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INCREASING THE EFFICIENCY OF HEALTH SERVICES
IN INDONESIA:
A KEY STRATEGY FOR CHILD SURVIVAL

USAID/Jakarta

August-September, 1986

**Resources for
Child Health
Project**

REACH



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ACRONYMS

ALOS	Average Length of Stay
ASKES	Health insurance for civil servants; renamed recently to Husada Bakti
BOR	Bed Occupancy Rate
CDC	Centers for Disease Control
DUKM	Term to describe government sponsored demonstration program of prepaid health service delivery schemes
EPI	Expanded Program on Immunization
GOI	Government of Indonesia
GP	General Practitioner
HCFADA	Health Care Financing and Development Agency
HMO	Health Maintenance Organization
IQC	Indefinite Quantity Contract
MOH	Ministry of Health
ORT	Oral Rehydration Therapy
PHC	Primary Health Care
PKMD	Village community health development program
Rp	Rupiah (Indonesian currency)
SUSENAS	National socio-economic survey
US	United States (of America)
USAID	United States Agency for International Development

PREFACE

This report has been informed by observations I made during my visit to Indonesia from August 15 to September 26, 1986. I am under no illusion that this brief period of observation has made me an expert on Indonesia's health services system. Indeed, I anticipate that this report contains a number of what will turn out to be misperceptions. I have not, however, let uneasiness on this score deter me from putting things as I have seen them in venturing recommendations where I have thought these in order, for only in this way will this report be of real use to those who may consult it.

I have discussed these matters with a large number of government officials and other individuals in both the public and private health services sectors. These busy people have been generous with their time and most cooperative in their efforts to assist my learning process--and for this I am grateful.

A special word of acknowledgement goes to Dr. Arie Doodoh, my counterpart here with whom it has been my genuine pleasure to work. Dr. Doodoh was instrumental in assembling much of the information necessary for this report and, as important, provided wise counsel throughout. For whatever may be of value in this report, much of the credit should go to Dr. Doodoh. I, of course, retain full responsibility for whatever errors are contained herein.

Prof. C. M. Stevens

Jakarta, September 1986

1. INTRODUCTION

This report is intended to help inform the design of a project which seeks to improve access by the people of Indonesia, especially those at the lower end of the income distribution, to those preventive, promotive, public health services that are most effective in improving health status, especially in enhancing the prospects for child survival. Pursuant to this objective, the project will promote more adequate resource commitments to these primary health care (PHC) activities. And, as the key strategy to achieve this result, the project will seek in several respects to increase the efficiency of health services in Indonesia.

The project will address efficiency in each of its several senses: operational (least-cost) efficiency, allocative efficiency and equity efficiency. A health activity is operationally efficient if it produces its output with a least-cost combination of inputs. Allocative efficiency concerns the mix or menu of services produced by the health services sector, i.e., the way in which resources are allocated to the various activities comprising the sector. The economic cost of producing any one health service is the foregone alternative--the best alternative service that might have been produced had these same resources been allocated to its production instead (this is the "opportunity cost" concept, here restricted to intra-health sector trade-offs). Allocative efficiency demands that resources allocation on the margin to each of the various health activities be worthwhile in terms of the opportunity costs paid. Equity efficiency concerns the way in which the benefits and burdens of the nation's health services system are distributed among the individuals who comprise the population, i.e., the question of whether the distribution of costs and benefits complies with whatever equity criteria we may bring to evaluation in this domain.

As will be more fully explained, financing (including reimbursement) strategies can play a central role in efforts to increase efficiency in each of its several aspects. For example, there seems to be agreement in various quarters that allocative efficiency in the health services sector would be

improved by a diversion of resources from hospital-based inpatient curative services to primary health care, especially preventive/promotive public health activities. The prospects for such a diversion of resources would be enhanced by increased efficiency in the hospital services sector, e.g., increased efficiency might enable this sector to sustain current rates of output with reduced resources commitment. In turn, financing/reimbursement strategies can be important in providing the incentives necessary to motivate enterprise management to seek operational efficiency and in providing management with the authority (e.g., with respect to deployment of those resources available to the enterprise) necessary to achieve efficiency.

The prospects for such a diversion of resources would also be enhanced by greater cost recovery for government-provided inpatient hospital services so that a reduction in the general tax revenue funding available to these hospitals (in favor of allocating these funds to PHC) need not be accompanied by a proportional reduction in the total resources deployed by the government hospital sector.

For these reasons, financing/reimbursement strategies aimed to increase efficiency and cost recovery in the government inpatient hospital sector are increasingly regarded as key PHC and child-survival financing strategies (even though, as typically will be the case, the hospital sector itself is producing little in the way of preventive/promotive, public health services). For these same reasons, an important focus of the project will be upon developing and implementing more appropriate approaches to financing the demand for health services provided by the public sector, particularly the hospital sector. Attention will also be paid to developing more appropriate approaches to financing the demand for medical services provided by the private sector, particularly the private hospital sector. This is in part pursuant to facilitating the diversion strategy. Generally speaking, the efficient rate of resource commitment to the government hospital sector will depend in various ways upon (among other considerations) the extent to which and the terms upon which hospital services are obtainable from the private sector. More widespread resort to social financing schemes to finance the demand for private-sector hospital services (e.g., insurance schemes, prepaid schemes)

will encourage an expansion of the capacity of the private hospital sector. This, in turn, may lessen pressures on the government to increase rates of resources allocation to the government hospital sector. And this, in turn, may make more resources available for PHC and child survival activities than would otherwise be available.

Generally, more widespread resort to social-financing schemes to finance the demand for both private-sector and public-sector services has important equity implications. As matters stand, by far the largest part of the (non-tax-financed) demand for medical services in Indonesia is financed by out-of-pocket payments by the consumers of these services. Under this financing approach, there is no risk spreading (a source of disutility to those who are risk averse) and the sick, already to this extent disadvantaged, are again disadvantaged by having to bear the whole burden for supporting the nation's health services system. Under social financing of the demand for health services, the opposite of these effects obtains -- there is risk spreading and those who are well make regular payments to help support the nation's health services system, a more satisfactory and equitable arrangement all around.

Encouraging an increase in the capacity of the private hospital sector is very much in line with the GOI's development plans for the health services sector. For example, the GOI's Master Plan for health provides:

The government has to foster and guide the potency of the private sector and the participation of the community in the field of inpatient care, so that in the time to come, the burden of the government will be alleviated and the spreading of inpatient care will cover more areas.*

As has been explained, planning such that "... the burden of the government will be alleviated ..." in the domain of hospital services may make an important contribution to enhancing the prospects for more adequate commitment of resources to PHC, particularly child survival activities.

* See Long-Term Main Development Programmes Plan, in the Field of Health (1983/84 - 1998/99), Ministry of Health of the Republic of Indonesia, p. 37.

The discussion to this point has provided an overview of the aims of planned project activities. It is hoped that these activities' design will be assisted by the findings, analysis and recommendations that follow in this report. It is perhaps unnecessary to remark here that there can, of course, be no guarantee that the increased efficiency-diversion strategy will in fact work out as anticipated (indeed, the reader will by now have thought of various potential obstacles to its success). But then, this is a rule of all projects -- no project, especially in the health services sector, has a guarantee of success. What is required to warrant implementation is a high enough probability of success -- i.e., one high enough so that, in light of the payoff to success, the "expected value" of implementation is worth the effort of implementing the project. What is further required is that the expected value of the project be greater than that of other projects which might be implemented pursuant to the same objectives. The discussion that follows will help to explain why it is reasonable to regard a project based on the increased efficiency diversion strategy as meeting these requirements.

It sometimes is urged as an alternative to the diversion strategy that we simply induce the government to come up with more resources for health overall and that the additional resources obtained in this way be allocated to preventive/promotive public health activities. This might be termed the "bigger-pie" strategy. Those who think this strategy might work should try it. In my view, in Indonesia at the present time (as, indeed, in most developing countries), the prospect for success with the bigger-pie strategy is far more remote than with the diversion strategy.

In any event, these strategies are not really alternatives. The bigger-pie strategy is basically an effort to avoid the necessity of making choices, which is always imposed on us by the fact of scarcity (of resources). The notion seems to be that with a bigger pie we can have our hospitals and our preventive/promotive activities too, without having to fret about diverting resources from the former to the latter. Suppose, however, that the GOI did come up with more resources overall for health and that the additional resources were allocated to preventive/promotive activities. This would be an encouraging development. However, we would still be left with the economic

problem of how resources on the margin should be distributed among various health activities. And, within any plausible assumption about the size of the total pie, we would still want to find a way to divert resources from hospital services to preventive/promotive public-health activities.

Finally, a word should be said about the concept of "privatization" which has variously been associated with this project. Privatization means different things to different people but, whatever construction given to it, it cannot be seen as an end in itself. In the context of this project, it can be seen as a means to the end of increasing the efficiency of the health services sector such that there will be a more adequate commitment of resources to those preventive/promotive activities which are important for child survival. Below are a few examples of how privatization might be regarded as an integral part of overall project strategy.

- o On the demand side of the market, the project will seek to promote private social financing (insurance, prepaid schemes) of the demand for services provided by both the public and private sectors. This may encourage the growth of the private hospital sector such that some pressure is taken off resource allocation to the public hospital sector, thereby enhancing the prospects for the diversion strategy. This will also make for greater equity in the way in which the burden for supporting the nation's health care system is distributed among the people, also a project objective.

- o The project will encourage organization formats for public hospitals so that the management of these facilities will be at risk for both their success and failure, and in this way will motivate and facilitate greater performance efficiency. This may be regarded as a type of privatization in that it seeks to map private sector-type incentives into public organizations (it seeks to map some of the "dynamism" of the private sector into the public sector--in the colorful terminology of Pakistan's Sixth Plan for Economic Development).

- o By privatization we may also mean that the nation's health services system is comprised of interdependent, complimentary private and public sectors, with appropriate roles assigned to each. This concept is part of the MOH's long-term plans for health, in which it is envisaged that the private sector should in the main be responsible for acute/curative illnesses while the public sector should have minimum responsibility for preventive and chronic illnesses. Related to this, in this project, a distinction is made between what economists term "public goods" and "private goods." The case is made that, generally speaking, public financing will be more appropriate for the former and private financing for the latter. This is in turn related to the diversion strategy, for if we are to have more public financing of such public goods as preventive/promotive activities, the funds must be found somewhere in the public budget.

2. THE HOSPITAL SERVICES SECTOR: SOME ASPECTS OF STRUCTURE

Tables I through VI in the appendix exhibit various structural features of the hospital services sector in Indonesia. These features can be summarized by the following:

- o The bed-to-population ratio is quite lean. For all hospitals (general and special, all ownerships), the bed/population ratio is about 0.65 bed/1000 population. For general hospital beds, the ratio is about 0.50 bed/1000 population.*
- o Private hospitals provide 31.0 percent of total hospital beds and 25.0 percent of general hospital beds; thus, the government hospitals are the major factor on the supply side of the market for hospital services. Most bed capacity in the private sector is in the church-related hospitals which provide about 27.0 percent of total bed capacity, leaving 4.0 percent for other (non-church related) private hospitals.*

* For comparison, U.S. HMO ratios run about 2.0 beds/1000 population which is regarded as very lean. The old Hill-Burton standard was 4.5 beds/1000 population (i.e., below which an area was regarded as under bedded). Of course, with Indonesia's very different age distribution, perhaps otherwise different morbidity patterns and the like, there is no reason to suppose that U.S. bed/population ratios would be efficient here.

* It is my understanding that, under the laws of Indonesia, private hospitals are not to be operated for profit. In this sense, it would not be technically correct to identify the "other" (non-church related) hospitals as "proprietary" in the usual sense of this term, although the promoters of these hospitals expect in various ways to benefit from them. Some of these hospitals are owned by business firms who use them in the main to provide health services to their own employees and their dependents. Others are owned by physicians who plan to use them as adjuncts to their own private practices. A part of the motivation for these arrangements appears to be the physicians' desire to provide a higher quality of services than would otherwise be available to their patients.

- o The distribution of hospital capacity relative to the population is very uneven with the ratio of beds per 100,000 population varying (by a factor of about seven) from a high of about 187 in Jakarta to a low of about 26 in Nusa Tenggara Barat.
- o Hospitals in the government sector are operated not only by the Ministry of Health and provincial and local government health departments, but also by other ministries. Of the 63,155 government general hospital beds, only 7,992 (13 percent) are operated by the Ministry of Health, 35,010 (55 percent) by provincial and local governments, 11,428 (18 percent) by the Ministry of Defense, and 8,725 (14 percent) by other ministries. Of the 302 hospitals with 35,010 beds operated by provincial and local governments, 47 with 12,233 beds (35 percent) are provincial, 20 with 2,841 beds (8 percent) are municipal, and 235 with 19,936 beds (57 percent) are regency-level hospitals. This multiplicity of "ownerships" of government hospitals is of potential significance for the design of interventions to increase the efficiency of the hospital sector, e.g., there are a large number of different decision-making processes (in the sense of the locus of management aegis) to be taken into account.*
- o The government general hospital beds operated by the MOH and the provincial and local governments are classified as A, B, C, or D - in descending order by the number and sophistication of services they provide. A "C" level hospital is supposed to provide the four basic services, internal medicine, surgery, OB/GYN and Pediatrics. The "A" level hospitals are tertiary referral centers, providing the greatest range and sophistication of services. The 318 hospitals with their

* To classify government hospitals by "ownership" is somewhat misleading. The concept of ownership does not appear to have its usual meaning in this domain, e.g., local government bodies cannot sell, rent, etc. the facilities they "own." What ownership appears to mean in this context is that the local government is responsible for coming up with the operating revenue for its facilities.

43,002 beds operated by the MOH and the local and provincial governments are distributed among the classes as follows:

<u>Class</u>	<u>No. Hospitals (percent)</u>	<u>No. Beds (percent)</u>
CLASS A	4 (1 percent)	2918 (7 percent)
CLASS B	16 (5 percent)	9396 (22 percent)
CLASS C	79 (25 percent)	15183 (35 percent)
CLASS D	219 (69 percent)	15505 (36 percent)

The main-system government hospital sector (i.e., those operated by the MOH and provincial and local governments) is dominated by the Class C and D hospitals which, between them, field almost 75 percent of these beds and comprise about 94 percent of the number of such hospitals.

We have already sought to remark upon certain structural features of the hospital services sector in Indonesia which, as will be further explained, are regarded as significant for the design of the project. Tables I - VI exhibit additional structural features, but enough has been said on this score to move on to some aspects of the performance of the government hospital services sector.

3. THE GOVERNMENT HOSPITAL SERVICES SECTOR: SOME ASPECTS OF PERFORMANCE

Table VII exhibits various dimensions of the performance of the hospital services sector in Indonesia. Perhaps its most striking feature is the generally very low bed occupancy rates for virtually all of the classes of facilities that comprise the sector. For the government general hospital sector, occupancy rates increase as we move up the scale from Class C to Class A, but even for the latter the occupancy rate is quite low.*

Table VIII exhibits bed occupancy rates in greater detail for the Class D and Class C government general hospitals. Class D hospitals exhibit the lowest rates, with 18 percent of the Class D beds in facilities with an occupancy rate of less than 25 percent and nearly half of these beds in facilities with occupancy rates less than 50 percent. For the Class C hospitals, 28 percent of the beds are in facilities with occupancy rates of less than 50 percent. At the other end of the scale, however, in both Class D and Class C facilities, almost 20 percent of the beds are in facilities with occupancy rates of 70 percent or better.

Considering that the general hospital bed-to-population ratio in Indonesia is only about 0.5 bed/1000 population, these low occupancy rates seem prima facie surprising. Moreover, in most developing countries, including those in which the bed/population ratio is much higher, one sees much higher occupancy rates. In any event, it would appear that the general hospital services sector in Indonesia is over-bedded relative to demand for these services. Whether the sector is also over-bedded relative to the "need" for these services (as this would be defined by public policy in this

* There is no generally agreed upon standard for the "optimum" occupancy rate. In the U.S., administrators tend to look at this matter from the point of view of some probability-of-space-shortage criterion, e.g., given the size of the hospital, maintain an average daily census such that the probability of being full to capacity is, say, one day in one hundred (or five days in one hundred, etc.). In any event, for large hospitals such as the typical Class A and Class B hospitals in Indonesia, an occupancy rate of about 85 percent would be regarded as normal full use of the facility.

domain) is, of course, another question. The answer to the question of why government general hospitals have low occupancy rates would be of considerable interest from the point of view of evaluating the efficiency of the sector and its facilities. This question will be addressed later in this report.

As Table VII indicates, in addition to inpatient services, the government hospitals produce a substantial volume of outpatient (OPD) services. Table IX compares the relative importance of inpatient and OPD services among the classes of government hospitals. Although the Class D hospitals are running with very low occupancy rates, they nevertheless, in the aggregate, deliver about 30 percent of the total number of bed days of government hospitals. And, these Class D hospitals are an important source of OPD visits, providing about 40 percent of the total of such government hospital services.

Table IX also exhibits OPD visits per GP physician by class of hospital and OPD visits per bed day. OPD visits per GP physician can be regarded as a kind of measure of the outpatient productivity of these physicians in these different practice settings.* It can be noted that physicians in Class C hospitals and especially in Class D hospitals have a far larger OPD visit output than their colleagues in Class A and B hospitals -- e.g., OPD visits per GP physician per year are only 2,732 in Class B hospitals compared with 13,562 in Class D hospitals. The service mix is rather different in these classes of hospitals, with Class B generating only 1.8 OPD visits per bed day compared with Class D, which generates 2.7 OPD visits per bed day.

Table X exhibits physician staffing patterns of the government hospitals and Table XI summarizes some of this information and presents hospital bed-to-physician ratios. Table XII exhibits standard staffing ratios for government hospitals. As Table XI indicates, about 80 percent of the specialist physicians are in the Class A and B hospitals -- there are 3 and 5

* I recognize that nurses and paramedics as well as physicians see these patients. Nevertheless, the OPD visit rate can be regarded as a measure of physician productivity in the sense that the physician as "captain of the team" has a central role in managing the OPD case load as a whole, in addition to seeing patients directly.

beds, respectively, per specialist physician in the Class A and B hospitals, 32 beds per specialist in the Class C hospitals, and 85 beds per specialist in Class D. Even in terms of GPs, Class D and C hospitals (with about 28 beds per GP) are running very lean compared to an average of about 5 beds per GP for Classes A and B.

As compared with the standard physician staffing ratios, the Class A and B hospitals are above standard whereas the Class C and D hospitals are very much below standard, with the standard number of beds : number of physicians running 9 to 1 and 15 to 1 for Class C and D, respectively, and the actual physician staffing running 15 to 1 and 21 to 1, respectively. Table XII also exhibits standard staffing ratios for nurses, paramedics and no-medics. Although we do not have data on actual nurse staffing ratios, there is general agreement in the field that a severe shortage of nurses exists and may well be a major constraint to future expansion of the capacity of the hospital services sector.

These data will help to inform our judgments about the efficiency of the government hospital services sector and of the facilities which comprise it. Before undertaking such an evaluation, however, we need to assemble some additional information, especially regarding financing the demand for government hospital services.

4. FINANCING THE DEMAND FOR GOVERNMENT HOSPITAL SERVICES

4.1 Introduction

The discussion of these issues will focus on the implications of financing patterns for facility efficiency and for the availability of resources for those preventive/promotive, public-health activities which are important for child survival. The emphasis throughout will be given to what are here termed as routine (i.e., operating) costs and expenditures, as distinguished from development (i.e., capital) costs and expenditures. One difficulty with assembling information on routine expenditures for health services in Indonesia is that not all of these are accounted for in the routine budgets, i.e., the development budgets contain funding for operating costs in addition to capital outlays.

Attention will be directed to the general government health services system -- namely, that operating under the aegis of the Ministry of Health (MOH) and the provincial and local governments. Thus, facilities operated by the Ministry of Defense and other ministries are neglected here. And within the general system, attention will be directed to general hospital services.

The general government health services system can be regarded as divided into two principal parts -- the central MOH system, funded directly by the central government, and the system operated and funded by the provincial and local governments.* Rules and procedures with respect to financing for the MOH system differ from those for the system operated by

* The provincial and local governments have very limited fiscal capacity. The funds they spend are in large part derived from central government transfers to the provinces and local governments. Some so-called vertical programs administered at the local level are directly funded from the central MOH and some facilities funded by local budgets may get some subsidy from the central MOH (e.g., hospitals).

the provincial and local governments. And, as has already been pointed out, the latter system is itself operating under a large number of different government authorities. It appears that rules and procedures differ from local government to local government, such that attempts to make generalizations about this sector are hazardous.

4.2 Some Budget Orders of Magnitude Relevant for the Diversion Strategy

As has already been explained, the diversion strategy for securing adequate resources commitment to preventive/promotive, public health activities entails diverting public funds from public hospital budgets to these PHC activities, a strategy to be facilitated by increasing cost recovery in the government hospital sector. The relative magnitudes of the hospital budget and the PHC budget are important for the design of this strategy. If the former is large relative to the latter, a relatively modest rate of cost recovery in the hospital sector can result in a relatively large increase in the funds available for PHC activities. In most developing countries, this configuration does obtain. That is, hospital services will claim the lion's share of the operating budget for the PHC government sector, typically on the order of 60 percent. And, typically, the government operating budget for health will make only modest provision for PHC activities, say, on the order of 10 percent. Does this configuration obtain in Indonesia?

To answer this question, we require a "functional" classification of government routine expenditures for health services, one that would exhibit the allocation of funds among the different programs, e.g., hospitals, and the various PHC services (EPI, ORT, malaria and other CDC, etc.). As we have noted, government health services in Indonesia are administered and budgeted at three levels of government and for each level, there exist budget documents: APBN at the national level, APBN I at the provincial level and APBN II at the kabupaten/kotamadya level. Fortunately for present purposes, however, a functional classification of the APBD budgets will provide most of

the information we need.* This is so because although in principle the puskesmas might be expected to provide some preventive/promotive services, in the main, the major child-survival PHC services (such as EPI, ORT, malaria and other CDC) are carried as so-called "vertical" programs or programs otherwise

* This is fortunate because it appears that only for the APBN level is it feasible to extract a functional classification of the routine budget. See Mark Wheeler, Financing Health Services, Sectoral Study No. 2, Central-Local Financial Relations Review for the Government of Indonesia, Development Administration Group, University of Birmingham, Dec. 1980.

With respect to APBN Wheeler notes that a functional classification of the routine budget may be inferred from the administrative (by directorate) breakdown and his Table 2, p. 13 exhibits this breakdown.

At the provincial level (APBD I) there is some subdivision of the routine budgets for health along functional lines, e.g., expenditures for general hospitals, the Dinas administration, and other services. According to Wheeler, however, (p. 18):

Unfortunately, the content of these subdivisions is so variable from province to province (reflecting variation not only in the range of services provided but also in accounting practice) that no useful functional breakdown can be extracted.

At the APBD II level, Wheeler notes that there are no comprehensive statistics available (p. 20).

To the best of my knowledge, the situation with respect to the availability of information on the functional breakdown of government routine health budgets is currently as Wheeler describes it. We may note that for some time now the World Bank has had a team in Indonesia working with MOH and other GOI officials on a study of sources and uses of funds in the health services sectors of Indonesia -- both private and public. When the results of this work are available, we may be better provided with information of this kind.

funded from the MOH central budget (APBN).* Thus, the allocation to hospital services in the APBN will be most directly relevant for the diversion strategy because the APBN will also be providing most of the routine funding for the preventive/promotive services.

Out of a total 1980/81 APBN routine budget of Rp. 52.0 billion, Rp. 27.4 billion (or about 53 percent) is provided for hospital services. If one subtracts from the total routine budget the Rp. 15.9 billion going for central administration and services, the hospitals claim about 75 percent of the remainder. Again for the 1980/81 APBN routine budget, the directorates of Community Health, CDC and Food and Drug Control (the directorates which would carry the primary health care activities) were budgeted for a total of about Rp. 2.1 billion. It appears that about these same relative rates of allocation among the directorates obtain currently. Thus, for the APBN routine budget, if we could recover an additional quarter of the MOH hospital budget and transfer a like amount to those directorates carrying the PHC services, we could thereby increase those budgets by about 300 percent.**

* With respect to the APBD II level, Wheeler remarks (p. 20):

The routine expenditure is almost entirely applied to hospitals, puskesmas and general administration. To the extent that preventive and promotive services are carried out at the puskesmas and its subordinate units, the finance for these activities comes from the higher levels of government, and not from the budget at the second level which "owns" and directly administers the puskesmas.

Wheeler's comment (p. 22) on the implications of the variety of funding sources for the puskesmas and for health services more generally is instructive:

In a very real sense, there is no such thing as a budget for the puskesmas; the one budget which is specific is only a partial budget, and the remaining costs are spread among half a dozen budgets. Nowhere is there a consolidated statement of the cost of operating the puskesmas as a whole, or even the cost of operating any one of its component activities. The same observation may be made of the kabupaten hospital and the special programs. Nowhere is there a coincidence between a source of funds and a level of administration, a type of service or programme, or a type of input, and nowhere is there a consolidated statement of the resources consumed in a particular level of administration, type of service or programme, or type of input.

** For 1980/81 APBN routine budget data, see Wheeler, Table 2, (p. 13).

To complete the picture on the budget orders of magnitude relevant to the diversion strategy, we need to consider the MOH (APBN) development budget. Like the routine budget, this budget is also largely directed to the hospital services sector; but it also provides significant operating cost funding for various preventive/promotive, public health services. Thus, there may be tradeoffs within the development budget between, say, capital outlays for hospital services and operating revenues for preventive/promotive programs. Indeed, this budget may be of particular concern from the point of view of adequate resource commitment to preventive/promotive activities because the development budget for health has taken the major beating in the budget reductions inspired by the recent drop in oil prices. The routine budget for health, on the other hand, has been maintained pretty much intact.

Estimates for the 1983/84 MOH development budget show an allocation of Rp. 68.4 million (57.4 percent) for "health services development" as against an allocation of Rp. 23.8 million (20.0 percent) for "communicable disease control."*

A detailed breakdown of the health services development item indicates that these funds are largely for capital outlays in the hospital services sector. I have not seen a detailed breakdown of the communicable disease control item, but it is my understanding that this item is a source of operating costs funding for these programs.** Again we appear to have a budget situation where relatively modest reductions in funding for hospital programs might, at least in principle, free relatively large amounts of funding (i.e., relative to the size of their budgets) for the operating costs of preventive/promotive programs. We will return in this discussion to the possibility of such tradeoffs in the MOH development budget.

* See Expenditure and Financing Issues in the Health Sector in Indonesia, Draft of Comments, Dec. 5, 1983, IBRD, pp. 52-53.

** Time did not permit an attempt to examine these budget items for detailed content. This should be done pursuant to further informing the design of the diversion strategy. Similar examination should also be made of the INPRES budgets.

What in Indonesia, at present and for the near term, would be an efficient rate of resource allocation to PHC activities is not a question that can be engaged here. I assume, however, that as matters stand, these services are underfunded in the sense that resource commitments to them are inefficiently low in light of national health objectives. Thus, a diversion of funds from hospital services to these preventive/promotive services would improve allocative efficiency. Opinions in the field seem to be in general agreement, e.g., that increased resource commitment for such programs as EPI will be necessary to achieve national objectives -- particularly in this kind of program as coverage is expanded to the population at risk as a whole and as donor funds now helping to support the program are phased out.

Preventive/promotive, public health services tend to be "public goods" in the technical sense or at least entail significant externalities so that attempting to rely on private markets for resource allocation to them will result in inefficiently low rates of resource allocation (so-called "market failure"). Nevertheless, private markets can carry some of the preventive/promotive, public health load and the efficient rate of allocation of public funds to these activities will depend upon the extent to which the private sector can generate these services.

Another factor that may bear upon the extent to which government health services should omit resources to PHC programs is the extent to which volunteers under the PKMD program (Village Community Health Development Program) prove to be effective in fostering PHC activities at the village level. It seems unlikely, however, that private sector activity and voluntary activity in this domain will be sufficient to preclude the need for additional resources via the diversion strategy.

4.3 Fees for Services Provided by Government Hospitals: General Policy

Cost recovery in the government health service sector is accomplished by fees or user charges for the services provided by the sector. And, as has been explained, cost recovery, particularly in the government hospital sector, is

an important element in the diversion strategy to secure more adequate resource commitment to PHC activities. Thus, government policy in this domain will be important for the development of the project. In Indonesia, and unlike the situation in many developing countries, fees for services provided by government facilities appear to have long been an accepted feature of financing the demand for services. A recent policy statement provides:*

CHAPTER II

POLICIES

Article 2

- (1) The government and the community are mutually responsible for maintaining and upgrading the standard of health of the community.
- (2) Costs of treatment at government hospitals are carried both by the government and the community paying attention to the financial status of the state and the social-economic state of the community.
- (3) The hospital tariffs are not meant to be a means of seeking profit and are established on principles of gotong royong (mutual cooperative effort), justice, and foremost, taking into consideration the interests of the low-income bracket of the community.
- (4) The hospital tariffs for the social classes whose payment are guaranteed by a guarantor party are determined on a basis of mutual benefit by means of a written contract.

As with most general statements of policy, this one does not spell things out in operational fashion. For example, there is no indication of, say, how much cost recovery through fees would be regarded as consistent with balancing the interests of the state and the community, given the financial status of the former and the economic state of the latter. Nevertheless, the policy clearly calls for some degree of cost recovery through fees for services provided.

* See "Letter of Declaration from the Indonesian Minister of Health: "Governing Tariff Pattern for Government Hospitals." It is my understanding that this recently-promulgated statement is still pending final approval by the GOI.

Item (4) is of considerable potential interest. "Guarantor" is elsewhere defined as: "Guarantors are those persons or legal bodies who guarantee the health care service costs of a certain individual."

It is my understanding that, as matters have stood, this provision has been directed to relationships between government hospitals and ASKES. It can apply likewise, however, to relationships between government hospitals and other third-party payers (e.g., health insurance carriers) who might be on the scene in years to come. The flexibility in these relationships, which are attainable by negotiating contracts on a basis of "mutual benefit," can be very important in promoting social financing of the demand for services provided by government hospitals. For example, it is frequently thought to be desirable from a public policy point of view that fees for services be income related -- i.e., such that the rich pay more than the less rich and the poor do not pay at all. Ex ante utilization by beneficiaries, fees (including capitation payments as fees) can be negotiated with guarantors to accomplish this -- a far more feasible mechanism to accomplish this than, say, attempting to vary fees on an ad hoc basis "at the hospital door."

4.4 Fees for Government General Hospitals: The Vertical Hospitals

There are twelve so-called vertical government general hospitals, i.e., those operated under the aegis of and directly funded by the Ministry of Health. Tables XIII and XIV present some performance and budgetary data for these hospitals.

It is my understanding that each of these hospitals determines its own fees (within "guidelines" promulgated by the MOH). For this and other reasons (e.g., variations in case mix by diagnostic category), there is considerable variation in revenue performance among these hospitals. In the aggregate, these hospitals recovered about 25 percent of "total" routine costs (assumed to be matched by total routine resources, allocation plus personnel expense). However, their rate of cost recovery varied from a low of 11 percent to a high of 33 percent. Col. (11) of Table XIV shows fee revenue per bed day which

varies from a low of Rp. 1000 to a high of Rp. 11,330 (this for Cipto, the Class A tertiary facility).

According to the letter of the law as it has stood, these hospitals are obligated to return all fee revenue to the government treasury. As Col. (5) shows, however, they variously complied with this obligation: the percentage of fee revenue returned varied from a low of 38 percent to a high of 100 percent. In the main, revenues from fees retained by the facilities appear to have been used for incentive payments to staff -- a very important factor in increasing the efficiency of staff performance, according to hospital spokesmen.

As previously discussed, the personnel budget is supposed to result from the application of standard staffing ratios (see Table XII) to hospital bed size. The allocations are supposed to be determined by taking account of output in physical units (e.g., bed days) and unit costs. It appears that the output measure has been mainly retrospective -- namely, the average of the last three years (with some vaguely-specified "adjustment" for prospective events).

4.5 Budgeting and Tariff Procedures for Vertical Hospitals: Current Developments.

Plans are underway to modify in some respects existing practice in vertical hospital budgeting and tariff procedures. New regulations have been formulated and await approval by the Ministry of Finance. It is my

understanding that such approval should be forthcoming shortly.*

Table XIV appears to reflect a considerable lack of uniformity in the way in which the various vertical hospitals manage their tariffs. An effort will be made to impose more uniformity on the system. Thus, according to Tariff Pattern, p. 30, taking into consideration:

- a. That the development of health care services and its expenses in government hospitals need to be supported by tariff regulations which are uniform and complete, / emphasis added /

it appears that efforts will be made to increase the income from fees and to establish more systematic procedures for estimating expected income from fees. Thus, according to Instruction, pp. 15-16:

3. Income Calculations

In order to estimate the amount of non-taxable income we need to consider and calculate that there are efforts being made to intensify and extend the income which is the responsibility of each work unit/hospital concerned. Determining the total said estimated income cannot only be done by looking at the realization of past years but must be done using a system of calculation which relates the volume of activity with the existing tariffs.

* These procedures, some reflecting what is supposed to be current practice and some modifying that practice, are set out in:

Instruction for the Compilation of Routine Activity Plans/Directorate General of Medical Services/Fiscal Year 1986/87 (henceforth "Instructions")

Letter of Declaration from the Minister of Health Governing Tariff Pattern for Government Hospitals (henceforth "Tariff Pattern")

Letter of Decree of the Director General of Medical Services, R.I. Department of Health, Governing/Guidelines for the Implementation of the Pattern of Tariffs for Government Hospitals (henceforth "Guidelines").

Page references are to a volume containing these documents prepared by sworn and authorized translator Grant W. Wilson.

It also appears that there will be uniformity in the calculation of the prospective budgets submitted by each hospital, and on the basis of which, the allocations are calculated. Thus, according to Instructions p. 18:

- (5) In order to compile the routine needs and total amounts of funds needed for the fiscal year 1986/1987, all vertical work units/hospitals of the Directorate General of Medical Services should use the unit costs which are recorded in Enclosure IV.

In various places in these documents, numbers and rules are set out to inform the calculation of fees. Without rehearsing all of this here, we can give an example. According to Tariff Pattern, p. 35:

Article 7

- (1) The inpatient treatment tariffs for Class III A have been made to become the basis for the calculation of tariffs of the other classes of treatment with the following regulations:
 - a. Class III A - 1.5 index of food costs DIK Dep. Kes.
/ Note: this index is currently Rp. 1200/day_/
 - b. Class III B - $1/3$ x Class III A tariff
 - c. Class II - 2-5 x Class A tariff
 - d. Class I - 6-9 x Class III A tariff
 - e. Main Class - 10-13 x Class III A tariff.

Thus, for patient treatment tariffs, there appears to be some leeway left to the facility to adjust the tariff, presumably to the circumstances of those in its service area. Other tariffs are set out particularly, however, e.g., those provided by Guidelines pp. 59 et seq. for VI. Supportive Diagnostic Inspection Tariffs.

The criteria which have been employed to establish the "unit costs" to be used for prospective budgeting and the fees to be charged are not discussed in these documents. However, according to the Directorate of Medical Services, the vertical hospitals will continue to be subsidized in the sense that the allocations from the MOH budget to them are expected to be greater than the

fee revenue. Indeed, it appears that the allocations and income from fees are not to be related, at least on a facility basis. That is, if a given facility increases its fee revenue and the amount it remits to the exchequer, it cannot expect to see this reflected in its allocation. (We subsequently comment on the incentive implications of this.)

As matters have stood (see Table XIV), although the vertical hospitals have returned to the treasury fee income equal to the income targets that had been set, they have also retained some fee income for their own use. To some extent, at least, this procedure is now to be legalized, viz: Tariff Pattern, pp. 47-48 provides:

CHAPTER XI
HOSPITAL FINANCIAL INCOME MANAGEMENT
Article 18

- (1) All revenues of the hospital shall be deposited in the state treasury and/or regional treasury, except the income from surgical and medical services and anesthetic services. / emphasis added /
- (2) Distribution of the revenue for the hospital from surgical and medical services and anesthetic services is determined as follows:
 - a. Type of Surgical and Medical Acts:

- Deposited in the state treasury	10 percent
- Medical manpower	50 percent
- Paramedics who are directly involved	10 percent
- Paramedics who not directly involved (treatment/non treatment)	10 percent
- Administration	10 percent
- General costs	10 percent

4.6 Provincial and Local Government General Hospitals: Financing the Demand for Services and the Role of Fee Revenue

Generally speaking, central funding is supposed to go to provincial and local governments for development expenditures only. The local governments are expected to be self-sufficient for the routine (operating) expenses of their programs such as hospital services.* In the health services sector, however, beginning in 1982/83, a program of direct, earmarked subsidies to 22 regency hospitals and 8 local government teaching hospitals was implemented, entailing expenditures of Rp. 35.2 billion and Rp. 7.5 billion, respectively, and amounting to about a 30-40 percent subsidy of these facilities. In 1986/87 this program was to be extended to include direct subsidies for all regency and municipal hospitals - 268 general and 31 special - entailing aggregate expenditures of Rp. 8.0 billion (for certain budget line items, e.g., food, medicines). In principle, these subsidies are supposed to be arrived at for each facility in the following manner:

- (1) Calculate the necessary expenses for the coming year
- (2) Estimate how much the facility will get from local government
- (3) The difference between (1) and (2) is the subsidy.

We will return to some implications of this subsidy scheme later.

Although the local government hospitals use a "budget code" similar to that utilized by the vertical hospitals, it appears that the local governments are less systematic in determining allocations to these facilities, i.e., they do not employ a conceptual framework such as multiplying projected service outputs by adopted unit costs. On the other hand, there does appear to be a discernable relationship between routine budget allocations to the hospitals

* As previously noted, the provincial and local governments have very limited fiscal capacity; their entire budgets are primarily financed by funds transferred from the national government. In this sense, routine local government health expenditures appearing in the local government budgets (APBD I and APBD II) are virtually all subsidized by the central government.

Health services personnel salaries are paid through the Ministry of Finance, i.e., directly subsidized by the central government.

and the fee revenue earned by them. Overall, it appears that local government pays out less in allocations to health programs than it gets back from them in fee revenue.* The relationship between local government and individual facilities varies from jurisdiction to jurisdiction such that making generalizations in this domain is hazardous. In some jurisdictions and with at least the tacit assent of local government, hospitals may retain a part of the fee income earned from specialist physician fees to be distributed as incentives to the physician and other staff (along the lines now being recommended for the vertical hospitals by the Directorate of Medical Services). In some jurisdictions, hospitals assume that they will get back, in the form of allocations from local government, about what they pay in the form of income from fees. Tables XV and XVI exhibit some data for a few local government hospitals. Although these non-randomly selected facilities obviously do not constitute a probability sample from which inferences about the population may safely be drawn, the findings are of interest (at a minimum, they urge that additional data of this kind be assembled). As appears from Table XV, these hospitals are much larger than the typical Class D hospital and larger than those Class C hospitals at the low end of the bed-occupancy-rate scale for Class C hospitals. Perhaps the most striking finding is exhibited by Cols. (6) and (7) of Table XVI: the percentage that fee revenue constitutes of allocations (exclusive of personnel) and of total routine expenditures (i.e., allocations plus personnel) come to 81 percent and 42 percent, respectively, on average for these facilities. These hospitals appear to be more seriously in the cost-recovery business than are the vertical hospitals.**

* However, Wheeler (op. cit.) comments (p. 20): "The structure of APBD II is very similar to that of APBD I ... One important difference of substance rather than format is that the proportion of routine expenditure financed from fee income is very much larger for kabupaten and kotamadya (more than 25 percent) than for provinces (less than 8 percent)."

** This is consistent with the finding that overall, local governments (at the APBD II level) give back to the hospitals less than they receive in income from fees from the hospitals.

According to the Directorate of Medical Services, although local government hospitals are not generally subject to the jurisdiction of the MOH, guidelines will soon be issued for them with respect to budgeting and fee income procedures. These will be along the lines of the procedures being developed for the vertical hospitals. Presumably, these guidelines will tend to result in more uniformity of practice among local government facilities.

The MOH favors adopting as a principle for local government hospital financing that income from fees should cover all operating costs (exclusive of salaries paid through the Ministry of Finance). Pursuant to this, hospitals will be obligated to turn all fee income over to the local government treasury and the local government will be obligated to pay each hospital an allocation equal to the fee revenue it turned in. This will establish a direct link between fee income earned by each facility and the funding available for operating expense for the facility.*

If, pursuant to the guidelines to be promulgated, budgeting is done more systematically and more realistically (e.g., based on good estimates of service output and realistic unit costs) and if fee revenue is equal to "need" in this sense, then the subsidies from the center (now based on the difference between "need" and what the local government pays in allocations) would no longer be necessary. If in fact subsidies were to be decreased, rupiah for rupiah, as fee income increased (and hence as the gap between "need" and the allocation from local government decreased) -- there would seem to be a strong disincentive built in to discourage efforts to increase fee income. In any case, however, to the extent that local governments can be prevented from claiming part of the income from hospital fees for other purposes, the need for subsidies from the central government will to this extent, at least, be diminished.

* It will also preclude local governments from using part of the income earned by hospital fees to finance other activities. If the fees are set high enough, this direct link may provide an incentive to keep collection rates up.

5. A HOSPITAL ORGANIZATION FORMAT TO PROMOTE EFFICIENCY

We note here two points for future reference. First, I shall subsequently recommend that, at least at the outset, the development of the diversion strategy should focus on the central government (MOH) budget, and not the local government budgets. Nevertheless, financing events at the local level, such as those discussed in this section, may (because they may result in a reduction of subsidies to local government hospitals paid from the MOH) tend to release additional central government funds for more adequate resource commitment to PHC activities.

Second, the rules now being proposed for the local government hospital-budgeting and fee-income game could, with some modification, result in an organization format with interesting possibilities from an incentive-for-efficiency point of view. Suppose a scheme as follows:

- a. For each local government hospital, a prospective budget is established ("negotiated" by the facility and the government) taking account of anticipated outputs and unit costs. This, as I understand it, is the procedure to be urged by the forthcoming guidelines.
- b. For each local government hospital, an estimate is made of anticipated income from fees during the forthcoming accounting period. This is analogous to the fee income "targets" now set for these hospitals. However, rather than being based simply on, say, past experience, the estimate should be based on the anticipated outputs in the first point above and an agreed upon set of tariffs. This is also, as I understand it, the procedure to be urged by the forthcoming guidelines.
- c. Rather than passing this income for fees through the local government budget, i.e., getting back in allocation what is turned in as income from fees (the procedure now contemplated), the facility would directly retain income from fees to be used, under suitable regulations, to defray operating expense (including such incentive

payments as the regulations might recognize). Here we have an important modification of the arrangements now contemplated.

- d. A "subvention" equal to the difference between (a) and (b) would be paid to the hospital to complete funding for operating costs. As matters stand, with local governments making no net fiscal effort on the health account, the subvention might be represented by the existing central government subsidy.

The favorable efficiency implications of this scheme derive from the fact that, operating under it, the hospitals would be at risk for both success and failure. Thus, assiduous attention by hospital management to cost containment might result in expenditures that are less than the "negotiated" prospective budget. And, for example, by striving to produce a quality product, management might improve the utilization (bed occupancy) rate and thus earn more income than had been projected. These developments would result in a "surplus" which the hospital management would be authorized to use, subject to suitable regulations, to forward the mission of the hospital (the suitable regulations should provide for some discretionary budget for hospital management). Thus, this organization format not only provides an incentive structure to motivate more efficient performance by management and staff but also some of the discretionary resources necessary to accomplish this. Additional changes from current practice in this domain may also be required, e.g., somewhat different rules for personnel management. And, of course, there are some obstacles to be recognized and coped with if this kind of format is to be implemented successfully. We will return to a further discussion of this format, including how the project might assist in the implementation of this kind of scheme.

Why might the central government and, more particularly the MOH, be interested in the potential of this kind of scheme? For one thing, if the scheme in fact results in increased efficiency in the hospital services sector, it would help to conserve the nation's scarce resources allocated to these services. More narrowly, the scheme might work to reduce the need for subsidies from the MOH to these facilities. And, from the point of view of the aims of the project,

this in turn might help to free scarce fiscal capacity for more adequate resource commitment to PHC activities.

One attractive aspect of this scheme in the practice setting afforded by the local government hospital sector is that in large part, the organization format incorporates institutional features already being urged by policymakers. It also incorporates a major modification of the arrangements now contemplated, notably, retention of income from fees by the facility. Obviously, a major institutional change of this kind is not to be undertaken lightly. Some trial runs with this kind of organization format, perhaps assisted by the project, would be valuable in helping to determine its feasibility.

More could be said about the structure and performance of the hospital services sector. However, perhaps enough has been said to provide an adequate context for a discussion of efficiency issues, and we now turn to these.

6. EFFICIENCY IN THE GOVERNMENT HOSPITAL SERVICES SECTOR: PROBLEMS AND ISSUES

6.1 A Note Regarding the Measurement of Efficiency

The efficiency of any activity or production process is measured as the amount of desired output per unit of input. Efficiency measurement for health services activities confronts a number of well known difficulties. Inputs to these activities can be fairly readily measured and even aggregated (e.g., in value terms). Output measurement is another matter, however. The penultimate output of a health services activity is improved health status (the ultimate output is, presumably, felicity). It is seldom feasible for the investigator to measure output in terms of improved health status, however. Consequently, some other output variable must be adopted, one which is, presumably, related to improvements in health. For example, some data sets may permit measuring the output of a health activity in terms of episodes of illness by diagnostic category treated (e.g., hospital discharges by diagnostic category). And it may be possible to assign costs of treatment to each of the various diagnostic categories.* Thus one might, for example, measure the relative efficiency of Hospital A and Hospital B by comparing their costs of treatment for each of various cases of illness by diagnostic category. Even this approach, however, is often not feasible and the investigator must resort to more rough and available measures of output, say the number of hospital bed days or hospital discharges. Needless to say, from an efficiency measurement point of view, comparing unit costs of output measured in these terms leaves much to be desired, e.g., the cost-consequential medical content of bed days or discharges may differ greatly depending upon the nature of the case load. In comparing the relative efficiency of Hospital A and Hospital B in terms of costs per bed day or cost per discharge, at a minimum, information would be required to determine if the distribution of the case load by diagnostic category and severity were reasonably similar.

* Recently-introduced prospective budgeting adopted by Medicare for provider reimbursement is based on the DRG (diagnosis related groups) scheme, the development of which entailed costs analysis of this kind.

For the purposes of this report, I have not undertaken to address the hospital efficiency issue by attempting to measure unit costs of hospital output.* Rather, more general observations are made on the apparent efficiency implications of some features of the performance of the hospital services sector. In addition, we address issues of organization function and structure as these bear upon conditions necessary (if not also sufficient) for efficient facility performance.

6.2 The Issue of Low Bed-Occupancy Rates (BORs) in the Government General Hospital Sector

We have already remarked on the phenomenon of very low BORs in this sector, particularly for the Class D hospitals. The general hospital bed to population ratio in Indonesia, at 0.5 bed/1000 population, is very lean overall (and much leaner in some parts of the country). In various developing countries, even those with much richer bed/population ratios, BORs run much higher. In light of these circumstances, the experience in Indonesia is surprising. My inquiries in the field have produced no very satisfactory answer on how to account for this. The most common (indeed, virtually ubiquitous) explanation encountered is that low BORs reflect the culture, that many Indonesians prefer to resort to the traditional sector and have not yet established a habit of using western medical facilities such as hospitals. I do not find this explanation very convincing (which does not, of course, mean that it may not be true). For one thing, surveys of household expenditures

* For reasons in addition to those suggested in this note, calculating such costs is a formidable undertaking and one upon which a team from the planning department of the MOH (assisted by the World Bank) is said to have embarked. My understanding is that they have not as yet gone very far down this road.

show relatively low rates of expenditure on "traditional" health costs (ongkos dukun) compared with other sources of health care.*

Another common explanation of low BORS in government hospitals is the "low quality" of these services, including such factors as lack of considerate treatment of the patients by the staff of the facility. These allegations may be true. But, even so, one wonders, where are the patients to go? Perhaps all of the discouraged customers at government hospitals pay the price of admission to private hospitals. This does not seem a likely resort for many at the low end of the income distribution. And in any case, the BORS in many private hospitals also tend to run very low (see Table VII).

It is possible that these low BORS reflect the consequences of price rationing of demand, i.e., many people are excluded from this market because of inability to pay the fees for government services. An argument against this explanation is that, according to government policy, individuals who are too poor to pay these fees are supposed to be treated free of charge. Experience in the field suggests, however, that very few patients are in fact accomodated free of charge. We will deal with some of these issues in the next section.

The explanation for the low BOR phenomenon at this writing is far from clear. What is clear is that this phenomenon is an important feature of the performance of the government hospital services sector and one that warrants prompt investigation. Unused hospital bed capacity represents a waste of resources, i.e., is inefficient in this sense. What is the remedy for the position? We can state that the government general hospital sector in Indonesia is overbedded relative to demand for the product. This does not necessarily imply, however, that lowering the price would help to clear the

* To counter this, respondents sometimes take the position that the survey results are in error: the people, confronted by a government survey research worker, are reluctant to admit that they prefer and do use the traditional health sector rather than the puskesmas and other facilities provided by the government. An effort should be made to check this out. In an important way, understanding the performance of the health services sector in Indonesia needs to be informed by good, hard information on where people are obtaining what health services, including, of course, those obtained from the traditional sector.

market. The quality-of-services dimension may be a more important policy variable such that improving the quality of the product while leaving the price the same would be more effective in tending to clear the market (employ the now unemployed resources). In evaluating this strategy, we should keep in mind that most of the costs associated with the under-utilized bed capacity are sunk costs, not really relevant for prospective planning. Filling these beds cannot be regarded as an end in itself. Improving the quality of the product may require extra or additional resources (i.e., may incur marginal costs) which are greater than the extra or additional benefits to be secured in this way. What these extra or additional benefits may be depends in part upon whether the government general hospital sector is also overbedded relative to "need" for these services as this would be defined by public policy, e.g., that "need" which the government regards as its responsibility to serve.

In developing policy in this domain, it must be kept in mind that the Class D hospitals, albeit underutilized for inpatient services, are a very significant source of OPD services (39 percent of the total of all such services supplied by government general hospitals) and that physician productivity of this output is much higher in the Class D hospitals than in the other classes of hospitals (see Table IX).

Clearly, an investigation of the low BOR phenomenon is called for. These questions are of far more than mere academic interest. Plans now call for upgrading all of the Class D hospitals and an examination of the public policy implications of this underutilization. Meanwhile, it is clear that upgrading the D hospitals to C hospitals will necessitate a high opportunity cost. It will claim public resources in both the development budget and the routine budget that might otherwise have been allocated to preventive/promotive, public health activities. The implications on this score may be particularly ominous for development budget events (which, as has been remarked, carries a good bit of the operating cost funding for preventive/promotive services). The development budget has borne the brunt of the fiscal austerity motivated by current payments problems: between 1985/86 and 1986/87 alone, the development budget for health is scheduled for a decrease of nearly 25 percent.

6.3 A Note Regarding Project Agenda: An Inquiry into Low BORS

Perhaps an appropriate early activity for the proposed project would be an investigation that seeks to understand the reasons for government general hospitals' low BORS, particularly the Class D and C hospitals. As has been noted (see Table VIII), although 18 percent of the Class D hospitals exhibit BORS of less than 25 percent, another 18 percent exhibit BORS between 71 and 100 percent. One way to begin the investigation would be to draw a random sample of hospitals from the high utilization group. The investigators would then examine the circumstances obtaining for each group (e.g., staffing, adequacy of funding especially for drugs, availability of alternative services in the area, and the like) to see what clues emerge to account for the differences in BORS.

6.4 Fees for Government Hospital Services: How Large a Financial Burden for Consumers?

There has been much discussion of the extent to which fees for government hospital services are reducing services demand and which categories of consumers may be shut out by this price rationing. This is an aspect of the more general issue of the extent of the financial burden imposed on consumers by charging fees for these services. These are obviously important questions, both from the point of view of the health status impact of the health services sector and from the point of view of equity concerns.

We cannot undertake here any very thorough investigation of these issues; more data would have to be assembled to inform such an investigation. Nevertheless, it is important to note the basis of the information on hand. The issue is important, there is a high level of interest in it in various quarters and, perhaps not least, an attempt to address this issue is apt to inspire other investigators to do likewise.

One way to get at this might be to attempt to evaluate the prices that hospitals charge for the various goods and services they market, e.g., in

light of information about the income distribution of consumers. Not only would this be tedious (I have seen one hospital tariff book that runs to 50-odd pages) but it would also not be very relevant. What is important to consumers from a financial burden point of view is not the price paid for each unit of services consumed but rather the total cost of each episode of treatment for representative episodes of illness where the treatment regimen adopted those medical practice standards approved for the government hospitals (which might or might not be the same as the standards adopted for historical instances of treatment which might be observed -- such costs should also be determined on this basis). It would require far more time to assemble these data than was available.

As a fairly satisfactory surrogate variable, we might examine fee income per bed day (on an inpatient account, i.e., neglecting OPD income) and the average length of stay in days (ALOS). Fee income per bed day represents what, on average, consumers with various illnesses have paid to the hospital for services consumed (e.g., accomodation, lab tests, physician fees, etc.). And ALOS indicates the average number of bed days entailed by the various episodes of illness.

We have assembled some data of this kind for the vertical hospitals (see Tables XIII and XIV) and for three local-government hospitals (see Tables XV and XVI). Data of this kind (even if they have been accurately reported) do not represent the total cost of the average day's care to the consumer because they do not capture additional expenditures the consumer probably made for drugs, etc. which do not appear in fee income reported by the hospital.* Nevertheless, perhaps with some adjustment, we can use these data to establish some general order of magnitude.

Looking at the vertical hospitals, ALOS varies from 6.5 to 12.1 (omitting the apparently anomalous case of Bukit Tinggi), for an average of about 10.0 days.

* Also, I have been cautioned that even as far as they are supposed to go (i.e., reporting fee income earned by the hospital), these data may not in all instances have been assembled very accurately.

For the local government hospitals it is about 5.0 days. (Table VII reports ALOS for all Class D hospitals as 6.0 and for the A and B hospitals as 9.0 and 8.0, respectively.) Looking again at the vertical hospitals, fee income per bed day varies from a high of Rp. 11,330 to a low of Rp. 1000 (again omitting Bukit Tinggi). Cipto, at Rp. 11,330 is an outlier -- the average for the others is Rp. 4000. For the three local government hospitals, the average is about Rp. 4700. We do not know what costs to the patient are not captured by these numbers. Let us assume Rp. 5000 per day and an ALOS of 10.0 - round numbers and both on the generous side. (This will facilitate adjustments by readers who prefer to try different assumptions, i.e., they can work in terms of multiples of these round numbers.) On this basis, and average episode of hospitalization in the government general hospitals would cost the patient about Rp. 50,000.

To evaluate the financial burden implied by an outlay of Rp. 50,000 we require some information about household income levels (approximated in this case by household expenditure levels). Table XVII (following) exhibits estimated percentage distribution of the population by monthly per capita expenditure rural and urban classes. To convert to household expenditure classes, multiply by 5.

TABLE XVII
PERCENTAGE DISTRIBUTION OF POPULATION BY MONTHLY PER CAPITA EXPENDITURE CLASSES
 Estimated 1986

Monthly Per Capita Expenditure (Rp)	<u>Rural %</u>	<u>Urban %</u>
Less than 5400	4.13	0.54
5401 - 6480	4.54	0.73
6481 - 8640	14.32	2.64
8641 - 10,800	16.42	4.88
10,801 - 16,200	32.23	19.24
16,201 - 21,600	14.81	20.30
21,601 - 32,400	9.53	27.23
32,401 and over -	4.02	24.44
Total	100.00	100.00

Source: 1984 SUSENAS distribution (Table 1.2, pp. 4 & 5) with the expenditure classes adjusted on the assumption that money incomes and expenditures kept pace with the change in the general CPI for the period.

According to the 1984 Statistical Yearbook of Indonesia (see Table 3.1.8, p. 69) the average population per household in Indonesia in 1980 was 4.9. Thus, multiplying the numbers defining the expenditure classes by, say, 5.0 would convert from per capita to per month household expenditure.

On the basis of this table, a hospital bill of Rp. 50,000 would amount to more than one month's household expenditure for about 40 percent of households in rural areas and about 9 percent of households in urban areas. However, when evaluated as an economic burden on the households (e.g., in terms of equity), an expenditure of this kind would certainly seem to impose a financing burden on many households (i.e., in term of how to come up with the funds to finance the expenditure).*

It is very important to remark at this juncture that the form of the economic burden in this case and the fact of the financing problem are in large part an artifact of our implicit assumption that the demand for these services will be financed by out-of-pocket payments by the consumer. A better way to look at the question of economic burden is to ask what the implications would be under social financing (insurance, prepay) of the demand for these services.

* Of course, an episode of hospitalization will impose additional, extra-medical costs on the household, e.g., the possibility of lost earnings by the patient (although if the patient is sick enough to be hospitalized, this may not be a real opportunity cost), and lost earnings and transport expense for the household members who may attend the patient in the hospital. In a general examination of economic bars to utilization, these factors should be considered -- they certainly make the medical expense more ominous than it would otherwise appear to be. For this exercise, however, we are concerned just with the effects of the fees themselves imposed by the government hospitals.

6.5 Some Advantages of Social Financing of the Demand for Government Hospital Services

What yearly premium would be necessary to create an insurance fund to cover expenditures for hospital services such as those we have been exploring? To answer this question, we need to make an assumption about the hospital inpatient utilization rate, say in terms of the number of patient days per 1000 insured beneficiaries. Let us assume, say, 150 patient days/year per 1000 beneficiaries.* And let us assume as before an expenditure of Rp. 5000 per inpatient day. With these assumptions, a representative group of 1000 beneficiaries would generate about Rp. 750,000 in hospital bills per year. And, neglecting the costs of administering the fund, a monthly contribution of about Rp. 63.0 by each (or on behalf of each) beneficiary would create the fund necessary to defray these costs. This is more than 1.0 percent of expenditures for only about 9.0 percent of the rural population and for virtually none of the urban population. Looked at in this way, the burden imposed by the present level of fees for government hospital services appears to be modest. And, looked at in this way, the advantages of social financing in this domain are manifest.

Of course, these calculations are on the rough-and-ready side and assumed values for the crucial variables, especially costs per bed day, may be off by orders of magnitude.** Nevertheless, this exercise has given us a better perspective than we otherwise would have on the issue of fees for government services as a financial burden for consumers. Also, this exercise suggests that if fees are serving as a bar to utilization of government hospital

* As nearly as I can make out, this seems to be about what is being assumed for their beneficiaries by the architects of DUKM. See A Pilot Scheme of DUKM for Jakarta, March 1984, p. 12 (where, however, the hospital admission rate is put in terms of admissions per month).

** The reader can experiment with different assumptions. For example, if we triple the assumed cost per bed day (to Rp. 15,000) but leave the hospitalization rate at 150, we come up with a premium equal to more than 2.0 percent of total expenditures for only about 25 percent of the rural population and about 4.0 percent of the urban population -- results which are still encouraging.

services, this may be owing more to the financing problem (which is an artifact of out-of-pocket financing) than to the economic burden on consumers in the more general sense. This in turn suggests that social financing of the demand for these services might have a favorable impact on utilization rates, i.e., low BORs may to some extent be an artifact of out-of-pocket financing. This in turn suggests the desirability of devoting serious attention to the possibility of developing social financing schemes to finance the demand for government general hospital services at prevailing tariff levels.*

* Social financing schemes do not, of course, necessarily create additional resources or subsidize consumers. Thus, under the scheme discussed in the exercise, consumers in the aggregate pay exactly the same amount (and hence the average expenditure for each is the same) under out-of-pocket financing and social financing of demand, i.e., the anticipated favorable effect on utilization is not owing to some subsidy of consumers, although subsidies can be built into such schemes, e.g., for low income consumers.

It is frequently remarked that ASKES beneficiaries have higher utilization rates for government-provided health services than do consumers in the general (uninsured) population. For example, in one puskesmas visited by the author, ASKES beneficiaries, who constituted only about 10 percent of the people in the service area, were generating about half of all visits to the facility.

Such enhanced utilization rates for ASKES beneficiaries should not be interpreted as a "pure" social-financing effect, however, if other things, including the quality of the services, are held constant. The ASKES beneficiaries are getting a higher quality product, e.g., less queuing for services (they have special hours) and much better availability of drugs (ASKES supplies the puskesmas with drugs for ASKES beneficiaries). The enhanced utilization rates for ASKES beneficiaries may be owing in the main to higher quality services rather than social financing per se, i.e., such that holding the quality of the product constant might result in a significant reduction in utilization rates by these insured beneficiaries.

The drug supply picture may be crucial to generally low utilization rates for the general public. In many instances in various developing countries, low utilization of health centers can be traced to shortfalls in the supply of drugs to these facilities -- indeed, this is perhaps the most common reason for low utilization of such facilities.

6.6 A Note Regarding Project Agenda: An Inquiry into Costs to Consumers of Services Provided by Government General Hospitals and into the Feasibility of Social Financing of the Demand for These Services

For the reasons set out above, perhaps an appropriate early activity for the proposed project would be to investigate implementing a social-financing experiment to test the relationship between financing mode and utilization rates.* This investigation should also look into the question of the medically indigent, i.e., those judged poor enough to be excused from the liability to pay fees to utilize government-provided health services. How, operationally, is this class of consumers identified? How well does the procedure work? What kind of treatment are these consumers accorded by the government facilities? These questions have important equity implications for attempts to increase the rate of cost recovery in government hospitals.

I remark in this context that my experience in the field suggests that very, very few patients are treated free of charge by government hospitals on grounds of indigency. The ratio of free patients to all patients is virtually always reported to be 5.0 percent or less by spokesmen for the hospitals responding to questions on this score. Where are the poor patients going?

6.7 A Note on Government Hospital Financing as a Bar to Free Treatment for the Medically Indigent

As matters stand in local government jurisdictions, government hospitals are expected to be virtually self sufficient for that operating funding represented by the allocation from local government. That is, it appears that these hospitals collectively turn in more fee income to the local government than they get back in the form of allocations and some of these hospitals seem to assume that these magnitudes are directly related on a hospital-by-hospital

* Whether, and if so, under what circumstances, such an experiment would be feasible is of course a question which needs discussion. However, it has been well said:

"One social experiment is worth one thousand regression equations."
Anonymous, circa 1986.

basis, at least so far as they are concerned. Moreover, it appears that the guidelines about to be promulgated will require local governments to give back to each hospital (as an allocation on a hospital-by-hospital basis) what that hospital has turned in as fee revenue.

It should be obvious that if these hospitals are expected to be self sufficient in this sense, they simply cannot afford to handle any significant number of free patients -- unless the fees are set high enough for the paying patients (and there are enough paying patients) to provide an operating surplus on that part of the business. Where the hospitals are expected to be self sufficient from fee income for an important part of their operating funding, medically indigent patients will have to be accommodated in a different way -- namely, by a program that pays the hospitals on behalf of these patients for treatment given these patients (i.e., rather than providing that these patients get in free).

7. THE PRIVATE HOSPITAL SERVICES SECTOR

7.1 Introduction

This sector may be thought of as comprised of three subsectors:

- o The "deluxe" private hospitals (including maternity hospitals), which aim to produce a high quality product and to market it at a commensurate price.*
- o Employer (company) owned facilities used mainly to provide services to the company's own employees and their dependents.
- o The church-related (mission) hospitals thought of by their sponsors as responsive to a social need for good quality, considerate care at a price affordable to many consumers.

Hospitals in the deluxe sector are mainly physician owned and promoted -- a part of the motivation for this being the physicians' desire to provide higher quality services than would otherwise be available to their patients (at least within country). In any event, only the very few at the upper end of the income distribution can afford to patronize these facilities. Supply in the deluxe hospital services market seems to be able to respond to demand for the product and this sector can be expected to grow on its own over the coming years. In many ways, this sector is rather out of the mainstream of health sector events (which is not to say that it doesn't serve a useful purpose for those physicians and their patients who use these facilities). At best it will provide only a miniscule percentage of total hospital services for the foreseeable future. From a public policy point of view, this sector may to

* Some non-church-related private hospitals may be emerging. These hospitals are intended to produce and market services at more modest cost to the consumer than the deluxe sector, e.g., such as RSU Sitanggang in Medan. This particular hospital is authorized to admit ASKES beneficiaries. (Some problems have arisen in this relationship and are referred to subsequently.) In various developing countries, the emergence and growth of hospitalization insurance has encouraged the growth of this kind of hospital sector and similar developments might be anticipated here, at least in the longer run.

some extent reduce pressure for sophisticated facilities in public hospitals, i.e., thereby helping to conserve scarce fiscal capacity. Another significance of this sector from a public-policy point of view is that it will be competing with the other hospital sectors, public and private, for scarce resources, e.g., nurses. However, the likely relatively small size of this sector over the near term diminishes the significance of this competition. All in all, it is doubtful that the forthcoming project will find ways to usefully engage events in the deluxe sector.

The second subsector, the company-owned facilities, may be in a state of transition. Under recent changes in the tax laws, the cost of health services provided by employers to their employees in kind is no longer to be regarded as a cost of doing business (i.e., this cost will no longer reduce income for tax purposes). At the same time, it appears that if an employer pays his employees' health-services bills (directly or by buying insurance policies for them), these costs will be reckoned as a cost of doing business for tax purposes. Consequently, one would suppose that employers who are now providing in-kind health benefits will be looking for other arrangements.* Such other arrangements could include companies contracting with outside providers to provide services to their employees or contracting with carriers for group health insurance coverage for their employees.

These events will of course be important for the employees who will become the beneficiaries of various schemes: their welfare and that of their dependents can be significantly affected by the choices that are made. And these events may have a larger significance in their possible influence on the evolution of the system for private social financing of the demand for health services in

* Recent HMO developments at Pertamina appear at least in part to have been inspired by these tax law changes.

Indonesia (including here publicly sponsored social security-type schemes financed by payroll taxes).*

The recently launched DUKM trial illustrates some of the problems and issues involved. As a pilot scheme on a voluntary basis, DUKM has not performed as its proponents had anticipated.** One consequence of its disappointing showing may be that serious efforts will not be made to extend the DUKM scheme per se. Nevertheless, the basic issues in this domain will remain to be engaged. Should there be a national, social security-type, employment-related, payroll-tax financed health insurance scheme? If so, should employer/employee participation be voluntary or mandatory? If the former, what should be the conditions for opting out, e.g., that the employer put up an acceptable alternative scheme?

Indeed, events on the employment-related health care benefits front may have implications which go far beyond the concerns of the health services sector as such. Consider the following (see DUKM, p. 14):

"Where employers accept DUKM as a substitute for their existing services (except for basic occupational health services), the saving in cost would be very substantial. The preliminary results from those respondents able to provide figures (over half of respondents) in the survey, suggest that existing services are on average costing employers over 22 percent of

* As one example, it is frequently argued that the objective of cost containment in the health services sector will be better served if employers contract with providers for the provision of services to their employees on a prepaid, capitation basis (e.g., contract with HMOs) rather than contracting with carriers for insurance coverage of their employees. This view is largely based upon what is thought to have been the experience in the U.S. Great caution, however, is called for in any attempt to extrapolate this experience to the very different health services sectors in countries such as Indonesia. Indeed, a good case can be made that the apparently economical performance of HMOs in the U.S. owes less to the incentives inherent in this form of delivery system and more to market competition of a kind which may not exist in a severely supply-constrained health services sector such as that in Indonesia.

** See A Pilot Scheme of DUKM for Jakarta, March 1984 (henceforth DUKM). Proponents anticipated an enrollment of over 1.2 million persons. As of now, however, the scheme has enrolled only about 8,400 beneficiaries from the 40 small firms that have signed up.

payroll compared with the preliminary estimate of 7 percent of payroll for DUKM. Part of this surplus may go in higher rates of pay and part in company savings (adding to private savings in line with the objectives of the Repelita IV National Plan). Alternatively, lower labor costs would help to make Indonesian goods more competitive abroad and thus contribute to the balance of payments and to lowering the rate of inflation.*

This is an interesting statement. It is true that when health insurance enthusiasts are seeking to impose employment-related health insurance schemes on employers, economists usually caution that great care must be taken not to impose an increase in unit labor costs on these employers which will have adverse consequences for the viability of the firms and hence for the employment opportunities they provide.* Here, however, with DUKM we have an employment-related health insurance scheme recommended in part on the grounds that it will enhance the viability of the employers participating in it, improve their capacity to compete in domestic and international markets, and enhance their capacity to provide jobs. Clearly, the relationship between employment-related health benefits and wider market events needs to be looked into. For what percent of employees are employer-provided services costing over 22 percent of payroll? ** Prima facie, this would seem to be a much higher cost than one would expect. The more general issue suggested by this, however, is whether existing employer schemes feature inefficiencies (e.g.,

* This caution may be well taken here where, as Rucker remarks: "Almost everyone (donors, press, academics and GOI) seems to agree that a serious employment problem exists in Indonesia and that it is worsening." See A Preliminary View of Indonesia's Employment Problem and Some Options for Solving It, Agency for International Development, USAID/Jakarta, Oct. 1985.

** Even if this were the case, it does not follow without showing (as seems to be assumed in the DUKM quote) that these health benefits are increasing labor costs by a like amount over what they otherwise would be. After all, the incidence of these costs may be mainly on the employees who are accepting lower wages and other fringes to take out part of their compensation in the form of health benefits, such that absent the health benefits, wages and other fringes would increase. We need to know more about the working of the labor market here, e.g., just how are money wages determined, in order to deal with questions like this. The answers to these questions may be of importance for the design of employment-related health benefit schemes.

excess capacity in facilities such as company clinics and hospitals, a small, uneconomic scale of operation, and the like) such that alternative arrangements could provide some significant savings (even if not on quite as grand a scale as contemplated by the proponents of DUKM).

The third subsector, the church-related (mission) hospitals, have about 90 percent of the private hospital sector's beds and are the dominant force in this sector. These hospitals seem to think of themselves as performing a service function, supplying acceptable services at as low a cost as possible.* Even so, their fees and fee income per patient day are rather higher than for the government hospitals. This does not, of course, imply that the real costs of producing hospital services in the mission hospitals are higher than in the government hospitals.** The government hospitals are required to recover only a small part of their operating costs in income from fees. The mission hospitals must recover virtually all of their operating costs in income from fees, i.e., they must be self-sufficient in this sense.

As we have previously noted, the long-run plans of the GOI for the health services sector call for a very significant expansion of the capacity of the private hospital sector relative to the government sector. Since the church-related hospitals now have about 90 percent of the bed capacity in the

* It is my impression from visiting a number of these hospitals that they are well managed and administered such that they are achieving good operating efficiency. Investigators seeking to determine unit costs for hospital services in Indonesia would be well advised to take a close look at some of the mission hospitals with an eye to establishing at least one standard for services of that quality.

** It doesn't even necessarily lead to the conclusion that costs to the patient are higher in mission hospitals than in government hospitals. Patients in government hospitals may incur costs, e.g., for drugs from private suppliers (some government hospitals maintain private chemists shops on their premises), which do not show up in an accounting of payments to the hospital. Moreover, ALOS tends to run shorter in the private hospitals than in the government hospitals, which may reduce travel costs and time lost from work for the hospital members and their households. An interesting investigation would be an inquiry into the real (direct and imputed) costs of treating representative episodes of illness by diagnostic category in the mission and government hospitals.

private sector, one might suppose that they will be expected to play an important role in this expansion of private hospital capacity. If this is indeed the expectation of policymakers, it would be well for planners to begin thinking about what strategies might encourage such a result, including the possibility of more complementary relationships between the private and government sectors.

One problem for this strategy is that, as matters stand, some of these hospitals at least appear to be in trouble from an economic viability point of view, struggling to keep afloat (e.g., this appears to be the situation for RS Gunung Maria and RS Bethesda GMIM, both in the environs of Manado). In some instances, this may be owing to local economic problems, e.g., the deterioration of the copra market and the failure of the clove crop in North Sulawesi, which have reduced the capacity of the consumers there to pay for hospital services. However, the problem may be more general. If there is to be more large-scale dependence upon the private hospital sector, it is important for planners to canvass these institutions to determine what the market situation is. A finding that many of them are in trouble would have ominous implications for a strategy based upon anticipated expansion of the private hospital sector and would call for efforts to remedy the position. In the opinion of one thoughtful spokesman in a mission hospital visited, without changes in financing arrangements, non-government hospitals in rural areas will simply vanish from the scene.

7.2 A Note Regarding Project Agenda: An Inquiry into Employment-Related Health Benefits Schemes with an Eye to Providing Technical Assistance and Perhaps Some Risk Underwriting to Parties (Employers, Providers, Government) Seeking to Implement Programs in this Domain

What changes in the financing arrangements of mission hospitals might help? More widespread resort to private social financing of the demand for services provided by these hospitals is a promising possibility, and some of these hospitals have been undertaking initiatives in this direction, e.g., attempting to market to groups of employees. This is a domain in which the

project might provide valuable technical assistance and perhaps some risk underwriting.*

Another strategy might be given at least some attention. As I understand it, as matters stand, the government provides very small-scale assistance to some mission hospitals, e.g., posting some health manpower. Perhaps, at least in some selected market areas, a program of larger subsidies would make sense from the point of view of both parties. I am thinking particularly of those situations in which there may be a mission hospital struggling to keep afloat and a severely underutilized (very low BOR) government hospital in the same market area. Perhaps in this kind of situation, the public funds now being used to support the government hospital would go further if they were used instead to help finance demand for services provided by the private hospital (e.g., as by a subvention paid to the hospital to permit a reduction in tariffs to levels similar to those featured by the government hospital, or by providing vouchers to assist the medically indigent in financing services).

The possibility for mutually beneficial arrangements of this kind depends in part on the relative real costs of producing services in the two practice settings. A serious investigation of these relative costs would in any event be of interest to government policymakers and it might help inform the design

* RS St. Carolus (Jakarta) in particular has been active in trying to promote new modes of marketing. This hospital has been working with carriers (Pimur Gauh/Aetna) to market outpatient services on a capitation basis and inpatient services on the basis of one, all inclusive per diem charge. The package is to include a full range of MCH, preventive/promotive (health education included) services. Interestingly, the carrier, in seeking to market this plan to employers, is running into objections that they should not have to pay for the preventive/promotive component of the package (on the view that, why pay for services unless the employees are sick?). This scheme has been partly formulated with an eye on the implications of changes in the tax law which may cause increasing numbers of employers to seek to contract for services with outside providers.

of arrangements such as those sketched earlier.*

7.3 The Private Sector and Preventive/Promotive Public Health Services

Usually, and with the exception of a few services, to call upon providers in the private sector to produce preventive/promotive services will be unavailing. This is for the very good reason that usually the customers won't knowingly pay for such services. Sometimes customers can be tricked into paying for them by a loading on to what they are willing to pay for curative services, although one may question the implications of a strategy of this kind. And it is not easy, in light of the facts of life in the market, to coerce providers into providing preventive/promotive services. It is for these reasons that we usually must depend upon the public sector for them, recruiting resources through public finance rather than private finance.

An interesting exception to this general state of affairs may be represented by some of the mission hospitals (e.g., St. Carolus and Bethesda GMIM). These facilities are more than just hospitals, they are health-care systems, with the main hospital supervising satellite hospitals and these in turn supervising outpatient health clinics or centers.** And, there is a seeming

* It is of course easier to suggest that such a cost comparison be made than to actually make it. There are some real problems in this domain even without the additional complication of comparisons. For example, government hospitals operate under tight budget constraints and in any event will use all of the resources allocated to them in the various budgets. If we observe their historical costs over some period of time, changes in them may better reflect these budget events than actual changes in the cost of producing some defined product. An additional problem for comparison between government hospital and private hospital costs is that the product being produced is probably significantly different in the two practice settings. Unless we can somehow standardize the output, we will end up with very little. One approach would be to try to determine what would it cost to produce the output of private (public) hospitals (measured in physical units with regard for quality) if that same output were to be produced in the public (private) hospitals.

** St. Carolus has ambitious plans on the drawing board to expand its system to include some new "basic hospitals" and clinics. The project will want to take a look at the implications of this.

conviction that the health service system constituted by these facilities should deliver a full range of preventive/promotive, public health services, including outreach in the community. Thus it may be that for the project's objectives, the encouragement of this private sector activity could be regarded as appropriate.*

7.4. A Note Regarding Project Agenda: An Inquiry into the Market Position of the Church-Related Hospitals with an Eye to the Implications of More Social Financing of the Demand for Their Services and to the Possibility of Developing More Complementary Relationships Between this Sector and the Government Sector

For the reasons set out above, this might be an appropriate item early on in the project agenda. At the very time policymakers appear to have decided to rely on greatly increased capacity in the private hospital sector, the dominant force in that sector, the church-related facilities, may well be in trouble. Clearly, attention to this matter is in order, if only to determine at the outset how ominous a problem this actually is.

* It must be remarked, however, that whether these private providers can "get away" with obliging their customers to pay for preventive/promotive services may depend upon the degree of competition in this marketplace. If the package is sufficiently attractive otherwise, the employers may buy it. But what if there are alternative providers (with a good product) in this market who are willing to sell them an exclusively curative package (which would cost less)?

8. THE QUESTION OF THE OPERATIONAL EFFICIENCY OF GOVERNMENT HOSPITALS

Discussing this matter with the directors and other staff of a number of government hospitals in Indonesia has left me with grave doubts that these organizations meet the conditions necessary to achieve a high degree of operational efficiency. It is true that many of those directing these facilities have not been trained as hospital managers or administrators. It is also true that the conventional accounting systems employed by these facilities (the "budget codes") are not well designed to facilitate cost accounting for management purposes.* But these matters do not get to the heart of the problem. The heart of the problem lies in the adverse implications of the basic organizational structure of these facilities for those incentives which are necessary to motivate efficiency and for those resources and authorities which are necessary to actually achieve efficiency once it has been motivated. It seems probable that unless these basic organization-structure problems are addressed, efforts to enhance efficiency will be unavailing.

For example, in any organization, the recruitment, motivation and commitment of personnel is central to the capacity of management to achieve efficient performance. Personnel policies in the government hospital sector reflect policies in the civil service more generally. They appear to provide management with very little in the way of effective management "tools" (e.g., authority, resources) in the domain of personnel policy. Staffing patterns appear to be largely set by "standards" promulgated by higher authority. The incumbents of sanctioned posts are selected by higher authority ("dropped on the hospital," as a hospital director put it). Effective discipline of employees (and to this extent, effective supervision of employees) is not

* The project may want to design interventions to be responsive to these two kinds of problems. With respect to management/administrative skills, it has been suggested that a simple program under which hospital administrators, incumbent or prospective, would gain first-hand, practical knowledge by working in an intern-like relationship with accomplished administrators. This would be a good approach--much better than, say, formal coursework in hospital administration.

facilitated by personnel policies. For example, I have been repeatedly told that although it is possible, in principle, for a hospital director to terminate a malfunctioning employee, practically speaking this is not a real option.

Of course, the personnel policies adopted for the government service have not been adopted without good reason; they may serve the legitimate interests of the parties. In any event, one does not tamper lightly with such a fundamental structural feature of an organization as the "rules for play" of the personnel game. At the same time, however, those who profess an interest in increasing the efficiency of these organizations owe it to this aspiration to be quite candid about the implications of the rules and procedures which govern personnel policy. If these rules are a bar to increased efficiency, this circumstance must be frankly acknowledged and the question raised as to whether some acceptable (at least partial) remedies for the position might be found.

Given the organizational constraints sketched above, and barring a fundamental overhaul of the arrangements, the situation for management might at least be improved somewhat if the director had authority and resources to reward good performance by staff. As matters stand, however, it appears that hospital management has virtually no discretionary budget for this or any other purpose. The budget is pretty well frozen, line item by line item, with little or no leeway to move funds among the items. In this and other matters, the director has very little management "elbow room."

More generally, one of the basic problems of organization structure as it relates to the prospects for operational efficiency has been the rules for managing income from fees charged for the services marketed by the hospitals. According to the letter of the law (even though it is sometimes not strictly observed) all income from fees is supposed to revert to the central, provincial or local government treasury as the case may be. The hospital then is financed by allocations from the various budgets. This arrangement, if strictly observed, effectively deprives hospital management of the possibility (e.g., as by attention to cost containment, product quality and marketing) of

increasing the resources available to serve the mission of the hospital, surely one of the major ways in which organization management might seek to be successful. Indeed, considering all of the constraints already sketched (and others that may come to mind), it is perhaps a fair characterization of the position of the management of a representative government hospital to say that such management cannot be at risk for success--and this surely is a potentially discouraging organizational context in which to expect management to strive for efficiency.

In most developing countries, revenues from fees for services marketed by government health facilities must by law revert to the exchequer. In most countries, this arrangement effectively precludes the possibility of significant cost recovery through this kind of fee mechanism. This is because those on the ground in the facilities have no interest in collecting fee income (in various ways, an onerous task) that will only revert to the exchequer. Consequently, collection rates tend to be very, very low. Here, and contrary to what one would expect from simple knowledge of the legal arrangements, this seems to be less the case--indeed, judged by standards in other countries, collection rates seem quite high and the amount of cost recovery is quite substantial. What seems to account for this is that events are not in this domain de facto what they are supposed to be de jure. For example, not all of the vertical hospitals have been turning back to the treasury all of the income they receive from fees. Hospital managers testify that such income retained by the hospital is in the main used for personnel incentive schemes of one kind or another and that, indeed, having this income to use in this way is a big help in organizational efficiency. The fee revenue retained and used in this way is, however, only a small part of the total hospital budget, limiting its significance from this point of view. For the local government hospitals, the situation is somewhat different. Although various of these seem to return all income from fees to the treasury, an understanding has developed that they will get back in allocation what they turn in in revenue such that by earning more income they can increase the resources available to the organization. In addition, various local governments appear to have agreed to an arrangement under which for Class I and Class II patients, income from charges for specialists services can be

retained by the facility with, say, 60 percent going to the physician and the other 40 percent being divided as incentive pay to other members of the staff who have directly or indirectly assisted with the delivery of these services. Again, the testimony from the field is that these incentive arrangements are very important. Forthcoming developments for budgeting and tariff procedures for vertical hospitals suggest somewhat this kind of procedure for the vertical hospitals. The problem is, however, from an incentive point of view, that a rigid formula is to be adopted with respect to the amount and pattern of the incentive payments. Indeed, the concept of "incentive" here seems to be a payment to supplement salary, agreed to and expected ex ante performance with the hope that it will evoke better performance. This is a very different concept of "incentive" than another frequently used sense of it--namely, a payment ex post performance which, far from being automatically forthcoming, will be paid only if it is earned by superior performance. It is in this latter sense that we use the concept of incentive in what follows.

9. A GOVERNMENT HOSPITAL ORGANIZATION FORMAT TO PROMOTE EFFICIENCY:
SECOND VIEW AND HOW THE PROJECT MAY ASSIST THIS DEVELOPMENT

The reader should at this point recall or review Section 6.6, which sketched a prospective budgeting format under which the hospital would be at risk for both success and failure. This is basically the model we have in mind here. In the earlier discussion we suggested the possibility of some trials along these lines with one or two selected local government hospitals, and, indeed, continued consideration should be given to this possibility.

More generally, however, the local government hospital sector, comprised mainly of Class C and D hospitals, should probably be given some overall study and evaluation before programatic interventions are undertaken. Thus, the major emphasis would upon developing the prospective budgeting format for selected vertical hospitals. If one (or more) such hospitals were to be singled out for a trial run under the new format, it would facilitate matters if that facility could be regarded as unique in some respect and hence a logical candidate for this role.

The points set out in Section 5 that define the organizational format remain the same, although now we are talking about relationships between vertical hospitals and the national government (not, as before, local government). And the explanation of why this format might increase efficiency remains relevant.

Beyond this, for the trial runs at the national level, a couple of additional points should get attention, viz:

- o The possibility of perum status for the trial hospital (say, one of the Class A tertiary facilities). An advantage of this may be to give the hospital director more management elbow room, e.g., with respect to personnel policy, and it may also reduce problems with the provision that the hospital retain fee income rather than having it revert to the exchequer.

- o Increasing the rate of cost recovery: Various policy statements indicate that the government is interested in increased rates of cost recovery in the health services sector. It is not clear whether the forthcoming instructions and guidelines have built increased cost recovery into the tariffs or not. If not, or even if so, the GOI might want to consider combining the trial with a prospective-budgeting format with increased cost recovery. In any event, a major objective of attempting to increase operational efficiency with this format is to, at least in the longer run, facilitate increased rates of cost recovery.

How might the project assist the implementation of a trial run under the prospective-budgeting format? There are several ways in which the project might assist, viz:

In launching a trial of this kind, it will be desirable to attempt in various ways to improve the quality of the services being delivered. This should help greatly with marketing the product, e.g., on a contract basis to groups of prepaid beneficiaries (say employees of firms). Marketing in this way may well facilitate increased cost recovery (e.g., better collection rates, maybe higher negotiated tariffs tied to better quality) as well as being otherwise desirable from a social-policy point of view.* Improving the quality of the product will depend in an important way on the change in organization format and the incentives it brings with it. At the same time, however, some attention to various ways of improving facilities may also be required and the project might make some funds available for this purpose.

A major way in which the project might provide assistance would be to break the deadlock that might result from a chicken-egg type of problem which could well bar implementation of the trial. The prospective-budgeting format proposed requires that the facility marketing the services be able to retain

* The very high "collection rates" reported by government hospitals here seem to refer to how actual collections compare with the "targets" set for these collections. What is not clear is what the "targets" have assumed about collection rates.

the income earned in this way (i.e., it should not, as under current rules, be assumed to revert to the exchequer). The argument for accepting this change in the rules is that it is an integral part of implementing new organizational formats which have high promise of significant improvements in organizational efficiency which may conserve scarce resources and increase rates of cost recovery. Experience shows, however, that ministers of finance (and others in like positions of authority) are very unlikely to be impressed enough by these arguments to agree to the change in rules. Not unreasonably, perhaps, they would like a demonstration of the alleged increases in efficiency said to flow from the new arrangements. But, to demonstrate the efficiency implications of the new arrangement, it is essential that the trial be run with an organizational format under which the facility marketing the services retains the income from fees. Thus, we arrive at a deadlock. To get agreement that the facility can retain income from fees, we need (at a minimum) a successful trial run. But the successful trial run cannot take place unless the facility can retain income from fees. We have thus arrived at an impasse in our negotiation with the Ministry of Finance.

The project can break this impasse by providing the funding necessary to simulate the situation where the facility marketing the services retains its income from fees. Thus, let income from fees revert to the exchequer as provided by current law. Let the project, however, pay to the facility amounts equal to the fee income reverting to the exchequer. This income would then be used according to guidelines to be agreed upon. It will be recognized that this kind of project assistance is among the more appropriate types of such assistance -- it permits events to occur which could not otherwise occur with the expectation that when these events occur, they will be rewarding to the parties such that they will continue them in force after one of the projects has picked up its marbles and gone home.

In all this it must be kept in mind that, at least from the project's point of view, we are starting down this road with rather specific objectives in mind that run well beyond the immediate institutional context of the trial run. We would want to make certain good-faith "bargains" before starting down this road, viz:

- o That the Ministry of Finance (or other relevant authority) would agree in good faith that if the trial run proves successful, then the official rules would be changed to permit the facility lawfully to retain the income from fees. (The definition of "success" in this context could have to be negotiated.)

- o That the MOH agree in good faith that to the extent that the trial run results in increased cost recovery, public funds would be diverted from the hospital to preventive/promotive, public health services.*

Although we cannot take time to spell them out here, good arguments can be made that the government parties to these events would be well advised to and would find it in their best interest to go along with the "bargains" proposed.

We have reached the point in this report where attention should now be directed to the question of what institutional form (what "incarnation" as it were) the project should assume.

* What the formula for this should be would have to be worked out with care, e.g., a reduction in the public funds allocation, rupiah for rupiah, with increased cost recovery would subvert the favorable incentive effects of the scheme. Nevertheless, some meaningful diversion should be agreed upon.

10. THE PROJECT

10.1 Institutional Form.

The discussion which has gone before has set out the general logic that informs the project, the objectives it seeks, and how it proposes to get there. And at various places in the discussion, "tasks" (kinds of interventions) have been proposed as appropriate for the project's agenda. But what kind of institutional embodiment of the project will result in an organization that can be responsive to the various demands contemplated?

In my view, the institutionalization of the project should be developed very much in the spirit of the 1972 HMO Act in the U.S. The central principle (as a matter of social planning) which informed that Act was that it was to be responsive to initiatives by any of various parties interested in developing HMOs (i.e., the Act did not propose that some government agency take the initiative in this development). Our project here should be developed to reflect that principle: it should seek to be responsive to initiatives by any of various parties, public or private, who want to implement programs or activities consistent with the aims of the project.

Of course, the HMO Act itself was specifically designed to encourage the growth of this type of delivery system in the U.S. health services sector. Although our project may also assist with some such developments, its agenda will by no means be restricted to such assistance. To avoid possible misunderstanding, let me emphasize that I have used the HMO Act as exemplary of the principle that the project be responsive to initiatives by interested parties (rather than assume the initiative itself).* The specific aims of

* A great problem with many USAID health projects (e.g., the typical "rural health project") is that they have gone in the opposite direction and have assumed the initiative for development in which, it turns out, the host country is not genuinely interested. In this kind of situation, the prospects for project success are remote. We will be well advised in developing the project to avoid this kind of approach. We do not want to be seen as "cramming anything down anybody's throat," so to speak.

that Act, however, are not regarded as exemplary for outside projects--they were much too narrow. Like the HMO Act, the project might provide various genre of assistance, for example:

- o Front-end money for initial planning of programs, including funds for technical assistance (where this is desired by the proposing party).
- o If initial planning has gone well, the proposal may have arrived at the stage of operational design. The project would provide assistance at this stage, again being prepared to respond to requests for technical assistance.
- o If operational design has gone well, the proposal may be at the point of actual implementation. The project will assist this phase, particularly by standing ready to underwrite certain unavoidable risks assumed by the proposer of the program but such that outside assistance is required in responding to them.*

The project's institutionalization will have to include an appropriately designed decision-making process to respond to initiators and promoters in the field and decide which proposals are to get how much of what kinds of funding. Before addressing this aspect of project design, however, it will help to put a little more meat on the project's bones by giving some examples of the kinds of proposals to which the project might respond, viz:

- o The project might attract as a major client the MOH and a vertical hospital proposing to implement a trial run with the prospective-budgeting format. A large amount of initial planning would be called for, e.g., what criteria and data the MOH and the hospital are to use in reaching agreement on the prospective budget and the rate

* In this case, a groundwork has already been laid, as in some of the MOH documents discussed earlier in this report.

of prospective income from fees.* The hospital might want to think about designing schemes to market the product in innovative ways, e.g., to groups on a prepaid basis. And of course, the project could assist with stimulation of the state of affairs which would obtain if the hospital were to retain income from fees (see foregoing discussion of this point).

- o More modestly, a government hospital or a private hospital might want to seriously consider marketing services on a prepaid basis to groups of consumers. This might require a good bit of assistance with initial planning, operational planning and ultimately, risk underwriting.
- o Or, a government hospital might want to give serious consideration to and ultimately to implement more innovative schemes aimed to enhance cost recovery. One such scheme currently being implemented by RSUD Dr. Soetomo, a Class A hospital in Surabaya, is to make special provision for private patients in this public hospital. Twenty percent of the bed space has been set aside as a private pavillion, the hospital collects fees for accommodation and tests, and the physician charges his patient whatever fee he regards as in order. The pavillion has earned significant income -- of a total 1985/86 fee income of Rp. 1752 million, pavillion income was Rp. 757 million (about 43 percent). Other government hospitals might want to plan and implement similar schemes, and the project could help with such planning (e.g., what should private fees be, what should be invested in such facilities, what space should be allocated for them, etc.)**

* An example of this function: Emerging HMOs are almost sure to run with substantial deficits for the first few years (I have in mind HMOs of the PPGP type, not IPAs). This is so because they must have staff and facilities on board in order to contract with members (beneficiaries) for the provision of services to them. But, it may take some years (market penetration problems) to build up the membership to the point where dues income is enough to defray costs. The HMO Act responded to this potential bar to the growth of HMOs by providing funds to help defray deficits during up to the first three years of operation for HMOs being assisted under the Act.

** It should be noted that Soetomo is not collecting overall an unusually large amount of income per bed day (about Rp. 3484).

- o In its relationship with some private hospitals (e.g., RSU Sitanggang in Medan), ASKES is having some cost-containment problems. Under initially negotiated fees for ASKES beneficiaries, costs were getting out of hand. In response, ASKES apparently unilaterally imposed a flat monthly payment to the hospital in exchange for which the hospital was expected to see all ASKES beneficiaries. The hospital claims that this arrangement is not meeting its costs for these patients. This would not seem to be a workable approach to the cost containment problem in this domain. What should be done? Perhaps ASKES and the hospital could negotiate a capitation arrangement for these patients. ASKES and the hospital might propose to the project some assistance in the design of such a scheme and maybe some risk underwriting once it was launched.
- o The MOH (or other government ministries who may regard themselves as being "at risk" in the situation) might propose to the project and seek assistance for a serious inquiry into the low BORS problem in the Class D sector -- with an eye to more rational planning of the (now diminished) development budget in this domain.
- o Employers (firms) seeking to adapt their employee benefit plans for health to changes in the tax law might come to the project for some technical assistance in exploring alternatives (e.g., contracting with providers on a prepaid basis).

It would be easy to go on adding to this agenda or list of prospective clients who might bring proposals to the project. The point should by now be made, however. The prospects that the project will do important business seem promising. And, it seems clear that the government health services sector stands to gain as much or more from the project as does the private health services sector -- although, of course, both will gain and may be able in the process to improve the complementarity between the two sectors.

10.2 Decision Making Process

This matter will require a good bit of thought and discussion. Perhaps we can here suggest a few guidelines. The project will want to assume a name for doing business -- perhaps something like Health Care Financing and Development Agency (HCFADA). The project will require some kind of committee or board to respond to proposals, to evaluate them (this may be assisted in part with help from various outside experts), and to decide which proposals should have how much support. The board might well include representation from the MOH and USAID. It is important to put the board together in such a way that it can expeditiously make decisions, i.e., not be stalled by long lasting disagreements among the members.* And, the board should probably be quite small. It should include among its members an individual who is to be a full-time, resident "executive director" -- duties would include public relations, making sure that word spreads about the project, and its aims and facilities get adequate circulation. They would also include helping interested parties with the applications process, e.g., perhaps providing forms, via-a-vis discussion and instruction where requested. It is crucial that this process be kept simple and quick.

What, in Indonesia, would be an appropriate "legal personality" for a project constructed along these lines I do not know. Perhaps, as has already been suggested, this kind of organization format could be somehow wedded to an IQC arrangement.

* That this is a real danger is shown by recent experience in the Philippines.

APPENDIX
SUPPORTING TABLES

TABLE I

NUMBER OF HOSPITALS AND BEDS IN INDONESIA:

78/79, 83/84, 84/85, 85/86

TYPE OF HOSPITAL	1978/1979		1983/1984		1984/1985		1985/1986	
	HOSP	BEDS	HOSP	BEDS	HOSP	BEDS	HOSP	BEDS
A. GENERAL HOSPITALS	612	72,315	666	81,109	679	83,255	688	84,254
1. MINISTRY OF HEALTH	10	5,673	13	7,800	15	7,978	16	7,992
2. PROV./LOCAL GOV.	265	28,090	295	33,270	302	34,428	302	35,010
3. DEFENSE MINISTRY	129	13,625	115	11,481	115	11,644	115	11,428
4. OTHER MINISTRY	76	9,412	76	8,854	78	8,911	80	8,725
5. P R I V A T E	132	15,515	167	19,704	169	20,294	175	21,099
B. SPECIALTY HOSPITALS	557	22,316	607	23,789	642	25,246	679	26,172
1. MINISTRY OF HEALTH	33	7,430	40	7,447	43	7,679	44	8,354
2. PROV./LOCAL GOV.	45	4,615	44	3,763	43	4,221	43	3,923
3. DEFENSE MINISTRY	54	745	25	517	24	501	24	453
4. OTHER MINISTRY	10	253	10	176	10	177	10	167
5. P R I V A T E	415	9,273	488	11,886	522	12,668	558	13,275
T O T A L	1,169	94,631	1,273	104,898	1,321	108,501	1,367	110,426

SOURCE: Dr. Dirk Palekahelu, MPH - "A Country Profile, Indonesia"

Ministry of Health, Republic of Indonesia, 1986.

TABLE II

NUMBER OF HOSPITALS AND HOSPITAL BEDS, 1979/1980-1985/1986

BY TYPE, CLASS AND OWNERSHIP

TYPE OF HOSPITAL 1	1979/1980		1983/1984		1984/1985		1985/1986	
	HOSP 2	BED 3	HOSP 4	BED 5	HOSP 6	BED 7	HOSP 8	BED 9
A. GENERAL HOSPITALS	629	74,684	666	81,109	679	83,255	688	84,254
MOH/PROV. & LOCAL GOV.	289	36,014	308	41,070	317	42,406	318	43,002
CLASS A	(2)	2,854	(2)	2,901	(4)	2,904	(4)	2,918
CLASS B	(14)	8,040	(15)	9,215	(15)	9,333	(16)	9,396
CLASS C	(43)	8,625	(79)	14,720	(79)	14,813	(79)	15,183
CLASS D	(230)	16,495	(212)	14,234	(219)	15,356	(219)	15,505
DEFENSE MINISTRY	129	12,895	115	11,481	115	11,644	115	11,428
OTHER MINISTRY	77	9,345	76	8,854	78	8,911	80	8,725
P R I V A T E	134	16,430	167	19,704	169	20,294	175	21,099
B. SPECIALTY HOSPITALS	561	22,055	607	23,789	642	25,246	679	26,172
1. MINISTRY OF HEALTH	34	7,439	40	7,447	43	7,679	44	8,354
2. PROV./LOCAL GOV.	45	3,736	44	3,763	43	4,221	43	3,923
3. DEFENSE MINISTRY	54	743	25	517	24	501	24	453
4. OTHER MINISTRY	11	292	10	176	10	177	10	167
5. P R I V A T E	417	9,845	488	11,886	522	12,668	558	13,275
T O T A L	1,190	96,739	1,273	104,898	1,321	108,501	1,367	110,426

SOURCE: Dr. Dirk Palekahelu, MPH - "A Country Profile, Indonesia"
Ministry of Health, Republic of Indonesia, 1986.

TABLE III

NUMBER OF HOSPITALS AND BED BY TYPE AND PROVINCE
INDONESIA, 1985

DATE: 86/08/14

NO	PROVINCE	RSTTPRO														TOTAL					
		GENERAL		MENTAL		LEPROSY		T B		EYE		M HOSP		M HOME		SPEC		S	C		
		H	BED	H	BED	H	BED	H	BED	H	BED	H	BED	H	BED	H	BED	H	BED		
1	D I Aceh	18	1382	1	140																
2	SUMUT	74	10235	3	395																
3	SUMBAR	20	2228	3	235	4	820			1	24			48	770				19		
4	RIAU	20	1260	1	90									39	678				130		
5	JAMBI	9	682	1	60									13	157				62		
6	SUMSEL	32	3311	2	260	1	450					1	48	10	175				34		
7	BENGKULU	5	290	1	40							1	42	1	8				21		
8	LAMPUNG	9	110	1	0							1	24						37		
9	DKI JAKARTA	37	9645	6	622							1	53	17	654				7		
10	JABAR	60	8093	3	840	1	470	2	120	1	57	6	564	133	2988	3	217		28		
11	JATENG	71	11515	4	1190	2	275	3	230	1	236	10	93	41	856				188		
12	D I YOGYA	12	2417	2	253			3	170					118	2138	1	150		119		
13	JATIM	89	13651	2	1410	3	363			1	116			21	321	1	26		199		
14	BALI	16	1833	2	247	1	25	3	190	1	130			59	1237				37		
15	NTB	9	674	2	40	2	46											3	48		
16	NTT	22	1422			1	70							1	16				22		
17	TIMOR TIMUR	5	439											2	82				14		
18	KALBAR	14	1278	2	260	1	120												25		
19	KALTENG	11	438									1	130	7	186				5		
20	KALSEL	20	1193	2	150									3	39				25		
21	KALTIM	17	1481	1	80	1	200					1	30	1	25			1	14		
22	SULUT	20	2310	1	250	2	183	1	75			2	74	1	30			30	25		
23	SULTENG	12	828	1	110									9	321				22		
24	SULSEL	39	3303	1	380	5	697									1	13		33		
25	SULTRA	11	597	1	52							5	247	23	759				14		
26	MALUKU	16	1340	1	30									1	10				73		
27	IRIAN JAYA	20	1302	1	75	2	162					1	25	3	70				13		
INDONESIA		688	84254	7209	26	3881	12	785	5	563	30	1730	551	11520	6	406	4	78	21		
																			23	1465	
																				23	1539
																				1367	110426

Note: - S C = Specialist Clinic
 - SPEC = Specialty Hospital (Cardiac Centre Hospital, Orthopaedic Prosthetic Hospital, Quarantine Hospital, Ear, Nose and Throat Hospital, Surgical Hospital, Internal Medicine Hospital).

SOURCE: Dr. Dirk Palekahelu, MPH - "A Country Profile, Indonesia," Ministry of Health, Republic of Indonesia, 1986.

TABLE IV
POPULATION DENSITY PER SQUARE KM BY PROVINCE
INDONESIA, 1985

NO	PROVINCE	AREA SQ KM	TOTAL POPULATION	TOTAL HOSP. BEDS	POP. DENSITY PER SQ KM POPULATION	RATIO BEDS PER 100,000	R A N K
1	DI Aceh	55,392	2,999,900	1,522	55		
2	SUMUT	70,787	9,452,000	12,244	134	50.7	22
3	SUMBAR	49,778	3,779,600	3,141	76	129.5	3
4	RIAU	94,562	2,513,400	1,507	27	83.1	8
5	JAMBI	44,924	1,755,300	965	39	60.0	17
6	SUMSEL	103,688	5,423,100	4,071	52	55.0	19
7	BENGKULU	21,168	946,900	354	45	75.1	11
8	LAMPUNG	33,307	6,086,700	1,814	183	37.4	24
9	DKI JAKARTA	590	7,873,200	14,213	13,133	29.8	26
10	JABAR	46,300	31,142,000	11,218	673	186.5	1
11	JATENG	34,206	27,387,200	15,438	801	36.0	26
12	DI YOGYA	3,169	2,891,100	3,133	912	56.4	18
13	JATIM	47,922	31,266,700	16,981	652	108.4	6
14	BALI	5,561	2,672,000	2,153	480	54.3	20
15	NTB	20,177	3,045,100	776	151	80.6	10
16	NTT	47,876	2,999,300	1,574	63	25.5	27
17	TIMOR TIMUR	14,874	608,400	439	41	52.5	21
18	KALBAR	146,760	2,771,500	1,974	19	72.2	12
19	KALTENG	152,600	1,123,900	477	7	71.2	13
20	KALSEL	37,600	2,285,500	1,428	61	42.5	23
21	KALTIM	202,440	1,603,000	1,865	8	62.5	14
22	SULUT	19,023	2,395,000	3,139	124	116.4	4
23	SULTENG	69,726	1,549,800	951	22	133.1	2
24	SULSEL	72,781	6,574,700	5,386	90	61.4	15
25	SULTRA	27,686	1,091,900	659	39	81.9	9
26	MALUKU	74,505	1,617,400	1,465	22	60.4	16
27	IRIAN JAYA	421,981	1,332,000	1,539	3	90.6	7
						115.5	5

SOURCE: Dr. Dirk Palekahelu, MPH - "A Country Profile, Indonesia,"
Ministry of Health, Republic of Indonesia, 1986.

TABLE V
ADMINISTRATIVE DIVISION OF INDONESIA, 1985

NO	PROVINCE	CAPITAL OF PROVINCE	REGENCY	LOCAL LEVEL MUNICIPAL	TOTAL	CITY OF ADMINISTRATION	DISTRICT
1	D I ACEH	BANDA ACEH	8	2	10	-	131
2	SUMUT	M E D A N	11	6	17	2	188
3	SUMBAR	P A D A N G	8	6	14	-	92
4	RIAU	PEKANBARU	5	1	6	1	69
5	J A M B I	J A M B I	5	1	6	-	38
6	SUMSEL	PALEMBANG	8	2	10	3	90
7	BENGKULU	BENGKULU	3	1	4	-	23
8	LAMPUNG	TANJUNG KARANG	3	1	4	-	71
9	DKI JAKARTA	J A K A R T A	-	5	5	-	30
10	JABAR	BANDUNG	20	4	24	5	413
11	JATENG	SEMARANG	29	6	35	-	498
12	DI YOGYA	YOGYAKARTA	4	1	5	-	72
13	JATIM	SURABAYA	29	8	37	1	547
14	BALI	DENPASAR	8	-	8	1	50
15	NTB	MATARAM	6	-	6	1	56
16	NTT	KUPANG	12	-	12	1	110
17	TIMOR TIMUR	D I L I	13	-	13	-	64
18	KALBAR	PONTIANAK	6	1	7	-	106
19	KALTENG	PALANGKARAYA	9	1	10	-	82
20	KALSEL	BANJARMASIN	9	1	10	1	100
21	KALTIM	SAMARINDA	4	2	6	-	70
22	SULUT	MANADO	4	2	6	1	84
23	SULTENG	P A L U	4	-	4	1	62
24	SULSEL	UJUNG PANDANG	21	2	23	-	170
25	SULTRA	KENDARI	4	-	4	1	43
26	MALUKU	AMBON	4	1	5	-	56
27	IRIAN JAYA	JAYAPURA	9	-	9	-	117
INDONESIA			246	54	300	19	3,432

SOURCE: Dr. Dirk Palekahelu, MPH - "A Country Profile, Indonesia,"
Ministry of Health, Republic of Indonesia, 1986.

TABLE VI
NUMBER OF HOSPITALS AND BEDS BY TYPE AND OWNERSHIP
INDONESIA, 1985

OWNERSHIP	GENERAL		MENTAL		LEPROSY		T	B	EYE		O P		Q	R	M HOSP		M HOME		SPEC		S	C	TOTAL	
	H	BED	H	BED	H	BED	H	BED	H	BED	H	BED	H	BED	H	BED	H	BED	H	BED	H	BED	H	BED
1 MOH	16	7992	31	6313	3	1065	6	400	1	236	1	150	1	76	0	0	0	0	1	114	0	0	60	16346
2 PROVINCE	47	12233	4	445	16	2467	5	347	0	0	0	0	0	0	0	0	1	71	0	0	0	0	73	15563
3 MUNICIPAL	20	2841	0	0	1	22	0	0	0	0	0	0	0	0	2	101	1	24	0	0	0	0	24	2988
4 REGENCY	235	19936	0	0	5	257	0	0	0	0	0	0	0	0	0	0	8	189	0	0	0	0	248	20382
MOH, PROV., LOC.	318	43002	35	6758	25	3811	11	747	1	236	1	150	1	76	2	101	10	284	1	114	0	0	405	55279
5 DEFENSE	115	11428	0	0	0	0	0	0	0	0	0	0	0	0	2	98	22	355	0	0	0	0	139	11881
6 OTHER MINS.	80	8725	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	167	0	0	0	0	90	8892
GOVERNMENT	513	63155	35	6758	25	3811	11	747	1	236	1	150	1	76	4	199	42	806	1	114	0	0	634	76052
7 PRIVATE	175	21099	10	451	1	70	1	38	4	327	0	0	0	0	26	1531	509	10714	3	66	4	78	733	34374
T O T A L	688	84254	45	7209	26	3881	12	785	5	563	1	150	1	76	30	1730	551	11520	4	180	4	78	1367	110426

Note: - S.C. = Specialist Clinic, OP = Orthopaedic Prosthetic Hospital, QR = Quarantine Hospital
- SPEC = Specialty Hospital (Cardiac Center Hospital; Ear, Nose and Throat Hospital; Surgical Hospital
Internal Medicine Hospital)

SOURCE: Dr. Dirk Palekahelu, MPH - "A Country Profile, Indonesia,"
Ministry of Health, Republic of Indonesia, 1986.

TABLE VII
HOSPITAL PERFORMANCE, 1985

TYPE & OWNERSHIP	DISCHARGES	BED DAYS	OUTPATIENT	B O R	Av. Los	B T O	T O I	G D R	Av. Visit
1	2	3	4	5	6	7	8	9	10
A. GENERAL HOSPITAL	2,382,376	16,724,620	36,117,508	53.1	7	28	6	41	196
MOH/Local Gov.	1,390,460	9,217,216	19,553,472	58.3	6	33	5	49	237
A Class	85,340	801,400	2,017,356	76.9	9	30	12	62	3,155
B Class	269,960	2,347,044	4,229,048	67.8	8	29	13	59	1,117
C Class	528,216	3,323,696	5,780,396	59.1	6	35	10	-	275
D Class	506,944	2,745,076	7,526,672	48.4	5	33	11	39	135
Defense Ministry	226,464	1,893,120	6,311,608	42.2	8	19	19	28	191
Other Ministry	182,472	1,409,772	4,457,140	43.7	7	21	17	22	206
P r i v a t e	582,980	4,204,512	5,795,289	52.1	7	27	13	25	119
A. SPECIALTY HOSPITAL	373,944	4,962,864	3,561,380	52.1	14	15	12	8	19
MOH/Local Gov.	51,976	3,608,964	582,740	79.7	79	4	68	21	31
Defense Ministry	9,140	38,968	116,040	24.2	4	21	17	2	17
Other Ministry	3,416	15,152	28,140	23.3	4	20	19	2	14
P r i v a t e	309,412	1,299,780	2,834,460	25.9	4	23	16	5	17

SOURCE: Dr. Dirk Palekahelu, MPH - "A Country Profile, Indonesia,"
Ministry of Health, Republic of Indonesia, 1986.

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TABLE VIII

BED OCCUPANCY RATE, GOVERNMENT GENERAL HOSPITALS 1985, CLASS D HOSPITALS

<u>OCCUPANCY RATE %</u>	<u>NO. HOSPITALS</u>	<u>NO. BEDS</u>	<u>% TOTAL</u> <u>HOSPITALS</u>	<u>% TOTAL</u> <u>BEDS</u>	<u>AVERAGE NO.</u> <u>BEDS</u>
0 - 25	56	2803	26	18	50
26 - 50	78	4772	36	31	61
51 - 70	57	5058	27	33	89
71 - 100	24	2751	11	18	115
TOTAL	215	15384	100	100	

SOURCE: Calculated from data supplied by Ministry of Health. Four hospitals with their 121 beds omitted from these calculations owing to missing data.

BED OCCUPANCY RATE, GOVERNMENT GENERAL HOSPITALS 1985, CLASS C HOSPITALS

<u>OCCUPANCY RATE %</u>	<u>NO. HOSPITALS</u>	<u>NO. BEDS</u>	<u>% TOTAL</u> <u>HOSPITALS</u>	<u>% TOTAL</u> <u>BEDS</u>	<u>AVERAGE NO.</u> <u>BEDS</u>
0 - 25	3	295	4	2	98
26 - 50	25	3999	32	26	160
51 - 70	37	8027	47	53	217
71 - 100	14	2862	18	19	204
TOTAL	79	15183	100	100	

SOURCE: As above.

TABLE IX

MOH, PROVINCIAL AND LOCAL GOVERNMENT HOSPITALS, 1985: BED DAYS AND OPD VISITS

<u>Hospitals</u>	<u>Bed Days</u> (000)	<u>% Total</u> <u>Bed Days</u>	<u>OPD</u> (000)	<u>% Total</u> <u>OPD</u>	<u>OPD Per</u> <u>Bed Day</u>	<u>OPD Per</u> <u>GP Physician</u>
Class A	801	9	2017	10	2.5	2885
Class B	2347	26	4229	22	1.8	2732
Class C	3324	36	5750	30	1.7	10764
Class D	2745	30	7527	39	2.7	13562

SOURCE: Table VII and Table X.

TABLE X
HOSPITAL MANPOWER 1985*

Type & Ownership	DAB	DPD	DAA	DOG	DAR	DAN	DPA	DAS	DAJ	THT	DAM	DKK	DAK	DPR	DBS	DAO	DAU	DAL	DRU	DRG
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
A. GENERAL HOSPITALS	521	540	650	536	143	165	154	149	131	268	222	154	103	92	16	6	1	209	4222	824
<u>MOH/Prov/Local</u>	415	467	581	456	110	131	138	127	103	218	176	128	79	73	15	5	1	144	3339	531
A Class	113	133	122	104	30	57	44	32	53	50	56	33	59	22	5	-	1	63	699	36
B Class	208	252	284	217	69	67	93	80	45	114	78	84	17	35	10	5	-	75	1548	193
C Class	74	62	101	94	11	7	1	12	2	44	37	8	3	13	-	-	-	6	537	123
D Class	20	20	74	41	-	-	-	3	3	10	5	3	-	3	-	-	-	-	555	179
<u>Defense Ministry</u>	71	50	47	57	22	22	12	16	23	37	32	23	16	13	-	-	-	30	448	198
<u>Other Ministry</u>	35	23	22	23	11	12	4	6	5	13	14	3	8	6	1	1	-	35	235	95
B. SPECIALTY HOSPITALS**	7	1	2	3	-	2	-	1	78	-	18	6	-	5	-	-	-	1	210	9
<u>MOH/Prov/Gov</u>	7	1	2	2	-	2	-	1	78	-	18	6	-	5	-	-	-	1	207	9
<u>Defense Ministry</u>	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-
TOTAL	528	541	652	539	143	167	154	150	209	268	240	160	103	97	16	6	1	210	4232	833

* Not included private hospitals

** Not included: maternity homes.

Notes: DAB = Surgeon, DPD = Internist, DAA = Pediatrics, DOG = Obstetric, DAR = Radiologist
 DAN = Anesthesiologist, DPA = Pathologist, DAS = Neurologist, DAJ = Psychiatrist, THT = ENT Specialist
 DAM = Eye Specialist, DKK = Dermatologist, DAK = Cardiologist, DPR = Pulmonologist, DBS = Neuro Surgeon
 DAO = Orthopaedic Surgeon, DAU = Urologist, DAL = Other Specialist, DRU = General Physician, DRG = Dentist.

SOURCE: Dr. Dirk Palekahelu, MPH - "A Country Profile, Indonesia,"
 Ministry of Health, Republic of Indonesia, 1986.

TABLE XI

MOH, PROVINCIAL AND LOCAL GOVERNMENT HOSPITALS, 1985

<u>Hospitals</u>	<u>No. Specialist Physicians</u>	<u>No. GP Physicians</u>	<u>No. Total Physicians</u>	<u>No. of Beds Per:</u>		
				<u>Spec.</u>	<u>GP</u>	<u>All</u>
CLASS A	977	699	1676	3.0	4.2	1.7
CLASS B	1733	1548	3281	5.4	6.1	2.9
CLASS C	475	537	1012	32.0	28.3	15.0
CLASS D	182	555	737	85.0	27.9	21.0
TOTAL	3367	3339	6706			

SOURCE: Tables X and I.

TABLE XII

STANDARD STAFFING RATIOS OF GOVERNMENT HOSPITALS:
NUMBER OF BEDS:NUMBER OF STAFF

<u>Hospitals</u>	<u>Physicians</u>	<u>Nurses</u>	<u>Paramedics (Non-Nurse)</u>	<u>Non-Medics</u>
CLASS A	4-7 : 1	3 : 1	1 : 1	1 : 1
CLASS B	4-7 : 1	3 : 1	1 : 1	1 : 1
CLASS C	9 : 1	1 : 1	5 : 1	4 : 3
CLASS D	15 : 1	2 : 1	6 : 1	3 : 2

SOURCE: B.2.4 Peraturan Menkes RI No. 262/Menkes/Per/VII/'79 tgl 17 Juli '79 tentang Standr Disasi Ketenagaan RS Pemerintah. It is my understanding that these standards are currently in the process of revision.

TABLE XIII

PERFORMANCE OF 12 VERTICAL HOSPITALS 1985/86

Hospital (Class)	(1) Beds	(2) Discharges	(3) Bed Days	(4) ALOS Days	(5) Bed Occup. %	(6) OPD	(7) OPD/Bed D. (E)/(3)
RSUP DR. CIPTO M. (A)	1388	37836	346084	9.2	68	1172796	3.4
RS FATMAWATI (B)	485	14608	118592	8.1	67	718668	6.1
RS PERSAHABATAN	455	13944	111316	8.0	67	278532	2.5
RSUP DR. HASAN S. (B)	933	24312	294656	12.1	87	423148	1.4
RS DR. KARIAKI S. (B)	1070	33092	350620	10.6	90	554020	1.6
RS TEGALYOSOS (C)	330	11904	76836	6.5	54	60720	0.8
RSU DR. M. JAMIL P. (B)	547	17144	165564	9.7	83	282704	1.7
RSU DR. SARDJITO Y. (B)	637	12524	144516	11.5	62	236132	1.6
RSUP PALEMBANG (B)	706	23904	193244	8.1	75	365548	1.9
RSUP SANGLAH D. (B)	625	18412	163640	8.9	75	185704	1.1
RSUP DILLI TIM T.							
RSU BUKITTINGGI	50	208	992	4.8	5	6720	6.7
TOTAL							

SOURCE: Calculated from data supplied by MOH.

TABLE XIV
ROUTINE BUDGET AND FEE REVENUE: 12 VERTICAL HOSPITALS, 1985/86

Hospital (Class)	(1) Allocation (exclusive of personnel) Rp. million	(2) Personnel # Rp. mil	(3) Total Rout. (1)+(2) Rp. mil	(4) Fee Revenue Rp. mil	(5) % Fee Rev. Returned	(6) % Fee Rev. of Alloc.	(7) % Fee Rev. of (3)	(8) Allocate per Disch. Rp.	(9) Alloc. per Bed Day Rp.	(10) Fee Rev. per Disch. Rp.	(11) Fee Rev.* per Bed Day Rp.	(12) Fee Rev. of Retain Rp. mil	** Total "Resources" (3) + (12) Per Bed Day Rp. million
RSUP DR. CIPTO (A)	6657	5357	12014	3981	38	60	33	175944	19235	105217	11330	2488	41903
RS FATMAWATI (B)	1631	1539	3170	1023	90	63	32	111651	13752	70030	5596	125	27784
RS PERSAHABATAN (B)	1541	1347	2888	668	72	43	23	110514	12843	47906	4740	187	27624
RSUP DR. HASAN S. (B)	3220	2631	5851	990	83	31	20	132445	10928	40721	2640	171	20437
RS DR. KARIAKI S. (B)	3729	2354	6083	1449	51	39	24	112686	10635	43787	3340	677	19280
RS TEGALYOSO (C)	677	605	1282	346	100	51	27	56872	8811	29066	4100	-	16694
RSU DR. M. JAMIL P. (B)	1863	915	2778	487	45	26	18	108668	11252	28406	2090	268	18398
RSU DR. SARDJITO Y. (B)	1452	614	2066	872	51	60	42	115937	10047	69706	5220	424	17230
RSUP PALEMBANG (B)	2005	1216	3221	394	100	20	12	83877	10376	16483	1090	-	16668
RSUP SANGLAH (B)	1481	1365	2846	262	100	18	11	80437	9050	14230	1000	-	17392
RSUP DILLI TIM.T.	536											-	
RSU BUKITTINGGI (C)	215	58	273	28	93	13	10		21673		24800	2	277217
TOTAL			42472	10501			25						

* This is total fee revenue less OPD fee revenue/patient days, i.e., fee revenue presumably earned by marketing inpatient services. OPD fee revenue was estimated as Rp. 500 x OPD visits (this is the actual OPD fee used by Dr. Cipto M. Hospital and was assumed for the others).

† Excludes personnel budgeted through Ministry of Education.

** In some instances, hospitals will have additional resources through extra-budget grants or gifts.

SOURCE: Calculated from data supplied by MOH.

TABLE XV

LOCAL GOVERNMENT HOSPITALS
PERFORMANCE 1985/86

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Hospital (Class)	Beds	Discharges	Bed Days	ALOS Days	Bed Occupancy Rate	OPD	OPD/Bed Days
K. CIANJUR (C)	135	6001	26542	4.4	54	61731	2.3
Dr. SLAMET (C)	243	10475	52049	4.9	59	84638	1.6
TASIKMALAYA (C)	250	9719	56008	5.7	61	90404	1.6
TOTAL							

SOURCE: These hospitals.

TABLE XVI

LOCAL GOVERNMENT HOSPITALS
ROUTINE BUDGET AND FEE REVENUE 1985/86

Hospital Class	(1) Allocation (exclusive of personnel) Rp (000)	(2) Personnel Rp (000)	(3) Total Rout. (1) + (2) Rp (000)	(4) Fee Revenue Rp (000)	(5) Collect. Rate %	(6) (4)/(1) %	(7) (4)/(3) %	(8) Allocation per Bed Day Rp	(9) Fee Revenue per Bed Day* Rp
K. CIANJUR (C)	135,250	151,193	296,443	135,250	90	100	47	5,096	5,096
DR. SLAMET (C)	242,941	276,700	519,642	280,430	104	115	54	4,668	5,388
TASIKMALAYA (C)	391,861	296,677	688,538	211,314	101	54	31	6,996	3,773
TOTAL	770,052	724,570	1,494,622	626,994		81	42		

*Not adjusted for OPD revenue.

SOURCE: These hospitals.

TABLE XVII

PERCENTAGE DISTRIBUTION OF POPULATION BY MONTHLY PER CAPITA
EXPENDITURE CLASSES
 Estimated 1986

Monthly Per Capita Expenditure (Rp)	<u>Rural</u>	<u>Urban</u>
Less than 5400	4.13	0.54
5400 - 6480	4.54	0.73
6481 - 8640	14.32	2.64
8641 - 10,800	16.42	4.88
10,801 - 16,200	32.23	19.24
16,201 - 21,600	14.81	20.30
21,601 - 32,400	9.53	27.23
32,401 and over	4.02	24.44
T O T A L	100.00	100.00

Source: 1984 SUSENAS distribution (Table 1.2, pp. 4 & 5) with the expenditure classes adjusted on the assumption that money incomes and expenditures kept pace with the change in the General CPI for the period.

According to 1984 Statistical Yearbook of Indonesia (see Table 3.1.8., p. 69) the average population per household in Indonesia in 1980 was 4.9. Thus, multiplying the numbers defining the expenditure classes by, say, 5.0 would convert from per capita to per household monthly expenditure.