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INDONESIA
Social Financing Component**

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LIST OF ACRONYMS

ASTEK	Asuransi Sosial Tenaga Kerja (social insurance for military personnel and their dependents)
HMO	Health Maintenance Organization
JPKM	Jaminan Pemeliharaan Kesehatan Masyarakat
MIS	Management Information Systems
PHB	Perum Hasada Bhakti
PIO	Project Implementation Officer
PKTK	Pelayanan Kesehatan Tenaga Kerja (health insurance fund for private sector workers)
SIP	A Regulatory Information System

INTRODUCTION

The purpose of this report is to present the findings of the evaluation of the adequacy of the information currently produced by the MIS's of the various participating organizations in the JPKM concept. This evaluation addresses the capabilities of the information in supporting managed-care decision making and other responsibilities assigned to the regulatory body known as SIP.

The duration for this assignment was a two-week period from November 12 to 24, 1990. The itinerary of the activities performed by this consultant during the two-week stay in Indonesia is presented in Appendix A.

SECTION 1 PARTICIPATING ORGANIZATIONS

Four organizations are expected to participate in the revamped health-care system in Indonesia. They are:

- **PHB**
- **Pelayanan Kesehatan tenaga Kerja (PKTK)**
- **Dana Sehat, and**
- **the private sector.**

The differences between the MIS capabilities of these participating organizations are readily obvious and are related to the membership size of the organization. As a consequence, the amount of data collected by the various organizations is vastly different, and so are the methods of data collection.

The analysis and recommendations presented in this report are based on the following premises:

1. The government regulatory body will require information support for broad policy decision making. This support will be in the form of data gathered from all four health-care participants. For this to be achieved, a core of comparable information must be provided by each participant. It is recommended that standard data collection forms be used at the front end of the MIS system for this purpose. These forms could also be used to provide required information to other government or regulatory agencies, hopefully rendering some forms that are presently required superfluous. Further discussion of this recommendation is provided below under "Encounter Forms."
2. Embedded in the concept of JPKM is the notion that the country's health-care system will ultimately consist of a capitation arrangement at the expense of the prevailing fee-for-service arrangement.
3. At this stage of development and limited financial and technical capabilities, the objective should be to provide a limited number of information with a stress on accuracy and clarity of definitions. This approach is preferred to one that aims at ambitious volumes of data.

These premises have to be kept in mind in designing the data systems for the SIP. Another premise that has no impact on the SIP but that may force the various health-care components to view data differently is the intention of the government, also under the aegis of the JPKM, to privatize the health-care insurance business in the country.

Encounter Forms

Any MIS system should be driven at the front end by data collected in a structured manner, generally on specially designed forms. In the health-care field, the focus of the MIS lies in the cost and frequency of services, hence the need for forms to report these aspects. Forms that are generated with each service for billing purposes are called claims forms, whereas forms that are generated for tracking utilization only are called encounter forms. For JPKM purposes, the intent is to convert the provision of services from a fee-for-service arrangement to a capitation arrangement. For this reason, the forms discussed herein will be referred to as "encounter" forms, although it is likely that they will be used to report fee-for-service utilization at the outset of the JPKM program.

In the U.S., the Federal Government played an important role in unifying the format of claims forms. As the number of Medicare members covered by the Federal Government grew, the forms that were mandated to be used by providers and third-party payors for reimbursement from the Federal Government were used more frequently. To facilitate the time consuming process of claims data reporting, these forms slowly became the standard for all members, including non-medicare members.

In the Indonesian context, a number of participating organizations use encounter forms while others do not. In addition, encounter forms in use are not alike. It is recommended that the Ministry of Health devise a simple encounter form and mandate its use by all participating organizations.

However, in order not to burden physicians further with paper work, the Ministry should incorporate information on this form that is required by other regulatory agencies such as the Department of Infectious and Disease Control. Should such integration be made, encounter forms will constitute a relief from paper work, rather than a perpetuation of it. Also, encounter forms should be simple enough to allow clerks and nurses to fill in parts of them.

The cost of converting to the encounter approach should be estimated before adopting this decision. It should include the cost of hardware, personnel, and other costs. Areas of support should also be identified, such as technical training.

It should be emphasized that no MIS can be construed without encounter or claim forms. It should also be emphasized that, for JPKM purposes, the encounter form should be made as simple as possible, with emphasis on definitions of services. It may, for example, surprise many to see how elaborate the definition of a simple service such as a physician office visit can be when all qualifications and exceptions are included.

SECTION 2. PARTICIPATING ORGANIZATION ANALYSIS

In the following, the data capabilities of each of the four health-care participants will be analyzed separately. The sources of the information for this analysis are the evaluation forms that were filled out by each participant ("Evaluasi Sistem Informasi Manajemen" shown in Appendix B), analysis of data collection forms and sample reports whenever available, and face-to-face interviews with key administrators and systems managers in each organization.

A summary of the status quo will be followed by recommendations as to how the data system of this component should fit into the overall SIP picture. Following the individual analysis, a summary of the observation that resulted from various meetings with key players in the restructuring of the health-care system will be made. Finally, a discussion on the activities necessary to construct a centralized SIP data information system will be made.

I. PHB

A. Status

The parastatal PHB, covering over 14 million members, has the most sophisticated software and hardware. Its offices are also well entrenched in most state hospitals. Four basic categories of utilization data are collected. With each category, summary information is forwarded to either the sub-branch PHB office, depending on the level of the facility:

- **Outpatient:** a summary of the data that are collected at the health-care center (Puskesmas). A copy of the data form is inserted as Appendix C.
- **Inpatient:** a summary of the data that are collected at the hospital from the claims. The form used for these data is attached as Appendix D.
- **Drugs:** a summary of the drug utilization data that are collected from both the Puskesmas and the hospitals is reported to the sub-branch and branch offices. In their revised form, outpatient and inpatient encounter information includes drug information.
- **Laboratory:** general information reported on the encounter form.

B. Conclusion

The PHB data system is satisfactory for SIP reporting. Data are collected by means of encounter forms. However, in spite of the availability of a mini-computer, data from various sources (inpatient, outpatient, membership) are not integrated.

C. Recommendation

A review should be made of the data elements used on the encounter forms needs to be made.

2. PKTK

A. Status

PKTK is the health-care insurance division of ASTEK, a large insurance firm that provides social security, workers' compensation, life, as well as other types of insurance. PKTK's membership is close to 140,000, whereas ASTEK's non-health-care membership is about 4 million. It is not surprising, then, to see that ASTEK's powerful hardware and software are exclusively used for non-PKTK business. As a result, PKTK uses a series of PCs in its headquarters to enter summary data sent from the regions. Each PC is used for one type of data base: membership, utilization, finances. No means are available today to interlink these data bases.

B. Conclusion

The PKTK data system is satisfactory for SIP reporting, and data are collected by means of encounter forms. However, additional consideration should be given to a central system where the existing PC systems will feed and marry.

C. Recommendations

A review of the data elements used on the encounter forms needs to be made.

3. The Private Sector

A. Status

Reportedly, there are about a dozen private health-care institutions in the country that are interested in managed care. Only one has been visited and studied, St. Carolus. This discussion will be limited to the status of the data systems in this organization. No generalizations are implied for the rest of the private sector.

St. Carolus is embarked on an HMO trial. On a trial basis, it is underwriting prepaid coverage for a group of 5,000 of its hospital employees and their dependents. It is also the first managed-care institution in the country. Reportedly, it has data capabilities to support limited utilization management activities. It is also characterized by an aggressive and innovative leadership.

B. Conclusion

The St. Carolus data system is satisfactory for SIP reporting, and data are collected by means of encounter forms.

C. Recommendations

A review of the data elements used on the encounter forms needs to be made.

4. **Dana Sehat**

A. **Status**

At present, Dana Sehat operates essentially on a fee-for-service basis. However, it is planned that more and more business will be on a capitation basis.

The data collection activities for Dana Sehat members are very limited. Manually written notes are generated upon a patient's visit to a health center. These notes are then discarded, and only tally marks denoting the frequency of the services are entered in a log book in most health centers. These summary statistics are then forwarded to the district.

Virtually no record is kept of inpatient utilization of Dana Sehat members.

B. **Conclusion**

The Dana Sehat data system is clearly inadequate for SIP reporting: no structured forms are used to report the data, insufficient detail is reported, and there is some doubt about the integrity and completeness of the data reported.

C. **Recommendations**

1. The introduction and use of a simple structured form for data reporting should be considered for Dana Sehat. This form should be service-driven rather than patient-driven. This issue is discussed in greater detail under "Encounter Form" above.
2. Dana Sehat has virtually no MIS, and serious consideration should be given to starting up one. The new system should be built to address the data needs of the SIP. And since the SIP's mandate will include decisions making on broad managed-care issues, the new Dana Sehat system should include at least inpatient information in addition to outpatient information.

SECTION 3.
INFORMATION OBTAINED FROM OTHER MEETINGS

A. Meeting with the Hospital PIO

USAID's Hospital team was assigned the task to save about 35 percent of the government subsidy to public hospitals to allow this amount to be channelled to child care. Reportedly, 9 interventions were identified with the purpose of increasing efficiency in hospital operations, hence improving cost effectiveness.

To achieve this assigned target, the Hospital's team is planning to start up an MIS for only financial purposes, collecting information on billing, budgeting, and the like. No plans are being made to collect utilization data at this point. However, it was reported that such utilization MIS exists presently in a pilot hospital, but that the data collected are insufficient and unaudited.

Recommendation

The approach taken by the Hospital PIO is adequate, given the available resources. However, serious consideration should be given to starting up a small core of information on inpatient utilization. As mentioned above, this category of information is crucial to making sound managed-care decisions, of the type planned to be made up by the SIP.

B. Meeting with the Pharmacy PIO

In terms of data collection, the immediate plans of the USAID pharmacy team are to look principally at drug volume from the standpoint of purchases and supply. However, as the discussion evolved, the team expressed eagerness in collecting utilization data. This type of data is particularly important with drugs to study the impact of the capitation system on changes in physicians prescription patterns.

Recommendation

Basic drug data should be included on the encounter form.

SECTION 4 THE REGULATORY AGENCY

The Regulatory Agency's role is to support the functions of the JPKM both at the national level and at the provincial level. The primary objectives of this agency are to oversee the quality of care and to provide care in a cost effective manner. Another reported responsibility is to foster the growth of the JPKM while preventing unfair competition.

Even though this agency is still in its embryonic stages, a preliminary information system (the SIP) has been designed to support its activities. The decision to design an MIS prior to the finalization of the Regulatory Agencies role was a conscious one.

It is recommended that the design of the MIS data that are needed to support the tasks of the Regulatory Agency proceed along the following steps:

1. Define the role and responsibilities in detail.
2. Using the information available in Step 1 above, design core reports to support the agency's role. These reports should be designed in their greatest detail, showing exact columns and rows for each report.
3. Identify the data elements needed to generate the reports described in Step 2 above.
4. Design the specifications of the hardware and software required to support the data needed. This step must take into consideration the interface of the diverse MIS's that presently exist at the participating organization level.
5. Budget for, purchase and install the system.

A. Status

A document entitled "Technical Brief, JPKM Regulatory Information System, Phase I Development" dated September 1990 prepared by James R. Marzolf describes much of the purpose and characteristics of the JPKM. The document also provides information on data elements and reports needed to support JPKM activities. This report could be used to design the actual reports as described in Step 2 above.

However, no formal decree of the roles of the Regulatory Agency, nor its manpower and budget requirements, were found. Although part of the role of the SIP is anticipated as described above, additional information about its responsibilities needs to be made available before a useful data support system is designed. Questions about whether this body will regulate and license health-care providers and HMO's, whether it will regulate the purchase of expensive equipment, and the like, need to be answered first. Finally, the differentiation between the agency's role at the provincial and national levels should also be made.

B. Conclusion

A critical number of activities that should precede the design of an MIS for the Regulatory Agency do not seem to have been performed. Foremost is a clear and official identification of the agency's role.

C. Recommendations

1. At this point, efforts should be expanded in the clarification of the role of the Regulatory Agency.
2. The data elements and reports format provided in the document by James Marzolf could be used to generate more detailed SIP reports, once the agency's role is known. A determination of which reports need to be made available at the provincial versus the national levels should also be made.

These reports should be able to support the following type of decision making, albeit in a broad level:

1. Managed care
2. Performance analysis
3. Capitation rate determination
4. Alternative reimbursement approach determination
5. Benefit design

At this point, it should be emphasized that the development of a new MIS requires different types of activities that should be carefully planned in advance:

1. A lengthy period of testing for data integrity, and
2. The generation of numerous coding tables. This activity will be especially critical at the agency's level, where coding will constitute the basis of unifying data that are fed from non-homogeneous source systems.
3. At the participating organizational level, one of the outstanding coding issues at present is the member identification. It is well known that the member's name is a poor identifier owing to spelling discrepancies. The determination of whether the Social Security number, the national identification number, or a different number, is to be used should be made as soon as possible. Here again, a unified number for all participating organizations, perhaps mandated by the Ministry, could only prove to be useful in the long run.

SECTION 5 SUMMARY AND CONCLUSIONS

The evaluation of the data currently produced by the MIS's of the participating organizations in the JPKM indicates that all but one organization have adequate data for SIP reporting, at least in its early stages. Dana Sehat is particularly noteworthy in its data deficiency. Unfortunately, in a national MIS where all the organizations' MIS's will feed, the information will be as good as the weakest link.

It is, therefore, recommended that a simple MIS be set up for Dana Sehat. This MIS will be based on encounter forms for structured data collection. It is also recommended that the government mandate a unified encounter form for all organizations. The requirements of this form are that it should be:

1. Be as simple and short as possible;
2. Be a substitute for a number of other forms that encumber the providers and that are needed by other regulatory bodies; and
3. Be reviewed and taken into consideration by the present World Bank team that is assigned the task of restructuring the country's health-care data reporting system.

From another perspective, for a proper design of the new MIS to be effectively designed for use by the Regulatory Agency, an essential precursing activity is a clear formulation of its role and responsibilities. This formulation is neither sufficiently clear nor final at present.

Finally, before data are collected for the Regulatory Agency's MIS, a list of detailed definitions for each data element on that MIS should be disseminated to all participating agencies. A draft form of this definition list should be prepared as soon as possible and sent to the participating agencies for review and comments. A final version should then be used for SIP data reporting. Any agency that report a data element in a manner that deviates from the standard should report the deviation along with the data.