

P.N.ABE-972

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DIAGNOSTIC OF BEMFAM CLINIC MANAGEMENT SYSTEMS

PERFORMED BY  
THE FAMILY PLANNING MANAGEMENT TRAINING PROJECT  
MANAGEMENT SCIENCES FOR HEALTH  
BOSTON, MA.

DECEMBER 1989

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## ACKNOWLEDGMENTS

The diagnostic of BEMFAM's own clinics' management information systems, presented in this report, has been possible thanks to the generosity of BEMFAM executives and personnel at the headquarters offices in Rio de Janeiro, at the community program offices in Recife, Natal and Chapecó, and at the clinics in Olinda, Natal and Chapecó. They all were supportive with their time, information, and gracious hospitality. We take this opportunity to express our deepest appreciation to all BEMFAM executives, and program and clinic personnel for the support they offered the FEMT consultants.

## I. EXECUTIVE SUMMARY

Since the 1987 AID evaluation of the AID Brazilian population program, AID/Washington and AID/Brasilia have been recommending a strengthening of the sustainability of the Brazilian private sector family planning programs and have been projecting a phase-down of AID population funds for Brazil. Brazilian institutions, including BEMFAM, and international contracting agencies learned of this proposed phase-down at the December 1987 meeting in Salvador, where the Brazilian institutions also learned that their programs and institutional future were at stake. AID also told them at that time, that technical assistance and training by FPMT and the Enterprise project would be provided to assist them in their move towards sustainability.

BEMFAM, reflecting the wisdom and prudence of its first-class leadership and management, was resolved to plan and implement plans, strategies, structures and systems to enhance its sustainability. One step in that direction was the attendance of a senior member of its management at the FPMT Strategic Planning for Sustainability Workshop held in May 1988 at Nova Friburgo. Another was reaching agreement with FPMT on a long-term and comprehensive four part program of management support in: technical assistance in strategic planning, training and technical assistance in management information systems (MIS), technical assistance in organizational restructuring, and in institutional marketing.

This report presents the diagnostic of the first area of work BEMFAM requested from FPMT: assessment of the organization's clinic management information systems. The goal of that assessment, undertaken in December 1988, was to improve clinic sustainability (defined as self-financing, continuing service to the needy, and institutional continuity). BEMFAM's own clinics are a significant provider of FP services, consume a significant amount of BEMFAM's self-generated funds, and produce relatively few revenues. They also represent where the institution could start to develop and expand technology on sustainability management.

The FPMT team is making two key recommendations:

1. The design, development, installation and training for a micro-computer based integrated financial management and health services system for clinic management. FPMT would work with BEMFAM throughout this institutional development process so that BEMFAM executives and staff acquire increased managerial perspective and skills to promote BEMFAM's sustainability as well as a management information system to support sustainability in the clinics.
2. That BEMFAM watch this process in the development of a managerial perspective, skills and system for clinic management with an eye to the future transferability of learnings on promoting BEMFAM sustainability to other areas of BEMFAM's work

These recommendations support the leadership trends of decentralization of clinic operations and reinforcement of central office strategic management and control. More specific recommendations are:

1. Provide strong and focused MIS support to clinic management.
2. Integrate financial and service statistics data to facilitate planning.
3. Use market research techniques to explore options for expansion and diversification.
4. Integrate personnel and service data.
5. Strengthen and standardize inventory management and integrate it into cost accounting.
6. Develop full management accounting.
7. Develop managerial cost accounting.
8. Organize an integrated financial management/health statistics system.

The FPMT proposed approach to this work is to work closely in TA and training with BEMFAM management and staff, starting from the design work onward, through the stages of detailed design, testing, and implementation, until the systems are in place and being used in the management of the sustainability of these clinics.

## II. INTRODUCTION

This section presents the background leading up to this work, and the approaches taken in the field work and to this report's presentation.

### A. BACKGROUND

#### FPMT IN BRAZIL

Since the 1987 AID evaluation of the AID Brazilian population program, AID/ Washington and AID/Brasilia have been recommending a strengthening of the sustainability of the Brazilian private sector family planning programs and have been projecting a phase-down of AID population funds for Brazil. The projected phase-down is based upon both AID's longtime support of Brazilian population activities and by the reported high Brazilian prevalence rate (63.5%). Brazilian institutions were notified by AID/W and the Mission of the projected phase-down at an AID meeting with the FP providers and contracting agencies in Salvador, Brazil in December 1987. Brazilian institutions were notified that they should begin planning and implementing ways to increase their financial self-sufficiency. They heard that, in light of a phase-down of donor funding, the sustainability of their institutions and programs was at stake. They were told by AID that technical assistance and training would be provided by FPMT and the Enterprise project to assist them in their move toward self-sufficiency.

The Family Planning Management Training Project (FPMT) had begun work the previous year in Brazil. At the request of AID, in 1986 FPMT had undertaken and completed a management needs assessment of the three most important private sector family planning institutions in Brazil: BEMFAM, ABEFF and CPAIMC. That assessment recommended a series of sequenced training and technical assistance interventions to increase institutional and managerial effectiveness and efficiency. FPMT began that year with a training program to which staff from the three institutions were invited. Later, in-depth technical assistance was initiated; AID and FPMT agreed to sequence the TA for ABEFF, BEMFAM and CPAIMC respectively.

#### FPMT HISTORY WITH BEMFAM

BEMFAM was one of the three organizations assessed by FPMT in 1986 and for whom FPMT recommended a program of management training and technical assistance. BEMFAM staff participated thereafter in the various training events which the project sponsored.

In May 1988, BEMFAM's Administrative Coordinator participated in the Strategic Planning for Sustainability Workshop held by FPMT in Nova Friburgo, Brazil. At that time and in the months that followed, BEMFAM requested indepth TA. BEMFAM, reflecting the wisdom and prudence of its first class leadership and management, was resolved to plan and implement plans, strategies, structures and systems which would enhance its sustainability. In November 1988, with USAID concurrence, a FPMT team worked with BEMFAM to identify management areas critical to BEMFAM sustainability and areas appropriate for FPMT management training and technical assistance.

BEMFAM and FPMT agreed on a detailed training and technical assistance program to promote the sustainable development of BEMFAM. This program, to be carried out over the next year and a half, includes:

1. technical assistance in strategic planning for sustainability. FPMT is supporting a strategic planning retreat for the further development of BEMFAM's institutional plans, is providing strategic planning and marketing consultants, and supporting their related international and local costs.
2. training and technical assistance in MIS for sustainability. FPMT agreed to provide international and Brazilian consultants to work with BEMFAM personnel in designing, developing, implementing and training for a micro-computer based integrated financial management and clinic statistic system to improve the organization's own financial and clinic management.
3. technical assistance in organizational restructuring. FPMT will support Brazilian consultants to work with BEMFAM personnel in evaluating and designing the new organizational structures and related human resource systems which are expected to result from the strategic plan.
4. technical assistance in institutional marketing. FPMT will assist BEMFAM to market itself more effectively nationally.

At BEMFAM's request, one of the first areas of work was an assessment of the organization's clinic management information systems (MIS). This evaluation was undertaken so as to provide recommendations on managing those clinics for increasing sustainability. Specifically, the work was to concentrate initially on the management information systems of BEMFAM's own 12 clinics which are spread out over Brazil. Although these clinics serve only a small percentage of the total number of persons to whom BEMFAM provides services each year, BEMFAM and FPMT agreed that the clinics are an appropriate and feasible entry point for BEMFAM to begin developing the institutional perspective, systems and skills which will enable increasing sustainability. This report addresses this work.

#### METHODOLOGY OF THIS MIS ASSESSMENT

On December 8, 1988, four BEMFAM executives and the three FPMT consultants met at BEMFAM's headquarters in Rio de Janeiro to plan in detail the clinic systems diagnostic work to be done in the following days. BEMFAM executives were: Jose Maria Arruda-Adjunct Executive Secretary, Carmen Gomez-Planning and Programming Coordinator, Sergio Lins-Evaluation Coordinator, and Rita Baudiani-Adjunct Planning and Programming Coordinator. The clinic management information systems FPMT team was composed of consultants Kip Eckroad of Management Sciences for Health (Boston, U.S.A.) and Jorge Bedoya and Rolf Stern of Stern & Compañia (Ecuador).

At this time, BEMFAM executives briefed the FPMT team, discussed criteria for selection, and the group jointly planned the headquarters and clinic visits.

BEMFAM executives stated that visiting the Olinda, Natal and Chapecó clinics would provide an adequate and representative sample of the organization's 12 own clinics. Two clinic visiting teams were established, composed each of BEMFAM executives and FPMT team members. The team composition is described in Annex II. Also, the schedule for interviews at BEMFAM Rio de Janeiro headquarters was agreed on. The complete schedule of activities carried out by the FPMT team is described in Annex II.

The field work was carried out from December 9 through 16, 1988 and on the afternoon of December 16, the FPMT team verbally presented to BEMFAM top management executives a brief summary of findings and directions to consider for the future. The purposes of this report are to:

- \* Present in writing these findings and points to consider for consideration of BEMFAM executives.
- \* Serve as a basis for planning the FPMT work to be undertaken to develop a clinic management information system (MIS) which will promote increasing BEMFAM sustainability.

## B. APPROACHES TO THIS DIAGNOSTIC AND REPORT

This section describes the approaches which the team used to perform the diagnostic work and to prepare and present this report.

### 1. FPMT Approach to the Diagnostic

The FPMT approach was characterized by four elements: an analysis of systems from the bottom up, a recognition of the decentralization process underway and a view that the technical installation of systems is only one part of the whole process of developing BEMFAM's ability to use information to heighten sustainability. Training and technical assistance throughout the process are essential components to this proposed institutional development. And lastly, but perhaps most importantly, our approach was to recognize that BEMFAM is a unique organization and to develop all design and implementation recommendations to meet the individual situation.

### THE VIEW FROM THE CLINIC

With the goal of strengthening BEMFAM clinics' sustainability, the FPMT consultants approached this diagnostic trying to understand the view from the clinic managers perspective and by identifying the management information systems needed to support managing these clinics towards sustainability. It is, after all, in the clinics that patients are seen and it is to enhance services to such patients that th's entire work is undertaken.

The diagnostic focused on identifying and understanding managerial information needs for making strategic and operating decisions. The FPMT consultants tried to see through the eyes of the clinic managers so as to understand the challenges these executives face, the management information they require and that they receive from all directions: their headquarters, their patients and communities, their clinic and community program organizations.

#### DECENTRALIZATION

A second characteristic of the diagnostic approach was to take into account the clinic management decentralization process which has been initiated by BEMFAM's leadership. BEMFAM wishes to decentralize operations while at the same time strengthen strategic decision making at the central level. The FPMT team, in their recommendations, tried to foresee what MIS needs might arise through a continuation of this process.

#### SEQUENCING OF TRAINING, TA AND MIS

A third characteristic of our approach was to view the development of these systems as a matter of carefully sequencing a number of components which together can enable the institutional development sought here. These components are:

1. A diagnostic of what exists and what is needed.
2. A working with BEMFAM at multiple levels to design appropriate new systems and to train BEMFAM, at the same time, in the management skills to use those systems.
3. Development and implementation of appropriate MIS software, together with training in the use of that software.
4. Training of BEMFAM at multiple levels to use the information generated for more effective and efficient management.

## BEMFAM IS A UNIQUE INSTITUTION

As is clear to all, BEMFAM is a large and complex organization, requiring a flexible and multi-faceted understanding. It has four main activities of which service delivery is one. Within service delivery itself there is considerable diversity. For example, the team visited a clinic in southern Brazil, which as of November 1988 no longer had a donor (Matching Grant) supporting part or all of its operations, and where self-financing consequently is a "do or close" situation. On the other hand, clinics visited in northern Brazil had significant donor (by Matching Grant and IPPF) and state support, thus requiring other considerations perhaps stronger in programmatic accomplishment and with lesser self-financing imperatives in the short term.

Since BEMFAM has a well-established and successful reputation for managing programmatic issues, whereas the self-financing imperative is relatively new, the focus of this work emphasized that area new to BEMFAM, that of combining and integrating information on service statistics and finance.

### 2. Approach to the Report

- Given the fact that this FPMT technical assistance is intended to serve as a starting point for establishing a clinic management information systems (MIS) development and implementation program, the team thought it useful for the report to have several characteristics:
  - \* The report is as explicit as possible about the assumptions made in the approach and conduct of the work, report preparation and recommendations presented. It may be considered somewhat descriptive. The purpose of this approach is to permit the widest consideration of all aspects that should be taken into account in the future work to be undertaken. If there is an error, it was deemed to be preferable to err on the side of providing too much information rather than too little.
  - \* Although this report is organized in several sections, it has been prepared and structured to be considered as a whole. Partial reading of one section by itself will not necessarily adequately portray the views of the FPMT consultants, on the whole or its parts.
  - \* In each section of the diagnostic per se, the report presents what was found and then, points which the team believes important for BEMFAM to consider.

Much information was gathered during the diagnostic, thanks to the generosity of BEMFAM executives and personnel at headquarters, in program and clinic offices. This report does not intend to compile all the documentation gathered and only refers to it. A full set of all documentation gathered is available in the FPMT files.

### III. SYSTEMS FOR THE MANAGEMENT OF CLINIC SUSTAINABILITY

This section briefly discusses the relationship between systems and management, and the relationship of sustainability to these systems.

#### A. RELATIONSHIP BETWEEN SYSTEMS AND MANAGEMENT

Management information systems (MIS) support the successful accomplishment of the manager's key task which is to take the organization in the direction and the place desired. They do so by placing information at the manager's disposal, in a timely, consistent and accurate manner, with the frequency needed for the manager's operating and strategic decision-making.

Accordingly, the concept of management information systems is not an absolute but a relative concept: relative to the direction and to the place the manager wishes to take the organization, relative to the critical strategic and operating elements on which the manager wishes to be informed in order to make decisions, relative to the managerial leadership style. Management information systems are shaped to the priorities of the organization; new MIS systems are shaped preferably to the critical elements the organization wishes to manage in its strategic and operating future.

If the critical elements to be managed in an organization are programmatic in nature, then these are the specific object of the management information system (MIS). If the critical elements to be managed are financial in nature, then these are the focus of attention for systematic recording and reporting. If the critical elements are both programmatic and financial, then these systems need to accommodate recording and reporting adequately on each one separately, and on both mixed. If the strategic and operating direction and criteria of an organizational unit are relatively clear, it is more likely that new MIS end up being useful and effective in assisting the managers to manage that unit towards the desired direction.

If the focus of management is the clinic as a specific organizational unit, then information on it needs to be garnered and provided to those charged with and responsible for producing its appropriate performance, be they at the clinic, at the program office, at the central office, or a combination of these all. Thus, management information systems reporting on one organizational unit may provide information to many managerial units, not all of which need or can use that information in the same reported form, although it may be based on the same set of original data.

#### B. SUSTAINABILITY AND MIS

In this report we are concerned with the sustainability of BEMFAM's own clinics for whom there are two parts:

- \* The network of clinics themselves. BEMFAM has direct management of these units and has a major stake in their programmatic and financial success.
- \* central offices that direct, supervise and assist the operations of this clinic network

Sustainability is understood here, as elsewhere in the Family Planning Management Training Program, to mean the effective capacity of an organizational unit to:

- \* be self-financing;
- \* provide continuing services and impact to needy and underserved populations;
- \* have institutional continuity.

These terms are further understood to be:

In the context of this report, self-financing means the capacity of BEMFAM's own clinics, considered individually or as a network, to generate revenues sufficient to cover either of one of the following seven levels of expenditures, presented in a progression from a minimal definition of self-financing to a maximum, most inclusive definition:

- a. direct clinic operating costs: personnel, supplies and materials for service delivery, food, rent, record keeping, water, gas and electricity, transportation, and petty cash.
- b. direct clinic operating costs, AND  
indirect clinic operating costs: maintenance, cleaning, insurance, replacement of minor instruments and other inventories.
- c. direct and  
indirect clinic operating costs, AND  
renewal of clinic physical assets and their replacement, such as furniture and furnishings, equipment and machinery, installations and buildings owned.
- d. direct and  
indirect clinic operating costs, and  
renewal of clinic physical assets, AND  
contribution to covering a part of the total clinic network deficit.
- e. direct and  
indirect clinic operating costs, and  
renewal of clinic physical assets, and  
contribution to covering a part of the total clinic network deficit, AND  
contribution to covering a part of central office operations expenditures.

- f. direct and indirect clinic operating costs, and renewal of clinic physical assets, and contribution to covering a part of the total clinic network deficit, and contribution to covering a part of central office operations expenditures, AND contribution to cover central office renewal of physical assets and their replacement, such as furniture and furnishings, equipment and machinery, installations and buildings owned.
  
- g. direct and indirect clinic operating costs. and renewal of clinic physical assets, and contribution to covering a part of the total clinic network deficit, and contribution to covering a part of central office operations expenditures, and contribution to cover central office renewal of physical assets and their replacement, such as furniture and furnishings, equipment and machinery, installations and buildings owned, AND contribution to establishing institutional patrimonial reserves for such purposes as: bridging deficitary periods, increasing availability of investment funds for: augmenting the clinic network, entering completely new areas of activities, funding initial stages of non-service related revenue-producing ventures, and so forth.

Revenues, considered here in their broadest sense, can be in-kind and in cash. In-kind revenues can include a wide range such as third-party payment for personnel, free supplies, forgiven cost such as rent, community building refurbishing, donations of equipment, furniture and furnishing, instruments and materials, qualified community volunteers donating their service time, and so forth. Cash revenues include fee-for-services, pre-payments for services, donations and funds raised from non-service activities

The more important that clinic revenues are to the self-financing of the individual clinic, to the clinic network and to overall BEMFAM, the more important it will be to plan and to manage clinics so as to cover costs at the highest level.

Usually, not all clinics reach the same level of financing at the same time, nor do all services in one clinic or from one clinic to another have the same self-financing level at the same time. Each clinic usually is at a different stage of revenue-generation capacity and the same can be said for each service within each clinic. Some services and some clinics are knowingly, as a matter of policy, deficit-generators. Some services and some clinics may be deficit-generators for a time in order to later become surplus generators and net contributors; this then is a matter of management decision-making of investment today for financial results tomorrow. In all cases, there is a need to know, with adequate information, the financial situation of clinics and services.

## BEMFAM CLINICS' CURRENT LEVEL OF SELF-FINANCING

In the period January through September 1988, BEMFAM's own clinics generated revenues of Cz\$. 8.9 million and expenditures of Cz\$ 40.7 million, with revenues covering 22% of these expenditures. These revenues were comprised of receipts in cash from services provided. Significant revenues not included here were donor funding and state funding.

The expenditures during those nine months were equivalent to 160% of the revenues. During the first nine months of 1988, the Olinda clinic had revenues covering about 13% of these expenditures and the Chapecó clinic revenues covered about 11% of its expenditures. Expenditures included most of the direct and some of the indirect costs (personnel, office and cleaning supplies, communications, water, electricity and gas, travel expenses, clinical and surgical materials, laboratory exams, IEC materials, equipment maintenance, food and clothing, and others). Significant direct costs not counted in the above expenditures include the costs of supplies provided by BEMFAM, and the costs of personnel paid by the state and other third parties, not on BEMFAM payroll. If these costs had been included in the total expenditures, the level of self-financing would be lower than that reported.

2. Continuing services to the needy ("carente") by family planning service delivery organizations, while on the road to achieving self-financing, is a difficult task often questioning the balance desired and possible between serving low income persons who can afford to pay little or nothing for services and recovering costs of those and other services.

This interest/need of achieving a new balance quickly brings the service providers to not only consider differentiated financial strategies (charging fees and not, costs reductions, new ventures) but also to consider differentiated marketing strategies (how to appropriately serve non-paying and paying clients). Self-financing of services mainly to low income persons may mean reconsidering the organization of clinic operations, evaluating differently than in the past the opening a new clinic or closing of an existing one. It may mean developing new procedures for treating paying clients, re-training personnel, possibly re-decorating facilities and maybe establishing new ones, while continuing to serve the needy. It means looking at the strategy and operations of clinics with a programmatic view accompanied by an entrepreneurial one.

It may also mean developing new policies and processes including sliding fee scales and service packets for different types of clientele. These could be: the needy ("carente") who should not pay, the patients who can and should pay a little, and the patients who should pay well.

From the view of management information systems, continuing services to the needy also means recording and reporting on the quantity and quality of services provided to the "carente" and the paying clientele, knowing the difference between the fees (if any) that they pay and their cost, to be able to determine the benefit they are being provided by the organization. It also means knowing the preferential prices (if any) that they are charged by BEMFAM in comparison to other service providers, and being able to determine easily the contribution that paying patients are providing the non-paying. It also means that if general or specific pricing policies are established on serving "carentes", there will be ways to know how well these policies have been carried out.

The Natal clinic used to charge patients by socio-economic categories A,B,C and D, but is now, as of December 1988, charging a unified fee for all patients. The clinic in Olinda charges by several socio-economic categories and also reports total patients served. Both clinics maintain internal records that differentiate volumes and income of patients served at each socio-economic level. The Chapecó clinic has recently instituted a policy of serving gratis up to 10% of their morning and afternoon session patients; the other patients pay the same fee. The clinic internally records these separately and reports them unified. Comparisons between these clinic's prices and those of other service providers (private clinics, the state health units, hospitals and so forth) are done quite occasionally and are not reported.

In sum, continuing services to the "carente" means knowing, being able to show regularly, and being able to provide information to decision-makers on the preferential services being provided to these clients, and having a mechanism that supports the implementation of policy set for serving them, at a clinic and at a network level.

3. Institutional continuity is understood to mean the continued and active presence and participation of the organization fulfilling its mission in society. For BEMFAM this includes recording and reporting the activities, benefits and financial consequences of direct service provision and supporting service provision through third-party managed units. Management information systems then would have the role of supporting and reporting of direct and indirect activities and integrating them into comparable and consistent information, so as to be able to provide a total institutional view.

#### IV. BEMFAM OWN CLINICS' MANAGEMENT INFORMATION SYSTEMS

This section presents the team's perception of the role of BEMFAM's own clinics within its larger service delivery network, discusses the findings of the FPMT diagnostic of the clinic management information systems (MIS) and presents points to consider for the future MIS development.

##### A. THE IMPORTANCE OF BEMFAM'S OWN CLINICS WITHIN ITS SERVICE DELIVERY SYSTEM

During the first semester of 1988, BEMFAM provided family planning services through 822,804 family planning consultations in its service delivery network of 1.) its own clinics, 2.) clinics in agreement, 3.) community programs. 187,354 (equivalent to 22.8%) of these consultations were provided in either BEMFAM's own clinics or in the clinics-in agreement (referred to here as the total clinic network). BEMFAM's own clinics provided 63,607 consultations this period. That number is 34% of the total clinic network family planning consultations and is 7.7% of the total BEMFAM consultations in that period. These clinics, therefore, certainly are significant in the BEMFAM service delivery network.

In the first nine months of 1988, BEMFAM's own clinics income of Cz\$8.9 million represented about 4.6% of self-generated funds ("receita de renda propria") and about 1.1% of total income during that period. In 1988, these clinics did not, therefore, produce significant income for the organization.

In the first nine months of 1988 BEMFAM used Cz\$ 40.7 million of its own generated funds to pay for expenditures at these clinics. This amount was about one third of all expenditures paid with BEMFAM's own funds and about 21% of all its own self-generated income. Total 1988 BEMFAM clinic expenditures paid with BEMFAM self-generated funds is about Cz\$54 million, a significant amount. On a total cost basis, these expenditures would probably be larger if they were re-stated to reflect total costs, including central office support, supplies and other costs. BEMFAM's own clinics currently, therefore, represent a significant user of BEMFAM self-generated funds.

##### LESSONS TO BE LEARNED

More significantly, these clinics are the locations at which BEMFAM can develop models for new fee-for-service options, can introduce and manage directly, with fewer external limitations, their efforts in self-financing while serving the poor, and develop new important expertise. Some of lessons learned here may be applicable and replicable in the extended clinic network.

## B. OVERALL VIEW OF CLINIC MANAGEMENT

### The Actual Situation

As indicated previously, clinic management is only one of BEMFAM's several important activities to promote social welfare in BRAZIL. Within that limited context, there are a great many levels and types of personnel involved in and interested in clinic management. Clinic management and managers include the staff of the clinics and the staff of the program management offices (the program coordinators, the administrative and evaluation assistants). Also participants in clinic management are members of headquarters staff in areas such as services, finance, administration, planning and programming. Clinic management includes such tasks as establishing services' quality standards and personnel structure, clinic planning, setting information requirements. Management information is found in all these portions of the organization and a total view of these clinics is obtained by assembling all this information.

Management information systems now are manual at the clinic level and mixed (manual and using electronic data processing) at the BEMFAM central office. Some good manual graphics are used at the clinics and program offices to track service statistics on a monthly and yearly basis. There is an increasing generation of information using electronic data processing at the central office, that is shared with the clinic and program managers (for example-service statistics).

### Points to Consider: PROVIDE STRONG MIS SUPPORT TO CLINIC MANAGEMENT

While it is important to keep the BEMFAM clinics in perspective, as an important but not major part of BEMFAM's entire program, it is also important to provide them with the management support so they can be successful in meeting the needs of family planning users and so they can contribute to the success of BEMFAM as a whole. This stronger clinic support could be provided by a management information system which assembles together all clinic management information and integrates clientele, services and financial information, thereby assisting the management of free, subsidized and surplus-generating services and clinics.

Such an integrated financial management/health statistics system would complement the ongoing process of decentralization. The decentralization of operations and centralization of policy and control will necessitate the generation of better and more operational managerial information to be used at the clinics and, at the same time, which can be used to reinforce the strategic, policy and structural information requirements at central office levels. The importance of generating management information to satisfy both managerial levels will place greater importance on clear and consistently applied standards of definition, recording, reporting and interpretation of information, at both managerial levels.

As more management information is generated with electronic data support at the central office, clinic managers can expect to receive better and more information, prepared by the central office, to complement the systems at the clinics. In the longer-term future, it may be feasible for program offices to have electronic data processing facilities that could facilitate their generation of management information.

## C. PLANNING AND BUDGETING

### The Actual Situation

The annual planning and programming for BEMFAM clinics is done at the Department of Planning and Programming and the Department of Services. These Departments manage the programmatic aspects, including decisions on where/when/how to open new clinics, on evaluating trimestral real performance of clinics, on estimating the maximum capacity of each clinic, on setting targets for the next period, and so forth. These decisions are made in consultation with clinic managers who provide ideas on clinic capacity and utilization for the next period. Planning also relates to configuration of needed clinic personnel, supplies and other data which enables the Financial Department to prepare an estimated budget of monthly expenditures per clinic, denominated in current local currency.

Clinic budgets, for one typical month and for a year, are prepared principally for those which have revenues from donors, usually international ones. Clinics that are funded from own funds usually do not have yearly budgets. These budgets consider most of the direct and some indirect expenditures. Costs of supplies are not included nor is depreciation. Budgets are prepared on electronic spreadsheets. The Cobol compatible system included in the accounting package is not used.

Cash budgets are prepared for a typical month, as a division of the annual budget, and usually divided by clinic or program personnel, into four weekly periods. Remittances have for some time been on a monthly basis.

### Points to Consider: INTEGRATE FINANCIAL AND SERVICE STATISTICS DATA TO FACILITATE PLANNING

The team recommends that a MIS be established which integrates financial and clinic service data so as to facilitate planning as well as management. This would permit simultaneous planning of services (to the needy and paying clients) and the increasing self-financing of the clinics. It would also establish new parameters for monitoring and control.

As BEMFAM develops marketing to multiple types of clients, it would probably find it very helpful to determine the unmet demand of family planning services for several market segments in the catchment areas of existing clinic locations. Additionally, as BEMFAM considers varieties of service expansion, BEMFAM may wish to estimate the probable increase in family planning services coming from offering a wider range of health services at the clinics. Both of these considerations, marketing to several types of clients and a wider set of health services, would necessitate the determination of new indicators for the monitoring and control of clinic performance.

Additionally, the team recommends that planning be carried out, due to the current Brazilian economic situation, in a stable currency as well as the cruzado.

## D. SERVICES

### The Actual Situation

Within the BEMFAM's clinics there is currently interest and plans to significantly widen the range of services currently provided. The Natal clinic is considering adding pediatrics; Olinda is considering pediatrics, cardiology, electroencefalograms and laboratory; and the Chapecó clinic is considering adding laparotomies. All three clinics are working on capturing new client segments: Natal: the middle class; Olinda: clients that can pay for specialized services, and Chapecó: municipalities and large enterprises.

These ideas for changes in market and services are relatively new and have not been thoroughly discussed, apparently, with the central office staff. However, both program and clinic managerial personnel manifested strong interest in carrying out market segment studies for new clients and feasibility pre-evaluations for newly-considered activities.

As indicated in the previous section, clinic capacity of family services is estimated at the central office and discussed in limited fashion with clinic personnel. Annual service targets, distinguishing between first and subsequent visits, are set and the supplies needed are estimated by method (Programas Comunitarios e Clinicas-Estimativas 1988-Clientes Novas por Metodo). These are monitored every monthly, every three, six and twelve months for that period and cumulatively (Relatorio Estadistico, Relatorio Analitico-Clinicas Propias, Relatorio de Clinicas Propias). Clinic personnel mix and number is discussed with the clinic and any changes of installed capacity (of personnel) must be approved at the central office for each clinic.

Points to Consider:      **USE MARKET RESEARCH TECHNIQUES TO EXPLORE OPTIONS FOR EXPANSION AND DIVERSIFICATION**

Planning and programming of clinic services would be significantly strengthened by the use of market research techniques in the following areas. They could be well used to explore options for expansion and diversification of client segments; for determining increases in volumes where deemed appropriate (of non-paying and paying clientele); to test patient acceptance of different service mix options; and answer the questions of policy makers on how to attain institutional goals in services and self-financing at each clinic. Clinics' experience and successes with innovations could be monitored (e.g.: monthly) and evaluated to establish models and lessons learned, that may be helpful for other clinics to reach their goals. The service standards (Manual de Atendimento-Clinicas) could be expanded to cover new services not previously provided.

Programming of family planning and other services would benefit by identifying the goals set for each client segment at each clinic, in volume and financial terms and by having that data micro-computer based. Additionally, it is possible and it has been very useful in other health programs to develop and use micro-computer based modeling simulations of clinic and financial data to identify possible service mixes and to select the apparent best mix of services, personnel and facilities. These can then, of course, be monitored and evaluated through-out the year for performance through the use of micro-computer based information flows.

Such a micro-computer based system can be used, to provide information for monitoring and control purposes, at the clinic, program and central office level for breaking out the numbers and percentages of clients at various income levels. It would be helpful to have this data presented numerically and graphically, actual and actual against targets.

The team recommends the use of such electronic data processing to facilitate planning, management, control and evaluation of the clinics.

## E. PERSONNEL

### The Actual Situation

BEMFAM's personnel function is located within DEAM and is centralized in terms of employment and payroll. All hiring and firing decisions are made at the central level, and all employee wage payments are generated at the central level. This centralization has made possible a system that is well organized, with much of the information managed by a computer program written in Cobol.

There exists an employee classification system for all BEMFAM employees. Each position in the organization is given a specific classification which is covered in the employee manual (Manual de Cargos). The manual contains the name of each position together with a short description. It also contains a more detailed description of activities and functions, as well as criteria for evaluation. Each employee is identified by a unique four digit number. They are also assigned an additional nine digit number which incorporates three pieces of information: 1) where the employee is assigned, 2) what is the source of funds for paying the employee, and 3) the project number where the employee works. In addition, each employee is classified by a two digit class and two digit level code. This determines their rank within the organization and their salary level.

While the personnel system is well organized at the central level, there are some discrepancies in implementation in the regions. This primarily occurs where two functions, such as a regional program and a clinic, share the same location. For example, an employee working in Natal might be officially assigned to the regional program but might be working part or all of their time on activities related to the clinic. Similarly, an auxiliary nurse may fill in for receptionist's position under certain conditions. These occurrences are not necessarily bad; in fact, efficiencies can be gained by having the flexibility to shift people around based on the local situation.

### Points to Consider: INTEGRATION OF PERSONNEL AND SERVICE DATA

As is the case with inventory, a major consideration in the area of personnel has to do with cost allocation. As stated earlier, one of the objectives of the proposed information system is to develop a better understanding of the relationships between BEMFAM's various activities and services, and their costs. Since personnel represents a very significant part of BEMFAM's expenses, it would be very useful to have a better understanding of how these resources contribute to the different things that BEMFAM does.

How much time from different positions (e.g. doctor, auxiliary nurse, receptionist, etc.) is required per new client receiving an IUD? How much per follow up visit? This type of information would help BEMFAM establish unit costs for different kinds of services. It would also permit comparisons of unit costs from one operating unit to another. This will help to discover efficiencies and identify problem areas in need of special attention. Similar kinds of analyses would also be useful at the central level in terms of examining administrative support for BEMFAM's work.

The main question is how to generate this detail of information. One possibility is to have employees keep close track of how their time is spent. This, however could be a burden that results in staff spending too much time and energy just keeping track of what they do. Another possibility would be to carry out specialized time/motion studies to measure how much time is spent on different activities. This, also, can take time and energy, and the interpretation of results can be difficult.

We suggest a different approach: that of using data that is already being collected, as recommended above, on a regular basis. Regression analysis or data envelopment analysis could be used to compare the mix of personnel to the mix of services that exist in different clinics and regions. This would provide an estimate of the contribution of each type of position to each type of activity. To carry out this last approach would require that the information on personnel and the information on service statistics are compatible with each other and can be easily combined.

## F. SUPPLIES AND INVENTORIES

### The Actual Situation

At the central level the inventory and supply situation is well organized with most of the process being computerized. There is a coding structure which covers all of the regular material which passes through the system. Each individual type of supply has a unique code, but in addition the system groups the supplies into major categories. There are a total of seven of these major categories: 1) ED-Educational Materials (Cartazes Educativos), 2) ES-Office Supplies (Material de Escritorio), 3) FC-Continuous Forms (Formularios Continuo), 4) IM-Printed Material (Impresos), 5) MA-Contraceptive Supplies (Metodos Anticonceptivos), 6) ML-Cleaning Supplies (Material de Limpieza), and 7) MM-Medical Supplies (Material Medico).

A computerized program (written in Cobol) keeps track of all material at the central level. The system is able to summarize movement by type of supply as well as by separate consumption for each administrative sector (administrative department, regional program and Individual clinic).

The team thinks it would be useful to consider distinguishing between two broader classifications of supplies: general administrative supplies used at the central level and specific operational supplies which are associated specifically with delivery of services. Operational supplies would generally consist of the ED, MA and MM categories which are usually sent to and consumed at the regional program or clinic levels. Administrative supplies would consist of the other four categories and would generally be consumed at the central level. Regional programs and clinics also use administrative supplies, but they are normally purchased locally and do not pass through the central inventory. Locally purchased supplies are recorded in a program's or clinic's general accounting system but there is no effort to classify or summarize consumption by the coding system used at the central level.

There are some special characteristics which are worthwhile to consider about the operational supplies. One is that the valuation is often difficult and so the value is not carried on the books beyond the initial acquisition. Contraceptive supplies make up a very large portion of the total supply system, yet most of this, with the exception of the pills, is received directly as donation. Its value tends to be represented as the cost for shipping and insurance. Likewise, educational materials often do not have precise methods for valuation. Much of the materials are developed within BEMFAM and the actual development costs are not accounted for. In addition it appears that even the production costs are often not carried on the books.

Another characteristic is that the distribution system for the operational supplies is often considerably more complex than the administrative, or centrally consumed, supplies. When supplies are required centrally, a department makes a request, the material is delivered and the transaction is recorded in the computerized system. Significant quantities of supplies are not held within the departments. Distribution to the regions, on the other hand, involve creating and managing significant stocks at a second, third and perhaps fourth level. This multi-level distribution system, of course, is not computerized and the stock management methods are not standardized.

Distribution for the contraceptive supplies has some additional special characteristics. Distribution of these supplies represents one of, if not the most important service of BEMFAM. In addition, the international supply is not always secure and shortages are not uncommon. These characteristics lead to a distribution based on setting priorities and estimating requirements for resource which are sometimes scarce. Since the commodities are usually free, order and stock decisions are not made on an economic basis, but rather on a basis of availability. In general the norm is to maintain six months of supply in the central warehouse and in the regional warehouses. Clearly, these stocks are higher than would be the case if the supplies represented significant investment and were not scarce.

The contraceptive allocation and distribution system involves a number of different departments within BEMFAM. The Department of Evaluation (DEAV) in collaboration with the Department of Family Planning Services (DSPF) is responsible for the initial programming which sets the goals and estimates the levels of supplies required by each of the regional programs and clinics. It is then up to the Department of Administration (DEAM) to arrange for the necessary supplies. As arrangements are made DEAM circulates lists of availabilities projected over a three or six month basis which can lead to DEAV making adjustments in priorities. As supplies actually become available DEAM informs DSPF which makes decisions as to where and when those supplies are to be distributed. In addition the programming adjustments and distribution decisions are necessarily based in part on information from the regions and clinics on actual services rendered and current levels of stocks.

A large part of BEMFAM's decision processes on this complex management and distribution of contraceptive supplies is based upon the manual transmission of information through informal networks.

While inventory and supplies are well organized and managed at the central level, the situation changes somewhat once the supplies are sent out to the regions. The principal characteristic outside of the central offices is variation. BEMFAM's activities and methods of operation vary considerably from one region to the next. There is the situation in Pernambuco where the regional office and the Olinda Clinic are in separate locations. Most supplies for the clinic go first to the regional office warehouse, but some are sent directly to the clinic. In Rio Grande do Norte, on the other hand, the regional office and the clinic are both in the same location, sharing the same warehouse. Yet in Rio Grande do Norte a considerable portion of the supplies are sent on to SUAGE, the supply unit for the Secretary of Health.

All of the regions send monthly reports which record information for each type of contraceptive on quantities at the beginning and end of the month, as well as shipments received and quantities distributed during the month. The way this information is gathered, however, is different from one region or clinic to another. Sometimes the quantities distributed are deduced from beginning and end stocks rather than actually monitoring distribution. Among the three sites visited there did not appear to be a standard set of procedures for recording stock movements.

#### Points to Consider: COST ACCOUNTING AND MORE STRUCTURE AND STANDARDIZATION

An important aspect of this analysis of sustainability has to do with cost accounting. That is, the allocation of costs to the various activities and functions within BEMFAM will help determine the importance of their roles and form the basis for identifying inefficiencies and potential cost savings. Clearly, the area of inventories and supplies, particularly with respect to contraceptives, represent a very important function within BEMFAM. As such, systems need to be developed which will better monitor the costs associated with the acquisition and distribution of contraceptive supplies.

There are two aspects to gaining better control over these costs. One is to assign an imputed cost or estimated value to those contraceptive supplies which arrive as donations and, hence, don't have an actual cost. It is important to recognize that these supplies have a value even though BEMFAM does not currently pay cash for them. BEMFAM should want to know what would be the impact if they were suddenly required to buy these supplies on the open market. Similar arguments can be made for imputing costs for the educational material which BEMFAM develops and distributes.

The second aspect of inventory and supplies cost accounting is the development of a better system for tracking the storage and distribution costs. If BEMFAM were to want to increase the amount of contraceptives distributed by fifty percent, what would be the increases in transportation and warehouse charges? Are the current distribution and storage systems efficient? The accounting system needs to be able to track storage and transportation costs in a way that will answer these questions.

Another consideration is that BEMFAM currently has two completely separate sources of information on the quantities of contraceptives distributed, yet no attempt is made to compare the information. Very good records are available from DEAM on the contraceptives acquired at and distributed from the central offices. DEAV collects and processes regular reports on service statistics which include information on contraceptives distributed. There appears to be no attempt, however, to compare these two sources of what should be the same or similar information. If the two departments had information systems which were flexible and compatible, this comparison would be a simple yet useful task.

There are two main benefits from comparing these two independent sources of information. First, the programming of supplies is often carried out to a level below the regional program level, but the inventory system only monitors, on a regular basis, down to the regional level. Service statistics data could help determine how supplies are being distributed beyond the regional warehouses. Second, the service statistic data could serve as a control on the actual physical distribution records. If over a year period ten million cycles of pills are sent to a particular region then that region should be reporting approximately that many cycles distributed. This is a good example of where improved management information could result from better integration of information systems in two different departments.

In general there needs to be much more efficient and effective methods for this kind of information to be shared among DEAM, DEAV, DSPF and DEPP. These important functions of planning, implementation and evaluation as related to the distribution of contraceptives could benefit tremendously from an integrated information system which facilitates the communication and data sharing among these departments.

A final area of concern is the need to provide more structure and standardization on the way inventories and distribution are handled once the supplies have left the central level. Flow diagrams should be developed to describe all of the different paths and end points that the distribution can take. This should be accompanied by the development and implementation of standardized norms and forms for tracking and accounting for the movement along the different paths.

## G. ACCOUNTING

This section refers to general and cost accounting.

### 1. General Accounting

#### - The Actual Situation

The BEMFAM accounting systems at the central office maintain consolidated accounting records for the revenues of the programs and the clinics (own and associated) and maintains individualized records of clinics, program, and combined. Detailed reporting of revenues by clinics are prepared separately from the accounting and based on the cash receipts reporting of deposits made by the clinics in the central office account at Banco BRADESCO.

Accounting of expenditures does not include a number of items, such as depreciation of fixed assets, value of inventories of supplies sent to clinics and in place at them, cost of supplies included in the services provided. Additionally, neither revenues in-kind nor the expenditures of personnel paid by third-parties (e.g.: the state organization) are recorded in or out of accounting records.

Clinics have auxiliary records (extra-accounting and extra-official), co-ordinated by the program office (at Olinda) and prepared by the clinic, or prepared by the program office (for Natal and Chapecó). These informal records show the gratis and fee-for-service transactions of paying clients by type of service and number of patients. Clinic accounting is a report on revenues and expenditures, produced monthly. Where program offices are close to clinics, program personnel prepare these reports. Revenues are registered daily ("Controle Diário de Atendimento e Recebimento de Doacoes, Controle Diário de Atendimento e Recebimento de Consultas").

Revenues are considered donations and recorded monthly ("Doacoes Diversas"). Other revenues (in cash) are recorded at the program offices, received from municipalities ("Doacoes Prefeituras"), from companies ("Doacoes Empresas") and other ("Doacoes Diversas"). A weekly deposit of these is made into the central office managed bank account at BRADESCO bank, which has a Brazil-wide network of branches.

Expenditures are done through a rotating fund in a bank account for minor operating expenditures and for major purchases approved by the central office, managed at the program offices, in accordance with monthly remittance made by the central office following the amounts indicated in the monthly budget ("Orçamento Mensual") submitted by the program office.

Personnel payment come prepared from central office in the form of a full payroll. Monthly reporting on actual expenditures is presented by the Administrator of the program office, classified in a pre-coded form ("Relatório Financeiro e Classificação Contábil"), that follows the code of accounts.

The accounting systems have been prepared in Cobol and processing is done in batches. The accounting code structure present separate code levels for groups (e.g.: assets), sub-groups (e.g.: current assets), principal accounts (e.g.: available assets), principal ledger accounts (e.g.: cash), subsidiary and auxiliary accounts. Reports issued include revenues verification, daily journal, financial statements ("Balancete, Balanço"). Balance sheets are produced monthly and an income statement (revenues, expenditures and superavit) is produced annually.

Budget comparison for expenditures ("Quadro analítico") is produced outside of the accounting system; none is for revenues.

#### Points to Consider: FULL MANAGEMENT ACCOUNTING

The team recommends that full management accounting per clinic be established, based on formalizing records for revenues on services provided to needy and paying clients, establishing standardized recording and reporting. Full management accounting could show BEMFAM management the complete financial profile of each clinic, and consolidated profile for the clinic network, on a frequent (e.g.: monthly) basis. Similarly, full expenditure and costing accounting for management could be established to reflect all the expenditures of a clinic and the network. The items of expenditure noted in the previous section could serve as initial elements.

This monthly accounting should be kept in a constant currency, as well as cruzados, in order to take out the effect of inflation and permit a comparison on similar monetary terms. This could allow comparison for real financial performance versus budgeted, establish and permit variance analysis.

The cash recording and reporting systems could be merged into the general accounting stream of transaction recording and reporting for emphasized consistency. Cost accounting (see next section) should be balanced with general accounting on a regular basis for consistency and full recognition of costs.

All this information could be combined with financial indices for each clinic and provided to clinic and program managers, as well as central office staff participating in and responsible for clinic sustainability.

## 2. Cost Accounting

### The Actual Situation

To date, there has been little need for cost accounting of services and clinics. However, as indicated in the previous pages, there is now a need for building costing systems from the ground up. They will require developing methodologies and collecting service information, discussed below.

### Points to Consider: MANAGERIAL COST ACCOUNTING

The FPMT team recommends that managerial cost accounting be adopted, at service, clinic, program and central office levels, on an integral basis, parallel to the general accounting to be used for services and fee-for-services planning, review and evaluation. Personnel time and volume data, frequency of usage, fixed and variable costs, and other need to be determined in a consistent methodology for BEMFAM's own clinics to establish a comprehensive and uniform cost accounting system.

An initial basic system could be established at the clinic level for approximate calculations that can initially serve the clinics for knowing their costs, comparing them to proposed prices and calculate surpluses (or deficits) per service and per clinic, given a mix. The methodologies need to consider the effect of program office personnel providing support and participating in clinic activities, the cost of supplies (at least a reference pricing that could consider market or substitution cost), depreciation of fixed assets, and the other categories described in antecedent sections.

## H. SYSTEMS

This section seeks to tie together much of what has been presented in the previous sections in that it deals with how information from the different functional areas is processed and used to improve the management of the overall organization. It deals with the timely topic of computerization but more importantly discusses how information needs to be organized to better support the objectives and work of BEMFAM.

### The Actual Situation

Within BEMFAM there are a number of individual information systems, some of which are mechanized. Examples of computerized information systems are: 1) the personnel and payroll system within DEAM, 2) the inventory and supply system within DEAM, 3) the service statistics system within DEAV, 4) the accounting system within DEFIN, etc. Many of these are customized programs written in cobol by a programmer who is no longer with BEMFAM.

The personnel system is written in cobol but was developed and is supported by an outside firm. While adequate at the time they were developed, there now exists some discussion that these programs are not satisfying all of the current needs. Since they are practically impossible to modify, consideration is being give to replacing at least some of them. In addition to these cobol programs, there are a number of special applications using electronic spreadsheets or other microcomputer software.

There are also a number of non computerized information systems. For example, DSPF is currently managing service statistics from DEAV and inventory and availability from DEAM in order to establish delivery priorities for the regions. This is done without the help of computers, often working with primary documentation rather than wait for the computer outputs from the other departments. A lot of BEMFAM's managerial use of information consists of manually pulling together data from various segments of the organization.

Until recently, the data processing function in the organization was carried out centrally in the Data Processing Center. BEMFAM is now in the process of decentralizing this function. Computer processing is now being performed on microcomputers which are located in the individual departments, and there are plans to acquire more computers and additional hardware and software.

Much of the proposed decentralization of BEMFAM's information processing is presented in a report by a IPPF consultant, Xavier Gonzales Alonso. In addition to promoting this decentralization, that report also recommends hardware and software requirements which are directed toward standardization of BEMFAM's computerized information systems. Although the team presenting this report is in agreement with some of the recommendations made in that IPPF report, we do not agree with the recommendation that BEMFAM embark on a path of buying a number of commercial packages which are not integrated and which do not enable decision-making on the basis of integrated financial and service statistics.

**Points to Consider: AN INTEGRATED FINANCIAL MANAGEMENT/HEALTH STATISTICS SYSTEM**

This team is recommending that the Family Planning Management Training Project work with BEMFAM to design, develop, implement and train for a BEMFAM micro-computer based integrated financial management and health services system. Discussion on this point follows.

A major issue for BEMFAM in building and improving its management information system is the question of decentralization. It is very important for BEMFAM to distinguish between what is decentralized processing, and what is decentralized design and decentralized (non integrated) use. Autonomy for the individual users and departments is an attractive consideration, but recognition of the organization's complex, interrelated activities is perhaps more important.

If BEMFAM is to develop a management information system which is supportive of the objective of becoming self financing, that system must improve and facilitate communication among the various departments and activities within the organization. Specifically, it must allow for analysis and comparison of information mixing financial and accounting data, resource (e.g. personnel and supplies) utilization data, and service statistics data.

It is possible to have a management information system which is based on a centralized and integrated design, but in which the processing of the information is carried out on a decentralized basis. This approach should be considered for BEMFAM since it can provide some level of autonomy for users in individual departments but would superimpose a structure to assure that the overall information needs of the organization were being met. We feel that the best way to accomplish this is with an "open database" approach to developing a management information system. This approach can be contrasted with closed systems such as the customized cobol programs that exist now and commercial packages such as TecApro which was recommended in the report cited above.

The approach which is being suggested is based on the use of a relational database package (e.g. dBase III+) for most of the data entry, data processing and report generation. Using dBase or a similar package it is possible to build systems which would replicate the functions currently being performed by the cobol programs. In addition, the systems could be added to with other processing and reports on an as-needed basis. There are some information functions such as budget modeling, statistical analysis or graphical presentation which a database package may not do well, but file import/export would allow transfer to other packages.

There are perhaps two main criticisms to providing information processing needs through development of customized database systems. These are the time required to develop such systems, and the possibility of creating dependencies on the persons who develop the systems. Both of these criticisms are based on the assumption that large, integrated, menu-driven programs must be developed before the systems can be implemented. This is not the case, however, with an open database approach.

An open database approach is based on three key characteristics: 1) a strong emphasis on the design of file structures which reflect the nature of the organizations activities, 2) a highly modularized system where processing functions are broken down into small, free standing units, and 3) more direct interaction between the user and the database package rather than through closed menu driven programs. There are several important results from this approach. The first is that the centralized design of the file structures assures that information can be easily combined and processed regardless of the "ownership" of the information. Emphasis on the structures also helps assure that systems can be easily modified over time. Next, because the system is to be highly modularized, it lends itself to a flexible, incremental design. That is, some modules can be implemented before all modules are complete. Finally, because the users have more familiarity with the database environment, they have more control over what they can get out without having dependencies on systems developers. Current microcomputer database packages have improved user interfaces which make them easier to use by non programmers.

What this means is that the organization provides the overall structure, guidance and training, but the individual departments has the authority and capability to design and implement the processing appropriate to their activities.

#### DESIGN AND DEVELOPMENT WITH BEMFAM

It is a system which is tailored to the uniqueness of each organization.

The first step in developing an open database system is to undertake a thorough system analysis which takes a look at: 1) the objectives of the organization, 2) the activities and decisions being undertaken (or needed) to achieve those objectives, and 3) the information necessary to improve the activities and decisions. One purpose for this is to identify inter dependencies of activities and information among the departments and users. This will then lead to the establishment of norms which will identify where individual users have flexibility and where they must conform to the needs of the larger system.

The next step is to design those file structures which will be defined and controlled by the overall system. This will consist of identifying natural entities and their corresponding attributes. For example, each operating unit (such as Department of Evaluation or Regional Program in Pernambuco) would be an entity, and attributes would include a unique code, the unit's name, type of operation, etc. It is important that the same coding system be used to identify operating units in all of the databases in the larger system. This is what makes it possible, for example, to compare service statistics in Pernambuco with inputs to that region such as personnel employed and contraceptives shipped. That is, the service statistics system, the payroll system and the inventory system all must have the same code for the Pernambuco region.

Once these system wide design steps are taken the next phase involves working with the individual departments and users to begin to help them develop their own applications. This phase will also consist of system analyses and file structure definitions, but they will be limited to the particular departments or functions. It will also consist of identifying and developing data processing modules to meet specific objectives.

#### TRAINING

The main activity in this phase, however, will focus on training and technical assistance. The purpose here is that each department will develop a basic capability for designing, using and modifying their own information systems within the constraints of the larger system.

Clearly an important component of this open database approach is the training of a number of people within BEMFAM in the use of computers and a database package. Certainly BEMFAM does not want to be in a position where all of the knowledge about their management information system resides in one or two persons who might leave the organization. In discussing the training needs it is convenient to think about three different levels of users:

- 1) one or two highly trained persons who are responsible for defining and applying the norms for the whole organization and are responsible for providing technical assistance and training to the rest of the organization,
- 2) one or two persons in each department who would receive intermediate training and would be responsible for developing and maintaining the system in their department, and
- 3) the persons in each department who would have occasion to use the system, whether for data entry or special managerial queries.

The training for these three levels of users should be a combination of in house workshops and individual instruction in the actual situations and problems that face them in their work. That is, the training will be carried out in conjunction with the development of the individual systems.

## V. SUMMARY OF RECOMMENDATIONS

In the work which is presented in these pages, FPMT has been working under certain assumptions which we believe we share with BEMFAM and with USAID who has funded this work and who has and is funding BEMFAM. We wish to spell out those assumptions very clearly because they are the basis upon which we are recommending the path set forth below.

### ASSUMPTIONS

1. Over the next five years AID funding will be phased-down for Brazilian population programs. While the extent of this phase-down and timing are unknown, we think it is wise to assume that in 1995 AID will not be directing the same level of financial resources to Brazil as it has in the past.
2. The role BEMFAM is playing to promote social welfare in Brazil is critical to the well being of individuals and families and to social development in Brazil. A sustainable institutional capacity to carry out that role, under the direction of its Brazilian Board of Directors, is of absolute importance to BEMFAM and to those who support it, including AID.
3. It is wise and prudent for BEMFAM to position itself so as not to be dependent on one main source of revenue, that of AID, given a long-term future with lower or no AID funding. It is important to diversify sources of revenue and to find new major sources of revenue, as well as to cut costs so as to be as efficient as possible with the revenue received.
4. Increasing the sustainability of BEMFAM is of primary importance. That is, increasing BEMFAM's institutional capacity to:
  - 1.) Continue to fulfill its institutional mission, carrying out activities which the Board of Directors and BEMFAM executives decide will promote social welfare and create long-term impact among the Brazilian population;
  - 2.) Be increasingly self-financing with a secure flow of financial revenues;
  - 3.) To survive as a sovereign institution.

In light of the above assumptions and in light of BEMFAM's request that attention in this process be focused first on clinic management, FPMT recommends to BEMFAM the following.

1. The design, development, installation and training for a micro-computer based integrated financial management and health services system for clinic management. FPMT would work with BEMFAM throughout this institutional development process so that BEMFAM executives and staff acquire increased managerial perspective and skills to promote BEMFAM's sustainability as well as a management information system to support sustainability in the clinics.

2. That BEMFAM watch this process in the development of a managerial perspective, skills and system for clinic management with an eye to the future transferability of learnings on promoting BEMFAM sustainability to other areas of BEMFAM's work.

#### RECOMMENDATIONS FOR BEMFAM CLINIC MANAGEMENT

FPMT recommends that to increase the sustainability of BEMFAM's own wholly-owned clinics, BEMFAM should:

- A. ESTABLISH A DESIRED SUSTAINABILITY FOR EACH CLINIC and for the network of BEMFAM's own clinics as a whole. That is, clearly establish targets for: 1.) volume of services to the poor; 2.) the level of self-financing and 3.) plans for institutional continuity. Revenue generation targets can range from no revenue generation to generation of revenue sufficient to cover all clinic costs (direct, indirect and fixed assets renewal), covering central office operating expenses, renewal of their fixed assets, and establishing patrimonial reserves for bridging deficitary periods and for entering into new ventures.
- B. FOCUS THE MANAGEMENT INFORMATION SYSTEMS TO PROVIDE STRONG MIS SUPPORT TO CLINIC MANAGEMENT. Provide support for planning and performance monitoring which will cover critical aspects of clinic sustainability such as: strategies, market segments, volumes and prices; (for needy and paying patients); service standards and mix, services delivery capacity, financial reporting and costing, and other key management aspects. This focus should include generating better and more operational managerial information to be used at clinic level, and at the same time, reinforce the strategic, policy and structural decision making ability at central office levels.
- C. INTEGRATE FINANCIAL AND SERVICE STATISTICS DATA TO FACILITATE PLANNING. Use integrated data to plan and manage services, knowing the unmet demand for expanded services to needy and paying clients, service delivery per market and the level of self-financing. We recommend this data be kept in a constant currency as well as in cruzados.
- D. USE MARKET RESEARCH TECHNIQUES TO EXPLORE OPTIONS FOR EXPANSION AND DIVERSIFICATION. These techniques can be used for widening the number and types of clients served at the clinics (needy and paying), exploring the feasibility and establishment of new services to current and new clientele, and for assisting the organization of differentiated service-delivery packages. Research can determine the link between a wider gamut of services offered and stimulation of family planning demand. Standards should be expanded to cover new services. Clinic operational and microcomputer-based financial simulation may help to select and manage the best mix of services, personnel and facilities, and then monitor and evaluate them through-out the year for performance. Micro-computer systems for monitoring and control purposes at the clinic, program and central office level would be helpful as would be graphic and statistical analysis.

- E. INTEGRATE PERSONNEL AND SERVICE DATA to understand the relationship between BEMFAM's various activities, services and their costs. Information needs to be generated to keep track of how employee time is spent in service delivery and administration at clinic and program office levels, and relate them to costing methodologies.
- F. ESTABLISH MORE STRUCTURE AND STANDARDIZATION FOR SUPPLIES AND INVENTORIES, AND INTEGRATE THEM INTO COST ACCOUNTING for more complete allocation of important components into costs. This will require assigning an imputed cost or estimated value to donated supplies to represent the costs which BEMFAM would have to bear if the supplies ceased to be donated. A better tracking system for storage and distribution through to the user would be helpful to assist better planning, implementation and evaluation of clinic performance. The system should integrate data from the central office and clinic level.
- G. ESTABLISH FULL MANAGEMENT ACCOUNTING PER CLINIC. This would include formalizing records for revenues on services to needy and paying clients, and establishing standardized recording and reporting mechanisms. The cash recording and reporting could be merged into the general accounting stream for emphasized consistency. This could show BEMFAM management, on a frequent basis, the complete financial profile of each individual clinic and that of the network as a whole. We think it should be presented in cruzados and a constant currency and with financial indicators for clinic, program and central office sustainability.
- H. ORGANIZE AND APPLY MANAGERIAL COST ACCOUNTING, at service, clinic, program and central office levels. It would be used on an integrated basis, parallel to the general accounting system, for fee-for-services planning, review and evaluation. It would also permit identifying inefficiencies and areas for potential savings. Personnel time and volume data, frequency of usage, fixed and variable costs and other need to be determined in a consistent methodology. An initial basic system could be established at the clinic level for approximate calculations to estimate surpluses. The comprehensive cost systems will include all direct and indirect inputs for the service delivery, such as reference pricing for supplies, depreciation of fixed assets, overhead at clinic and central office levels, and other.
- I. DEVELOP AND APPLY AN INTEGRATED FINANCIAL MANAGEMENT/HEALTH STATISTICS SYSTEM. The team believes this system should be tailored to BEMFAM, centralized and of open database in design, with decentralized (user controlled) processing and use. This approach would allow easily combined and processed information, modification of the systems over time, a flexible and modular approach, and would overcome the limitations of closed customized database systems (time and dependencies on persons who develop them). These systems would be developed with BEMFAM personnel who would participate and receive training in the design of these systems; FMPT would provide technical assistance and training through out the process of achieving the regular use of the systems. Training would be provided at different levels: for BEMFAM executives managing the whole organization, for persons in each department who would develop their department's particular needs, and for users in each department who would use and query the system.

ANNEX I - LIST OF PERSONS INTERVIEWED

BEMFAM HEADQUARTERS

Avenida Graça Aranha, 333  
Rio de Janeiro, Brazil

- Marcio Schiavo - Executive Secretary  
Jose Maria Arruda - Adjunct Executive Secretary  
Carmen Gomes - Planning and Programming Coordinator  
Katalina Czer - Family Planning Services Coordinator  
Sergio Lins - Evaluation Coordinator  
Jose Milare - Administrative Coordinator  
Evandro Gomes - Financial Coordinator  
Rita Baudiani - Adjunct Coordinator of Planning and Programming  
Idis Lopes - Adjunct Administrative Coordinator  
Manoel Mescouto - Accounting Division Chief

PERNAMBUCO COMMUNITY PROGRAM OFFICE  
Rua D. Virginia Heráclio IPESEP - IBORA  
Recife  
Pernambuco

- Denise Zelaquete - Program Coordinator  
Joao de Andrade - Program Administrator

OLINDA CLINIC  
Av. Governador Carlos de Lima Calvancanti, 1475  
Casa Caio da Olinda  
Pernambuco

- Carlos Carneiro - Doctor  
Norma de Andrade - Doctor  
Marta de Oliveira - Auxiliary Nurse  
Nazidir Da Silva - Auxiliary Nurse  
Geraldina de Gouveia - Administrative Assistant

RIO GRANDE DO NORTE COMMUNITY PROGRAM OFFICE

Maria Jose de Sabino - Program Administrator

Euridice Da Silva - Evaluation Assistant

NATAL CLINIC

Avenida Deodoro, 766

Cidade Alta

Natal

Rio Grande Do Norte

Dr. Araken Pinto - Medical Advisor

Maria de Fatima Dantas - Warehouse Assistant

Marlene Barbosa - Attendant

SANTA CATARINA PROGRAM OFFICE

Rua Guaporé, 140-E

Chapecó

Inezita de Camargo - Program Coordinator

Frederico Iten - Evaluation Coordinator

CHAPECO CLINIC

Dr. Celso Marques Meneses - Doctor

Dr. Paulo Scottini - Doctor

Fatima Baldissera - Nurse

Gecemira Knroharto - Auxiliary Nurse

Marta Helena Lajus - Administrative Assistant.

ANNEX II

SCHEDULE OF ACTIVITIES CARRIED OUT

BY THE FPMT CONSULTING TEAM

- December 7      Arrival of Kip Eckroad to Rio de Janeiro from Boston, U.S.A.
- December 8      Arrival of Jorge Bedoya and Rolf Stern from Quito, Ecuador.
- FPMT team meeting
- Team meeting with BEMFAM executives: Jose Maria Arruda-Adjunct Executive Secretary, Carmen Gomez-Planning and Programming Coordinator, Rita Badiani-Adjunct Planning and Programming Coordinator, and Sergio Lins-Evaluation Coordinator. BEMFAM executives briefed the FPMT team, discussed criteria for selection, and the group jointly planned the headquarters and clinic visits. Two clinic visiting teams were established, composed each of BEMFAM executives and FPMT team members. The schedule for interviews at BEMFAM Rio de Janeiro headquarters was agreed on.
- December 9      Meeting with Sergio Lins, Evaluation Coordinator, to understand evaluation activities and systems.
- Meeting with Evandro Gomez, Financial Coordinator, and Manoel Mescouto, Accounting Division Chief, to understand financial and accounting systems.
- December 10     FPMT consulting team meeting at the hotel for review of information gathered and detailed planning of clinic visits.
- Team A            Composed of Sergio Lins, Evaluation Coordinator and FPMT consultants Kip Eckroad and Jorge Bedoya, traveled to the Olinda clinic and Recife Program Office in the state of Recife, and the Natal clinic and Program Office in the state of Rio Grande Do Norte. Following is their schedule of activities.
- December 11     Trip from Rio de Janeiro to Olinda in the state of Recife.

- December 12 Visit to Olinda Clinic.
- Meetings with clinic and program personnel and general acquaintance of the clinic: Denise Zelaquer-Program Coordinator, Norma de Andrade-Doctor, Geraldina de Gouveia-Administrative Assistant, Martha de Oliveira-Auxiliary Nurse, Nazidir Da Silva Lima-Auxiliary Nurse. Learned of services delivery, accounting, medical services, and administrative systems.
- Visit to Program Office in Recife and meeting with João Rigis de Andrade-Program Administrator.
- December 13 Departure for Natal in the state of Rio Grande Do Norte
- Clinic visit with: Maria Jose de Sabino-Program Administrator, Maria de Fatima F Daria-Warehouse Assistant, Marlene Barbosa F Lima-Attendant. Observation of clinic systems at reception, clinic services, education, inventories and accounting
- December 14 Visit at the Natal clinic and observation of evaluation, administration and inventories, with: Dr. Araken Pinto-Medical Advisor, Maria Jose de Sabino-Program Administrator, Euridice Da Silva-Evaluation Assistant.
- Trip to Rio de Janeiro
- Team B Composed of Jose Milare-Administrative Coordinator and FPMT consultant Rolf Stern traveled to Chapecó clinic and Program Office in the state of Santa Catarina. Following is their schedule of activities.
- December 11 Trip from Rio de Janeiro to Chapecó in the state of Santa Catarina
- December 12 Visit to Santa Catarina Program Office and Chapecó clinic. Meetings with Inezita de Camargo-Program Coordinator, Dr. Celso Marques Menezes-Doctor.
- Acquaintance with the clinic medical services process and inventory administration. Meetings with Dr. Paulo Henrique Scottinni-Doctor, Fatima Baldissera-Nurse, Gecemira Kronharto-Auxiliary Nurse and Maria Helena Lajus-Administrative Assistant.
- December 13 Learning of evaluation, administration and accounting systems. Meetings with Maria Helena Lajus-Administrative Assistant, Federico Iten-Evaluation Assistant and Inezita de Camargo-Program Coordinator.

- December 14 Information gathering on service statistics with Federico Iten-Evaluation Assistant and Inezita de Camargo-Program Coordinator
- Trip from Chapecó to Rio de Janeiro
- December 15 Team meeting exchanging information and preparing for presentation.  
Visit to Department of Finance to collect accounting system information with Manoel Mescouto-Accounting Chief
- Team meeting on presentation to BEMFAM executives.
- December 16 Individual consultants' and team work on BEMFAM presentation.
- FPMT team verbal presentation to BEMFAM executives of preliminary trip observations and points to consider regarding clinic management information system, and agreement of tentative date for next step and schedule of report presentation and discussion.
- FPMT team meeting for review and on future activities.
- December 16 Kip Eckroad trip home
- December 17 Jorge Bedoya and Rolf Stern trip home.