



# HEALTH SECTOR FINANCING PROJECT

Ministry of Health  
Republic of Indonesia

## CONSULTANT REPORT SERIES

### REPORT 23:

#### LECTURE:

- PART I OVERVIEW
- PART II HOSPITAL UNIT COSTS:  
THEIR VALUE AND HOW THEY  
RELATE TO EACH COMPONENT OF  
THE HEALTH SECTOR FINANCING  
PROJECT
- PART III A SURVEY OF HOSPITAL  
MANAGEMENT PRACTICES



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MINISTRY OF HEALTH  
REPUBLIC OF INDONESIA

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## ACRONYMS

<b>DEPKES</b>	Ministry of Health
<b>KANWIL</b>	District Health Office
<b>RSAM</b>	Rumah Sakit Achmad Mochtar (class B hospital)
<b>RSIS</b>	Rumah Sakit Ibnu Sina (private Moslem hospital)
<b>RSUD</b>	Rumah Sakit Umum Daerah (province-owned hospital in Padang Jagong)
<b>RSUP</b>	Rumah Sakit Umum Pusat (centrally-owned hospital)

## INTRODUCTION

This presentation was given to the Ministry of Health and other invited Indonesian Government officials and staff. Also present were International Science and Technology Institute, Inc. representatives. My presentation was given in conjunction with other team members, Dr. Paul Zukin and Professor Carl M. Stevens.

Our presentation responded to the assignment to review the reports generated by two local Indonesian contractors, PT Binaman Utama (Binaman) and Productivity and Quality Management Consultants (PQM). The review was conducted during the period June 23 through July 7, 1989. The review was somewhat compromised since the PQM report had not been fully compiled nor translated into English. However, from my view point, this was not a serious problem since I was familiar with their findings. I had worked closely with the two contractors earlier in the year helping them develop methodology and gather information at the various hospitals.

The presentation consisted of three parts:

1. Overview
2. Hospital Unit Costs, Their Value and How They Relate to Each Component of the Health Sector Financing Project
3. A Survey of Hospital Management Practices

**PART I:**

**OVERVIEW**

## OVERVIEW

### PART I

The general objective of this project is to improve access to health care by the people of Indonesia, and more particularly to enhance the prospects of child survival. A key element to this project is the necessity to improve hospital efficiency and cost recovery and thus be able to divert funds to the child survival program. All this is to be accomplished in an equitable manner with special attention given to those at the lower end of the economic spectrum.

The focus of this project is on hospitals. Other health care projects (primary care - puskesmas, health sector financing, pharmaceuticals, etc.) are being handled separately.

The Binaman Progress Report dated June 24, 1989 presented much evidence that the government hospitals studied in the Bukittinggi area were poorly managed. This resulted in low morale and productivity, and lost revenue which negatively impacted quality of care. The evidence consisted of both subjective and objective data; surveys of government hospital managers to gain their opinions supported by statistical information. The evidence consistently indicated that government constraints at the national and local levels was the main problem. The constraints had effectively stifled hospital management initiative and created a mis-match of facility, man-power, drugs and equipment.

The findings of the Binaman Report are not surprising. Many of the findings were previously recognized in other reports and by individual observation. The real impact of the Binaman report is that, for the first time, hospital deficiencies are documented leaving little doubt that major changes, even structural changes, are needed.

The question now arises as to the next steps. Summarized below are some steps to consider:

1. **"Analysis paralysis"** which usually follows a report of this nature should be avoided. Little benefit would be gained from further study and analysis of the Binaman data. The data speaks for itself. Further study would only divert energy and resources away from the immediate and fundamental task of effecting structural change. The report itemizes more problems than can be effectively addressed so care should be given to address the important structural issues first.
2. **The number one structural issue is the need to decentralize the government hospital system and place hospital managers at risk for their actions and decisions.** A system of incentives would accompany decentralization to reward physicians, managers and staff according to

performance. Unless this structural change is made, improvements to hospital operations, cost recovery and quality of care will be marginal at best. Numerous examples from around the world could be cited regarding the shortcomings of central control and the debilitating effect it has on efficiency and human initiative.

A determination should be made regarding legal and other constraints which must be overcome in order to effect the necessary organizational changes.

3. **Associated with structural issue number one is the need to integrate primary care (puskesmas) and secondary care (hospitals) into a single health care delivery system.** Medical procedures are increasingly being provided in an outpatient setting and referral patterns and treatments must be integrated in order to achieve operational efficiency. Keeping primary and secondary care systems separate for planning and operational purposes will unnecessarily compete for scarce resources and encourage expensive redundancy.

Presumably, at least some of the expanded child survival program will be provided using both primary and secondary care facilities. This is another reason that primary and secondary care should be integrated in order to achieve greater operational efficiency.

4. **A modern accrual accounting system should be developed concurrent with the restructuring of the health care organization.** The new organization will require an accounting and cost system that will provide necessary management information. Such an accounting system would serve two other vital functions:

- a. **Provide the Health Sector Financing Project with unit cost information for the development of health insurance rates and premiums.**

Central to the Health Sector Financing project is the social issue, ability to pay. Should upper income members of society be called upon to subsidize the people having lower incomes? Unit costs will be important to the policy makers when they begin to sort out these types of issues.

- b. **Quality of care and unit costs are directly related.** Unit costs by themselves can be misleading. In order for unit costs to have meaning, they must be related to the quality or level of care being provided. Conversely, it makes little sense to discuss quality or level of care without asking the question, "at what cost".

Quality of care, and the necessity to address this issue is discussed

in more detail in the report "Hospital Unit Costs, Their Value and How They Relate to each Component of the Health Sector Financing Project."

5. **Elasticity of demand is one of the great unknowns in the Indonesian health care equation.** It has the real possibility of defeating one of the key objectives of the project; transferring some hospital resources to the child survival program. The relationship between hospital utilization, quality of care and price (tariffs) needs to be determined. These relationships will have an important bearing on the ability of hospitals to provide needed services at an affordable cost. History in other countries has shown that an improvement in quality in a heavily subsidized system can substantially increase the demand for hospital services. This is particularly pertinent to Indonesia which has one of the lowest hospital utilization rates of any country.

Because utilization rates are extremely low, there is a potential for much higher demand for hospital services should quality of care improve and prices remain low. In this instance, the government could be overwhelmed by soaring demand resulting in increased costs rather than the surplus which is contemplated when reforms are instituted.

6. **To effectively implement the above changes, existing hospital managers would have to be retrained, perhaps in overseas schools, and/or new managers recruited.**

**To summarize,** it is hoped that a concerted effort can be mounted and sustained to the extent necessary to implement the needed structural changes. Once a decentralized organizational structure and associated systems are put in place, there will be a basic framework upon which to support and sustain the other programs and changes that will be necessary to implement the project goals. To this end, the immediate task will be to plan and construct the basic framework in an orderly fashion. The components of the framework need not be developed in a linear fashion but should be developed concurrently. Early development of the framework will be important to the success of this endeavor.

**PART II:**

**HOSPITAL UNIT COSTS  
THEIR VALUE AND HOW THEY RELATE TO  
EACH COMPONENT OF THE HEALTH SECTOR  
FINANCING PROJECT**

## A. INTRODUCTION

For managers and decision makers everywhere, there is no more important question than, "how much does it cost?" Wherever there are scarce resources and alternatives from which to choose, the question demands an answer.

With this in mind, it is important to report that the hospital project has developed a working model for determining unit costs for hospitals in Indonesia. The model was tested in twelve (12) hospitals, in three (3) provinces, West Sumatra, East Java and Bali. The remainder of this section will be concerned with explaining the significance of this achievement and what it portends for the future. Before doing so, however, a brief description will be given regarding the unit cost methodology and what further steps should be taken.

## B. UNIT COST METHODOLOGY

Five steps were undertaken to identify total costs and unit costs for hospital departments.

First, routine expenditures for the 1988 fiscal year were undertaken from data available in the hospital reports.

Second, nineteen departments were identified for purposes of cost allocation and calculation of unit costs. These departments were separated into six (6) indirect service (non-revenue producing) departments and thirteen (13) direct service (revenue producing) departments. The nursing wards were further broken down into classes, thus increasing direct cost centers to a total of twenty two (22).

Third, line item expenses were assigned as appropriate to the various hospital departments. The figures were adjusted to include "imputed" costs (costs incurred by the hospital but not included in their expenditure reports); i.e., pharmaceuticals purchased by patients in outside apotiks when hospitals experienced stock outs, etc.

Fourth, the costs of the indirect or non-revenue producing departments were spread across direct service or revenue producing departments through a step-down procedure. This was done in two ways, including and excluding depreciation in the cost calculation.

Fifth, the total (direct and indirect) costs of the direct service departments were divided by each department's service volume (unit of measure) in order to calculate the cost per unit of service.

### **C. UNIT COSTS - ACCRUAL ACCOUNTING SYSTEM, NEXT STEPS**

This project has developed a unit cost model and demonstrated the value of the information it produced. Because there was no accrual accounting system, many assumptions and reconstruction of data were necessary in order to develop the unit costs. This was a time consuming and laborious process and the quality and comparability of the data was compromised accordingly.

While the development of the unit cost model produced valuable insights, it is only a first step. For unit cost and other types of financial information to be useful in the management of hospitals, the information must be uniform for all hospitals and be produced on a timely and routine basis. This can only be accomplished by the development and implementation of an accrual accounting system. With such a system, revenues, expenses and the consumption of services and materials can be properly assigned to the period in which they occur. Thus, they can be accurately measured, analyzed and compared.

## D. QUALITY OF CARE

Unit costs in Bukittinggi indicated that for 2nd class nursing wards, RSAM hospital had a unit cost per patient day of Rp.16, 704, RSUP Rp.17, 198, RSUD Rp.9,178 and RSIS Rp.14,356. Does this necessarily mean that RSUD, the lowest cost provider at 9,178 Rp. is the most efficient? Of course not.

The point of the example is unit costs by themselves can be misleading. In order for unit costs to have meaning, they must be related to the quality or level of care being provided. Conversely, it makes little sense to discuss quality or level of care without asking the question, "at what cost?".

To address the intrinsic interdependence of quality and cost, a standard or guidelines must be established from which other hospitals being studied can be compared. To establish a standard or guideline there are at least three (3) options to consider.

Option 1. Identify a well managed hospital (presumably a private hospital) which provides a level of care that is considered to be reasonable and acceptable. The various services comprising this reasonable level of care (physician, nursing, lab, radiology, pharmaceuticals, housekeeping, dietary and other services) would be quantified or otherwise described. Unit costs would then be calculated to answer the question, "quality at what cost?". Having quantified or described both quality and unit costs, this model could be used as a standard by which other hospitals could be compared.

Option 2. A representative group of health care professionals would develop a set of hospital quality of care guidelines appropriate for hospitals in Indonesia. Unit costs would be calculated to answer the question, "quality at what cost?". This model, as in Option 1 could be used as a standard or guideline by which other hospitals could be compared.

Either of these options could form the framework for addressing the quality/cost relationship and arriving at what is appropriate for the various catchment areas in Indonesia.

Option 3. This option could be entitled, status quo. It would assume that the quality/cost relationship as now constituted for Indonesian hospitals is acceptable. This option would not meet the project objective of increasing the efficiency of hospitals.

## E. ORGANIZATION AND MANAGEMENT

A common misconception is that cost and economic indicators associated with "good management" in the private sector are not relevant in a non-profit or government environment. This notion should be dispelled. While it may be more difficult to provide an atmosphere in the government sector where "good" management can be practiced, it is nonetheless desirable and possible. For instance, in the management of hospitals, it is equally important for a government hospital administrator to know the costs of services being provided as for a private administrator. This is particularly true when considering the government objective of reducing subsidies to hospitals.

The following tables are examples of how unit cost information can be used to increase the efficiency of hospital operations. (Please note, the reader should be aware that the data in the following tables has not been verified or analyzed and is meant for illustration purposes only).

Comparison of Potential Vs. Actual Revenue RSAM Hospital, Bukittinggi						
<u>Department</u>	<u>Unit of Measure</u>	<u>Total Units</u>	<u>Tariff Schedule Rp.</u>	<u>Revenue (000 Rp.)</u>		
				<u>Potential</u>	<u>Actual</u>	<u>Difference</u>
Outpatient Clinic	Patient Visit	113,964	350	39,887	29,176	10,771
Emergency Clinic	Patient Visit	4,929	1,500	7,394	2,229	5,165
Nursing Wards	Patient Visit			68,343	67,613	730
VIP	Patient Visit	347	10,000	3,470		
1st Class	Patient Visit	1,016	5,000	5,080		
2nd Class	Patient Visit	15,291	2,500	38,228		
3rd Class	Patient Visit	21,565	1,000	21,565		
OB GYN	Patient Visit			14,400	8,235	6,171
2nd class	Patient Visit	2,490	2,500	6,225		
3rd Class	Patient Visit	8,181	1,000	8,810		
Laboratory	Procedures			47,462	22,800	24,662
Sophisticated	Procedures	1,650	8,500	14,025		
Medium	Procedures	3,976	1,300	5,157		
Minor	Procedures	80,799	350	28,280		
Radiology	Procedures			16,501	11,233	5,268
Sophisticated	Procedures	206	15,000	3,090		
Medium	Procedures	175	3,000	525		
Minor	Procedures	6,443	2,000	12,886		

The above schedule indicates that a substantial amount of tariff is not being collected. Knowing this, a hospital administrator can take corrective action.

Another important use for unit costs is illustrated by the following table.

Comparison of Charges (Tariffs)  
Vs. Unit costs  
RSAM Hospital Bukittinggi

Department	Tariff Schedule Rp.	Unit Cost Rp.	Gov't Subsidy %
Outpatient Clinics	350	5,990	94
Emergency Clinics	1,500	21,527	93
Nursing Wards			
• VIP	10,000	27,456	64
• 1st Class	5,000	20,682	76
• 2nd Class	2,500	16,704	85
• 3rd Class	1,000	15,549	94
ICU/CCU	2,500	221,186	99
OB GYN			
• 2nd Class	2,500	13,204	81
• 3rd Class	1,000	11,744	91
LABORATORY			
• Sophisticated	7,830	23,834	67
• Medium	1,300	18,079	93
• Minor	300	894	66
RADIOLOGY			
• Sophisticated	15,000	31,514	52
• Medium	3,000	10,505	71
• Minor	2,000	5,252	62

The above example illustrates the magnitude of government subsidy. This type of information will be necessary input in achieving the objective of reducing and managing the government subsidy.

## **F. UNIT COSTS - HEALTH SECTOR FINANCING AND THE ABILITY TO PAY**

It is clear that both the hospital and health sector financing (insurance) projects have need for unit costs. Hospitals need unit cost information in order to manage their operations efficiently and to effectively reduce government subsidies. The health sector financing project is dependent upon hospital unit cost information for the development of health insurance rates and premiums.

Central to the health sector financing project is the social issue, ability to pay. Should upper income members of society receive government subsidy, should they pay an amount equal to unit cost or should they be called upon to subsidize the people having lower incomes? Unit costs will be helpful to the policy makers when sorting out these types of issues.

## G. SUMMARY

Each component of the Health Sector Finance Project has need for unit cost and other financial information. A unit cost model has been developed which is an important step towards being able to provide this information. However, it should be emphasized that this is only a first step and much more is needed before unit cost information will be available for general use.

A sustained program will be necessary to transform unit costs from a special study mode to an ongoing operating system. The first step in this process should be the development and implementation of an accrual accounting system. Having this, unit costs and other financial information can be produced on a consistent and timely basis to satisfy the needs of all users. Unless basic financial management information, including unit costs, can be provided in this manner, it is unlikely that the several hospital sector projects discussed above can be implemented and managed effectively.

**PART III:**

**A SURVEY OF HOSPITAL MANAGEMENT  
PRACTICES**

The two contractors made a rather exhaustive tabulation in the three provinces of management systems and capacities. By almost any standard the results indicated that management practices in the nine government hospitals studied were poor. Many reasons were given but the reasons all had a common thread, central control. Central control has effectively brought to a halt any semblance of local hospital management and initiative and created a massive mismatch of facilities, manpower, pharmaceuticals and equipment.

This condition should come as no surprise. For instance, the paper written some two years ago outlining this project on page 18 states:

A substantial body of evidence exists which documents hospital inefficiency, however, the reasons are less clear. Several causes can be deduced: over staffing, absence of appropriate management and information systems, and inadequate training. There may be less apparent impediments to efficient performance such as restrictive regulations, lack of discretionary budget resources, or no effective incentive structure.

At the macro level, the shortcomings of central control and the debilitating effect it has on efficiency is well documented by many countries around the world.

The following examples of conditions resulting from central control are taken from the contractor's report covering West Sumatra.

... several of the indicators used to evaluate management performance are wholly or partially outside the control of the hospital managers themselves (page 10).

Although hospital directors acknowledged problems with respect to the unclear delineation of authority and responsibility within the hospitals, little was actively being done to investigate further or develop a structure and division of tasks that was more appropriate because of the constraints imposed by the existence of the government standard. (Page 11).

A lack of adequately trained staff, both in terms of the number and type of employees and in the skill levels of existing employees seems to be one of the most fundamental problems facing the managers of the hospitals studied. (Page 21).

In addition to reflecting the extent to which the needs of the hospital are not met by the government, the number of volunteer staff is, in fact, a reflection of the extent to which the community, in fact, subsidizes the government by providing it with free labor. (Page 21).

High usage of volunteer staff also has implications with respect to the skill level of the employees. It can be safely assumed that the skill level of volunteer staff will be lower, as will the level of motivation and job satisfaction, as compared with full time, salaried employees. (Page 21).

All hospitals show deficiencies in the number of staff required at the higher educational levels. (Page 25).

The most common reason cited for inadequate staffing was the inability of the government to provide the appropriate number and type of employee. (Page 25).

The fact that the government tends to provide more medical than non-medical staff, forced management to transfer senior paramedics to administrative positions (e.g. Head of Secretariat and Head of Planning and Reporting).

... RSAM urgently needs skilled and experienced managers, especially for administrative functions. The education and qualifications in this area is considered poor. (Page 28).

DEPKES has sent staff that were not requested or needed. (Page 29).

Perhaps the most fundamental cause of the current problem with respect to manpower provisions ... is the lack of coordination between the type and qualification of manpower provided and the type of facilities and equipment provided. An example of this is the fact that RSUD has operating facilities and equipment that cannot be used as it has no surgeon. This lack of coordination can, at times, be attributed to the fact, that there are separate routine and development budgets - manpower allowances are often included in the routine budget allocations, whereas facilities development is done through the development budgets. This lack of coordination also results from the fact that often approval of facilities is done by separate and unrelated governmental authorities from those that make the manpower decisions. (Page 30).

Any assessment of needs was done in relation to the standard established by the government regarding class of hospital and number and education of staff. Local demand for services of a given quality or type was not considered. (Page 32).

For the most part, the top management of the government hospitals did not feel a need to have a detailed development of expansion program as this was beyond their control. (Page 32).

This Director is in the opinion that the government's role in hospital operation is so big that planning beyond fulfilling government's request is useless. (Page 38).

RSUP does not make the effort to prepare the 5-year plans as requested knowing the KANWIL is at the moment preparing the plan for all hospitals in the area. (Page 38).

A common reason given by managers for a lack of planning beyond that required by the government was that they are too dependent of the government to make planning independently of any use. (Page 40).

The above direct quotes taken from the contractor and hospital managers working in the government hospitals are eloquently spoken, consistent and to the point. Many statistical tables based on questionnaires substantiate their statements.

Much could be written on the management deficiencies in the individual hospitals but this would only confuse and dilute the overarching issue, central control. Until this issue is addressed, improvements to local hospital management systems and managerial capacities will be marginal at best.

To prepare hospital managers for the day they will be at risk for the success or failure of the hospitals they govern, two additional programs must be developed.

1. Management Education and Training. Interventions to educate and train a new generation of hospital administrators in the practice of management and finance, perhaps in overseas schools, may be desirable, and
2. Management Information. As discussed earlier, a management information system must be developed capable of producing at least basic financial and management information.

## Summary

In the broadest sense, success in the hospital component of the Health Sector Financing Project will be realized to the extent the following key factors are implemented:

1. Decentralization of the decision making and management function.
2. Management training.
3. Management information.