (frozen sections)
Number of post mortum exams
Percentage of death with post mortums

Radiology: square meters - # fte's
of space

Number of films shot
Number of exams (may include more than one film)
Number of ultra sound exams
Number of therapeutic radiology treatments by type of treatment

L. QUALITY OF CARE

Evaluation of the quality of care is one of the most difficult aspects of the study. Process techniques will only identify that the proper facilities exist within the institution, not whether appropriate interventions or consultations were ordered in specific cases.

Outcome evaluation, on the other hand, may be used to ascertain if acceptable results are forthcoming in relation to community standards for similar diagnostic categories. However, retrospective outcome audits and a sufficiently developed medical abstract and coding system to make meaningful intra-and inter-institutional comparisons possible are required to employ this approach.

Since standard treatment protocols are not yet in widespread use for any given diagnostic category of cases, evaluation of the quality of care in any institution will have to depend on a peer review "process" technique.

It is suggested that a frequency distribution of caseloads be developed using the medical records department of each institution to be studied. A random sample of the ICD-9 coding of discharge diagnoses should be validated via physician - contractor chart review to ensure accurate classification of cases. After validation, the most frequently treated categories of cases can be evaluated by an expert physician panel drawn from recognized Indonesian medical leaders.

It is recommended that panels be created for each major diagnostic category, i.e., General Internal Medicine, Infectious and Parasitic Diseases, General Surgery, Orthopedic Surgery, Pediatrics, OB/GYN, etc. Moreover, to the extent feasible, each panel should conduct all case reviews within a single diagnostic area regardless of where the case was treated. Institutional names, patient identities and the identity of the physician of record can be masked by coding the origin of charts reviewed. However, a sample consisting of a sufficiently large number of cases from each institution in each diagnostic category treated by a variety of attending physicians must be obtained to engender statistically significant results.

If such a retrospective review process were employed it could represent the initiation of a national quality assurance process, whereby outlayer results or treatment plans could become the subject of corrective education programming. The same approach could be employed at an institutional level, but sufficient numbers of cases or physician sub-specialty expertise may not be available at the local level to ensure reliability and validity.

M. ABILITY TO PAY (SOCIAL MARKETING)

Consumer selection of site of service, physician and staff attitudes and the attractiveness of accommodations and facilities have received a lot of attention in health care literature recently. Interview techniques may be appropriate for discerning consumer and staff attitudes but are clearly unnecessary and inappropriate in ascertaining ability or willingness to pay for the costs of care received.

However, a number of national and international data sets exist which can be obtained in machine readable form to develop patterns of employment, income and socio-economic profiles of population in each study province. Third count census data include household income and employment data as well as other proxy measures of sanitation facilities, home size and ownership characteristics. World Health Organization and World Bank sources should also be explored. Indonesian sources of information such as the Ministry of Commerce, Home Secretariat, Provincial Government, etc. should be utilized to develop a socio-economic profile of residents of each regency included in the study.

In this way objective, statistically-sound, profiles can be developed with attitudinal supplementation provided from patient, family and staff interviews. Health economists should be able to estimate the proportion of each socio-economic group's disposable income available to cover the costs of care rendered in study hospitals.

N. RELATIONSHIP OF CHARGES, COSTS AND PROFESSIONAL FEES

A note of caution is indicated at this point as we have not evaluated the accuracy of rate setting (charge determination) in existing facilities. If a variety of alternative health insurance is to be introduced experimentally, it is critical that we ascertain the relationship between costs and charges. A secondary issue, but one of great significance to physician providers, is whether in a system of salaried full-time medical staffs the institution will take assignment and bill third parties for professional services. If the answer is yes, retention of hospital-based physicians may require significant upward adjustment of compensation levels and fringe benefits. If the answer is no, issues of control over privileges and staff appointment should be addressed. Of course a combination of salaried full-time and voluntary physicians is possible, with the latter billing privately and the former having their fees collected by the institution. In any of these alternatives the incentive systems must be planned in advance to foster high-quality, cost-effective service delivery.

O. CONCLUSION

Needless to say it was not been possible in one week to redefine all the instruments contained in the protocol. However, the need for more precise definition of variables and study elements has been recognized and discussed extensively. Moreover, I have recommended that regularly scheduled meetings involving leaders from the Ministry of Health and participating institutions be planned to encourage cooperation and feed-back and to legitimize the efforts of the Project Implementation Office for Hospitals.

APPENDIX A

Sample Department List

Administration	Medicine	} Sub-specialties
Medical Director	Surgery	
Graduate Medical Education	OB/GYN	
Nursing Administration	Pediatrics	
Finance		
<u>Patient Accounts</u>		
<u>General Accounting</u>		
<u>Admitting</u>		
<u>Accounts Payable</u>		
Personnel		
Purchasing		
Public Relations		
Central Sterile Supply		
Planning & Marketing		
Dietary (Food Service)		
Maintenance		
Housekeeping		
Nursing Units		
<u>ICU</u>		
<u>CCU</u>		
<u>M/S</u>		
<u>OB</u>		
<u>Labor/Delivery</u>		
<u>etc.</u>		
Operating Theatre		
Emergency		
Clinical Labs		

Micro
Bac T
Chem
Hemo
Anatomic Path
Surg Path
Diagnostic Radiology
Therapeutic Radiology
Nuclear Medicine
Ultra Sound
Outpatient
Pharmacy
EEG
EKG/Echocardiography
EMG/ENG
Speech & Hearing
Physical Therapy
Occupational Therapy
Vocational Rehabilitation

APPENDIX B

**Chart of Accounts For Revenue & Expense
Recording By Department
Actual and Budget (Projected)**

Departments	Operating Expense Accounts			Revenue Accounts			Capital Accounts
	Budget	Actual	Variance	Budget	Actual	Variance	
Admin.							
Med. Dir.							
Nurse							
Finance							
etc.							

Report of Louis E. Gordon

Hospital Operations Diagnosis in Three Indonesian Provinces

A. CONSULTANCY PURPOSE

The purpose of this consulting assignment, conducted from September 24 through October 3, 1988, was to assist the Project Implementation Office for Hospitals with activities relating to final preparations for the conduct of a comprehensive diagnosis of operations within selected government and private hospitals. Project studies are to be conducted in twelve hospitals, equally divided among the provincial jurisdictions of West Sumatra, East Java and Bali.

Primary tasks associated with this assignment include: 1) assist with final field preparations for the hospital diagnosis; 2) review capabilities of potential bidders for the diagnosis and advise the Project Implementation Office regarding strengths and weaknesses; and 3) review and finalize the work plan for the hospital diagnosis.

Key observations are noted below.

B. ACKNOWLEDGEMENTS

Special appreciation is extended to members of the project team for their hospitality and assistance in appointment scheduling and orientation to the project implementation status. Dr. Kartini Binol was particularly helpful in providing insight into various aspects of the project.

The open dialogue with Dr. Soedibjo and Dr. Rukmono regarding project background, environmental constraints and opportunities was most enlightening.

C. GENERAL OBSERVATIONS

1. Initial discussion with senior members of the PMU placed emphasis on the need for putting in place an organizational structure which will assure project integrity and professionalism in carrying out field assignments and subsequent activities relating to the diagnosis, analysis, evaluation, and implementation of system/operational improvements within the subject hospitals. Concern focused on the organizational approach which had the greatest potential for assuring ultimate success of the project, i.e., horizontal vis-a-vis vertical structure.

To gain a clearer understanding concerning the organizational approach currently in place, Dr. Rukmono and this consultant met with Dr. Soedibjo. The current approach is as follows:

Project Management Unit

Project Implementation Office

Province I

Province II

Province III

The Chief Medical Services Office in each Province will function as the project activities center, providing assistance to contract consultants and project management, as required.

With cooperation of the provincial Chief Medical Services Officer, the contract consultants will carry out their assignments in the designated hospitals. Consultants studies will address the following general areas: Quality of Care; Hospital Management; Financial Systems/Cost; and, Social Marketing/Health Care Financing. A "horizontal" approach is to be used in conducting the diagnostic studies.

An Analysis and Integration Study will be undertaken, thus consolidating findings from each of the general study areas, noted above. As the project progresses, it is anticipated that linkages will be established and maintained between all participants so as to assure positive communication and collaboration.

Upon completion of the Analysis and Integration Study, priorities will be determined and appropriate actions taken.

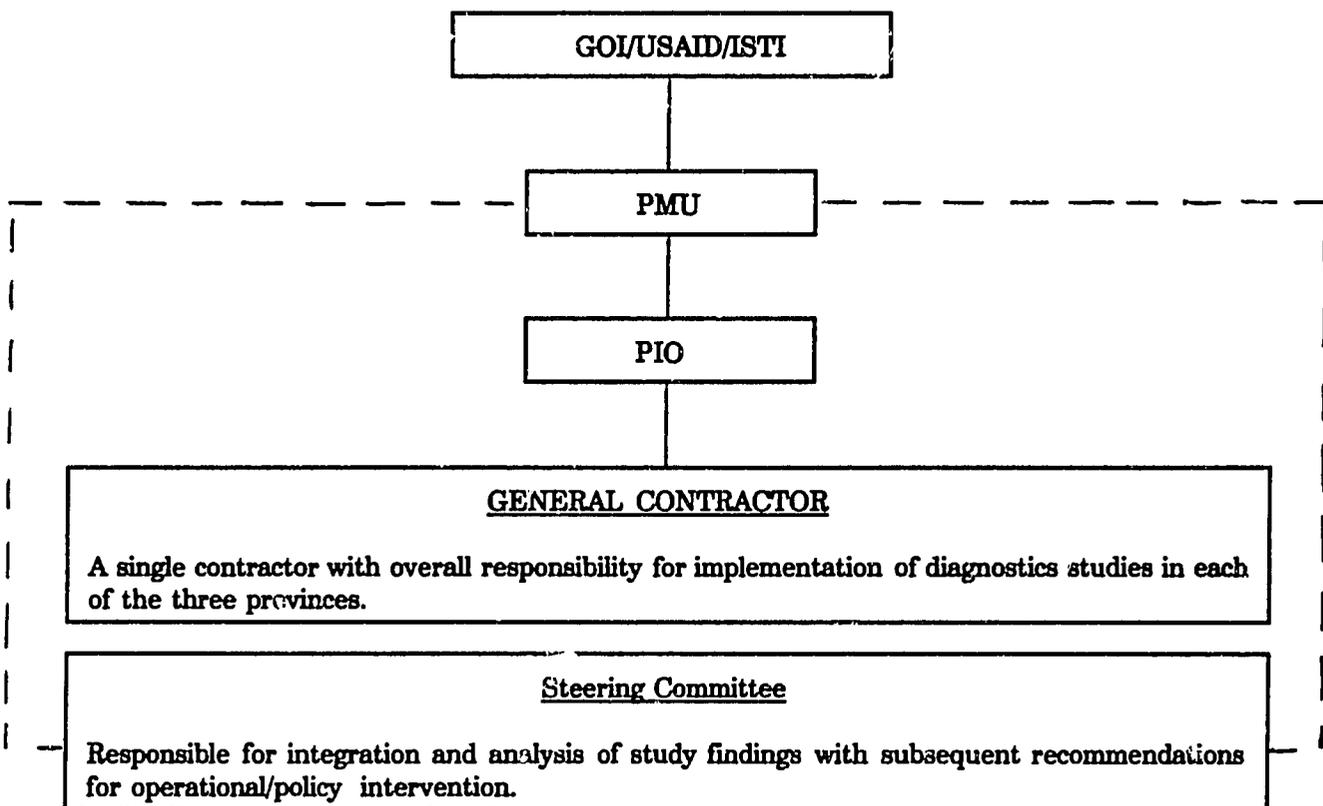
The above represents this consultant's understanding of the approach presently in place, under Dr. Soedibjo's leadership. The project appears to be moving along rapidly, in line with the above-described process. If an alternative approach is deemed more appropriate, immediate intervention might, at this point, result in rather difficult consequences.

2. While each of those who are participating in the planning/implementation process are talented and highly motivated, most are physicians with little or no operational experience beyond their chosen specialties. It seems apparent that other disciplines must be brought into the process immediately so that the project can benefit from a broader base of professional input, i.e., Nursing Management; Medical Information/Medical Records Administration; Financial Management; Engineering/Bio-Medical Operations, etc.

3. The primary focus of what has and is being discussed relates to the development and maintenance of quality standards. The Joint Commission on Accreditation of Health Care Organizations publishes several manuals dealing with quality issues and standards for virtually every functional area of the hospital, its medical staff and governing body. This material is readily available and will provide a valuable reference resource for those involved in the project. Source and cost of this material has given to the Project Director.

4. There is some degree of uncertainty as to the roles, responsibilities, and authorities of the various actors. Of additional concern is the organizational approach for implementing the four diagnostic studies, under supervision of the PIO.

In his consultant's report, Dr. Zukin briefly described three organizational approaches for implementing the studies. At the risk of oversimplification, a fourth alternative is suggested which may satisfy proponents of both "horizontal" and "vertical" persuasions.



Strengths of the above approach:

- a) **Simplicity of approach with clear lines of accountability, responsibility, and authority.**
- b) **Consistency in methodology of information and data gathering and analysis.**
- c) **Consistency in database development for future comparative analysis.**
- d) **Attractive to top expert consultants who will consider it worth their time and effort.**

- e) **Composite of findings for each of the diagnostic studies easily assembled, i.e., for all hospitals studied, for specific hospitals, for all hospitals within a province, for groups of hospitals according to size, etc.**
- f) **Will facilitate knowledge transfer and corrective intervention.**
- g) **Most importantly, this approach will maximize continuity and coordination of diagnostic studies.**

Weaknesses in the above approach are minimal.

5. While in transit to this assignment, the consultant had the privilege of meeting the General Manager of a major Indonesian corporation. This executive was very interested in the healthcare issues of his country and more specifically, this consultant's assignment. He volunteered the idea that his corporation (and, possibly others) might be in a position to offer Project assistance either now or in the future, as further studies might be initiated or intervention required. The opportunity to benefit from the experience and expertise of industry should be explored. The concept of a healthcare coalition, bringing together industrial and healthcare leaders, could open up new avenues for healthcare needs identification and system improvement. At some point, the coalition might expand its scope of interest to the other components of this Project -- healthcare financing and pharmaceuticals.

D. SUMMARY

Time constraints and unavailability of certain background material, i.e., contractor bid documents, etc. have limited the consultant's ability to fulfill all of the tasks assigned. It is hoped that this consultant's occasional participation in group dialogue has been of benefit to the Project.

Report of O. Ray Smith
Project Implementation for Hospitals

A. BACKGROUND

The purpose of this report is to outline the results of a review of Study Protocols III and IV of the Health Sector Financing Project under the Director of the Project Implementation Office for Hospitals, Ministry of Health, Republic of Indonesia.

The review of the Study Protocols was undertaken during the period of September 30 through October 9, 1988 by O. Ray Smith on a consultancy assignment utilizing a written scope of work as a guide. Specifically the tasks associated with the scope of work were:

1. to review the protocol and instruments of each of the Study Protocols;
2. to assess the methodology to be utilized relative to the collection of data for each Study Protocol;
3. to make recommendations with regard to improvement of data collection plans; and
4. to review data which has been collected, assessing the data indicators and the quality of the data collected.

B. OBJECTIVE

The objective of this review, involving the four specific points listed above, was to assist in finalizing the Study Protocols III and IV.

It is very important, for the purpose of this review, to restate the objective of the Health Sector Financing Project. That objective is to improve the financial condition of hospitals in such a way as to allow for reallocation of some financial resources currently being utilized for hospital activities to other health-related activities. Concurrently, it is expected that improvement of the efficiency and effectiveness in the delivery of health services will attract a larger portion of paying patients, thus also improving the financial conditions of the hospitals.

Study Protocol III deals with the costs of health care in hospitals. Study Protocol IV deals with marketing aspects of health care rendered in the hospitals. The results of each Study Protocol should bring to light various aspects of health care costs and health care marketing within the hospitals which will contribute to the objective of the Health Sector Financing Project which was stated above.

C. REVIEW

A review of the Protocols and Instruments of each of the Study Protocols (III and IV) was undertaken. There were two sources of information utilized in this review. The first and major source was from pages 42 through 53 of the English translation of The Protocols and Instruments of the Hospitals Study-PIO Hospitals, Health Sector Financing Project, draft number three. The second was parts of Appendix D, called the "Plan of Work," from Dr. Paul Zukin's draft report dated September 1988 which was concerned with the development of methodology and the work plan for the assessment of hospital operations in this study.

Dr. Zukin stated that Study Protocol III must "emphasize 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." This type of information is important because it is required as a basis for "preparing realistic budgets and measuring hospital performance."

Additionally, he stated that Study Protocol IV, which is concerned with marketing aspects of hospital services, will "analyze factors relative to patient use and non-use of hospitals and the [patients] ability to pay for these ... services." Further, the objective would be to identify ways through marketing to "increase cost recovery ... and market share."

D. ASSESSMENT METHODOLOGY

With regard to the assessment of the methodology to be utilized relative to the collection of data for each Study Protocol, it is proper that the descriptions of the two Study Protocols under review, as established by Dr. Zukin and presented above, be utilized as the appropriate definition of the respective Study Protocols. Assessment of the methodology associated with each Study Protocol will be based upon these definitions. The information found on pages 42 through 53 (referred to above) served as the source of all information concerned with methodology.

The assessment methodology consisted of a review and analysis of the material as presented on pages 42 through 53 (referred to above) with regard to each Study Protocol, and a comparison of the material with the definition of each Study Protocol as established by Dr. Zukin and stated above.

E. RESULTS AND RECOMMENDATIONS

The results are as follows:

1. The methodology associated with Study Protocol III is generally compatible with the definition as established. The only exception has to do with the questionnaires (instruments) which will be utilized as a method of measurement of the results.

2. The methodology associated with Study Protocol IV is less compatible with the definition as established. Specifically, the information requirements appear to be too broad and too comprehensive. Information requirements should be limited only to those indicators which are associated with market share. In other words, the methodology could be limited and simplified.

3. With regard to recommendations concerning improvements of data collection plans, the following should be considered:

a) with regard to Study Protocol III, specific questionnaires which are standard and can be utilized at all hospitals in the survey must be developed and presented, either as a part of the methodology or at a time prior to requesting collection of cost data from the various subcontractors. This is important because without it there will be no consistency or comparability when it comes time to collect and compile the cost data from the several subcontractors. Further, it may be very difficult to come to any conclusions relative to additional steps in the work processes (assess, design, test, monitor and evaluate) of the study; and

b) with regard to Study Protocol IV it is suggested that certain information requirements as presented in the methodology may not be particularly relevant to establishing a clearer idea of

ways to impact the marketing aspect of medical services. Among those factors which are more important than others are information about admitting physicians, referred patterns of physicians hospitals capabilities for the provision of services, services in demand for which there are no current provisions and the capability and willingness of patients to pay for services. It is particularly important that physician and patient information of this nature be researched thoroughly since the physician, and to some extent the patient, may control hospital utilization.

Lastly, it was suggested that a review of data be made, specifically assessing the data indicators and the quality of data collected. In my review of the documents which were provided and in my discussions with key individuals associated with the Project, as I did not have access to data which had been collected to date, I was not in a position to assess same.