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ABSTRACT

The Parent Child Center Management Information System, the first operational MIS for a social action program relating to child welfare, consists of three interlocking components: a standard set of recordkeeping forms for the local Parent Child Center; a set of quarterly reporting forms that interface with the recordkeeping forms; and a series of management reports that can be produced from data that are reported on the quarterly reporting forms. The system links data reporting directly to management decisionmaking. It focuses, standardizes, and channels the flow of information needed for making rational decisions about funding, budgeting, program evaluation, contract compliance, and program planning; and the timing of the flow of this data is geared to cycles of important management decisions. The system is seen as a potentially valuable means of maximizing the benefits from limited resources by timely reduction of managerial uncertainties. Additionally, it links costs to services, permits management to see how human resources are being used in a labor-intensive program, and acts as an early warning system and makes hard facts available for appropriate corrective action so that management-by-purpose can replace management-by-exception. (Author/WM)

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FINAL REPORT:

Overview of the Parent Child Center
Management Information System

AAI Report No. 73-86

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Keith McClellan
Project Director
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TABLE OF CONTENTS

	<u>Page</u>
Acknowledgements	1
Abstract of PCC MIS Final Report	2
Chapter I - Introduction	3
Chapter II - Design Considerations	10
Chapter III - Technical Problems	17
Chapter IV - The Solution to Technical Cost Accounting Problems	24
Chapter V - Description of the PCC MIS	28
Chapter VI - PCC MIS Implementation	50
Chapter VII - PCC MIS Data Uses	68
Chapter VIII - Recommendations	81
Appendix A - Forms	86
Appendix B - "A Simulated Management Decision-Making Exercise Using the New PCC MIS"	132
Appendix C - Estimate of Technical Assistance Needs	153
Appendix D - PCC MIS On-Site Technical Assistance	154
Appendix E - Data Collection Plan	168

The conclusions and recommendations in this report are those of the contractor and do not necessarily reflect the views of the U.S. Department of Health, Education and Welfare or any other agency of government.

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Keith McClellan
PCC MIS PROJECT DIRECTOR

June 1, 1973

Abstract of the PCC MIS Final Report

The PCC MIS consists of three interlocking components - (1) a standard set of recordkeeping forms for local PCCs, (2) a set of quarterly reporting forms that interface with the recordkeeping forms, and (3) a series of management reports that can be produced from data that are reported on the quarterly reporting forms. Unlike less demanding "information reporting systems", the PCC MIS links data reporting directly to management decision-making. It focuses, standardizes and channels the flow of information needed for making rational decisions about funding, budgeting, program evaluation, contract compliance and program planning. The timing of the flow of this data is geared to cycles of important management decisions. No research per se is conducted by the system and one-shot questions or data requests that have little continuous value to management decision-makers are not reported. In short, the selection, collection, processing and display of data is governed by management needs.

Every effort was made to ensure that the system is particularly useful to local management as well as national management. Forms were simplified to avoid an undue burden of paperwork in terms of system maintenance and data processing. The system takes into consideration other reporting requirements such as grant applications and budgets, and supports the completion of these requirements. In addition, the system is constructed so that useful management information flows toward the local PCCs as well as toward Washington.

The PCC MIS is designed to contribute to improved program management, planning and evaluation. The system is seen as a potentially valuable means of maximizing the benefits from limited resources by timely reduction of managerial uncertainties. It links costs to services. It permits management to see how human resources are being used in a labor intensive program -- a program in which more than 2/3 of the operating costs are personnel costs. It acts as an early warning system and makes hard facts available for appropriate corrective action so that management-by-purpose can replace management-by-exception. It channels requests for information through a system that manages information in a positive way by establishing specific times for data reporting and limitations on data to be reported.

The design of the PCC MIS makes it possible for the system to be transferable, and responsive to calls for change in the future. While the PCC MIS was designed as a comprehensive system, the interrelated parts of the PCC MIS have been integrated in such a way that they are not so dependent upon one another that a change to one part creates an untoward chain reaction in all other parts. Moreover, the system has been documented in modular fashion so that it can be transferred in whole or in part to other agencies and organizations with a need to organize the flow of information so that it is a meaningful input to management decision-making.

The PCC MIS is the first operational MIS for a social action program relating to child welfare.

Chapter I

Introduction

The supply of good teachers and caregivers for child development programs is elastic, but the current supply of good child care program management is not. Good program management for child care programs--whether home based or center based--requires a rare combination of skills. It requires the ability to relate to the financiers (both governmental and non-governmental), staff, program participants--children and parents alike, and the community. It demands knowledge about child development and about intervention strategies to achieve positive child development. It requires the leadership and insight to use the available resources--people, space, equipment, and supplies--to their best advantage in achieving program objectives. Finally, it involves a knowledge of financial accounting, including the elements of program costs, and an understanding of the relationship between program costs and program operations.

Normal family experiences together with formal education and training, both on-the-job and at colleges, are combining to meet the growing demand for good teachers and caregivers for child care programs. By contrast, trial and error is almost the only method of acquiring child care program management skills. Not a single university or college in the country has a class in the management of child care programs. Two or three colleges have a class that they label a management course, but at the present time none of these courses spends a single day on financial management, accounting, purchasing, fraud control, recordkeeping, methods of deploying and supervising staff, or administrative policies. Moreover, none of them even has a reading list that could be used to acquire these skills through reading. Schools of Social Work do not teach management skills, and Business Schools do not teach the child development and human service program skills necessary for child care programs.

This was the dilemma faced by the Parent Child Center (PCC) Program in 1970-1. The PCC program had been established in 1967 by Presidential Directive. It was developed in response to the increasing evidence that

the prenatal period and infancy are crucial influences on a child's subsequent development. Financed by the Bureau of Head Start, the PCC program was designed as a pilot demonstration to deliver comprehensive services to low-income families with children under the age of three and to expectant mothers. It had a projected five year life, but the shortage of good program managers was creating problems for the demonstration project.

In 1970, at the time the Bureau of Head Start was transferred from the Office of Economic Opportunity (OEO) to the Department of Health, Education and Welfare (HEW)* it became apparent that:

- the financial records of the PCC Program both at the National Office and grantee levels were inadequate and incomplete.
- local PCC recordkeeping systems for program operations were typically lacking in continuity and incapable of producing reliable program-wide statistics.
- both formal and informal communications between PCCs, Grantees, and the National Office of the PCC Program were poor. (In some cases monthly financial reports had not been submitted for more than 18 months and written reports on program operations had never been submitted).
- Federal guidelines for the program were not being enforced with consistency, and
- program services in several localities were irregular and erratic.

In short, serious deficiencies in management and administration were revealed, deficiencies that had been forecast by Kirchner Associates Inc. in their report, "A National Survey of the Parent-Child Center Program" (March 1970).

* The Bureau of Head Start was transferred to DHEW during the 1970 fiscal year.

The PCC Management Information System (MIS) was one part of a much larger effort to remedy the management and administrative deficiencies identified in 1970. The effort came at an opportune time. The start-up phase of the program was over. If the difficulties of translating untested program concepts into several project models and implementing them in 35 highly diverse, low-income communities had not been completely overcome, at least there were 35 projects in operation using several different modes of organization and service delivery. Furthermore, the program was under new auspices and consequently was more amenable to changes than it might have been earlier.

These circumstances were important considerations in determining the feasibility of a Management Information System (MIS) for the Parent/Child Center (PCC) Program. They were even more important considerations in the design and implementation of the PCC MIS.

A Parent Child Center Management Information System was first suggested as an instrument for providing local and national program managers with timely, relevant and accurate information for decision-making in November, 1970. The PCC Program had a reporting system that was being operated on behalf of the Bureau of Head Start by a private contractor. The reporting system, however, was not designed to meet the management information needs of local projects and the Bureau of Head Start.

What was needed was a "Management Information System," rather than an "Information Reporting System." A "Management Information System" differs from an "Information Reporting System" in the purpose of information collection and the use of the information once it is collected. An MIS links data collection to key management decisions, such as funding, budgeting, resource utilization and program planning. The selection of the data to collect and the timing of the flow of the data are geared to important management

decisions. An information reporting system, on the other hand, simply makes useful information available to a variety of users. It does not link information to a decision-making process. It is not designed to draw the implications of data to a decision-maker's attention. While data from an information reporting system can be used *ex post facto* to justify the program and monitor for contract compliance, it does not anticipate problems or suggest appropriate courses for remedial action.

In the spring of 1971, a public RFP was issued for a feasibility study of a Management Information System for the Parent Child Center Program. Abt Associates Inc. was awarded the contract for the feasibility study in June, 1971.

This phase of the design and implementation of an MIS for the PCC program was finished in October, 1971. During the feasibility study Abt Associates Inc. visited a sample of eight Parent Child Centers, which represented a range of different types of low income communities and a variety of organizational and program service delivery models. The PCCs of Newark (New Jersey), the District of Columbia, Mt. Carmel (Illinois), Leitchfield (Kentucky), La Junta (Colorado), Boston (Massachusetts), Honolulu (Hawaii), and Cleveland (Ohio) were visited and studied in depth. All reporting requirements, recordkeeping procedures, staffing patterns, organizational structures, fiscal management mechanisms, and administrative procedures were examined. Procedures at the National Office of Parent Child Center Program, the Bureau of Head Start, and the Office of Child Development were also examined. More than twenty interviews were held with key management decision-makers in the Office of Child Development. These examinations were the basis of the series of policy recommendations and the suggested design for a PCC MIS published in a report titled Management Information for the Parent Child Center Program; Phase I: Findings and Recommendations (October 25, 1971).

The report was received with enthusiasm by the Office of Child Development, and was distributed to all PCCs, PCC grantees, PCC project advisors, and National Office staff members.

The design of the MIS was to build on the feasibility study. The feasibility study suggested nine important system features:

- The system should be demonstrably useful to both local and national program management decision-makers by providing relevant and accurate information on a timely basis.
- The system should be directly associated with funding and contract compliance.
- The system should generate a two-way flow of useful management information; toward local Parent Child Centers as well as toward Washington.
- Program operating costs should be determined quarterly by function of service.
- All PCCs should adopt a standardized recordkeeping system.
- Communication patterns must be enlarged and standardized.
- The system should be feasible, given the kinds and amounts of resources currently or potentially available to collect and process information.
- The system should be sensitive to the rich diversity in PCC programs and avoid undesirable reorientation of the PCC program as a consequence of the MIS.
- The system should be adaptable to possible future modifications of the PCC program.

The timing of the Phase II contract also had a bearing on the design of the PCC MIS. The original plan was to begin Phase II in early December, 1971. However, the contract was not signed until late January, 1972. Once the contract was signed, PCC and Bureau of Head Start program management felt that it was imperative that the system be in operation and generating management reports by November, 1972.

Moreover, it was determined that the PCC MIS would have to be designed to help management decision-makers who typically must make a great many decisions that are ad hoc in nature and cannot be predicted even by the most thoughtful and articulate of managers. Previous experience suggested that it was important to involve local PCCs in the actual design of the MIS to insure maximum commitment to and use of the system, regardless of the time constraints. Finally, as a result of budget constraints, the project had to be tightly managed and some elements of the original assignment would have to be either eliminated or drastically altered.

Thus, constrained by time limitations, the need to involve a large circle of participants and potential users, a complex set of decision-making procedures, and an extremely tight budget, the alternatives available to the contractor were limited. Abt Associates Inc. chose an innovative strategy to the design and implementation of a management information system for the Parent Child Center Program. It chose to design and implement the PCC MIS concurrently. This was not the easiest nor the safest course, but it held out the promise of producing the best results for the time and money available.

The decision to design and implement the MIS concurrently produced at least five positive benefits:

- (1) It gave the system's users an opportunity to assess the system under true operating conditions while still permitting them to modify the system in meaningful ways at a time when the system was still plastic.
- (2) Because all system users had an opportunity to affect the design of the system as they used it under true operating conditions, it was possible for the system to become the user's, and not simply the designer's, system. This is a particularly meaningful point, since the system being implemented was an MIS that attempts to serve several levels of management and not a service system or a system that serves a single level of management.

(3) The system required less design and documentation prior to implementation than the classical model. As a result, it permitted a satisfactory MIS to be implemented and to yield results faster and at less cost (fewer debugging problems) than would otherwise have been possible.

(4) Because the system was being shaped as it was being implemented, it was easier to implement than a classical system. Progress was not unnecessarily impeded by users or potential users who felt threatened by a system that was difficult to alter or by a process that appeared to be closed. Moreover, this strategy made it possible to pursue the formative objective of improving management without requiring anyone to "lose face."

(5) The system has a greater likelihood of being used to make management decisions once implemented than a classical model would have, since it was shaped to meet the on-line needs of users.

A classical model for MIS design and implementation calls for the following protocol:

- A complete design and documentation of the system at the outset.
- A management review of the design resulting in a "go/no go" decision.
- A field test of the design.
- Debugging prior to introducing the system to broader program or company involvement. When the system is introduced at the program or corporate level, additional problems are likely to be identified. These problems will require another round of debugging.

Chapter II

Design Considerations

The decision to design and implement the Parent Child Center (PCC) Management Information System (MIS) concurrently had a significant influence on the design of the system. It influenced not only the process, but the product. It meant that the design phase would be a fluid process which would interact with incremental implementation. The design process would be spread over several months and since implementation paralleled design, the strategy eliminated the formal review of the design that frequently precedes the decision to implement.

The decision to design and implement concurrently also meant that the design team must be capable of performing a number of different roles. They must be capable of performing useful roles in implementation of the system as well as in design of the system. They must be able to relate to local PCC staff members, as well as to technicians; to accountants as well as to child development specialists. They must have a management orientation, but be sensitive to the rich diversity of the PCC program.

From the outset, this approach required that the design team have a sound overview of the system's objectives. It also required that the system's objectives remain constant. Changes in objectives would destroy the process. At this stage of the development of the MIS, the participatory aspects of system design must be confined to the specification of decisions and data points, and the refinement of definitions and procedures. Basic questions such as whether or not to focus on the management of resources by building the system around the quarterly analysis of operating expenditures by the functional services provided, could not be reopened. The basic decisions around which the PCC MIS were built are the subject of this chapter.

Limiting the Scope of the PCC MIS

The most fundamental design consideration built into the PCC MIS was the implicit decision to focus on program inputs and processes rather than on program outcomes (see Illustration I). The strategy places an emphasis on determining basic information about participant characteristics, staff characteristics, and financial resources as program inputs, and on recording services that participants receive as a result of program participation. It highlights the influences on children and parents that are presumed to affect parent and child development. Although changes in child and parenting outcomes are still seen as the true objectives of the Parent Child Center program, this strategy asserts that inputs and processes must be measured and monitored before program claims regarding child and parent outcomes can be made. Finally, it results from the belief that child and parent outcomes cannot be meaningfully measured at frequent enough intervals to make them cost-effective, on-going management tools.

Not all inputs and processes, of course, can be monitored cost-effectively either. Condition of premises, attitudes of staff toward children, and ability of staff to convey information to young children and to parents are critical processes, but they are difficult to measure cost-efficiently on a continuing basis. Likewise, most parent and child experiences defy meaningful measurement on a continuing basis. Moreover, some inputs and processes do not change frequently. Community resources, the size of a facility, and location of a facility are in this class. These inputs and processes require less frequent reporting than those that change more often.

As a consequence, some inputs and processes were not incorporated into the quarterly reporting system. This decision is not meant to imply that these inputs and processes are not important. Instead, their omission stems from the frequency with which a variable is likely to change, the system's priorities, problems of potential information overload, and cost-effectiveness of system operation and maintenance. In most cases the omitted data are incorporated into the management decision-making process through on-site observations by managers or their surrogates and as part of the annual grant applications and reviews.

Influences on the child

Zone of PCC influence

Potentially measurable changes in children

INPUTS

CHILD

- Age
- Sex
- Special problems

CHILD'S FAMILY

- Size
- SES
- Head of household

PCC STAFF

- Background
- Ethnicity
- Education

FACILITIES

- Size
- Location
- Condition

FINANCIAL RESOURCES AVAILABLE

- Amount
 - Timing
 - Allocation
- COMMUNITY RESOURCES**
- Social services agencies
 - Hospitals, clinics, and other health facilities
 - Volunteers

PROCESSES ASSOCIATED WITH PCC

ENVIRONMENTAL

Physical Environment

- Condition of premises
- Indoor space per child
- Outdoor space per child
- Age-relatedness of furnishings, shelves, toys, books, etc.

Human Environment

- Attitude of staff toward children
- Allocation of staff time to individual activities
- Ethnic and cultural content of books, menus, music, etc.
- Ability of staff to convey information and ideas to young children and to parents
- Staff/child ratio

EXPERIENTIAL

- Parent-child interactions
- Peer group interactions
- Dramatic play
- Climbing and crawling
- Catching an object in motion
- Visual discrimination (e.g., identification of shapes, colors, numbers, and objects)
- Auditory discrimination (e.g., identifying different sounds)
- Clean up
- Toileting
- Eating
- Matching/listening
- Verbal communications
- Resting

SPECIAL SERVICES

- Medical services
- Dental services
- Meals and snacks
- Housing assistance and home repairs
- Family counseling
- Transportation
- Parent education and training
- Referrals to social services

OUTCOMES

AFFECTIVE DEVELOPMENT

- Personality development
- Social skills
- Motivation for learning
- Aesthetic appreciation

COGNITIVE DEVELOPMENT

- Spatial reasoning
- Classificatory Reasoning
- Relational-implicational reasoning
- Systematic reasoning
- Attention span

CREATIVITY

- Imagination/fantasy
- Fluency
- Flexibility

PSYCHOMOTOR DEVELOPMENT

- Eye-hand coordination
- Small muscle coordination
- Large muscle and motor coordination

HEALTH

- Physical
- Dental
- Vision, speech and hearing
- Diet

WELL-BEING

- Sense of security
- Minimisation of environmental dangers
- Sense of personal worth

In order to measure inputs and processes, it was necessary to identify indicators of key inputs and processes and to define these indicators in such a way that they were quantifiable. When indicators are defined in a quantifiable manner, they can serve as measures of performance and contract compliance. This strategy has the advantage of providing information that lends itself to valid and precise comparisons of performance and contract compliance, and eventually to impact analysis.

Quantification of key indicators is affected by two considerations:

1. The indicators must be easily converted into close-ended questions.
2. Responses to these questions must be recorded on a scale composed of equal intervals.*

The condition that the questions are close-ended meant that available responses must be comprehensive and mutually exclusive. It also meant that the terms that are used must be well defined.

In addition to the range of information to be reported, careful consideration was given to the volume of information to be reported through the PCC MIS. The volume of data to be reported, verified, and transformed into useable form was considered to be the most critical variable in the system's design. Too little information was viewed as a constraint on the management value of the system, yet too much information could easily overload the system, destroying its prospects for generating valid data on a timely basis.

*The requirement that the responses to the question must be recorded on a scale composed of equal intervals can best be illustrated with an example. The number of months terminated employees had worked at the PCC was selected as an indicator of program continuity and the success of personnel management procedures. The categories for the number of months worked are multiples of 3-month periods so that comparisons between time periods worked at the PCC will be of the same length of time.

The Management Objectives of the PCC MIS

The identification of the National Office and local program management objectives for the PCC program was one of the purposes of the phase I feasibility study. Four principal management objectives were identified:

1. to demonstrate, through quarterly statistical reports, responsiveness to the child development needs of low-income families with infants or pregnant women.
2. to improve PCC program management.
3. to monitor for contract compliance.
4. to maximize the utilization of the resources available to PCCs in providing comprehensive child development services to eligible families, and particularly to focal participants (children 0 to 3 years of age and pregnant women).

In pursuit of these objectives, the PCC MIS was expected to

- identify the functions performed by the PCCs and attribute operating costs to those functions.
- report the scope and quantity of services provided by PCCs.
- link costs to services.
- make accurate, uniform data available for comparative purposes on a quarterly basis.
- standardize the basic recordkeeping and reporting system for all PCCs in a manner that permits maintenance by paraprofessionals
- produce useful information flow toward the local PCCs as well as toward Washington.

The identification of functions of service and the attribution of operating costs to those functions was viewed as a core concept. Known as functional cost analysis, this technique for analyzing operating expenses is particularly valuable to the planning and management of human service programs. Human service programs are invariably labor intensive. The Parent Child Center Program, for example, spends approximately 70 percent of its operating budget on salaries and fringe benefits. Good planning and management depends on a knowledge of how this 70 percent of the available resources is being utilized. Functional cost analysis provides this knowledge. It also permits comparisons between programs with common functions, even if there is not a complete match of functions.

Functional cost analysis requires a great deal of information. It requires information about the wages and accrued benefits due to each employee and consultant during the time period being evaluated. It requires an accounting of donated services and an estimate of their dollar value. It requires a determination of how each employee, volunteer and consultant used their work time by function of service. It also requires detailed cost data on non-personnel expenses. Much of this information was not being collected by the PCCs, and some of the information that was being collected was not in an appropriate form for the purposes of functional cost analysis.

The necessity for obtaining quarterly data on operating costs by function of service did much to shape the design of the PCC MIS. The need to collect and report data on the services provided by PCCs in a manner that permits the linking of costs to services also played a significant role in the design of the PCC MIS. This need for service data established data requirements for frequency of service by type of service and people served by type of service.

The objective of having accurate, uniform data for comparative purposes is closely associated with the desire to standardize the basic record-keeping and reporting system for all PCCs. The use of standard record-keeping forms, procedures, and definitions which link directly into quarterly reporting forms at a prearranged time goes a long way toward having accurate, uniform data for comparative purposes.

The requirement that the system produce useful information flow in two directions was accomplished by a provision for sharing functional cost and unit cost data calculated in Washington with the PCCs.

The management objectives established for the PCC MIS required a multi-functional system. That is to say, they require a system that meets several different sets of objectives. The idea of a multi-functional system is dangerously enticing. It sounds cost-effective, but it tends to overload the ability of a system to collect, report, and verify data. It tends to undermine the maintenance features of a system, sapping it of the purpose that keeps it alive.

This fundamental problem was overcome in the PCC MIS in two ways: (1) by confining the collection of data for impact analysis to annual in-take records and drastically limiting the number of these data items even on those record-keeping forms, and (2) by making contract compliance a basic management concern.

Unit Costs As a Management Tool in Human Service Programs

When Abt Associates Inc. was given the responsibility of recommending an approach to management decision-making for the Parent Child Center Program, we recommended costs and staff time use as yard-sticks to the appropriateness of management decisions. This recommendation was made with the full realization that many of the sought for outcomes from the PCC program are difficult, if not impossible, to monetize. We did not feel, however, that the inability to monetize program outcomes is a barrier to allocating resources on the basis of costs. Only through allocation on the basis of costs is the determination of cost efficiency and cost effectiveness feasible. Furthermore, it was felt that good program management, planning, and evaluation are impossible without a clear understanding of how available resources are being used to achieve sought-for outcomes. Finally, we felt that an understanding of resource utilization is particularly important in a program that is charged with the responsibility of demonstrating the feasibility of altering the life chances and life style opportunities of young children, for possible replication.

Chapter III

Technical Problems

Reliable and timely cost data for management and comparative purposes are not easy to obtain. Accounting procedures are not usually designed to furnish information for management decision-making and they are not uniform among projects. Budgets are not uniformly constructed and generally bear only limited resemblance to actual project expenditures. Audit reports are almost always too late to play an important role in management decision-making and they are frequently not much better than budgets for making cost comparisons.

In the absence of reliable data on operating costs, policy-makers commonly resort to representing total cash program expenditures per child enrolled as the cost of program service. This procedure has serious limitations. It combines capital costs with operating costs and it ignores the costs of third party paid and contributed goods and services. Furthermore, unless the length of the program year, the scope of program services, and the number of units of service per day are standardized, it distorts comparisons between programs or projects that do not have the same mode of operations.

The task of developing a cost finding and reporting system for the Parent Child Center program was a difficult assignment. The successful completion of this assignment is one of the strong features of the PCC MIS.

Meaningful cost analysis requires a complete and detailed reporting of expenses. It also implies comparisons, and thus requires a clear understanding of what is being compared.

The complete costs associated with a comprehensive child development program are difficult to trace and report. Complete cost reporting for

functional cost analysis imposes additional requirements on the way in which costs can be reported. At least seven significant problems are encountered:

- separating operating costs from capital costs;
- identifying and valuing donated goods and services;
- reporting costs that are shared with another program or agency;
- differentiating accrued expenses from cash expenditures;
- reconciling program accounting practice with actual experience;
- attributing total operating costs to the functions of service performed; and
- controlling on externalities when making cost comparisons.

Separating operating costs from capital costs--

Most bookkeeping systems and cost reporting procedures (such as CAP 15 Forms) fail to keep capital costs separate from operating costs. They include contracts for the rental and/or maintenance of equipment and other property with service contracts in the same line items of expense. They rarely distinguish properly between consumable supplies and depreciable equipment. Yet, serious distortions in annual operating costs are introduced when capital investments are treated as operating costs.

Identifying and valuing donated goods and services--

The legislative authority for the PCC program specifies that for every four dollars of Federal funds that are furnished, there must be one dollar of non-Federal funds. These non-Federal funds may be donated goods and services as well as cash contributions to the project. Yet, despite the great need to document non-Federal contributions to the PCC program operations for legal purposes, systematic accounting for these sources of

support is rare. Consistent application of guidelines for imputing value is even rarer.

Reporting shared costs--

The problems of expenses, or costs incurred by more than one distinct operation of a single corporate body or by two or more different corporate bodies, is one of the most difficult problems associated with cost analysis.

To illustrate this problem, consider for example the difficulty of determining the operating costs of a Parent Child Center that is closely connected with an adult job-training center serving a rural area. The purpose of the job-training center is to train welfare recipients for jobs requiring possible skills. Many welfare recipients have young children, however, and these children must be cared for if unemployed female heads-of-household are to be eligible for job training. Hence, PCC services are used to make it possible for more unemployed persons to participate in a job-training program available at the job-training centers. Because the center is located in a rural area, a subsidized transportation system is initiated to transport participants to the training center. Young children are also permitted to accompany their parent on the bus as a means of getting to the day care center.

Obviously, the transportation system is a shared facility benefiting the PCC. The difficulty of prorating transportation costs is not easily resolved, however. It can be argued that the transportation program must be provided whether or not the PCC utilizes the service, and hence that none of the costs of the transportation service should be charged against the PCC. Conversely, it can be argued that if the PCC did not have access to transportation, it would have to pick up the cost equal to the entire costs of the transportation service. Hence, all transportation costs should be charged against the PCC.

Finally, there could be logical grounds for dividing the transportation charges to reflect the relative portion of the transportation costs benefiting each service. This alternative, however, has all the disadvantages of King Solomon's famous "half-a-baby solution," as it does not permit the transportation system to be duplicated if the two service systems separate, and it is open to year-to-year fluctuations reflecting changes in the balance of usage between the programs being served.

Differentiating accrued expenses from cash expenditures--

All PCC grantees keep their accounting books on a cash basis. That is to say, they record expenses not when they occur but when a bill has been submitted and when payment is actually made. This method of accounting has serious shortcomings. Accounting on a cash basis produces distortions from year to year, even of regular items of revenue and expense. Consider, for example, the situation of a cash-basis organization with a biweekly pay period in a year that starts on a Wednesday or a Thursday and ends on a Friday. Under these conditions, an organization would have to report 54 weeks' worth of salary expense. Or, to use another example, it is not uncommon for day care centers to pay annual or longer insurance premiums that cover a different time period from the grant or calendar year periods, hence introducing distortions. Finally, unpredictable variations in expenses which are caused by delayed billings are an even more important cause of distortions in a cash accounting system. Hence, the necessity for reporting expenditures on the basis of accrued expenses rather than cash expenditures constitutes a serious problem.

Reconciling program accounting practice with actual experience--

Federal program accounting procedures do not permit PCCs to charge some expenditures to the project. Interest charges on loans made to pay employees when the Federal check does not arrive on schedule and depreciation of capital holdings are outstanding examples of how Federal program accounting practice can distort actual experience. A more fundamental problem,

however, is the grants management practice regarding vacations. Vacations are not considered fringe benefits. They must be taken during the program year and are charged as salary. However, since no work is being performed during the period of time that the vacation is being taken, quarterly reporting of expenditures overstates the reporting of resources spent on program services in some quarters and understates the value of services performed in other quarters. This is particularly true if most staff vacations occur in the same quarter.

Merged program accounting represents another serious barrier to meaningful cost analysis. Federal program accounting procedures permit grantees to pool non-Federal contributions among several projects. Thus, if the PCC does not generate the legal minimum share of non-Federal support, the excess non-Federal contribution of another project operated by the grantee can be transferred on paper to the PCC's account. This means that the reported expenditures may not be the actual expenditures. It may also mean that program accounts cannot be closed or audited until all of the programs being merged have completed their program years. This has the practical effect of complicating the audit procedure.

The failure to institute a common Chart of Accounts for PCC grantees is also a serious impediment to the accurate reporting of expenditures. In some cases, travel for field trips is considered an "Other Cost," while in others it is considered a travel cost. Sometimes telephone costs are posted as "Space and Utilities," other times they are posted as "Other Costs." Sometimes a bus is considered "Purchase, Lease and Rental of Equipment," other times it is posted as a "Travel" expenditure. The failure to post the same expenditures consistently is a serious problem.

Finally, the 35 PCC project grantees had 17 different program years (PYs). Their accounts were based on those program years and not on a standard fiscal year or a calendar year. Unless each PCC grantee does a "trial

balance" monthly, they cannot report expenses in a form that will permit accurate comparisons among PCCs. Moreover, it will be impossible to link costs to services unless each PCC has its quarterly reporting cycle for service data tied to its own quarterly cycle for financial reporting.

Attributing total operating costs to the functions of service performed--

The problem of attributing operating costs to the functions of service performed is twofold: (1) can costs be reported in enough detail to permit them to be attributed to functions of service? and (2) can estimates of personnel time use substitute for a time and motion study?

Until recently many experts believed that functional cost accounting is a prerequisite to functional cost reporting. The designers of the PCC MIS did not accept this assumption. Nor did they accept the assumption that a time and motion study is needed as a basis for attributing personnel costs to functions of service.

The design team's previous experience in functional cost analysis suggested that the number of functional categories affects the accuracy of time use estimates and the requisite detail in cost reporting. The definitions of the functional categories and the process of introducing the functional categories is also critical to the potential success of functional cost reporting and estimates of personnel time utilization. Moreover, the time span between reports of staff time use affects the validity of results. Finally, establishing work policies, such as the actual length of a work week and how vacations, compensation time and overtime are handled, is an important ingredient of reliable time use estimates for functional cost analysis.

Controlling on externalities when making cost comparisons--

There must be some mechanism for controlling the influence of exogenous variables on PCC costs. Differences in the scope of services, the

density of the service area, or the regional costs of labor can easily distort data used in cost comparisons. The presence or absence of ancillary community services for the target population can also affect the meaning of data. The PCC MIS would need mechanisms for reducing the influence of these externalities.

Not all of the technical problems were cost accounting problems. The decision to process the data manually or by computer, for example, had to be made. There were a number of inputs to this decision:

- the frequency and volume of the data to be processed
- the alternative costs of data handling under different circumstances
- the programming costs of computerized data processing
- the availability of computer services.

The outcome of this decision could have had system design implications.

Likewise, the timing, protocol and content of workshops and on-site technical assistance (T-A) were technical problems as well as logistical problems. What kinds of learning experiences were to be involved? What kinds of questions should the workshops address? What could they afford to ignore? How important was group dynamics? How much manipulation of circumstances was needed? How much was unhealthy? When and on what issues was consensus required? These and many more technical problems were involved in the system's implementation.

Chapter IV

The Solutions to Technical Cost Accounting Problems

The technical problems described in the previous chapter were the primary obstacles to using cost accounting as a management tool for the Parent Child Center Program. The solutions to these problems could not always be direct, as the PCC program is a relatively small component of a much larger program -- the Head Start Program -- and neither the Office of Child Development nor the PCC grantees were willing to change basic operating procedures for the PCC MIS. Hence, except on a few occasions when meaningful changes were instituted by the PCC MIS, it was necessary to work around obstacles rather than confronting them head-on.

Separating operating costs from capital costs --

The problem of separating operating costs from capital costs was not easily solved. The line items on the Office of the Secretary's Quarterly Grantee Financial report, the OS-192, were not detailed enough to permit the separation of capital expenditures from operating expenditures. This difficulty was compounded by the fact that budgets in grant applications submitted by PCCs frequently did not follow grant application guidelines.

When we asked grantees why they did not follow grant application guidelines in submitting budgets, we were told that the OEO guidelines that governed most of their activities were different from the HEW guidelines governing the PCC grant and they were not always sure which guidelines to follow. Moreover, OCD grants management officers, who were handling very heavy work loads, did not always demand that grantees correct these confusions in budgeting since it did not appear to make any difference where line items were shown on the budget sheets so long as the proposed expenditures were approved, legal expenses.

Abt Associates Inc. attempted to solve the problem of separating operating costs from capital costs in three ways: (1) getting better information on project budgeting to PCC directors and grantees; (2) encouraging OCD grants management officers to enforce budgeting guidelines which separate capital expenditures from operating expenditures, and (3) introducing a more detailed quarterly reporting of grantee non-personnel expenditures. Progress was achieved on all

three fronts, but new Office of Management and Budget (OMB) "inform administrative Requirements for Grants-In-Aid to State and Local Governments" (Regulation A-102) issued for January, 1973, made it necessary to abandon efforts to introduce a more detailed reporting on grantee non-personnel expenditures. Instead, non-personnel expenses are taken from the annual budgets submitted by PCC grantees. Since all non-personnel costs, exclusive of occupancy and food costs, account for only about 5% of a PCC's operating expenses, this solution was found to be adequate for the purposes of the system. Item analysis based on audited expenses suggest that all errors introduced by this procedure are less than 2% on any functional activity performed by a PCC.

Identifying and Valuing Donated Goods and Services --

The process of identifying and attributing value to contributed goods and services is an important component of an accounting for PCC operating costs. One out of every five dollars spent on the PCC program at the local level must be non-Federal dollars. Most of these non-Federal dollars are donated goods and services. For this reason, we introduced donated goods and services vouchers to make it easier for PCCs to document contributions that are made to the program. These vouchers are designed to make it possible to record contributions in enough detail to make accurate reporting feasible and uncomplicated. In addition, PCC directors and grantees were told how important these records are to them and to the Federal Government. They were warned that they could expect future audits of these records. Finally, guidelines for valuing donated goods and services were sent to all PCCs and grantees and they were incorporated into the PCC MIS User's Manual.

Reporting Shared Expenses --

Problems of shared expenses were addressed during on-site inspections of PCC programs and grantees. Many PCCs have unique problems of shared staff. Some have multiple sources of Federal funding for multi-functional services that go beyond the PCC concept and program. For this reason, Abt Associates introduced a "Quarterly Report on Donated Services Volunteered or Paid for From Other Federal Agencies [Not Allowable as Non-Federal Share]" (see Illustration XVII in Appendix A). Shared non-personnel costs from other Federal Agencies are to be tracked on an annual basis through the grant application and the PCC MIS annual report. Otherwise it is not possible to generalize about the solutions to these problems, except

to state that shared expenses generally demand that more complete records and documentation be kept than ordinarily would be required.

Differentiating Accrued Expenses from Cash Expenditures --

Since child care is labor intensive, between 70% and 80% of all PCC operating costs are personnel costs. An additional 8% to 12% (in the special case of Kotzebue, Alaska, located above the arctic circle, 40%) of the operating costs are non-personnel occupancy costs such as rent and utilities. Hence, the key to attributing PCC operating expenses to the time period when they are used, as contrasted to when these expenses are paid and logged into the accounting records, is to account for personnel and non-personnel occupancy costs on an accrual basis. Other expenses can be estimated without serious distortions. This is exactly the strategy followed by the PCC MIS.

Reconciling Program Accounting Practice with Actual Experience --

The most serious Federal grants management problem for the PCC MIS is the practice of not considering vacations fringe benefits. Abt Associates Inc. solved this problem by having employees report vacation time, and eliminating this time from consideration when calculating personnel costs by functional category. The elimination of vacation time is then compensated for by treating vacation expenses as fringe benefits within the system. Thus, all wages and benefits reported as having been accrued by employees are multiplied by a factor that accounts for the costs of vacations to the project.

The problem of depreciation, on the other hand, was not addressed by the system. Capital costs are not included in the system, although they could be at a later time.

The problems of merged program accounting are particularly overcome by a person by person accounting of personnel costs, the most important single element of cost, by keeping close track of rent and utilities costs. However, the elimination of the practice of merged accounting for Federal projects and the institution of a common, detailed chart of accounts for all HEW projects would be a better and more complete solution to this problem.

Attributing Total Operating Costs to the Functions of Service Performed --

The previous experience of the design team was largely responsible for the satisfactory solution of this problem. The identification and definition of functional categories of services for the PCC program was based on two years of research into the structure of child care services in a center setting. The number of categories and the detailed definition of these categories resulted from this research, as did the methodology for attributing operating costs to functions of service.* Details of this process can be found in the PCC MIS Documentation (Cambridge, Mass.: Abt Associates Inc., 1973), Vol. I.

Controlling on Externalities when Making Cost Comparisons --

Three devices are used in the PCC MIS to control externalities: (1) a narrative report from PCC directors that is to highlight unusual circumstances that are likely to distort statistical reporting, (2) the structure and definition of reports on services to participants, and (3) the very process of viewing operating expenses by function of service. The definitions of services to participants are structured so that some leeway is permitted in the types of services that can be reported. This makes it possible for projects with unique sets of services to gain appropriate credit for the delivery of those services. However, the categories where these services can be reported are segmented from core PCC services so that distortions do not result. Finally, the process was designed so that services to participants can be linked to functions of service to yield unit costs. Unit costs are calculated from functional costs rather than from total costs. This procedure reduces the influence of externalities to a minimum.

The solutions to other technical problems can be found in Chapter VI.

* See Keith McClellan, "Considerations in Day Care Cost Analysis," Child Welfare, June, 1971, Vol. L, no. 6, pp. 341-348; Keith McClellan, Day Care Cost Analysis: A Manual of Instructions (Chicago: Welfare Council of Metropolitan Chicago, July, 1971); Keith McClellan, "Classifying Day Care Centers for Cost Analysis" (Mimeo, 1971); W. David Warner, A Study in Child Care, 1971, (Cambridge, Mass.: Abt Associates Inc., 1971), Vol. III.

Chapter V

Description of the PCC MIS

The Parent Child Center (PCC) Management Information System (MIS) consists of three interlocking components -- (1) a standard set of recordkeeping forms for local PCCs, (2) an interlocking set of quarterly reporting forms, and (3) a series of management reports that can be generated from the data that are reported on the quarterly reporting forms. The definitions and procedures that are required for uniform recordkeeping and information reporting are contained in a User's Manual. The organization of the system, the basic uses of the system for management decision-making, the procedures for data validation and preparation, decision rules for contingencies, file and maintenance procedures, resource requirements for system operation, computations and estimating procedures, and reporting schedules are contained in a two volume set of PCC MIS Documentation.

The Sub-System for Recordkeeping--

A set of eight different recordkeeping forms were introduced by the PCC MIS for use by local PCCs in their day to day operations. Use of these forms was made mandatory by a grant condition, and a half-time "data coordinator" was designated at each PCC to maintain these records.

Three of the eight records are "In-Take" records. They are to be completed upon enrollment in the program or upon being hired by the PCC. They are to be updated annually. The "Family In-Take Record" provides a profile of the participating family (see Illustration II). It establishes basic facts that demonstrate program eligibility, suggest possible special family needs and inputs to child development and parenting, and determine the program's service base.

The "Family Enrollment Record" (see Illustration III) is an adjunct to the "Family In-Take Record." It furnishes information for emergency contacts, screening tests, family enrollment status and individual

enrollment status on focal participants.* In-Take information about staff members is also collected on an "Employee In-Take Record" (see Illustration IV). This information parallels that gathered on program participants. It establishes the education, relevant experience, and special attributes of PCC employees. Furthermore, the form makes it possible to record employee advancements and on-the-job training once employed by the PCC. Finally, it deals with job application, employment status, termination and reinstatement in a systematic fashion.

The recordkeeping sub-system contains two records of services to participants: the "Weekly Family Service Record" (see Illustration V) and the "Family Health Services Record" (see Illustration VI). These records are designed so that it is possible to link the delivery of PCC program services to individual families. The ability to link services to individual families opens important management possibilities, even though it complicates recordkeeping. This form of recordkeeping makes it possible to determine if all of the services are going to a few families, if there is a relationship between the services delivered and changes in family well being, if there are patterns of service delivery, and if enrolled families receive core services. Given the comprehensive nature of the PCC program, the decision to link service delivery to individual families creates a number of data collection problems. It often means that subsidiary data collection forms are required or that a single form is passed among several staff members who provide different kinds of services to a single family. Neither the quarterly reports nor the management reports dictate the collection of service data by participant family. However, prudent guidelines for local PCC management would seem to recommend that PCCs be able to tell if their services are well distributed among enrolled participants or if some families are being neglected while other families are receiving a disproportionate share of services. Furthermore, reliable impact analysis is not feasible without records that establish that measurable change could have been brought about as a result of PCC services.

The "Weekly Family Service Record" keeps track of the number of times such services as meals, family counseling, transportation, infant education, and parent education are provided to an individual family on a week

*Focal participants are children under three years of age and pregnant women.

by week basis. It does not record the length or quality of infant education session, the distance traveled when providing transportation, or the type of family counseling provided. These are significant shortcomings of the data, and it proved to be impossible to remedy them without doubling the information requirements, raising the qualifications of data coordinators, and unduly complicating recordkeeping and reporting. Furthermore, the appropriate refinement of service data to incorporate considerations of length of service unit and the quality of a service unit probably would have overloaded the system and caused its breakdown. These weaknesses, however, do not destroy the value of keeping a record of the services delivered to individual participants. It merely limits their meaning.

The collection and reporting of "Family Health Services" data for PCC participant families is complicated by the myriad of patterns of health service delivery employed by the 35 PCCs. Most PCCs depend upon third party delivered health services. Health maintenance organizations (HMO), public health clinics, and out patient clinics of hospitals are common sources of health services to PCC participants. Frequently the PCC does not pay for these services nor even arrange for them. In many cases the health provider is either sponsored by a separate Federal grant or reimbursed by a Federal payment for service program such as Medicaid. If so, the Federal agency that sponsors or reimburses the health provider usually demands a report on services provided.

On the other hand, the PCC is charged with the responsibility of insuring that PCC participants receive comprehensive services, including needed health services. In some instances local PCCs purchase insurance, provide health services themselves, or pay for needed health services to PCC participants. In other cases, private and state sponsored health providers furnish health services as part of the non-Federal share of PCC program support. In any case, local PCC staff and program management need to know if PCC participants are receiving needed health care so long as the program attempts to live up to its responsibility of being comprehensive in its approach to child development and parenting.

The PCC MIS faces a dilemma when trying to respond to the cross currents of contrary demands posed by this complex set of circumstances. If it attempts to require a full medical report on health services provided to PCC participants by third party paid providers, it will be fostering the double counting of Federal services and perhaps unnecessarily increasing the reporting demands being made on already overworked medical and dental personnel. Moreover, there is an excellent possibility that such reporting demands will be ignored by third party paid health providers as they were under the previous PCC reporting system. If that should happen the PCC would have no leverage to gain compliance, since they are neither the financier nor the direct recipient of such services. On the other hand, if such health services are not recorded at all, the PCC will have no idea if their participants are receiving a comprehensive set of services or not. They may not know that the lack of needed health services is impairing the impact of other PCC services.

The compromise that was finally worked out left the PCCs short of the comprehensive health records that might be ideally warranted, but it makes it possible to obtain an indication of health services being received by PCC participants. However, even this level of knowledge is not likely to result from alternative strategies for health services recordkeeping.

The PCC MIS "Family Health Services Record for the Quarter" is intended to serve as an indicator of the Parent Child Center's role in providing medical and dental care for its participants. The form documents the type of health services provided by the PCC or the type of referral made by the PCC for individual participants. The form does not constitute a medical history. It is simply a record of services and referrals in which the PCC is directly involved. The record serves as an aid in reviewing the kinds of health services being provided to PCC participants as a direct result of PCC action. It does not distinguish between referrals and PCC paid for or provided health services. It does provide PCC program management with a statement of the PCCs overall role in the provision of health services to program participants.

The "Weekly Staff Utilization Record" (see Illustration VII) is one of the most important records introduced by the PCC MIS. It identifies 12 functional activities performed by PCCs:

- Administration (divided among Supervision of Personnel and Management; Program Planning and Research; and Fund Raising)
- Child Supervision and Education
- Parent Education and Training
- Social and Economic Services to Families
- In-Take, Evaluation and Referral
- Health Services
- Food Services
- Community Organization
- Transportation
- Pure Research
- Occupancy (Maintenance and Housekeeping)
- Staff Development and On-the-Job Training.

There is also space for reporting "Leave" (vacation, sick time, etc.) and Advocacy* or Non-PCC Funded Program activities.

Each PCC staff member and paid consultant is required to allocate their working hours to these 12 functional activities or to "leave" and "Advocacy or Non-PCC Funded Programs." Work time is to be distributed in 15 minute blocks and small periods of time spent on coffee or other work breaks are to be either omitted or absorbed into adjacent work activities. In general, staff members are urged not to worry too much about the accuracy of amounts of time that comprise less than 5% of their

*Advocacy is a special program component of the PCC program being tried in seven PCCs. See Sylvia M. Pechman, "Seven Parent and Child Centers," Children Today, March-April, 1972.

total work day, as it is unlikely to distort the total outcome of the staff time utilization report. As a rule of thumb, staff members are also asked to report staff time according to the primary purpose of the activity they are engaged in. The question, "What did I intend to accomplish?" is the key to staff time distribution according to functional category. In cases where a staff member is attempting to accomplish two or more objectives simultaneously, they are asked to split their time among the appropriate functional categories.

It is highly unusual for an employee of a Parent Child Center to show exactly the same distribution of time use each week. If this occurs, PCC Directors and Data Coordinators are urged to clarify reporting procedures and observe that employee's time use.

Each "Weekly Staff Utilization Record" can accommodate one month's reporting of a staff member's time use. Staff members are asked to report the number of hours they work, not simply the number of hours they get paid for. They are asked to fill out the sheet weekly.

Definitions of the functional categories can be found in the User's Manual.

The "Donated Service Voucher" (see Illustration VIII) requests approximately the same kind of time use reporting of volunteers and third party paid workers as the "Weekly Staff Utilization Record" requests of employees. The "Donated Service Voucher" is designed so that it can double as legal documentation of contributions that can be considered part of the "non-Federal share" of the PCC budget.

The "Donated Goods Voucher" (see Illustration IX) is designed to document non-personnel contributions to the PCC program. It doubles as legal documentation of contributions and the line items link directly to both the standard grant application (project budget) and the Office of the Secretary's quarterly reporting form on project expenditures -- Form HEW-"OS-192."

The Sub-System for Quarterly Reporting

Every three calendar months (beginning September 1, 1972) each Parent Child Center has been instructed to submit ten (10) quarterly reports to a National Data Coordinator assigned to the Office of the Chief of the Parent Child Center Program. These ten quarterly reports are to be completed as of the last business day of the quarter and mailed by the 10th calendar day of the month following the end of the quarter.

The PCC MIS is on a quarterly schedule that is one month earlier than the standard Federal quarterly cycle. This schedule was agreed upon so that the Chief of the Parent Child Center Program can receive timely statistical data for reporting and management decision-making demands that tend to coincide with the start of a new Federal quarter.

Nearly all of the data reported on the ten quarterly MIS reports comes directly from the seven (7) standard recordkeeping forms used by the PCCs. The local Data Coordinator is primarily responsible for coordinating quarterly reporting for the PCC, and all of the management and supervisory staff of the Center are likely to be involved in the process. The very process of aggregating and transferring data from the recordkeeping forms to the reporting forms has management value. It helps to establish management priorities and it forces key PCC management to review their performance in a systematic fashion.

The ten quarterly reports are:

- Report on Participant Characteristics
- Report on Staff Characteristics
- Report on Services to Participants I
- Report on Services to Participants II
- Report on Services to Participants III
- Staff Utilization Report
- Report on Donated Services (allowable as Non-Federal Share)
- Report on Donated Services Volunteered or Paid for From other Federal Agencies (Not allowable as Non-Federal Share)
- Quarterly Financial Report
- Quarterly Narrative Report (by the PCC Director)

This sub-system was designed so that the ten quarterly reports are complementary. They furnish a relatively complete picture of the primary inputs and processes that comprise the Parent Child Center approach to child development and parenting. They also interlock so extensively that more than 50 cross-checks for data validity are possible.

The "Quarterly Report on Participant Characteristics" (see Illustration X) contains 15 data elements, 56 data points, and a possible 65 digits. It establishes a Parent Child Center's service base and provides a basic profile of the participant families being served. In particular it reports the number of enrolled families and participants by ethnicity, family turnover, reasons for termination and length of time terminated families participated in the program. The report also provides a breakdown of children by age and other pertinent information about enrolled families which may have a bearing on program operations and contract compliance. This report may be used to review the composition of the client population, to analyze changes in that population over time, and to assess whether or not the orientation of the program is appropriate for the size and composition of the PCC clientele. This report can be used by the national office in preparing management reports that summarize potential problems, link services to costs, calculate unit costs, and describe the characteristics of PCC program participants.

The "Quarterly Report on Staff Characteristics" (see Illustration XI) contains 13 data elements, 43 data points, and a possible 51 digits. It provides basic information on PCC personnel including staff turnover, reasons for termination and length of time staff members worked for the PCC. The report also provides pertinent characteristics data such as number of employees by sex, ethnicity, full-time or part-time work status, and staff category information which is indicative of program organization and operations.

This report can be used to evaluate staff turnover, conduct a general review of the program, determine whether the composition of the staff is appropriate to the goals and objectives of the program, and assess the

correlation between staff composition and composition of the PCC client population. It can be used by the national office to prepare management reports that summarize potential problems and describe PCC staff characteristics. The report does not include data on volunteers, consultants, and personnel hired through a service contract.

The "Quarterly Report on Services to Participants I" (see Illustration XII) contains three sets of information. It contains information about the duration and type of program operations, number of focal participants, and the composition and degree of activity of the Policy Council. It provides the basic background data needed to review the subsequent two reports on services to participants. It reports information that can be used to identify potential problems and to interpret reports on program services. Most of the information for this report comes from PAC notes and minutes.

The "Quarterly Report on Services to Participants II" (see Illustration XIII) contains a summary of the quantities of major services provided to PCC participants during the quarter. It furnishes detail on participation in parent education and training activities. It records infant education sessions, parent-child interaction sessions, nutritional services, and direct social and economic services to participant families.

In the context of the Quarterly Report on Services to Participants I, it provides the basis for a review of services provided to participants. In this regard, it may be significant to note that the PCC program is not usually an every day service to every family, so it is important to view services against the backdrop of service schedules. This report is a vital input into calculations of unit costs of specific services such as food and transportation.

The "Quarterly Report on Services to Participants III" (See Illustration XIV) summarizes health services and referrals provided for PCC participants by the PCC during the quarter. It lists the total number of participants who receive each of 21 different kinds of medical and dental services.

Data are shown separately for focal mothers, other parents, other adults in the household, focal children, and siblings.

The "Quarterly Staff Utilization Report" (see Illustration XV) is a summary of the compensation paid by the PCC to each individual employee and consultant who worked for the PCC at any time during the quarter, together with a distribution of each individual's working hours by the function of the activities they worked at.

The data in this report may be used to review the use of PCC staff time on an individual basis to decide whether they are spending their time appropriately, given the person's skills and level of compensation, and the organization and priorities of the particular PCC. Since personnel costs account for at least 75% of the total budget in most PCCs, such a review of personnel time use is invaluable to effective program management. This report is also a critical component in the PCC MIS management reports. It is an input to eight of the ten basic quarterly management reports.

The "Quarterly Report on Donated Services" (see Illustration XVI) is a match to the Quarterly Staff Utilization Report. It records the same information as the Quarterly Staff Utilization Report, except that the "estimated dollar value of services" replaces the "dollar value of wages and salaries accrued" as an input.

Similarly, the "Quarterly Report on Donated Services Volunteered or Paid From Other Federal Agencies" (see Illustration XVII) records both (a) the value of personnel contributions paid by other Federal agencies and programs, and (b) the function use of the time spent by these individuals on PCC program activities for the PCC. The services of Neighborhood Youth Corps (NYC) workers and Concentrated Employment Program (CEP) trainees fall into this category. This report is an adjunct to the "Quarterly Report on Donated Services." It is a separate report because of our desire to be able to monitor the non-Federal share of a PCC's resources.

The ninth report in this sub-system is the "Grantee Quarterly Financial Report" (see Illustration XVIII). The "Grantee Quarterly Financial Report" represents a modest modification of the OS-192, and it was designed to replace the OS-192. It provides a breakdown of "travel" costs and of "Consumable Supplies" not previously furnished by the OS-192.

This form must be completed by the PCC's grantee and not by the PCC per se. It serves as a management tool for summarizing and reviewing the actual costs incurred. It is a means by which a grantee can communicate a financial summary of his operations to both the Office of Child Development and to the PCC. It is particularly valuable when compared to proposed costs and expenditure patterns. Finally, the "Grantee Quarterly Financial Report" is the source of non-personnel expenditures for functional cost analysis and unit cost calculations.

The form is most useful when grantees accrue their expenses on a project by project basis. It is least useful when they employ cash accounting and merged program accounting procedures that submerge and distort the expenses of individual projects. This form is not currently used.

The last quarterly report in this sub-system is the "Quarterly Narrative Report." Each quarter PCC Directors are asked to complete a three to five page narrative report to accompany the quarterly statistical and financial data. This narrative statement is intended to clarify and complement the quarterly reports. It is designed to serve as a mechanism for communicating problems to the Chief of the Parent Child Center Program, for highlighting process at the local level, and for describing unusual circumstances that are likely to distort statistical reporting. The "Quarterly Narrative Report" is to be a prod to documenting ideas, problems, and progress that cannot be adequately conveyed through statistics.

The Sub-System for Quarterly Management Reports--

Once Parent Child Centers have submitted their quarterly reports, the national office of the PCC program or their surrogate must validate these data, prepare them for processing, confront contingencies, process these data (including making requisite computations and estimates), distribute the output, and maintain data files. This sub-system encompasses all of these activities. It focuses on the selection of management information for quarterly management reports, the processing of data necessary to produce those reports, and the distribution of them. It is the culmination of the activities initiated in the previous two sub-systems.

Selection of Management Information

Sixteen (16) quarterly management reports are generated by this sub-system. Ten (10) of these reports are issued on each Parent Child Center (PCC). Six (6) reports are produced for the PCC program as a whole.

The ten quarterly management reports issued on each PCC are:

- Indicators of Potential Problems: Management Operating Problems
- Indicators of Potential Problems: Summary of Potential Problems
- Frequency of Service per Participant
- Cost Per Unit of Service
- PCC Cost Per Participant
- Total Cost Per Functional Activity
- Direct Cost Per Functional Activity
- Indirect Cost Per Functional Activity
- Non-Federal Cost Per Functional Activity
- Personnel Hours Per Functional Activity

The first "Indicators of Potential Problems" report (see Illustration XIX) identifies whether or not individual PCCs have submitted required reports and if there is a vacancy or turnover in key management personnel at any given center. The report is organized so that local and national program managers can see potential problems in these areas at a glance. It assumes that if a PCC has one of the characteristics that is flagged,

it has a potential organization, recordkeeping, or personnel problem that will cause serious difficulties for PCC program operations, if it is not corrected.

The second "Indicators of Potential Problems" report (see Illustration XX) highlights possible difficulties associated with financial control, contract compliance, or general program well-being. It is laid out in exactly the same way as the first "Indicators of Potential Problems" report. An individual Parent Child Center is flagged if its spending rate is inappropriate, it is not producing the required non-Federal share of project expenditures, it has too many families enrolled that are over the poverty level, or it does not meet the expected criteria for any one of seven other indicators of contract compliance or program well-being. Like the first report it enables both local and national program managers to identify potential problems at a glance.

Report number three, "Frequency of Service Per Participant" (see Illustration XXI), presents the linkages between the quantities of service delivered in each major service category (i.e., child care & supervision, parent education & training, etc.). It displays the quantity of units of infant education, for example, delivered over the course of the quarter. It then shows the frequency of service at that PCC per focal child enrolled per week during the quarter. The national average for this service is also displayed for comparative purposes.

These frequency of service statistics can assist the PCC manager in assessing how often different types of participants are receiving services targeted and delivered to them. Some specialized services, such as "water delivery" and "job placement" are subsumed under larger categories like "Other Social, Economic and Health Services" because these individual services are not delivered with enough frequency to warrant their being listed separately.

Different time horizons are used with different major categories of service because not all types of service can be readily assessed for a common time period. Parent Education and Training, Social and Economic Services to Families, Intake Evaluation and Referral, and Health Services are usually scheduled for less frequent use by participants than is child care and supervision.

Report number four, "Cost Per Unit of Service" (see Illustration XXII), shows the dollar cost for each PCC of each of the eight types of direct services to participants delivered through the PCC program. It presents the total cost per service category and the cost per relevant participant per service category. It displays the direct cost or cost without overhead (administration, occupancy, and staff development costs) and with overhead. The report gives the national average costs in these categories, as well as the local PCC's costs. Unit costs are not determined for every type of service delivered because some of the services listed are not considered to be of equal value, nor are they of the same quality (value) at all PCCs.

Report number five, "PCC Cost Per Participant" (see Illustration XXIII), translates three sets of unit costs into annualized costs. It gives the direct cost, the direct cost with overhead, and the non-Federal cost per participant, per family, and per focal participant. Direct costs are the operating costs, exclusive of depreciation, used directly to provide services to participants. Direct costs with overhead are direct costs plus a portion of the indirect costs of administration, occupancy, and staff development and training. These overhead costs were distributed among all other functions on the basis of the percentage of total direct costs spent performing each direct service function at the individual PCC. (This method of prorating overhead costs to direct services is a common procedure for labor-intensive activities that frequently use much of their space for multi-functional purposes.) Non-Federal costs are the sum of the non-Federal dollars and the imputed value of contributions of services and goods made to the PCC or claimed on behalf of them by the grantee. Because of special legislation, some Federal expenditures, Model Cities funds for example, are also considered non-Federal funds. It provides the national average cost along with PCCs cost so that comparisons can be made. Finally, it displays base statistics on number of focal children, families, other children (siblings), and participants so that PCC directors can compare their center's service base with the national average.

Report number six, "Total Cost Per Functional Activity" (see Illustration XXIV), examines the allocation of PCC resources among the various functional activities of the center. It gives the total operating expenditure per functional category and the percentage of total resources spent on that functional category. To obtain these costs per functional category, the value of wages and benefits accrued* to staff and consultants are distributed among the fourteen functional categories for each person who performed work for the PCC. The dollar value of these services are distributed to functions according to the time utilization shown on the Quarterly Staff Utilization Reports submitted by each PCC.

Next, the imputed value of donated services as reported in the quarterly reports, are used in determining the costs of services by function shown in the management report. As with wages and benefits accrued to staff and consultants, the imputed dollar value of donated services are prorated among the functional categories of service according to the time use shown in the Quarterly Reports on Donated Services.**

* Accrued wages and benefits, of course, include payments to which employees and consultants have an "unqualified right" regardless of whether or not payment has been made. The PCCs report only the wages. The National Data Coordinator calculates the dollar value of fringe benefits, using data submitted as part of the grant application process, and adds those costs to the wages paid prior to prorating personnel costs to functions.

**It should be noted that the non-cash contributions that frequently make up a large share of non-Federal PCC expenditures are sometimes inflated by grantees that have a difficult time generating the non-Federal share of the grant required by law. In these cases, those inflated costs will show up as expenditures and will introduce a bias in the cost for delivering those services.

Finally, the accrued cost of non-personnel expenditures other than capital investments are assigned to functional categories and appear as part of the costs shown. The decision rules for prorating non-personnel expenditures to functional categories are published as part of the PCC MIS Documentation. They are based on the published methods designed and used heretofore on day care center functional cost analysis by David Warner (A Study in Child Care, Abt Associates Inc., 1971, Vol. III) and Keith McClellan (Day Care Cost Analysis: A Manual of Instructions, Welfare Council of Metropolitan Chicago, 1971).

It should be noted that the expenditures shown in the Management Report are accrued operating expenditures excluding depreciation. They will not, in all likelihood, correspond with the expenditures to-date shown on trial balance sheets. Most PCCs do not accrue expenses. Nor do they amortize insurance, leases, licensing, etc.; or handle vacations and other paid leave in the standardized fashion employed in the PCC MIS.

One of the great strengths of the PCC MIS is that it treats expenditures of all 35 PCCs consistently and in a manner that permits inter-program comparisons.

It provides the national average for comparative purposes and shows the PCC's deviation from the national norm. When combined with knowledge about appropriate distributions of PCC operating expenditures, this report can be a very useful management tool.

Report number seven, "Direct Cost Per Functional Activity" (see Illustration XXV), examines the allocation of PCC resources among the different direct cost or service functions. It can help PCC directors assess if the use of resources reflects the center's service priorities. The report displays both the actual dollar expenditures for the quarter and the percentage of direct expenses allocated to each service category. Again, the national average is provided for comparative purposes.

Report number eight, "Indirect Cost Per Functional Activity" (see Illustration XXVI), examines the allocation of indirect or overhead costs. It shows how overhead resources were spent and provides a basis for assessing the propriety of this expenditure pattern. Less than optimum use of available resources can take place in overhead functions as easily as they can in direct service functions.

Report number nine, "Non-Federal Cost Per Functional Activity", (see Illustration XXVII), examines the uses of non-Federal resources in the PCC. It focuses on the management of a resource that is frequently non-cash.

Finally, report number 10, "Personnel Hours Per Functional Activity" (see Illustration XXVIII), looks at personnel time as a resource. Frequently, the pattern of dollar expenditures for a PCC does not match the pattern of staff time use. Staff members are paid differing amounts per hour of work at different paces. Good management, particularly for a labor intensive enterprise, not only requires an understanding of how dollars are being spent but of how people's time is being used. This report fills that need. It shows that number of hours, percentage total hours, and donated hours per functional category of project service and overhead.

A second set of six (6) management reports are generated each quarter for PCC management at the national level. They give aggregate data for the PCC program as a whole, and specific comparison data between the 35 PCCs. These six reports are not currently made available to the 35 PCCs, although they may be at some future time.

The first of these reports for the national staff, Report A, presents unit cost data (see Illustration XXIX). It gives the cost per participant, per family, and per focal participants for all PCCs for the quarter at annual rates. It shows the total cost per service unit and the Federal cost per service unit in table form. The table also displays the median cost and the range. Finally, it displays these costs for each PCC. The PCCs are listed in rank order with the least expensive at the top and the most expensive at the bottom.

The second report for national staff use, report B, presents a "Summary of Expenditures by Functional Category" (see Illustration XXX). The aggregate expenditure on each category of service is shown in dollars and as a percentage of total operating expenditures. The median, the range, and the quartile distribution of percentages by PCC (but without PCC names attached) are also displayed on this summary report.

Report C aggregates PCC program participant characteristics (see Illustration XXXI). It presents aggregate data on the age of children being served, the size of families being served, the number of families with female heads of household, the number of participant families receiving Aid to Families with Dependent Children (AFDC) or public assistance, and six other variables. Percentages of totals and mean scores are given when applicable.

Report D displays aggregate data on PCC program staff characteristics (see Illustration XXXII). It tells how many full and part-time paid employees the PCC program had by the following characteristics:

- Role
 - Professional
 - Non-Professional
- Primary Function
 - Administrative
 - Direct Service
 - Support Service
- Sex
 - Male
 - Female
- Employment Status
 - Full-time
 - Part-time
- Ethnicity
 - Mexican-American
 - Puerto Rican
 - Other Caucasian

- Black
- American Indian
- Native Alaskan
- Polynesian
- Oriental
- Other

It also displays the temporary paid staff on PCC payrolls, the turnover of PCC staff, and the reasons for staff turnover. It is not possible to identify individual PCC performance from these data.

Report E gives the aggregate program-wide statistics on PCC program services (see Illustration XXXVIII). It gives the total and the mean number of operating days during the quarter, the total and the mean number of days child care services were provided, and so forth. In all data are presented on 68 variables, including 34 independent variables.

Finally, Report F gives a rank order distribution of the frequency of service by PCC. It shows the median, the range, and the quarterly distribution, as well as the national average.

Processing PCC MIS Quarterly Reports--

Due to (a) the limited volume and relative concentration of the PCC MIS quarterly reports and (b) the number of individual calculations, electronic data processing of PCC MIS data is not cost-effective at this time. The PCC MIS, however, was designed for conversion from a manual to a computerized system.

At the present time, the following data processing procedures are being used.

On the 15th calendar day following the end of a quarterly reporting period, all quarterly reports not received by the national office or their surrogate are considered late submissions! Projects failing to

submit their quarterly reports within the stipulated time period are called immediately to determine why they have not met the deadline. If necessary, telephone assistance is furnished to resolve problems and to insure that steps are taken by the project to complete and submit accurate reports within five days. In addition, a written notification of non-receipt is mailed to PCC Directors who failed to comply with the deadlines. These procedures are strictly enforced and are intended to underscore the importance of timely submission of reports to facilitate rapid data processing and turn-around.

Should a PCC not complete a quarterly report package, that project will not be included in quarterly management output reports. National averages and summary reports of management statistics will be prepared on the basis of the total number of PCCs reporting. Any reports received after the 20th calendar day of the month cannot be processed.

When each set of quarterly reports is received, the date of receipt is entered on all forms and data validation procedures are implemented. Data validation procedures start with a preliminary review of a PCC's report package to ascertain whether all reports have been included and if all forms have been fully completed. An arithmetic figure must be reported for every data point. Projects have been instructed to use zero (0) as appropriate to indicate that a data point is not applicable or to indicate that no quantity should be reported. If a data item is unknown, the abbreviation UNK is suggested to signal missing information. All blanks and unknowns are considered unacceptable and require a call back to the project. Preliminary review findings are recorded by the validator on a data validation memorandum and mailed to the program (see Illustration XXXIV). The preliminary review process requires from 15 to 30 minutes per PCC.

A systematic list of internal cross-checks are then applied to each quarterly report. Tabulation errors, incorrect data resulting from improper data reduction procedures, and inconsistent or inaccurate data are systematically identified and purged. The internal cross-checks require approxi-

mately 45 minutes to one hour per PCC. Call backs to individual PCCs may be required to obtain corrected data, as a result of the cross-checks. These phone calls are made within 24 hours of applying the internal cross-checks.

A relatively large amount of time is spent on data validation on the assumption that good data is the best foundation for sound management decisions. It is felt that extra care in data validation pays high dividends in the quality and value of system output.

The manual processing of PCC MIS data starts by prorating personnel costs to functions of service. This is the most time-consuming aspect of PCC MIS data processing. It involves converting the time use of individual employees, consultants, and volunteers to dollar value. This is done by changing the hours spent by individuals in each of the functional categories to a percentage of their total time on the job during the reporting period and then multiplying those percentages by the dollar value of wages and salaries accrued to the employee during the reporting period. Finally, the dollar value shown in each functional category for each employee, consultant, and volunteer can be added for a personnel cost per function of service for that PCC. Frequently 5,000 separate calculations are required to complete this process for each PCC.

Subsequently, non-personnel costs are added to personnel costs to arrive at a cost per function of service. When this is done for all 35 PCCs, the person(s) processing the data can complete Quarterly Management Reports 4 through 10 and National Office Report B.

Frequency of service data is obtained from the Quarterly Report on Services to Participants II; Quarterly Report on Participant Characteristics; and Quarterly Report on Services to Participants I. The entire set of quarterly reports from PCCs contribute to the "Indicators of Potential Problems" reports.

DISTRIBUTION

The output of the PCC MIS is distributed in two different forms. Each Parent Child Center receives two copies of reports 1 through 10 that report that center's service and cost patterns. One of these reports is for the project grantee; the other is for the PCC director and staff. The project advisor is to have access to the PCC MIS data through the PCC director.

The national office of the Parent Child Center Program is to receive four copies of reports 1 through 10 on each PCC. It is also to receive five copies of the aggregate data for the PCC program: Management Reports A through F. One copy of each of the local program reports and one copy of the aggregate data for the national PCC program is to go into the permanent files maintained by the program. A similar set of reports is to be available for the chief of the Parent Child Center Program, and a third set is to be available for the grants management division of the Office of Child Development. The fourth set of local project reports is to be divided among the Program Coordinators of the Parent Child Center Program staff, to correspond with their assignments. The two sets of national aggregate data--Management Reports A through F--are to be available to the PCC Program Coordinator of the national PCC program staff.

The Chief of the Parent Child Center program will be responsible for additional dissemination of the quarter PCC MIS statistics to those in the agency to whom he has responsibility (for example, the Director of the Bureau of Head Start and the Director of the Bureau of Child Development Services).

Chapter V

PCC MIS Implementation

REGIONAL WORKSHOPS

Phased implementation of the PCC-MIS commenced with a series of three regional workshops held at one month intervals beginning in March, 1972. Directors and Data Coordinators from nine western area PCCs met in San Francisco March 12-15; representatives from 14 different PCCs attended the south-central workshop in Atlanta April 16-19; while the remaining 12 PCCs participated in the May 14-17 eastern area workshop held in Washington, D.C.

Workshop sessions were designed not only to train local personnel in recordkeeping and reporting procedures, but to allow PCCs to make criticisms and suggestions concerning the proposed content and procedures for the MIS. An important objective of the workshop series was to elicit PCC commitment to successful operation of the MIS by including local operators in the system design and by demonstrating potential management uses of MIS data on both the local and the national levels. The three workshops were conducted by a core team of five Abt staff members who participated in the development and on-going refinement of the system design and who were scheduled to later provide on-site technical assistance. Workshop size ranged from 30 to 45 participants including local PCC staff, OCD and national PCC staff, and other PCC affiliated personnel.

With the exception of two Alaska sites, all PCCs were represented at the regional workshops by both the Director and the Data Coordinator. Several Project Advisors, grantee agency representatives and OCD regional staff also attended, although their participation was not required. National PCC Program Coordinators attended the western and eastern area workshops, while the Chief of the Parent Child Center Program was present at both the Atlanta and the Washington, D.C., sessions. Members of the

PCC-MIS review panel also participated in the Atlanta and Washington workshops. Additionally, an OCD grants management specialist was present in Washington to clarify financial reporting requirements and to discuss the proposed plan to shift all PCCs to a common quarterly reporting cycle.

The presence of OCD and national PCC staff at all workshops proved critical in underscoring the need for the MIS and in calling for a strong commitment to its implementation. National staff also served as valuable resource persons regarding questions of contract compliance, PCC program guidelines, and national PCC policy. The workshops consequently serve not only as an MIS training session but as a forum for group and individual discussion of broader issues of concern to both national staff and local PCC operators.

Pre-Workshop Procedures

During the first two weeks of the contract, Abt Associates made telephone contact with the nine PCC Directors in the western region. These programs were informed that Abt Associates Inc. had been authorized to implement the MIS described in the Phase I report they had received earlier in the month. They were asked if they had read the Phase I report, and if they had any comments or recommendations to make regarding that report. Directors and Data Coordinators were then informed of plans for a regional workshop. The same procedure was followed with the remaining 26 PCCs and completed by February 28, 1972.

Three to four weeks prior to each workshop, participating PCCs were mailed a package of materials for pre-workshop preparation and a memorandum detailing workshop arrangements and agenda. The package included three draft data collection forms to be completed by PCCs prior to the workshop--

Family Intake, Staff Intake and Staff Time Utilization Records--together with instructions for collecting the required data. This preparatory exercise was adopted so that PCCs would come to the workshop already experienced with several components of the system and be alerted to potential implementation problems. Prior experience with the forms also expedited workshop proceedings since participants could focus immediately on critical issues and problems regarding data items, definitions and instructions, and staff resources required to implement the system. A sample of completed forms were brought to the workshops so that Abt staff could perform a preliminary assessment of PCC capability in recording accurate and complete data.

The Intake Records were selected for pre-workshop preparation since they constitute the logical base on which to "build" a standardized recordkeeping system, and are linked to the fundamental, yet complex, issues of focal participant definition, income eligibility, valuing donated goods and services and so forth. The Staff Utilization Record was included as it is one of the most critical and initially difficult records to complete. PCC experience with recording staff time prior to the workshops resulted in a discussion of specific problems that might not have otherwise been identified and provided Abt staff with useful feedback leading to clarification of definitions and recording procedures.

Delegate and Grantee Agencies, Project Advisors, and OCD regional representatives were notified of Abt Associates authorization to implement the MIS and were mailed a memorandum regarding the MIS workshops. While these agencies and persons were not invited as a group to participate in the workshops, requests to attend were handled on an individual basis. Provisions were also made to address their specific concerns and needs as potential system users during on-site technical assistance visits.

Workshop Structure

Each regional workshop included an equivalent three full days of sessions scheduled over a four day period. The workshops opened on a Sunday evening with introductions and an overview of forthcoming events. A social hour followed where participants became acquainted and shared PCC experiences and problems. Monday and Tuesday sessions were devoted to a systematic review of all MIS records and reports, combining whole group and small group training sessions with non-directed learning experiences to insure a maximum of active and attentive participation on the part of trainees. The following activities were included:

- Simulated Management Decision-Making Exercise Using the PCC-MIS
- Systematic Review of Recordkeeping Forms
- Role Play Exercise Using Staff Utilization Records
- Systematic Review of Quarterly Reporting Forms
- Fiscal Reporting for the MIS

The agenda for the final half-day session on Wednesday was dictated, in part, by the results and accomplishments from previous sessions. However, the closing session typically covered the following topics: workshop follow-up plans, preparation of local data collection plans, post-workshop implementation schedules, potential data uses, and PCC estimates of technical assistance needs. Where possible, special meetings were arranged for Directors to discuss subjects of common interest other than the MIS. Specific workshop strategies are detailed below.

- Simulated Management Decision-Making Exercise

On Monday morning, participants were asked to take part in a simulated management decision-making exercise designed to introduce the MIS in a non-directed manner and to raise pertinent management questions--thereby

helping to establish the need for an MIS. The simulation required that the PCC Directors and Data Coordinators be divided into evaluation teams of four or six members. The teams were then asked to review hypothetical information on two fictitious Parent Child Centers. Two packages of materials were prepared by Abt Associates including program narratives, selected MIS records and quarterly reports, and sample management output reports. The object of the simulation was to analyze the data and make a decision about which of the two hypothetical centers should receive a special "Improvement Grant" from a Federal agency.

Following a two hour review of narrative, statistical and financial reports, each team was given the opportunity to interview the hypothetical Center Directors' role played by Abt Associates staff within the guidelines of a prepared "profile." Following the fifteen minute interviews, each team was allowed one hour to make its decision about which center it felt deserved the special grant. In order to assist teams in evaluating the data and in linking data to decision-making, Abt Associates prepared a rating scale and tabulation sheet to be used in assessing center performance. Thirteen program operation dimensions were to be rated including staff time use, management of non-Federal share, appropriate program priorities and service delivery. Each team chairman reported the team decision with a summary of the process and reasons for reaching that decision. All participants were also asked to assess the effectiveness of the role reversal simulation in introducing potential management uses of the MIS data.

- Systematic Review of Recordkeeping and Reporting Forms

Monday afternoon and Tuesday morning workshop sessions focused primarily upon the systematic review of all local recordkeeping forms, file specifications, and quarterly reporting procedures. This called for an in-depth discussion of each data item including instructions for collecting the data and justification for its inclusion in the system. This review was intended to lead to common agreements about definitions and reporting procedures and

to afford PCCs an opportunity to participate directly in shaping the system. Directors and Data Coordinators were encouraged to respond to each data element, to request clarifications or to suggest revisions in the format or content of each record and report. These sessions also addressed the feasibility of substituting MIS records for other collection instruments currently in use and the interface between MIS quarterly reports and other reporting demands placed upon the PCCs.

● Role Play Exercise Using Staff Utilization Records

Prior to a detailed discussion of definitions and procedural questions associated with recording time use, Data Coordinators and Directors from different PCCs were paired with each other to carry out an exercise in using the Staff Utilization Records. Following an overview of the purpose of the form, participants were asked to actually complete a record documenting how they had used their time during the previous week. Data Coordinators and Directors then interviewed each other about their time use and estimated how they felt the other's time should have been recorded. Each pair compared results and discussed differences between self-completed records and those filled out by the partner on the basis of an interview. Problems and discrepancies identified through the exercise were discussed with the group as a whole leading to a clarification of functional categories and recording procedures.

● Fiscal Reporting for the MIS

A special session of the PCC-MIS was conducted to introduce the concept of functional cost analysis and to demonstrate both the management insight it provides and its value in making meaningful comparisons among different child care programs. Visual aids were used to compare allocation of resources by object category with the allocation of resources by functional category and to demonstrate the vital role of accurate staff time use documentation in labor intensive programs such as PCCs. Information requirements and fiscal reporting procedures essential for the functional cost analysis were outlined including wages and benefits accrued by paid employees and consultants, documentation of donated services and goods, accurate allocation of all staff, consultant and volunteer time to functional categories, and detailed cost data on non-personnel expenses. The session

included a review of the proposed MIS financial report calling for detailed line-item categories and instructions to insure standardized reporting of expenses. Specific examples taken from individual PCC budgets and fiscal reports were used to illustrate the inconsistent accounting and reporting practices currently used by the Parent Child Centers.

- Final Session

The final workshop session addressed follow-up procedures for local implementation of the MIS records and documentation of that process. Participants were given a schedule for phased introduction of each record in their use. These included the simulation and staff time utilization exercise conducted during the workshops. Data Collection Plan formats prepared by Abt Associates were distributed to the participants and were to be completed as the system became fully operational on the local level. Discussion during the final session also focused on the potential uses of the MIS data and development by each PCC of a local data use plan.

In preparation for on-site and telephone technical assistance, each PCC completed a form estimating the amount and type of assistance they felt would be required. The form also indicated preferred dates for on-site visits, advance notice required, and instructions for arranging transportation to the site. These "estimates of technical assistance needs" proved extremely valuable in preparing for the field effort, especially in arranging cost-effective travel schedules and in matching AAI staff skills with local PCC needs. Correct PCC addresses and phone numbers were also requested to facilitate later contact and to prepare an updated PCC directory for national distribution.

The purpose and scope of the Parent-Child Center Newsletter was also discussed during the final session. Consistent with the MIS objective of a two-way flow of information, the Newsletter was initiated to provide PCCs with a quarterly forum for exchanging information and ideas. The Newsletter would also be used to communicate progress with the MIS implementation and activities of the national PCC office and the OCD Participants were provided an opportunity to suggest subjects for inclusion in the newsletter and were encouraged to submit articles and photographs for publication.

Workshop Outcomes

By the end of each three day workshop, PCC Directors and Data Coordinators had been introduced to major PCC-MIS design considerations and were trained in the procedures required to implement both MIS records and quarterly reports. The workshop sessions also provided Directors and Data Coordinators with the skills and techniques for training their own staff in the collection and reporting of MIS data.

In addition, the fundamental objective of involving all local PCCs in the system design was successfully met at each workshop. Participants made numerous recommendations for alterations in records and reports, including additional data items, deletions, format changes, and clarifications in definitions and instructions.

Because all participants could not feasibly be involved in decisions regarding problems and concerns voiced at each workshop, it was Abt Associates' responsibility to weigh the value of recommendations and make changes in the MIS consistent with the expressed needs of as many PCCs as possible. These changes were incorporated into the User's Manual revised following each workshop and distributed to all PCCs. All PCCs were given an opportunity to submit reactions to changes in the system or to recommend further changes through June 12, 1972.

TECHNICAL ASSISTANCE

At least two man-days of on-site technical assistance (TA) were delivered to each Parent Child Center (except Cincinnati) during the period May through September 1972. Additional time on-site was required for multi-site grantees, especially those with centers located more than 25 miles apart and for those programs experiencing unusual problems such as high staff turnover.

In several cases, where it was impossible or unwise to provide all TA at one time, partial TA was delivered early in the field effort (June) followed with additional assistance as systems became fully operational.

Six staff members who had participated in at least two regional workshops visited a minimum of five sites each. Every attempt was made to match the skills of AAI staff members with the special technical needs of the PCCs in areas such as computer programming, functional cost accounting, ability to relate to particular PCC staff, parents, and/or grantees. The decision to assign appropriate staff to PCCs, however, precluded more cost effective serialized travel arrangements originally proposed.

Preparation for Site Visits

Prior to the major field effort scheduled for June-August, early on-site visits were made to two western area PCCs to provide technical assistance and to "pre-test" draft TA guidelines including tentative agendas, interview questionnaires, and formats for documenting basic information regarding local operations, data collection, data storage, data reporting, and inter-agency relationships. The TA package was subsequently revised and formalized to reflect on-site experience and emerging project needs. These materials are included in Appendix D.

Preliminary schedules and staff assignments for all technical assistance were established during the month of June. Staff members assigned to each site assumed responsibility for contacting the PCCs to confirm TA and for establishing feasible travel schedules for each wave of on-site visits. Several weeks prior to the scheduled visit, each PCC was called to reconfirm dates and to make detailed arrangements for the two to three day effort. A tentative agenda was

reviewed with the PCC Director for the purpose of scheduling appropriate meetings and interviews with PCC staff, delegate and grantee agencies, PAC members, Project Advisors and other persons suggested by the PCC. Staff were also requested to gather basic program operation information not already on file.

Provision of Technical Assistance

The following agenda served as a model for conducting on-site visits, although adjustments were frequently made to meet local program needs. Uniform formats included in the TA package were completed by field staff so that experiences and knowledge acquired during the course of on-site visits would not be lost. Every element of the local MIS system was documented to insure continuity in reporting and to provide a reference document for later communications and quarterly report validation.

● Director Interview

An initial interview with the PCC Director was conducted to review the proposed agenda and to complete a profile of the PCC designed to provide AAI staff with an overview of the local program. The following information was reviewed: number of sites and site location, participant enrollment, staff roster and organization chart, major service components and associated staff, types of services provided, fiscal reporting procedures and requirements, PYE and audit dates, other reporting requirements, and the status of the MIS implementation. The completed profile served as a basis for structuring a systematic review of data collection and reporting procedures leading to an early identification of potential problems.

● Meeting With All PCC Staff

AAI staff met with the entire staff to explain the need for an MIS, its value to local and national management decision-making, its unique features, and its implementation both locally and nationally. Basic forms and procedures for the local recordkeeping system were reviewed with appropriate staff while completed or sample weekly staff utilization records were discussed in depth with all staff. AAI staff were also required at many PCCs to respond to staff concerns about the MIS, and to additional time-consuming recordkeeping duties.

- Meeting the Policy Advisory Council

A modified version of the presentation outlined above was used to familiarize Policy Councils with the design and purpose of the PCC-MIS.

- Review of Data Collection and File Keeping Procedures with Data Coordinators

AAI staff systematically reviewed data collection and data storage procedures for all MIS records and reports with the Data Coordinator and other staff involved in collecting and compiling information. Staff inspected all files, adjunct forms, and routing procedures to insure adequate and efficient MIS implementation. Each step in the collection, compiling, and reporting process was verified and documented on an updated data collection plan. Where appropriate field staff also clarified definitions, designed adjunct forms, changed filing procedures and promoted changes in staff reporting responsibilities.

- Meeting with Grantee and/or Delegate Agency

Appropriate representatives (PCC liaison, Agency Director and/or fiscal officer) were interviewed by the AAI staff member to explain the new PCC-MIS and determine the interface with local grantee management and reporting needs. Specific issues addressed during the meeting included problems associated with changing the PCC PYE date, non-federal share documentation, recent audits (if any), and carryover and shortages in the PCC budget. General information about the Grantee agency was also gathered including number of grants administered and their PYE dates, the type of accounting system used, audit dates and, where applicable, an overview of computerized accounting and recordkeeping systems. Communications between grantee and PCC were discussed to determine how (if at all) fiscal information was shared with the PCC Director. Where appropriate AAI negotiated changes in PCC reporting requirements requested by the Grantee: every effort was made to substitute MIS quarterly report data.

Technical Assistance Follow-Up

At the completion of each wave of on-site visits, field staff were thoroughly debriefed by the Project Directors to insure that technical assistance objectives were satisfactorily met and to review interview guides and data collection plans completed in the field. Special problems identified by staff members were discussed to determine whether satisfactory resolutions had been reached and what

follow-up procedures would be required. Completed TA packages were maintained on file to facilitate future communications. Follow-up letters were mailed to all PCCs to thank them for their cooperation and to confirm any decisions made during the visit.

Field Staff Training

All Abt Associates staff members who provided on-site technical assistance had participated in at least two regional workshops and were, therefore, acquainted with PCC personnel, thoroughly familiar with PCC-MIS recordkeeping and reporting requirements, and cognizant of the problems and issues addressed during the conferences.

Two in-house briefings were conducted June 26-27 to train staff in special technical assistance procedures. Materials and guides prepared for on-site visits were distributed to staff and discussed in depth. Lessons gleaned from prior visits to six PCCs by senior staff were shared with the entire field staff and vital elements of the system were reviewed. Informal written materials summarizing outcomes were also prepared to assist staff in explaining the need for an MIS, and for responding to the most common and problematical questions raised by PCC staff and workshop participants. Staff members were also briefed on current PCC guidelines and other federal agency guidelines pertinent to PCC operations since previous workshop experience indicated that many programs were not fully aware of current regulations.

While some field staff were well experienced in cost accounting and reporting procedures, an intensive review of basic accounting principles was conducted to prepare staff for interviews with accountants, comptrollers, fiscal officers and bookkeepers and for a thorough inspection of financial records. Discussion focused on cash vs. accrual accounting systems, double and single entry ledgers, common payroll practices, and so forth. An outside consultant with experience in auditing large Community Action Agencies also familiarized the field staff with fiscal management practices commonly adopted by these grantees.

PHASED IMPLEMENTATION

In order to help the local PCCs in instituting the new reporting and operating procedures, Abt Associates developed a systematic phased implementation schedule for each region. This schedule (as printed in the PCC Newsletter) is presented on the following page. It was either included in a memorandum mailed to PCCs following each workshop or reviewed at the close of the workshop. The phased implementation was designed to allow PCCs adequate time to introduce the individual MIS records to PCC staff; to work out data collection procedures; and to identify and resolve problems prior to the July 1 on-line MIS data collection and reporting. Abt Associates monitored the MIS implementation closely in each area to insure that PCCs were on-schedule and to offer outside support in dealing with unexpected problems, staff resistance to the new system and so forth. The following major checkpoints were incorporated into the implementation and monitoring schedule.

- Frequent Telephone Communications

Five AAI staff were available throughout the April-June implementation period to answer questions about the records and reports, to review or clarify definitions and instructions for data collection, and to assist PCCs with special concerns or problems. Following each workshop AAI staff also initiated telephone calls to each PCC to assess whether or not appropriate progress had been made toward full system implementation. Implementation of the MIS was discussed with the Directors rather than Data Coordinators both to reinforce chains of authority and to avoid being threatening to Data Coordinators who might view direct questions about the MIS as tests of their competency rather than as an offer of assistance. All telephone communications were fully documented by AAI staff including date of call; PCC staff member contacted; problems and issues discussed; and outcomes. These records, extremely useful in managing information exchanged or decisions reached during telephone calls, served as a reference source for later calls and on-site technical assistance.

- Telephone Questionnaire

In addition to the above communications, an informal telephone questionnaire was conducted with 22 PCCs in the western and south-central regions to (a)

Parent and Child Center MIS Reporting Schedule

WESTERN PCC MIS WORKSHOP PARTICIPANTS

DEADLINES MET:

- April 3 Introduced the new voucher forms for "Donated Goods and Services".
- April 3 Transferred current staff information to standard "Staff Intake Form" and "Employee Record Form".
- April 3 Transferred current participant family characteristics information to "Characteristics of Participant Families: Annual In-Take Form" and "Participant Family Enrollment Records".
- April 6 Informed Grantee of the new PCC MIS and discussed the system and its implications with them.
- April 7 Introduced "Weekly Staff Utilization Records" (hopefully in place of current weekly time sheets).
- April 7 Introduced "Weekly Family Service Record". (You might try assigning specific families to specific staff members, thereby decentralizing data collection responsibilities.)
- May 3 Made out a "Parent Education and Training Record for the Quarter" on the basis of the quarter's experience to date.
- May 5 Made out a "Family Health Services Record for the Quarter" on the basis of the quarter's experience to date.
- May 9 Final date for arrangements for on-site Technical Assistance.
- May 9 Made out and sent copies of the Quarterly Reports to the National PCC Data Coordinator using April data.

DEADLINES TO BE MET:

- May 27 First Draft of a Data Collection Plan and Data Use Plan for your center.
- June 12 Last day to initiate suggestions for changes in the PCC MIS Data Collection and Reporting Forms.
- June 15 All revisions should have been made on your PCC's Data Collection and Data Use Plans and these plans should be available for local and national PCC staff use.
- July 1 Beginning of On-line PCC MIS data collection and reporting.

CENTRAL PCC MIS WORKSHOP PARTICIPANTS

DEADLINES MET:

- May 1 Transferred current staff information to standard "Staff Intake" Form and "Employee Record" Form.
- May 1 Transferred current participant family characteristics information to "Characteristics of Participant Families: Annual In-Take Record" and "Participant Family Enrollment Records".
- May 5 Informed Grantee of the new PCC MIS and discuss the system and its implications with them.
- May 5 Introduced "Weekly Staff Utilization Records" (hopefully in place of current weekly time sheets).
- May 5 Introduced "Weekly Family Service Record". (You might try assigning specific staff members, thereby decentralizing data collection responsibilities.)

DEADLINES TO BE MET:

- May 27 First Draft of a Data Collection Plan and Data Use Plan for your center.
- May 31 Make out a "Parent Education and Training Record for the Quarter" on the basis of the quarter's experience to date.
- May 31 Make out a "Family Health Services Record for the Quarter" on the basis of the quarter's experience to date.
- June 6 Final date for arrangements for on-site Technical Assistance.
- June 9 Make out and send copies of the Quarterly Reports to the National PCC Data Coordinator using May data.
- June 12 Last day to initiate suggestions for changes in the PCC MIS Data Collection and Reporting Forms.
- June 15 All revisions should have been made on your PCC's Data Collection and Data Use Plans and these plans should be available for local and national PCC staff use.
- July 1 Beginning of On-line PCC MIS data collection and reporting.

EASTERN PCC MIS WORKSHOP PARTICIPANTS

PROPOSED DEADLINES TO BE MET:

- June 1 Inform Grantee of the new PCC MIS and discuss the system and its implications with them.
- June 1 Introduce the new voucher forms for "Donated Goods and Services".
- June 1 Transfer current staff information to standard "Staff Intake Form" and "Employee Record Form".
- June 1 Transfer current participant family characteristics information to "Characteristics of Participant Families: Annual In-Take Form" and "Participant Family Enrollment Records".
- June 7 Introduce "Weekly Staff Utilization Records" (hopefully in place of current weekly time sheets).
- June 7 Introduce "Weekly Family Service Record". (Perhaps by assigning specific families to specific staff members, thereby decentralizing data collection responsibilities.)
- June 12 Last day to initiate suggestion for changes in the PCC MIS Data Collection and Reporting Forms.
- June 15 All revisions should have been made on your PCC's Data Collection and Data Use Plans and these Plans should be available for local and national PCC staff use.
- June 28 First draft of a Data Collection Plan and Data Use Plan for your center.
- July 1 Beginning of On-Line PCC MIS data collection and reporting.
- July 3 Make out a "Parent Education and Training Record for the Quarter" on the basis of the quarter's experience to date.
- July 6 Make out a "Family Health Services Record for the Quarter" on the basis of the quarter's experience to date.
- July 10 Final date for arrangements for on-site Technical Assistance.
- July 10 Make out and send copies of the Quarterly Reports to the National PCC Data Coordinator using June Data.

NOTE: While Aht Associates Inc. will not be collecting the individual record-keeping forms maintained in the Parent Child Centers (PCCs), one of Aht's task assignments is to develop common forms to be maintained in the centers. The data on these forms will be held in strict confidence on the part of the coordinator in each Parent Child Center. All employees and parents should be made aware of each of these forms and their purpose. The PCC Data Coordinator should obtain consent of staff participants prior to the completion of the requisite forms. Records maintained for the previous National Reporting System are no longer required.

determine if local recordkeeping was being maintained on the new system and (b) generate hard data on PCCs for use in the PCC Newsletter. The PCCs were requested to compile information on nine MIS staff characteristics (number, age, ethnicity, function and so forth); these data were later compiled and graphically displayed in the second issue of the Newsletter.

- Data Collection Plan

Prior to on-line reporting, all PCCs were requested to complete a draft data collection and reporting plan and to submit the plan to Abt Associates for review. The data collection plan format developed by AAI calls for a detailed illustration of how the MIS is implemented in each PCC. The completed plan documents the flow of information within the center, specifically indicating who is responsible and at what intervals for: filling out the recordkeeping forms, updating forms as changes occur, compiling the data, and completing the quarterly reports. Filing procedures for each recordkeeping form are also specified.

The systematic, written documentation was intended to assist PCCs in "thinking through" the implementation process, assigning specific data collection and reporting responsibilities to appropriate staff, and identifying potential trouble spots early in the start-up phase. A data collection plan was also essential to insure that a new person could assume the responsibility of Data Coordinator without a loss of continuity in reporting. Finally, each program's completed plan was used to prepare field staff for on-site technical assistance. Draft data collection plans were revised and finalized during the on-site visits. Final plans were to be maintained on file by both the national PCC office and local programs.

- Trial Quarterly Reports

While telephone communications and other monitoring procedures were used to assist PCCs in implementing MIS records, trial quarterly reports were required to assess PCCs ability to accurately compile and report data from those records on a timely basis. Each PCC made out and sent sample quarterly reports to the National Data Coordinator using one month's data (April for the western region; May for the south-central region; June for the eastern region). These reports were reviewed by AAI staff and further telephone assistance was provided to individual PCCs as required. The trial quarterly reports were also used by the field staff during on-site visits as a concrete reference document when reviewing specific collection, tabulation, and reduction procedures related to quarterly re-

NEWSLETTER

The National PCC Quarterly Newsletter was proposed as a component of the PCC-MIS in the Phase I Final Report to help produce useful information flow in two directions and to serve as a resource for local PCCs in eliminating trial and error learning. It reinforces the communication established by the MIS and serves as a regularized method of information exchange among centers. The newsletter was to be used by both national and local PCC staff to exchange information and to help facilitate the best use of good management information as it became available.

The initial newsletter, published several weeks following Abt Associates authorization to design and implement the PCC-MIS, was used to disseminate information about the proposed system and to elicit feedback from the local programs. The five page issue contained an open letter from the Chief of the Parent Child Center Program; an overview of the MIS, prepared by Abt Associates, including basic design considerations, and a schedule for forthcoming workshops. The first issue also included a PCC Directory to encourage centers to begin making direct contact with other centers within the entire PCC program.

The subsequent three issues, published in May, August and November, continued to carry highlights of the MIS implementation such as photographs and summaries of MIS regional workshops and the National PCC Conference. At the same time, the Newsletter was expanded to serve as a vehicle for all PCCs to share their successes, problems, questions, and suggestions. The twelve page issues included numerous articles and photographs prepared and submitted by PCC staff or drafted by the Abt Associates editor on the basis of telephone interviews.

Each Newsletter issue focused on a special "theme", although numerous articles addressing other subjects were included. The first issue was devoted to the new MIS; the second to "introducing the PCCs"; the third to the physical plant and interior design of PCC facilities; the fourth to health and nutrition programs. A list of additional themes or focal subjects for subsequent newsletters was also prepared by Abt Associates. Special features included in each Newsletter were (1) reported changes in PCC personnel, (2) updated PCC directories, (3) a parent's corner, (4) MIS information, and (5) news from OCD and the National PCC office.

* See Abt Associates Inc., PCC MIS Documentation (Cambridge, Massachusetts, Abt Associates Inc., 1973) Vol. I, p. 127-128.

In response to increasing demands for the Newsletter and a growing mailing list, circulation was increased from 2,000 copies of the first issue to 5,000 for the second issue. Copies were distributed to PCCs, the national office, Project Advisors, Grantees and other persons in the field of child care who requested copies. Although demand for the Newsletter increased with each issue, circulation of the third and fourth issues was reduced to 3,000 and 2,000 copies, respectively, due to budgetary constraints.

USER'S MANUAL

The purpose of the PCC-MIS User's Manual is to describe procedures for collecting, recording, and reporting critical information for making key management decisions in a uniform and timely manner. The User's Manual was drafted before the first regional workshop and the results of each workshop were reflected in it. It serves as a reference manual to insure uniformity of definitions and procedures at local Parent Child Centers.

The User's Manual has two sections. The first section includes a set of mandatory forms to be maintained in all Parent Child Centers and recommended procedures for data collection. These records are central to the system, both for operational purposes and statistical reporting and research purposes. While not sent to Washington, these records are the primary source of all required information reported quarterly to the National Data Coordinator and can support special studies of program impact. At the same time, the records are offered to individual programs for the value they may have to local operations. The recordkeeping forms are:

- Family Intake Record
- Family Enrollment Record
- Employee In-Take Record
- Weekly Family Service Record
- Family Health Services Record for the Quarter
- Weekly Staff Utilization Record
- Donated Service Voucher
- Donated Goods Voucher

The second section describes the procedures for submitting required quarterly reports to the U.S. Office of Child Development. When these reports are processed and displayed, they provide management reports on local program characteristics, services to participants, and operating costs. The quarterly reports are:

- Quarterly Narrative Report
- Quarterly Report on Participant Characteristics
- Quarterly Report on Staff Characteristics

- Quarterly Report on Services to Participants I
- Quarterly Report on Services to Participants II
- Quarterly Report on Services to Participants III
- Quarterly Staff Utilization Report
- Quarterly Report on Donated Services (Allowable as Non-Federal Share)
- Quarterly Report on Donated Services Volunteered or Paid For From Other Federal Agencies (Not Allowable as Non-Federal Share)
- Grantee Quarterly Financial Report*

Both sections are organized by the forms they describe. Each recordkeeping and reporting form is accompanied by a short explanation of the form's purpose; suggested procedures for completing the form; data collection procedures for the information to be shown on the form; standard definitions for items that appear on the form; recommendations for filing the records; and a sample completed form.

In order to accommodate future changes in the system, the Manual is printed on three hole paper and packaged "notebook" style with tab dividers. Single pages or sections can be added, deleted or altered without reprinting the entire manual. The Manual is color-coded to underscore the linkages between records and quarterly reports and to further distinguish forms associated with participants, staff and service data.

The Final User's Manual represents the combined contribution of national PCC staff, local program operators and AAI staff to the development and refinement of the recordkeeping and reporting system. Data collection forms were drafted for the Phase I final report based on interviews with OCD management, national staff and seven PCC programs and project advisors to assess information needs for decision-making. These formats served as the basis for development of the first draft User's Manual introduced at the western-area workshop. The User's Manual was revised following each workshop and again following each review by the PCC-MIS Review Panel to incorporate recommendations for changes and improvement.

Chapter VI

PCC MIS Data Uses

Reliable cost and program service information has a variety of uses. It can be used to establish benchmarks for good program management. It can be used to evaluate the effectiveness and the efficiency of a program. It can be used for projecting resource requirements for continued program operation. It can be used to justify the continuation and/or expansion of a project or program, or conversely to justify the elimination of a project or program. When the efficacy of a program is at question, these data can be used for cost-benefit analysis. In addition, reliable cost and program information is invaluable to those who must account for expenditures.

Cost Controls--

Perhaps the most basic management use of the PCC MIS data is for cost controls. The PCC MIS encourages three forms of cost controls: inventory controls, investment criteria, and management control.

Inventory controls are mechanisms for controlling expenditures on supplies, equipment, and other types of property. The PCC MIS initiates this form of control by requiring a chart of accounts that separates educational, office, health, and maintenance supplies from one another. A PCC director can exercise greater control in the use of supplies by calculating educational, office, health, and maintenance supplies separately as costs per enrollee and per average daily attendant. The former will give an indication of the reasonableness of the budgeted amount, while a comparison of the two unit costs can indicate over spending or misuse of supplies. If the cost per enrollee for a given type of supplies is reasonable and there is a large difference between the cost per enrollee and the cost per average daily attendant, then the program is over spending for that type of supplies. Corrections can be made by spending less for supplies--either through allocating less money or through tightening controls on the use of supplies to avoid misuse or stealing.

Investment criteria are rules of thumb that can be employed when making investment decisions. For example, the advisability of making large capital expenditures such as renovations and equipment purchases can be tested by determining the annual cost savings they will achieve or the extra income they will make possible and comparing that amount to the total cost of the anticipated investment divided by its life expectancy and prorated per enrollee. A market analysis may be required before making plans to enlarge. It seems questionable for a center that is operating under capacity to expand unless there is convincing evidence to the contrary.

One of the best investment criterion for the reasonableness of rental costs for space for a child care center is to calculate the cost per licensed slot. The cost of low enrollment and of absenteeism to the PCC can be calculated by determining the rental cost per child enrolled, and per average daily attendant and comparing those figures with the cost per licensed slot.

Management Controls--the PCC is not usually the legal recipient of Federal funds. It is dependent upon either a grantee (often a Community Action Program (CAP) Agency) or a delegate agency for paying bills, purchasing supplies, and keeping abreast of PCC expenditures. In the past this dependent relationship has occasionally created operating problems for PCCs and grantees alike. PCCs have lacked ready access to pertinent financial information, and grantees have lacked information about PCC actions. The PCC MIS remedies these problems. It institutes procedures that require PCCs and grantees to share information. These procedures make it possible to pinpoint malfunctions in the flow of management information. Failure to meet reporting requirements can be traced to individuals who can be held accountable. This form of management control is indispensable to good program management.

Resource Allocation--

Because child care is a labor intensive activity, the most critical management resource is personnel time. When staff time is inappropriately managed, underenrollment, higher unit cost, and turnover of both staff and participants is likely.

Simple analysis of the staff time utilization records of the PCC MIS can yield high management dividends. If less than 12% of the operating expenses are spent on administration, it is likely that the center has either a reporting problem or a loss of management control. If more than 25% of the operating costs are spent on administration, there is likely to be inefficiency or "overkill" in the management process. Low rates of expenditure on fund raising correlates with a shortage of non-federal support for the PCC. Too large an investment in staff training and the on-the-job training of professional staff by professional staff often means that participants and paraprofessional staff are getting shortchanged, but a small investment in the training of paraprofessionals usually indicates both inefficiency and a lower than necessary quality of service to participants. High staff turnover disrupts the continuity of service, yet no staff turnover suggests that employees are not growing. A PCC that spends more than half of its operating budget on overhead (administration, occupancy, and staff training) is not delivering enough services.

Cost-Efficiency--

Cost-efficiency analysis requires three sets of data: (1) operating costs and output under optimum conditions, (2) actual operating costs, and (3) actual output. The PCC MIS determines the operating costs of each Parent Child Center, measures the center's output, and calculates unit costs of output. The model outlined below can be used by a Parent Child Center director, the national office of the Parent Child Center Program, or both to establish a PCC's operating costs and output under ideal conditions.

A Model for PCC Resource Planning

Management Problem: Determination of the resources needed for next year's PCC project.

<u>Inputs to the Decision</u>	<u>Constraints</u>
1. Number of participants to be served	● The demand for services by eligible recipients
2. Number of staff members required per participant	● Licensing requirements that establish maximum staff-to-child ratios; the number of concurrent sessions or activities planned
3. Number of sessions per day	● (Center based activities) length of a session, and space requirements per person being served (often regulated by state law) ● (Home based activities) travel time, average client-to-staff ratios, length of session
4. Number of sessions per participant per week	● The minimum number of sessions necessary for making a worthwhile service available
5. Number of operating days	● Holidays and vacations
6. Operating efficiency (i.e., average attendance and interruptions in service due to bad weather, etc.)	● Over enrollment to increase operating efficiency may add to the costs of ancillary services such as health services
7. The scope of ancillary services	● The availability of these services in the community and their cost

Calculating Number of Focal Participants to be Served

(number of staff members) x (number of participants per staff member) x (number of sessions per day) x (number of sessions per participant per week) x (operating efficiency) = total number of participants that can be served per week.

Space Constraints

(amount of useable indoor space available) ÷ (the number of sq. feet required per participant) = the number of participants that can be served per session.

Social and Health Service Delivery Requirements

(number of participants enrolled) x (desired frequency of service per quarter) x (operating efficiency) = Service Delivery Requirements Per Quarter.

Food Services

(number of sessions per day where meals are served x (number of persons per sessions) x (number of sessions per week) x (operating efficiency) = number of meals per week to be served.

Parent Education and Training

(number of Families Enrolled x 2 parents per family - number of Female Heads of Household) = (number of parents enrolled) x (number of sessions per month) x (number of months per year this service is offered) x (operating efficiency) - (number of persons per Parent Education and Training session) = Total number of Parent Education and Training.

Conversion to Dollars and Determining the Operating Efficiency

All of these totals can be converted to dollars by multiplying them by the unit costs shown in the management output reports. It is also possible to construct a budget from the facts already ascertained. If one calculates the unit costs from an ideal construct of the PCC developed along the lines outlined above, and compares those unit costs with the unit costs shown through experience, it is possible to determine how cost efficient the PCC is currently being operated.

The model outlined above is also proposed for use in making refunding decisions regarding PCC grant applications.

The Context for using the PCC MIS in Management Decision-Making--

The PCC MIS was designed to deal with management decisions at three levels of decision-making. It was designed to serve PCCs and their supporting agents, the national PCC program office, and Federal Government Policy-Makers and Program Planners.

The PCC MIS was also designed to contribute to a wide-variety of different types of management decisions. Refunding/annual planning, contract compliance, day-to-day operations (such as best use of available resources), long range planning, and justification for the continued use of public funds are all covered by the system.

Finally, the PCC MIS is designed so that each of its three sub-systems can be used independently from the system as a whole as tools for management decision-making. The recordkeeping system can be used to track staff and participant turnover, ascertain frequencies of service, and establish patterns of personnel time use. It can be used to link services to individual families. The quarterly reports provide a profile of each PCC's staff, participants, services, and personnel time use. Some of this information is lost in the conversions to management reports. The management reports afford insight into potential operating problems, frequency of service per participant, unit costs, costs per functional activity, overhead rates and influences on direct costs, and the PCC program as a whole.

Data uses at each of the three levels of management decision-making are discussed below. At each level of decision-making types of management decisions are discussed, and selected uses of each sub-system in management decision-making are suggested.

Selected PCC MIS Data Uses for Parent Child Centers and their Supporting Agents

PCC directors, policy councils, project advisors, delegate agencies, and grantees have a regular need for information that they can use in making management decisions. To one degree or another each of these decision-makers are asked to make long range decisions, annual planning decision, and day-to-day project operating decisions. Each of these types of decisions, in turn, involve questions of best use of available resources, contract compliance, cash flow, and project objectives.

Best Use of Available resources at the local level.--

Management decisions that depend upon judgements about the best use of available resources are probably the most basic kind of management problems that local management decision-makers and policy-makers are asked to address. Fundamental decisions such as:

- "Should the organization and operation of the program be changed in any way?";
- "Are personnel costs too high?";
- "Should the mix of para-professional and professional staff members be changed?";
- "Are work tasks organized properly?"; and
- "Has the proper amount of time been spent by staff on administrative functions and on direct service functions?"

are in this category of management problems. They are essentially resource allocation questions and require three sets of information for a sound decision: (1) a list of program and project priorities, (2) a statement of how resources are currently being allocated, and (3) an estimate of how proposed changes will affect the allocation of available or potentially available resources.

The PCC MIS provides the second set of information necessary for making resource allocation decisions and it furnishes decision-makers with an experimental base for predicting the resource requirements of alternative allocation strategies. The management reports contain the best information on overall resource utilization on a project basis. They link costs to services. They prorate personnel costs and non-personnel costs to functions of service. They show overhead costs and prorate overhead to direct service costs, and they give unit costs. All of these pieces of information are useful to making resource allocation decisions.

Local PCC allocation decisions, however, often require greater detail for sound management decision-making. If this is the case, the quarterly reports and the local PCC MIS records will be useful. The quarterly reports show how much each staff member was paid during a given quarter and they tell how that staff member used his or her time (see "Quarterly Report," Illustration XV). The quarterly reports also show how volunteer's and third party paid helper's time is utilized during the the quarter (see "Quarterly Report on Donated Services Volunteered or Paid from Other Federal Agencies," Illustration XVII). The "Grantee Quarterly Financial Report" presents a picture of how non-personnel expenditures are allocated.

Finally, the local recordkeeping sub-system yields the most detailed information on resource allocation. The "Weekly Staff Utilization Record" (Illustration VII) documents the use of staff time by individual staff member on a weekly basis. Together with the "Donated Service Voucher" (Illustration VIII), the "Donated Goods Voucher" (Illustration IX), and the accounting records of original entry, this record gives a complete picture of resource allocation on a week by week, month by month basis.

Taken together, the management reports, the quarterly reports, and the local records of the PCC MIS provide a complete accounting of time use and costs for a PCC. Of course, different allocation decisions require different levels of data aggregation. Some of the decisions, such as "Are personnel costs too high?", can be made from the "Grantee Quarterly Financial Report," whereas others, such as "Are work tasks organized properly?", require an analysis of "Weekly Staff Utilization Records."

Contract Compliance--

As the primary sponsor of the PCC program, the Federal government has established conditions which must be met by all Parent Child Center. These conditions are contract obligations, and failure to comply with them can lead to legal action.

While Federal requirements allow PCCs a wide latitude for decision-making in most areas, they are quite specific in other areas. Four Federal requirements tower above a series of possible grant conditions as contract obligations. These four requirements are:

- 20% of total PCC project costs must be met from non-Federal sources
- each participating family must have at least one child under three years of age or an expectant mother enrolled in the program
- 90% of the participant families must be either on welfare or below the poverty income level; and
- at least 51% of the PCC's policy council must be made up from program participants.

The PCC MIS is designed so that local and national program managers can determine at a glance if they are complying with Federal contract requirements. The "Family In-Take Record" (Illustration II) establishes program eligibility and items on the "Quarterly Report on Participant Characteristics" (Illustration X) provide a cross check on family eligibility. All other basic contract compliance questions are answered in "Quarterly Management Report Number 2" (Illustration XX).

The "Quarterly Report on Staff Characteristics" (Illustration XI) furnishes the information needed to compile and check the progress of "Affirmative Action Plans" required of Equal Opportunity Employers.

Cash flow.--

Whenever employees have to be paid and non-personnel expenses are incurred, there is a potential cash flow problem for management. The amount and timing of income must either correspond to or be greater than expenditures incurred and paid, if an organization is to remain economically solvent.

The PCC MIS addresses this problem in two ways. It calculates each PCC's spending rate and "flags" or draws to attention any PCC that is either overspending or underspending according to the funds committed by the Federal Government and the agreed to spending plan for those funds. It also tracks the non-Federal share of each project's operating budget. PCCs that are not generating enough non-Federal resources are "flagged" on "Quarterly Management Report Number 2." Finally, "Quarterly Management Report Number 9" analyzes how non-Federal resources are being generated and spent.

Project objectives.--

The very structure of the PCC program establishes many local project objectives. It dictates that PCCs provide one, or a combination, of three types of infant education--(1) infant education in a group setting, (2) infant education in an individualized setting, or (3) parent-child interaction sessions. It also dictates that PCCs provide parent education and training sessions, social and economic services to families, evaluation and referral services, health services, and food services. Delivery of each of these sets of service is a project objective.

The PCC MIS formalizes these objectives and measures services that constitute efforts to achieve them. "Quarterly Management Report Number 3: Frequency of Service Per Participant" (Illustration XXI) indicates both the scope of services provided by a PCC and the frequency of those services during any given quarter.

Other project objectives, such as employment of indigenous para-professionals, the use of fair employment practices, and continuity of services, can be monitored by reviewing the PCCs "Quarterly Report on Staff Characteristics" (Illustration XI), its "Quarterly Report on Services to Participants I" (Illustration XII), and the "Employee In-Take Records" (Illustration IV).

Project objectives for participant families can be monitored on the "Weekly Family Service Record" (Illustration V) and the "Family Health Services Record" (Illustration VI). An objective of making project opportunities available to children with handicapping conditions can be monitored by checking the third page of "Family In-Take Record" (Illustration II).

Selected PCC MIS Data Uses for the National PCC Program Office

The chief of the PCC program, PCC program coordinators, the Office of Child Development Grants Management Division, and the Director of Project Head Start are all primary users of the PCC MIS at the national level of the program. They are called upon to make refunding decisions, monitor contract compliance, identify potential operating problems that require remedy, recommend changes in program structure, and justify continued use of public funds.

Refunding Decisions.--

Refunding decisions are or at least should be made on the basis of performance and proposed plans. The PCC MIS establishes the performance of every PCC. It identifies potential problems in recordkeeping, reporting, continuity of service, spending rate, contract compliance, and program well-being. It reports levels of service, unit costs of service, per participant costs, overhead rates, and how resources have been utilized.

Contract Compliance.--

The PCC MIS tells national program officials at a glance if local PCCs are meeting their contractual obligations (Illustration XX).

Identification of potential operating problems that require remedy.--

The first two quarterly management reports summarize possible operating problems that require remedy (Illustrations XIX and XX). More complex and less critical operating problems can also be identified through the process of verifying quarterly report data. For this reason, Abt Associates Inc. suggests that PCC Program Coordinators be involved in processing PCC MIS data.

Recommend Changes in Program Structure.--

Recommendations in program structure should emanate from two sources: program performance and new theory about child development and parenting. The PCC MIS cannot help with the second source of recommended changes, but it is the prime source of systematic information about the program's performance strengths and weaknesses. Some of these findings flow naturally from the PCC MIS management reports. Others will have to be garnered through analysis of PCC MIS data. For example, it seems probable that the cost per participant correlates highly with the degree of staff professionalism and the adult-child ratio in effect at a center. However, it is not clear to what extent changes in child and parenting outcomes are associated with professional levels of knowledge and low adult-child ratios and answers to these questions could fundamentally alter PCC program structure. A large part of the answer to these questions can be gained from an analysis of PCC MIS data.

Justification for the Continued Use of Public Funds.--

The PCC MIS Quarterly Management Reports that summarize the management statistics for the PCC program are an excellent source of data for justifying the continued use of public funds. They present data

per participant, per family, and per local participant at annual rates. They show how much Federal money has gone toward direct services, as compared to support services. They profile the characteristics of the participants in the POC program and of the staff members who provide services to participants. They detail program services and they aggregate cost accounting data.

These data are in a form that permits a specialized presentation to the office of the secretary or to Congress. They are also in a form that permits a more extended display of program or implementation for those that seek greater detail.

Jointly Prepared Memorandum for National Policy Makers

The office of the secretary of Health, Education, and Welfare, and the management of the Federal Government Division of HEW, the Executive Office of the President, and the Congress of the United States are the most important Federal policy-making and program planning bodies that are likely to be involved in the POC program. These policy makers are more likely to be interested in the program and its outputs than in procedural, administrative, or management details. A brief summary of program results and a detailed description of the program participants.

The POC program is a product of national policy-making in that it is a major part of a larger Federal program, the Head Start Program. Unlike the Head Start program, it is not an alternative mode of service delivery within the same program as the Head Start Program. The program could be considered as a different way of doing the same thing, but it is not. It is a separate program that is designed to be a part of the Head Start program. It is a separate program that is designed to be a part of the Head Start program. It is a separate program that is designed to be a part of the Head Start program.

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to parents and families, not just services to child. It looks more
in terms of participants, families, and family participation, not
simply costs per child. It presents resource use in terms of a
broader range of objectives than Head Start.

The 1991 MI report is available for policy makers as well as program
managers.

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as does the apparent relationship between a high volume of child care and supervision services and a lower than national average cost per unit of service.

Because recordkeeping and reporting are time consuming and expensive, many people have argued that these functions detract from service delivery. Just the opposite seems to be true, projects that neglect recordkeeping and reporting tend to be less organized and less efficient than projects that keep good records and use them in making decisions. The EIC-MI helps local EICs capitalize on good records. This emphasis on recordkeeping should be maintained.

The procedures and techniques developed for the EIC-MI probably have transferable uses to the extent possible. The insights and experience gained as a result of this project should be transferred and built upon. For example, the experience with the "data coordinator" deserves special attention.

The EIC-MI concentrated recordkeeping and reporting responsibilities in a single coordinator. This was the key to the project. EICs experience with recordkeeping and reporting are limited. This is especially true for the rural areas. The role of the data coordinator varies from project to project but in the EIC-MI this person is responsible for the record keeping, weekly and monthly, and for analyzing and reporting on the data. The data coordinator is also responsible for the maintenance of the data base and for the coordination of the data base with the other data bases. The data coordinator is also responsible for the coordination of the data base with the other data bases.

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The data coordinator need not be a college graduate or an accountant. Ideally, that person should be persistent, compulsive, and concerned about details. Legal secretaries often make good data coordinators, as do bookkeepers, shipping clerks, store clerks, or any one who is concerned about upkeep of property and record maintenance.

During the design and implementation phase of the ICC MIS project, data coordinators were involved in the system design and trained in data collection and reporting. They were also given a limited amount of training in the use of the data being collected.

The experience with data coordinators in the ICC MIS suggests that such a person can play an important role in improving the management of human service programs. It is frequently difficult to hire good experienced multi-functional center directors. They do not exist in very large numbers, and they are almost all currently employed in good positions. On the other hand, the presence of a trained data coordinator, who is part of a management team, can easily make it possible to develop potential management on-the-job while holding center personnel accountable through reliable recordkeeping and timely reporting.

It can be concluded that the Federal government frequently:

- demands large quantities of information from Federally funded programs in short notice;
- requests information about participants without prior notice; then, if there are no records to support these requests, requests for reports;
- requests information about the results of reported data without the proper documentation;
- demands a wide variety of reports for information, control, and administrative purposes; and
- is unaware of the time and money required to comply with these requests.

The PCC MIS attempts to address these concerns. But, it is important to restrict additional reporting requirements to a minimum. The design of the PCC MIS makes it possible for the system to be responsive to calls for changes, but each change requires changes in recordkeeping and reporting procedures, and affects the value of the system for longitudinal analysis. Moreover, the addition of each new piece of information threatens the integrity of the total system, by altering printouts, data relationships, and the prospects for information overload.

Finally, PCC MIS should not be considered an end itself. It was designed to be a management tool. When it stops functioning in this way it should be abandoned.