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EVALUATION OF THE PHARMACEUTICAL CONCEPT COMPONENT OF THE HEALTH SECTOR FINANCING PROJECT

October 16 - November 5, 1990

Report No. 35

PRESENTED BY : Norbert Hirschhorn, M.D.

Prepared for:

Health Sector Financing Project
Ministry of Health
Republic of Indonesia

Under USAID Contract No. ANE-0354-C-00-8030-00

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ABBREVIATIONS, ACRONYMS AND TERMS

ADSP	Review of secondary data and literature
APBN	Central level program funds used at provincial levels
APBO	Province and kabupaten budget funds
ARI	Acute respiratory infections (and special program)
ASKES	Asuransi Kesehatan — National Health Scheme for Civil Servants
CDD	Control of Diarrheal Disease
DMS	Drug Management Study
DUS	Drug Use Study
EPI	Expanded Program of Immunization
FA	Focused Assessment Studies
GFK	Regency Pharmacy Warehouse
GOI	Government of Indonesia
HSFP	Health Sector Financing Project
INPRES	Special Presidential Program
ISTI	International Science and Technology Institute, Inc.
Kabupaten	Regency (both rural and urban)
KAP	Knowledge, Attitudes and Practice Study
MPS	Manpower Study
ORS	Oral rehydration salts
ORT	Oral Rehydration Therapy
PIO/P	Project Implementation Office, Pharmaceutical Component
PMU	Project Management Unit
POM	Pengawasan Obat dan Makanan (Food and Drug Administration)
Pusat	National level of the health system
Puskesmas	Community Health Center
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

This report represents an evaluation of the major activities carried out by the Pharmaceutical Component (PIO/P) of the Health Sector Financing Project (HSFP). This evaluation was requested by the PIO/P to assist in the assessment of progress to date and the planning of 1991/1992 activities. The evaluation provides a general view of the technical direction and work process in the PIO/P. It presents the consultant's findings and recommendations on possible options that the PIO/P could consider in the design of interventions and the 1991/1992 Plan.

The activities of the PIO/P were evaluated by the following methods:

- In-depth interviews with PIO/P staff, POM staff, MOH staff and PIO/P consultants
- Review of documents and related files (see Appendix A for list)
- Meetings with project-related Project Management Unit (PMU) staff, USAID staff and consultants

In accordance with the benchmarks in the planned project implementation schedule, the PIO/P is on schedule in the implementation of activities related to the design of interventions. As per the PIO/P Workplan for the period of December 1989 to March 1991, 50 major items were scheduled for implementation. Action was taken on 31 items (62 percent), of which 18 items (36 percent) were completed, 13 items (26 percent) were started and 19 items (38 percent) have not been started.

A more in-depth assessment of the status of implementation of activities and sub-activities reveals that 88 activities were planned for implementation, of which action has been taken on 69 activities (78 percent), 40 (45 percent) were completed, and 29 (33 percent) were started and partly complemented. See Appendix D for a complete review of the status of each planned activity.

This rate of implementation is consistent with the amount of time (11 months, or 73 percent of the total project period) that has elapsed for this plan period. With 27 percent of the time (4 months) remaining and 19 major activities that are planned for implementation, the PIO/P should complete its planned work on schedule.

The consultant noted that the Project Paper Implementation Schedule for the PIO/P is incongruent with the phasing of technical assistance and financial support. The Grant Agreement between the Government of Indonesia (GOI) and USAID is for a seven-year period — 1988 to 1995. The Institutional Contract Agreement between USAID and ISTI covers a five-year period — 1988 to 1993, while the provision of technical assistance to the PIO/P is for a four-year period — 1988 to 1992 — which includes focused problem assessments and the design of interventions. No technical assistance is planned to cover the implementation of demonstration intervention packages or the monitoring and evaluation of interventions — June 1992 to March 1994 and July 1994 to March 1995, respectively.

The consultant is unaware of any plan for institutionalization of the PIO/P or means of sustaining implementation, monitoring and evaluation of intervention packages after termination of financial and technical support to the PIO/P. If this is the case, then a major issue is how intervention packages will be implemented and how the results and recommendations on policies will be used by GOI decision-makers.

It is not feasible to expect the MOH (POM) to assume the financial and technical responsibilities for the implementation and evaluation of these activities. These issues should be reviewed and discussed in reference to revision of the implementation schedule and/or redesign of this component.

With only 18 months of technical assistance remaining, time is short. It is therefore very important that the interventions are sharply focused, are implemented as pilot or demonstration studies and have the highest probability of achievement. The PIO/P is aware of these issues and has accelerated the process and schedule for the design and implementation of interventions.

Implementation of some activities has been delayed by the following constraints and/or problems:

- The lengthy period of time required for the preparation and approval of subcontracts;
- The lack of standard administrative and technical operating procedures and guidelines;
- The lack of data required for monitoring PIO/P budget expenditures.

The PIO/P has developed the following generalized scheme for interventions in reference to the conditions of diarrhea and acute respiratory illness, which are the leading causes of illness in children under five years of age, and which account for 58 percent of the health problems treated at the puskesmas and 61 percent of the cost of drugs for treatment:

- Training of managers for effective drug management;
- Implementation of a MIS for planning and use of drugs;
- Training of managers in budgeting and costing;
- Training of prescribers in diagnosis and prescription;
- Providing scientific data on drug therapy;
- Providing standard treatment protocols and drugs to paramedics;
- Establishing regional supervisory systems;
- Social marketing: making the community aware of best drug use.

This consultant would like to recommend the following additional interventions for review and consideration:

- An expert committee of pediatricians, obstetricians, primary care specialists and pharmacists should come together and assist in the development of standard guidelines for zero-based budgeting as a part of the determination of drug requirements as a part of the drug planning process.
- PIO/P should quickly find out if the puskesmas are *not* serving the under-ones, and why not. No drug reform can substantially reallocate resources to the infants and toddlers if they are not coming when ill (outside of posyandu days).
- The Indonesian Food and Drug Administration (POM) should conduct antibiotic sensitivity tests for key pathogens (shigella, H. *influenzae*, S. *pneumoniae*) so that the expert committee can restructure the antibiotic profile of the various drug lists.
- POM should conduct an inventory of the stocks of needles and syringes at the puskesmas and puskesmas pembantu, the means of sterilization available, and current practices.
- If women of child-bearing age — pregnant or not — routinely get injections of questionable value (papaverine, vitamin B-12, others), would the Expanded Program on Immunization (EPI) approve of giving tetanus toxoid injections routinely?
- In focusing on diarrhea and acute respiratory infections (ARI), PIO/P aims to *add to* the capacity of prescribers, not take away from them. Therefore, can 200cc cups and spoons be added to the Oral Rehydration Salts (ORS)? For pneumonia, can PIO/P arrange a nicely packaged "course of therapy" with cotrimoxazole and an inexpensive digital timer to count respirations?

- Some of the unnecessary costs of primary health care are directly linked to poor quality, such as those incurred by polypharmacy. It may be possible to reduce polypharmacy and recover some costs, if patients are asked to pay for any prescription above three (with certain drugs, like ORS, exempted from the count). Could this idea be tested in one puskesmas?

- What would happen if the puskesmas set up a "toko obat" where adult patients and older children could obtain simple over-the-counter medicines at low cost (cough syrups, ORS, iron-folate for women, kaolin-pectin, skin salves, aspirin), without having to wait in line for the physician or paramedic?

- The proposed interventions have tended to emphasize the supply side, less so the demand side. After supply is ensured, a pilot test of social marketing methods should be undertaken to inform the public about rational drug treatment for diarrhea and ARI. Social marketing techniques to discover how the practitioners can be convinced should also be applied.

Although the Project Paper makes reallocation of funds to child survival its principal purpose, a true development project has as a deeper aim the creation of the *process* of change. It seems to this consultant that the PIO/P, in the course of its technical work, ought to continue putting this process into place so that it lasts well beyond the time-bounded project.

I. INTRODUCTION

This consultancy was intended to provide a broad view of both the general technical direction being taken by the PIO/P and the process made by work undertaken thus far. This consultant has not been involved in the day-to-day management of the project; neither is he a technical adviser working on one or another operational detail. But his knowledge of essential drug programs in primary health care may allow an objective view of the results and future prospects of this component of the Health Sector Financing Project (HSFP). The audience for this consultancy is primarily the staff of the PIO/P. Since the staff knows its own history and mandate intimately, this report will not go deeply into such details; other readers may refer to the list of documents in Appendix A.

The consultant's scope of work was:

- To evaluate the HSFP's Project Implementation Office for Pharmaceuticals (PIO/P) activities since inception, particularly the past year.
- Assist in writing a draft annual report.
- Use results from the evaluation to assist in development of a draft plan for 1991 to 1992.

The Project Logical Framework, contained in the Project Paper, states that the PIO/P's major outputs should be "drug reforms instituted to increase child survival program impact" and "policies and procedures in place to increase child survival impact of GOI expenditures on drugs."

The Project Paper specifies that these outputs will be evaluated to determine:

- Whether drugs are being more rationally prescribed;
- Whether expenditures for different therapeutic categories of drugs have been changed to reflect internal reallocative shifts within the drug budget; and
- Whether larger expenditures are being made on pharmaceuticals that directly support child survival programs.

Since no major intervention activities were planned for implementation during the problem assessment and intervention design period, it is not possible to evaluate the current progress of the PIO/P by the above-mentioned criteria. The PIO/P activities can be evaluated in reference to the benchmarks specified in the Project Paper and the annual PIO/P Workplans.

The HSFP's Health Economic and Policy Analysis Unit has the responsibility to oversee overall evaluation of the project components. The consultant met with staff from that unit to coordinate this evaluation.

II. PIO/P OVERALL STRATEGY AND MEANS TO IMPLEMENT

The overall purpose of the HSFP (1998 - 1995) is to reduce the public financing of curative health care through capture of private funds (health insurance, cost recovery, management efficiencies) and then to reallocate public spending toward child survival programs, by a targeted 35 percent increase in real terms compared to 1987. The pharmaceutical component provides for the systematic study of how public sector pharmaceuticals are budgeted and planned, ordered, distributed, prescribed and used. Based on the results of the study, a series of interventions will be tested, to increase the availability of medicines that impact directly on child survival. The interventions can range from policy changes to management and administrative improvements, from training of health workers in rational prescribing to social marketing of the essential drug concept to the public.

The PIO/P is but a temporary unit within the Indonesian Food And Drug Administration (Pengawasan Obat dan Makanan, POM), itself but one player in a highly complex field whose interactions cannot be captured on an organigram. At the central level, POM is one of four general directorates of the Ministry of Health:

- Pebinaan Kesehatan Masyarakat (Binkesmas, or Community Health Services);
- Pelayanan Medik (Yanmedik, or Curative Services, including hospitals); and
- Pemberantasan Penyakit Menular dan Penyehatan Lingkungan Pemukiman (P2M-PLP, or Communicable Disease Control and Environment)

together with the medical and pharmacy research institutes. All of these groups must be involved in any of the aspects of pilots and policies dealing with pharmaceuticals. At the provincial and district levels, the situation is even more complex as the budgeting process, moving up from the district level, is separated from the drug planning process:

- The Ministry of Interior is the line authority for all government activities, with the Ministry of Health providing staff support and technical supervision.
- The funding for pharmaceuticals comes out of at least six different pockets, including two entirely local funds, with separate but overlapping drug lists and requirements. One fund, however — Impres, the President's special account based on population size — predominates.
- Drugs for public sector hospitals (four levels, including the teaching hospitals), community health centers (puskesmas) and subcenters (puskesmas pembantu) derive mostly from parastatal firms, but commercial sector drugs may be purchased with local funds. A new generic drug law requires public purchase of generic pharmaceuticals made by large parastatals.

III. PIO/P METHODS

Appendix B, PIO/P Organizational Chart for Design and Implementation of Interventions, and Appendix C, Design of Interventions — both courtesy of PIO/P — show the sophisticated and careful process by which a temporary unit creates alliances and consensus for a large number of field studies. PIO/P has gained agreement to and collaboration with a series of studies and interventions. The Steering Committee (chaired by the head of the PIO/P), Activity Coordinators, a Consensus Group, and integrated working groups at central and local levels may seem ponderous, but if changes are to come, they must reflect the interests and involvement of all persons and agencies capable of making the changes work, or of blocking the changes. Recently, in preparation for the field testing of interventions, PIO/P has sponsored province and district-level workshops to present the findings of the various studies and to solicit reactions and ideas for possible interventions.

In the course of the upcoming Knowledge, Attitude and Practices study (KAP), more ideas will be generated from the local planners and front-line health workers themselves. This participatory style has already shown itself successful in the way certain structural changes in drug procurement and planning have already taken place or are about to take place, and in the way the PIO/P has received help in conducting its studies. If the method continues to be successful, it will serve as a model for the future. It is important to note that the various committees and working groups have been established by Ministerial decree, and thus are much more likely to be sustained after the special project is completed. (For more details on membership of the committees and methods of work, refer to Appendix A, Item 37, Status Report HSFP-P, October 1990.)

PIO/P has leveraged its work by contracting out key studies to universities and the private sector, by recruiting long-term advisers from both public and private sectors in Indonesia, and by judicious use of expatriate and Indonesian short-term technicians, most of whom return for long stretches and give full attention to technical details. The PIO/P is fortunate to have leadership that can make best use of the contributions by the contractors and consultants.

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IV. PIO/P PROGRESS IN ANALYSIS OF THE SYSTEM

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- The lengthy period of time required for the preparation and approval of subcontracts
- The lack of clear standard administrative and technical operating procedures and guidelines
- The lack of data required for monitoring PIO/P budget expenditures

In the past 18 months, the PIO/P has provided the Ministry of Health and its HSFP a systematic overview of pharmaceuticals in the public sector, particularly at the primary care level.

- The Drug Management Study gave a clear view of the processes of budgeting, planning and distribution of pharmaceuticals.
- The Drug Manpower Study inventoried the personnel at several levels involved in those processes, and their skills and constraints.
- The Drug Use Study provided hard data on what health care workers are actually prescribing for key conditions, and to whom.
- The KAP study — relying particularly on focus groups and direct observations — will explore the reasons for the events described in the other studies, and the incentives and disincentives for current practices and proposed changes.
- The Secondary Data Analysis Study provides, under one cover, a comprehensive review of government policies, regulations and procedures with respect to pharmaceuticals.

That the studies were not conducted simultaneously, or in exactly the same geographic areas, was to be expected (although not planned this way), but in fact this was quite a reasonable approach as successive studies need to capitalize on the findings of previous ones. As it also turns out, the less sophisticated studies came first, as they should. A detailed Integrated Analysis has placed all the findings into a single, comprehensive matrix.

PIO/P has also commissioned bioavailability studies to support the new generic drug laws.

V. MAJOR FINDINGS OF THE STUDIES TO DATE

The Drug Use Study confirms and expands on what was found in previous similar studies:

- Most of the patients are adults; only 17 percent are children under five years old, despite their heavier load of illness, and perhaps fewer than 1 percent are infants, by this consultant's review of one puskesmas register. Overall, however, ARI and diarrhea make up nearly 60 percent of the cases and 60 percent of the cost of the drugs.

- An average of nearly four drugs are prescribed per encounter.

- Drugs are prescribed for three-day courses only; three-fourths of prescriptions are made by paramedics (nurses and midwives); nearly half the patients come away with injections.

- Three-fourths of the episodes of diarrhea and ARI — most of the ARI *not* pneumonia is a fair assumption — receive one or more antibiotics (the more reasonable figure would be about 10 percent).

- Most of the incorrectly given drugs are less than effective rather than dangerous (except when needles and syringes are reused without sterilization), but the wide-scale use of antibiotics given when not necessary promotes emergence of resistant and more virulent strains of bacteria.

- Cost savings could be realized by more rational treatment of ARI — fewer antibiotics — but overall a completely rational use of pharmaceuticals and fewer injections would not reduce costs by much. This means that reallocation of resources to small children and their mothers is the principal goal, as well as improved quality of prescribing.

Focus group studies with prescribers, attached to the Drug Use Study, give us tantalizing hints as to what goes on behind the figures. (Much more will be learned by the KAP.) The paradigm is roughly like this:

- Puskesmas doctors are overworked with administrative chores and leave much of the care of patients to the paramedics.

- The drug supply is fixed by the budget and by the drugs on specific lists. Shortages — due partly to budgetary constraints, partly to inefficient planning and distribution, or some combination — induce a rationing mentality.

- Patients expect — or the prescribers *think* they expect — several drugs and injections; treatments are given in the course of a brief examination, as the prescriber tries to match a limited list or limited supply of drugs to the complaints presented by the patient.

- Since the puskesmas are ranked by the number of patients it sees, there is clearly a pressure to please the patient with what the puskesmas mainly has to offer: free drugs. (If an injection backfires — as happened in one puskesmas — the rate of use may go down dramatically, showing it is the upleasing function that counts.)

- A major source of continuing education for the puskesmas physicians is the drug company representatives.

The Drug Management and Drug Manpower Studies have shown quite convincingly that there is much room to improve the efficiency of the system. One suspects that the system grew hurriedly in response to the rapid growth of the primary health care network, and to the steps taken toward decentralized planning and control in all sectors. Much can be done:

- Better coordination of drug planning with the budget cycle;

- Greater local flexibility to choose rational drugs;
- Coordination of the various funds from which drugs may be purchased (ideally, merged into a single fund);
- Better coordination of drug supply to needs through a timely and more accurate information system;
- Better trained and supervised warehouse staff so that there will be fewer stockouts and better storage capacity and inventory control;
- Better and more accessible literature.

The studies did not reveal how difficult or easy it would be to introduce any or most of these changes, or whether the changes need to be made through the whole system at one time or can be done in small steps, or even whether such structural changes will have any direct impact on prescribing patterns.

VI. INTERVENTIONS

PIO/P is getting ready to test a series of interventions. A number of small but useful structural changes have already taken place, or are about to, based on the data presented by PIO/P to the Steering Committee.

The generalized scheme for interventions comes out of the Integrated Analysis·

- Training of managers for effective drug management;
- Implementation of an MIS for planning and use of drugs;
- Training of managers in budgeting and costing;
- Training of prescribers in diagnosis and prescription;
- Providing scientific data on drug therapy;
- Providing standard treatment protocols and drugs to paramedics;
- Establishing regional supervisory systems;
- Social marketing — making the community aware of best drug use.

PIO/P has decided to apply the first four items in particular to two conditions — diarrhea and ARI. The interventions at the district level may take place in two provinces (West Sumatra and East Java), four districts, and 120 to 240 puskesmas, where much preparation with local staff has already occurred. The project also has a chance to observe the effects of an expanded pharmaceutical budget in a World Bank project in two other provinces — Nusa Tenggara Barat and Kalimantan Timor. Even as the interventions proceed, additional investigations and evaluations will take place.

VII. THE CONSULTANT'S POINT OF VIEW

This consultant would like to offer a series of observations and ideas. Many will already be obvious to PIO/P; some others are speculative.

1. What the project is most short of is *time*. The outside external technical advisers' term of duty ends in June 1992, and project funding ends a year later. With a one-year budget and planning cycle, this means that interventions must be sharply focused, must be carried out as pilot or demonstration studies, and must involve no intervention that is itself so complex as to be uncertain of achievement.

2. Even if the project had several years to run, it is by no means certain that a total revision of the drug management system — from initial planning to final prescription and use — is possible. The evidence from the Bamako experience shows how difficult it is to make wholesale changes in drug management, so intimately tied is it to the entire health system; and so tied to the profound, sometimes mysterious, cultural and social interactions around health, in which the basic medium of exchange is drugs. Moreover, experience from the U.S.A. shows how difficult it is to change physicians' prescribing habits; only intensive face-to-face education seems to work — something that drug company representatives do well because they promote the *increased use* of drugs, while "rational drug therapy" tries to *limit* the use of drugs.

3. Before engaging in wholesale interventions, one ought to ask what the conceptual model of the drug system looks like (PIO/P, in fact has already made some implicit assumptions about such a model). Is the model like the hands-and-string game of "cat's cradle," where whatever string is plucked, the whole structure is affected (and only one right move is possible at a time)? Or is the model like a tangled and knotted string, each knot to be undone in sequence? Or perhaps the model is like the game of "pick up sticks," with a jumble of sticks on the ground, each stick to be picked up without disturbing the others, and so one goes for the easy sticks first. Or yet, like a villager's house: this month a kitchen has to be rebuilt, next month a new shed, or a spare bedroom for the elders; meanwhile the older rooms might become decrepit and uncomfortable, or fall down if additional supports are not built during reconstruction.

   It is this consultant's intuition that the model is a combination of the jumble of sticks and the villager's house: Some things are done by habit and are there by accident; some things are absolutely necessary but uncomfortable to live with; some changes may be easy to make, while others will cause real damage.

4. The key decision-makers use a political model for change: change must be easy to conceptualize ("generic drugs," for example), have a bold and moral strategic purpose ("child survival," say), satisfy as many groups as possible (loud complaints from powerful groups surely threaten the changes, no matter how "rational"), and changes must be presented in a constructive way.

5. Although the Project Paper makes reallocation of funds to child survival its principal purpose, a true development (or "transfer of technology") project has a deeper aim: to create the *process* of change. The process of change requires a means of obtaining and analyzing data, a way to present the information most cogently, a way of building the political and bureaucratic coalitions — at all levels — that decide on and implement changes.

   It seems to this consultant that the PIO/P, in the course of its technical work, ought to continue putting this process into place so that it lasts well beyond the time-bounded project. An improved drug supply done without this process would be a failure; a process that works and continues, even if the outcomes of the interventions were not spectacular, would be a success.

6. This consultant would like to propose some additional interventions "at the margin," so to speak. The suggestions do not imply any criticism of what is already planned.

- An expert committee of pediatricians, obstetricians, primary care specialists and pharmacists should come together; considering absolute budget ceiling and a typical puskesmas population to be served, they should choose a list of truly essential drugs — types, forms, course of treatment and volumes — for both the puskesmas and the puskesmas pembantu. The exercise is a form of zero-based budgeting and reflects what the dinas planners go through. The experience in Indonesia with kanamycin shows that eliminating an unnecessary drug on the lists sharply reduces its use.

- PIO/P should quickly find out if the puskesmas are *not* serving the under-ones, and why not. No drug reform can substantially reallocate resources to the infants and toddlers, if they are not coming when ill (outside of posyandu days).

- POM should have antibiotic sensitivity testing done of key pathogens (shigella, H. *influenzae*, S. *pneumoniae*) so that the expert committee can restructure the antibiotic profile of the various drug lists. (This consultant's impression of the lists is that they reflect the situation of some time ago.)

- POM should conduct an inventory of the stocks of needles and syringes at the puskesmas and puskesmas pembantu, the means of sterilization available, and current practices. A costing study should also be done to determine how "one sterile needle, one sterile syringe, per patient" can be ensured.

- While on the subject of injections: If women of child-bearing age — pregnant or not — routinely get injections of questionable value (papaverine, vitamin B-12, others), would EPI approve of giving tetanus toxoid injections routinely? Only a patient-carried record card need be introduced.

- Management and structural interventions being planned by PIO/P have an interesting characteristic: *each makes life easier* for someone. Moving drug ordering out of the puskesmas frees up the physicians; consolidating the different drug budgets immensely simplifies ordering. The consultant applauds this approach.

- In focusing on diarrhea and ARI, PIO/P aims to *add to* the capacity of prescribers, not take away from them. Therefore, can 200cc cups and spoons be added to the ORS? For pneumonia, can PIO/P arrange a nicely packaged "course of therapy" with cotrimoxazole and an inexpensive digital timer to count respirations (these are made in Southeast Asia, perhaps available locally)?

- The general experience in improving primary health care is that it becomes more expensive, not less. Savings are realized to the system as a whole by preventing costly hospitalizations due to poor quality of care. Some of the unnecessary costs of primary health care are directly linked to poor quality, such as incurred by polypharmacy. It may be possible to reduce polypharmacy and recover some costs if patients are asked to pay for any prescription above three (with certain drugs, like ORS, exempted from the count). Could this idea be tested in one puskesmas?

- What would happen if the puskesmas set up a "toko obat" where adult patients and older children could obtain simple over-the-counter medicines at low cost (cough syrups, ORS, iron-folate for women, kaolin-pectin, skin salves, aspirin), without having to wait in line for the physician or paramedic? (A tick system by the dispenser would still capture the number of patients for the puskesmas records.) The puskesmas should be able to keep the funds for local needs.

- Can parastatal drug firms be enlisted to help in positive ways: Provide technical assistance on warehousing and distribution? Promote their more rational products with professional brochures? Help stock the"toko obat"? Help set up a rehydration corner?

- The proposed interventions have tended to emphasize the supply side, less so the demand side. After supply is ensured, a pilot test of social marketing methods should be undertaken to inform the public about rational drug treatment for diarrhea and ARI. Social marketing techniques to discover how the practitioners can be convinced should also be applied.

VIII. ACKNOWLEDGMENTS

The consultant is grateful for the chance to observe an exciting project. He has learned a lot in so doing, and hopes he has been helpful at the same time.

IX. PERSONS INTERVIEWED

Dra. Andayaningsih, Director of Drug Control, Pengawasan Obat dan Makanan (POM, Indonesia's Food and Drug Administration), Chief of PIO/P

Dr. Reginald Gipson, ISTI's long-term expatriate adviser

Drs. Yos Hudyono, long-term Indonesian adviser on management

Drs. Roostijan Effendi, PIO/P adviser, and delegate of Dra. Andayaningsih, on management of technical interventions

Dr. Purwanto Hardjasaputra, PIO/P adviser on drug use

Drs. S.U. Sembiring, PIO/P adviser on drug distribution, coordination of field activities

Widyastuti Soerojo, Dennis Ross-Degnan, and Jennifer Zeitlin — short-term consultants on design of KAP study and technical interventions

Dr. Alex Papalaya, Dr. Chris Costello, and Dr. A. Anhari — Center for Child Survival staff executing KAP study

APPENDIX A
LIST OF DOCUMENTS READ

1. Project Paper, USAID, Health Sector Financing 497-0354, February 1988.

2. Terms of Reference, Health Sector Financing Project, Pharmaceutical Component (HSFP-P 001, Rev. December 22, 1988).

3. Terms of Reference, HSFP-P Focussed Assessment (HSFP-P 005, Rev. December 22, 1988).

4. Scope of Work for Integrated Analysis of Focussed Assessment Studies (undated).

5. Integrated Analysis of Focussed Assessment Studies, June 1990 (draft).

6. Integrated Analysis of HSFP-P Drug Use Study, April 1990 (draft).

7. Integrated Analysis in the Effort to Formulate the Design of an Integrated Intervention (Yos Hudyono, August 1990).

8. Report of Manpower Study HSSFP-P (Price Waterhouse Siddik, October 1989).

9. Protocol and Instrument of Drug Management Study (MJM Consultants, Revised Version II, February 1989).

10. Progress Report on the Implementation of Drug Management Study (MJM Consultants, August 1989).

11. HSFP Consultant Report Series, #22, 23, 24: The Indonesian Hospitals Study, Quality of Care, Production of Services (Paul Zukin, Blaine Rasmussen, Carl Stevens, July 1989).

12. Final Report. Review of Secondary Data and Literature (undated).

13. Drug Management Study — Executive Summary Report (MJM Consultants, undated).

14. Conceptual Outline for Medical Service Intervention, HSFP-P (August 1990).

15. Quarterly Reports, ISTI, HSFP, July 1989 — June 1990.

16. Quarterly Reports, HSFP-P, July 1989 — June 1990.

17. Consultants' and contractors' scopes of work, various.

18. Child Survival Pharmaceuticals in Indonesia — "CSP-I" — (MSH/YIS/MOH, December 1987).

19. "Where does the Tetracycline Go?" — Health Center Prescribing and Child Survival in East Java and West Kalimantan, Indonesia — "CSP-II" — (Bapennas, CDC, POM, Binkesmas, YIS, MSH, April 1988).

20. Findings from the Drug Use Study — Prescribing Patterns in Health Centers and Hospitals in Six Indonesian Provinces (YIS, draft, October 1990).

21. Focus Group Discussions with Prescribers (YIS, draft, October 1990).

22. Status Report, HSFP-P, July 1990.

23. Puskesmas drug indent lists, APBD/Inpres/PHB, samples.

24. Laporen Pemakaian dan Permintaan Obat (example drug use report from a puskesmas).

25. Register Poliklinik Tanguil Puskesmas.

26. HSFP Consultant Report Series, #30, Economic Considerations in the HSFP-P: Drug Costs and Expenditures (S.J. Fabricant, August 1990).

27. HSFP Consultant Report Series, #27, Strategy for the Evaluation of the HSFP-P and Progress of the Focussed Assessments (Dennis Ross-Degnan, 1989).

28. HSFP Consultant Report Series, unnumbered, A Review of the Drug Supply Management System to Rural Health Facilities in Indonesia (James A. Maneno, draft, September 1990).

29. Scope of Work for Technical Assistance for Design of PIO/P Drug Management/Use Interventions and Establishment of Technical Working Groups (undated).

30. Ditto: Drug Management Information Systems (undated).

31. Design of Interventions and Evaluation for HSFP-P Component (D. Ross-Degnan, J. Zeitlin, draft, October 1990).

32. Work Plan, HSFP-P, December 1989 - March 1991.

33. Design of Interventions PERT Chart, October 24, 1990.

34. PIO/P Organigram.

35. PIO/P personnel work plans.

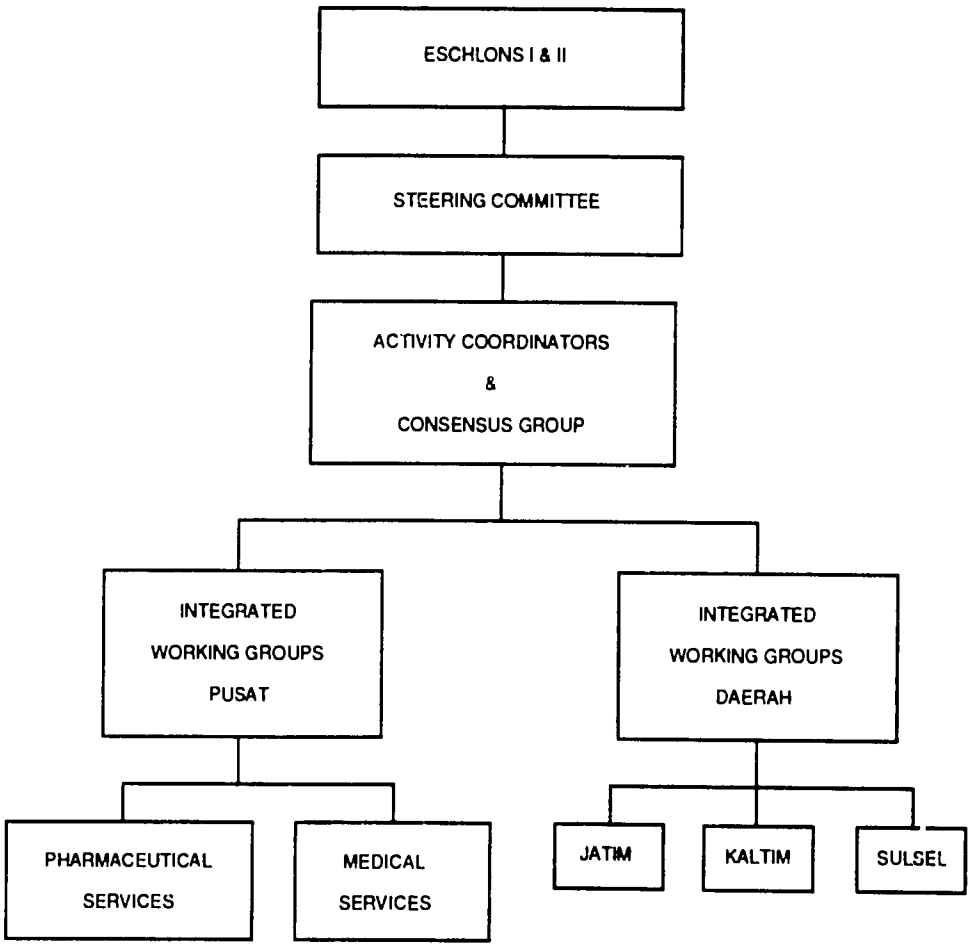
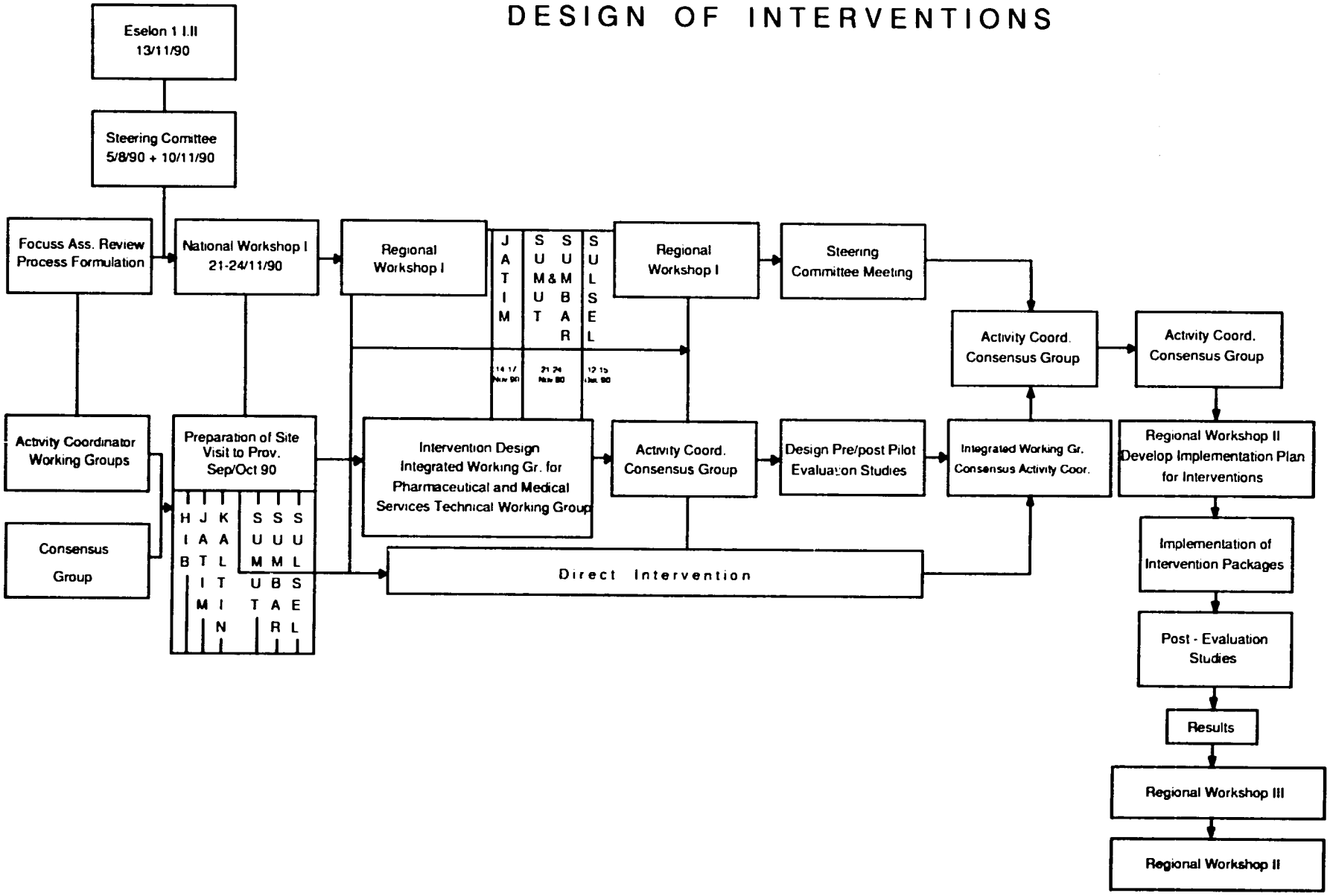
36. HSFP-P, Seminar Summary Presentation, June 9, 1990.

37. Status Report HSFP-P, October 1990.

38. Literature review of this consultant's pesonal library on essential drugs and drug management, approximately two dozen items.

APPENDIX B
PIO/P ORGANIZATIONAL CHART FOR DESIGN AND IMPLEMENTATION OF INTERVENTIONS

PIO/P
ORGANIZATIONAL CHART
FOR
DESIGN AND IMPLEMENTATION OF INTERVENTIONS



DESIGN OF INTERVENTIONS