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**THE TRANSITIONAL EMPLOYMENT
TRAINING DEMONSTRATION:
ANALYSIS OF PROGRAM OPERATIONS**

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Large demonstrations and evaluations happen only through the joint efforts of many individuals, and in the five years since its conception the Transitional Employment Training Demonstration has not been an exception. It had its origins in the urgings of the Association for Retarded Citizens and Transitional Employment Enterprises, which encouraged the Social Security Administration to use the demonstration authority granted in the Social Security Disability Amendments of 1980 to provide transitional-employment services to increase the self-sufficiency of Supplemental Security Income (SSI) recipients with mental retardation. In response, a preliminary meeting was held in Baltimore on September 22, 1982, to discuss the initial design of the demonstration and its evaluation, which were developed by Aaron Prero, with the assistance of Vincent Geraci.

Mathematica Policy Research (MPR) was awarded the design and evaluation contract in September 1983. Our subsequent efforts were assisted by an extremely helpful advisory panel, consisting of Robert Bruininks, Gary Clark, Frank Rusch, and Paul Wehman. We have also benefited from the ongoing assistance of the government project officer, Aaron Prero.

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Finally, we want to acknowledge the contributions made by the men and women who volunteered to be in the demonstration research sample. This report is dedicated to them and to the hope that it will help improve the delivery of vocational services and thus improve the quality of life for them and other persons who face similar challenges.

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TRANSITIONAL EMPLOYMENT TRAINING DEMONSTRATION:
Analysis of Program Operations

EXECUTIVE SUMMARY

In the last fifteen years it has become clear that the primary barrier to employment gains among persons with mental retardation is inadequate training and support, rather than a lack of ability. Evidence for this observation has come from dozens of transitional-employment programs, which have demonstrated the feasibility of placing, training, and maintaining persons with mental retardation on jobs similar to those held by many persons without cognitive or physical impairments. The key features of these programs is the provision of training and support on the job that is expected to be retained by the program participant after training is completed. This approach is advantageous because it (1) does not require that participants generalize skills learned in the training program to new settings, and (2) enables the program to establish transportation arrangements and supervisor/co-worker relationships that are often crucial determinants of job success.

Thus, the primary focus of research on transitional employment for persons with mental retardation has moved beyond demonstrating the feasibility of programs, and is directed instead toward determining how training techniques can be improved, how services can and should be targeted to those persons who can benefit most from them, which program approaches are most cost-effective, and whether these programs can be operated at a policy-relevant scale.

The Transitional Employment Training Demonstration was undertaken to address these policy issues--in particular, to determine whether transitional employment would be an effective vehicle for enhancing the economic self-sufficiency of Supplemental Security Income (SSI) recipients with mental retardation. Assessing these policy issues required information on the following:

- o The operational successes and challenges experienced by training agencies as they sought to serve persons whose level of retardation was sufficiently severe that they met the criteria for SSI benefit receipt
- o The costs incurred to serve these persons

- o The extent to which the transitional-employment services were successful at increasing employment and reducing SSI receipt relative to what would have been the case in the absence of those services
- o Whether the effects of the transitional-employment services were sufficiently large to justify the cost of providing them

To collect this information, the Social Security Administration funded eight training organizations to provide transitional-employment services to a sample of SSI recipients with mental retardation who lived in thirteen communities around the country. It also contracted with Mathematica Policy Research, Inc., to design and conduct a rigorous evaluation of the demonstration. Demonstration operations began in June 1985 and ran through June 1987, and data collection began with the enrollment of the first person into the demonstration and is planned to continue for several years.

At this time, we have collected sufficient information to assess the first two of the policy issues listed above--the operational experience of the demonstration and its costs. Specifically, we can review the characteristics of the SSI recipients who entered the demonstration, the services that were provided to them, and the extent to which they left the demonstration with jobs. This "process" information provides a basis for understanding the nature of the demonstration intervention and for planning future transitional-employment programs. The remaining two research issues, the impact and benefit-cost analyses, will be the subject of subsequent reports.

A. CONCLUSIONS FROM THE PROCESS ANALYSIS

After reviewing the experiences of the eight organizations that operated demonstration projects and the program experiences of the 375 SSI recipients with mental retardation who were served by these projects in the demonstration, we reached the following conclusions:

- o The basic elements of the demonstration--the enrollment of SSI recipients with mental retardation, job development and placement, on-the-job training, and short-term support and followup--were implemented successfully.
- o Delineating screening criteria for enrolling applicants is difficult; intake workers rely on a range of objective and subjective assessments in making enrollment decisions, and these decisions reflect a subjective weighing and balancing of the various factors.

- o The projects, which were precluded by demonstration rules from extensively evaluating or screening demonstration applicants, were able to place and maintain approximately one-third of the enrollees on potentially permanent jobs--a success rate consistent with the rate observed for other large transitional-employment programs, but below the rate for small programs, which are able to screen applicants more thoroughly.
- o Projects that stress placing clients first in a training-job position that is not intended to be potentially permanent constrain their ability to provide time-limited transitional-employment services.
- o The 12-month service period used in the demonstration was generally adequate for placing and training demonstration enrollees on potentially permanent jobs.
- o The diverse needs of the persons who were enrolled required that the demonstration projects be able to provide a wide range of support services, ranging from help with job-seeking, hygiene, and interpersonal skills to budgeting and housing-location assistance.
- o Arranging transportation to and from jobs was a critical element in providing transitional-employment services, and required considerable effort by the projects.
- o Operating the demonstration was feasible at a variety of program capacities.
- o Several alternative staffing patterns were feasible; projects successfully combined different types of staff (whose educational backgrounds and previous experience in working with persons with disabilities varied) and different management/supervision structures in order to provide transitional-employment services.
- o Transitional employment represents a substantial investment, with average costs for the eight projects ranging from \$3,800 to \$14,000 per person enrolled; in an ongoing nondemonstration program, we estimate that the projects would have been able to lower their average costs to between \$2,800 to \$8,100.

Taken together, these conclusions indicate that the basic transitional-employment services were delivered successfully; thus, the demonstration operations will provide a solid foundation for the forthcoming impact and benefit-cost analyses. Of course, the overall performance of the demonstration program as measured by the impacts found for the demonstration is likely to differ from the overall performance

of future ongoing programs, since such future programs would likely use different screening criteria than those adopted in the demonstration. As screening criteria are improved, it is likely that future programs would make different enrollment decisions and could generate different sets of outcomes and impacts than those that will be estimated for the persons enrolled in the demonstration.

Without information on the impacts generated by the various projects, it is difficult to make specific recommendations about the desired structure of future transitional-employment programs. Nevertheless, based on our observations of project activities during the demonstration, we espouse a hybrid transitional-employment approach that combines elements from several of the projects. These features are as follows:

- o Direct placement into potentially permanent jobs as soon after enrollment as possible should be emphasized.
- o Jobs that are training-oriented only and are not potentially permanent should be used only for assessment and problem-solving purposes, and the time spent on such training jobs should be minimal, individually determined, and closely monitored.
- o Job-development efforts should concentrate on developing full-time jobs for as many clients as possible.
- o A system of monitoring the status of each client in an ongoing manner is essential to providing the mix of services that will move each client into a stable job situation as soon as possible for that client.
- o The use of job coaches with graduate degrees is unnecessary and expensive. Instead, job coaches who show the abilities necessary for training others in a work setting (such as business experience, maturity, enthusiasm, patience, and adequate communication skills) should be led by a strong, professionally trained coordinator.
- o Programs must be flexible throughout each aspect of their services in order to meet the individual needs and interests of each client.

To a large extent, it is the ability to be flexible that distinguishes effective transitional-employment programs. The persons served by this type of program cannot be expected to conform to a fixed service model. Instead, they need individualized attention, including training on the specific job that they are expected to hold in the future. In the demonstration, it appears that the projects that were most successful were those that could most easily tailor their approach to meet the wide range and diverse combinations of needs of the individual clients.

Such attention requires substantial resources--an ongoing transitional-employment program could be expected to spend an average of almost \$6,000 per person enrolled--but the investment generates many returns. We expect that, in the short-term, this investment would increase the earnings of clients and may also lead to shifts in the support services used by clients. However, the investment can also help persons with disabilities lead more normal lives. The longer-term picture is unclear, although transitional employment clearly has the potential of helping persons with mental retardation. The degree to which this potential is achieved will largely determine the future employment prospects of economically disadvantaged persons with disabilities.

B. EVALUATION PLANS FOR THE DEMONSTRATION

The operational phase of the demonstration ended in 1987 with the program exit of the last of the demonstration enrollees. The evaluation phase will continue into the future as the postprogram activities of the treatment- and control-group members are monitored, and as we assess the impacts and benefits and costs of the transitional-employment services offered in the demonstration.

The first phase of this follow-up evaluation will incorporate information on the activities of sample members for the first 2-3 years after their enrollment in the demonstration. This analysis will examine the impacts of the demonstration programs on employment rates, earnings, SSI receipt, and the use of vocational program services (such as sheltered workshops and work activity centers). It will also compare the benefits and costs of the demonstration services from the perspectives of the Social Security Administration, the government as a whole, the SSI recipients who were enrolled, and society in general.

A second phase of the follow-up evaluation will entail tracking the sample members over a number of years to assess the long-term impacts of the services on their employment, earnings, and SSI receipt. In the end, the evaluation will provide key empirical evidence about the effectiveness of transitional employment, evidence that will help shape the future of this promising technique for helping persons with mental retardation enhance their economic and social assimilation into society.

I. TRANSITIONAL EMPLOYMENT FOR SSI RECIPIENTS WITH MENTAL RETARDATION

There has been an explosion of interest in the concept of transitional employment as a vehicle for helping persons with mental retardation increase their economic and social self-sufficiency. Fifteen years ago, this program model, which represents a bridge to competitive jobs for such persons by providing them with limited-duration training and placement services, was considered to be an essentially novel idea in terms of its appropriateness to many mentally retarded persons, and was received with considerable doubt and skepticism. Today, dozens of transitional-employment programs are being operated to serve persons with mental retardation, and the transitional-employment model has even been adopted by several states as a formal component of their vocational rehabilitation systems.

Three trends have fueled this growing interest. First, the enhanced awareness of the public about the rights and abilities of handicapped persons in general and mentally retarded persons in particular has created greater social pressures to assimilate such persons into the mainstream of society. Second, rapid progress in the development and application of new training techniques has made social and economic integration feasible for a greater number of handicapped persons. Finally, budgetary pressures on federal, state, and local governments have encouraged the search for effective ways to increase the self-sufficiency of previously dependent persons.

Successful efforts at assisting mentally retarded persons through such methods as transitional employment have led to the recognition that the primary barrier to their employment is often inadequate training and support rather than a lack of ability. It is now clear that placing and training mentally retarded persons on competitive jobs is feasible. Thus, the primary focus of research in this area has moved beyond demonstrating the feasibility of programs, and is directed instead toward determining how employment programs for mentally retarded persons fit into the overall social service system, how training techniques can be improved, how services can and should be targeted to those persons who can benefit most from them, which program approaches are most cost-effective, and whether these programs can be operated at a policy-relevant scale.

The Transitional Employment Training Demonstration was undertaken to address these policy issues--in particular, to determine whether transitional employment would be an effective vehicle for enhancing the economic self-sufficiency of Supplemental Security Income (SSI) recipients with mental retardation. Assessing these policy issues required information on the following:

- o The operational successes and challenges experienced by the demonstration projects as they sought to serve persons whose level of retardation was sufficiently severe that they met the criteria for SSI benefit receipt
- o The costs incurred to serve these persons
- o The extent to which the transitional-employment services were successful at increasing employment and reducing SSI receipt relative to what would have been the case in the absence of those services
- o Whether the effects of the transitional-employment services were sufficiently large to justify the cost of providing them

To collect this information, the Social Security Administration (SSA) funded eight training organizations to provide transitional-employment services to a sample of SSI recipients with mental retardation who lived in thirteen communities around the country. It also contracted with Mathematica Policy Research, Inc., to design and conduct a rigorous evaluation of the demonstration. As indicated in Table I.1, demonstration operations began in June 1985 and ran through June 1987. Data collection began with the enrollment of the first person into the demonstration and is planned to continue for the next ten years.

At this time, we have collected sufficient information to assess the first two of the policy issues listed above--the operational experience of the demonstration and its costs. Specifically, we can review the characteristics of the SSI recipients who entered the demonstration, the services that were provided to them, and the extent to which they left the demonstration with jobs. This "process" information provides a basis for understanding the nature of the demonstration intervention and for planning future transitional-employment programs.

TABLE I.1

MILESTONES IN THE PLANNING AND IMPLEMENTATION OF
THE TRANSITIONAL EMPLOYMENT TRAINING DEMONSTRATION

| Date | Event |
|----------------|---|
| June 1980 | President Reagan signs the Social Security Disability Amendments of 1980 (P.L. 96-265) that authorize the demonstration. |
| September 1982 | The Social Security Administration (SSA) holds a public conference to solicit comments on the initial demonstration design. |
| September 1983 | SSA hires an evaluation contractor (Mathematica Policy Research) |
| March 1984 | SSA publishes <u>Federal Register</u> notice to solicit bids for training organizations to operate demonstration projects. |
| November 1984 | SSA awards grants to 8 projects after reviewing 80 proposals. |
| May 1985 | SSA starts to mail invitation letters to mentally retarded SSI recipients who are between the ages of 18 and 40 and live in the areas served by the 8 projects. |
| June 1985 | Projects begin enrolling persons into the demonstration. |
| July 1986 | Sample member enrollment ends. |
| June 1987 | Projects complete demonstration training activities. |
| December 1988 | Planned end of intermediate-term followup data collection |

Because we have yet to collect the data necessary to estimate the impacts of the demonstration and to make unbiased judgments about its relative benefits and costs, we will examine these issues in a subsequent report. The information that is currently available on service delivery and in-program impacts does not enable us to judge whether the transitional-employment services provided in the demonstration were effective in producing the desired impacts. The process information largely reflects the efforts of the demonstration projects to help participants find and hold jobs while they were actively enrolled in the programs. Such information does not indicate the extent to which participants will be able to maintain their employment and increase their economic self-sufficiency beyond the period after which demonstration-funded services end. To answer these long-term questions and to judge the investments that were made by the demonstration in its participants, we must wait until the end of 1988 when we will have collected at least two years of postenrollment observations for the 745 sample members who were enrolled in the demonstration. A multi-year follow-up based on Social Security Administration records is also planned.

Thus, this report provides the foundation for an assessment of the transitional-employment services. We examine the nature of these services and their delivery in the demonstration. We also examine the design of the evaluation, particularly the random assignment of program applicants to either a treatment group that was offered demonstration services or to a control group that was precluded from receiving the demonstration services but was free to use any other services available in their community. It is this experimental design that will provide the basis for generating unbiased estimates of the impacts of the demonstration.

The remainder of this report is as follows. Background information on the antecedent research and on the goals and structure of the demonstration is presented in the remainder of Chapter I and in Chapter II, respectively. The body of the process analysis focuses on the organizations that operated the transitional-employment programs (Chapter III), the SSI recipients who were enrolled in the demonstration (Chapter IV), and the specific nature of the transitional-employment services that were provided (Chapter V). A description of and the basic conclusions about the operational processes of the projects are then presented in Chapter VI. We conclude the report with a brief overview of the designs for the forthcoming impact and benefit-cost analyses, including a review of the activities of the control group during

the first eighteen months after their enrollment into the demonstration sample. More detailed background information and supplemental information not presented in the body of the report are contained in a series of appendices.

A. SSI RECIPIENTS WITH MENTAL RETARDATION

Persons with mental retardation represent an important challenge and opportunity to policymakers. A growing body of evidence is available to suggest that these persons can work and contribute to their own support--indeed, some fraction of mentally retarded persons have always been able to find employment and fit into society. Nevertheless, many of such individuals are quite poor, exhibiting low rates of employment and earnings. These individuals also receive an extensive array of services from the government, services which are estimated to have cost over \$15-billion in 1982 (see Lakin, Hill, and Bruininks, 1985, and Kusserow, 1984).

Part of the policy challenge and opportunity is that there are many persons with mental retardation. To estimate the prevalence of mental retardation, one must consider the two conditions that characterize mental retardation (Grossman, 1983). The first is evidence of a significant intellectual limitation. The second is an inability to engage in activities that are age-appropriate.

The distribution of IQ scores in the general population can be described approximately by the bell-shaped curve of the normal distribution. The average score for the general population is 100, and the standard deviation is 15 to 16, depending on the particular IQ test used. The typical definition of "significant intellectual limitation" is an IQ score that is at least two standard deviations below the mean--that is, a score below 70. This definition, along with the overall distribution of IQ scores, implies that fewer than 3 percent of the population would be classified as mentally retarded on the basis of their IQ score. Furthermore, among those who are classified as mentally retarded, most would have IQ scores between 55 and 70 and would thus fall in the mildly retarded range. A review of available prevalence data suggests that persons with IQ scores that indicate mild mental retardation probably constitute greater than 85 percent of all persons with mental retardation.

The distribution of adaptive behavior is less well known. Many persons with limited intellectual capacity are employed and lead essentially normal lives. Others are less self-sufficient and depend on a variety of services for support. After

reviewing the available evidence, Kiernan and Bruininks (1986) suggest that approximately 1 percent of the population, or some 2.4 million persons, would be classified as mentally retarded on the basis of their measured intellectual capacity and their adaptive behavior.

The employment rates of persons with mental retardation are also not well known. Fifteen years ago, Conley (1973, Table 36) estimated that half of the working-age adults with mental retardation did not have a job. Judging from employment statistics for more general populations of persons with disabilities (McNeil, 1983), it seems unlikely that this employment picture has improved substantially.

This lack of employment and earnings means that many persons with mental retardation depend on government and family support. While estimates of expenditures made by families and friends are unavailable, the government expenditures are large. As noted earlier, all levels of government spent over \$15 billion in 1982 to provide services to persons with mental retardation. This dollar figure includes almost \$2.9-billion of SSI and Social Security benefits, \$7.4-billion for Medicare, Medicaid, and other health-related programs, and over \$145-million for rehabilitation services, as well as expenditures for residential, educational, and social services.

Another way to view these expenditures is to consider, as an example, a person who was served by a sheltered workshop and received benefits from the SSI, Food Stamp, and Medicaid programs. Total government expenditures for such a person would have been approximately \$14,000 in fiscal 1984.¹ The magnitude of these expenditures has created a base of support for developing promising techniques to enhance the self-sufficiency of mentally retarded persons.

The total number of individuals with mental retardation who receive government services is unknown. However, statistics are available for a number of specific programs. A review of the current SSI caseload statistics indicates that roughly 470,000 working-age adults receive SSI payments on the basis of a primary

¹ This expenditure figure is based on estimates of the average annual cost per recipient for the SSI, Food Stamp, and Medicaid programs and the average annual cost per client for sheltered workshops. Thornton and Will (1987) examine these and other average costs.

diagnosis of mental retardation.¹ Approximately 140,000 mentally retarded persons live in intermediate-care facilities supported by Medicaid (Social Security Administration, 1985, Table 152), and approximately 56,000 mentally retarded persons are served in sheltered workshops and related facilities (U.S. Department of Labor, 1977).

The relatively low employment rates of and high levels of program use by many persons with mental retardation generate social costs in addition to the \$15-billion in government expenditures. The first are the foregone goods and services that could be produced if the rate of employment among mentally retarded persons could be increased. The second are the psychological costs to persons with mental retardation—including their low rate of social integration and lack of the self-esteem that can be derived by working and contributing to society.

B. TRANSITIONAL-EMPLOYMENT SERVICES

Transitional-employment programs have developed rapidly in recent years to help persons with mental retardation increase their economic and social integration and self-sufficiency. These programs have changed substantially as new techniques and new program structures have been developed. Due to these changes, it is essential that we review exactly what is meant by the term "transitional employment" and how these program models fit into the overall service system.

Over the past fifteen years, transitional employment has shown considerable promise for helping mentally retarded persons become employable and economically self-sufficient. The key element of this method, well expressed in the term transitional employment, is time-limited training in a real work-employment setting, with the goal of helping persons enter regular employment. The technique stresses training on regular jobs, rather than pre-placement or work-readiness training, and

¹ In March 1986, approximately 1.7 million disabled adults under age 65 were receiving SSI (this calculation excludes individuals with blindness). Using data from a randomly selected 1 percent of these persons and assuming that the distribution of disabling conditions is the same among persons with or without diagnostic information in their Social Security file, we estimate that 27 percent of disabled working-age adult SSI recipients, or 470,000 recipients, have mental retardation as their primary disabling condition.

thus seeks to place persons on regular jobs more quickly than under many traditional programs.

The concept of transitional employment is still evolving as more is learned about effective training strategies. However, consensus has been reached on certain basic characteristics:

- o Training services are available only for a limited period of time.
- o Training is provided on real jobs--that is, paid jobs that consist of tasks that another worker would otherwise perform for a specific employer and in which the worker has an opportunity to interact with nonhandicapped co-workers or the public.
- o Special training is provided by job coaches who gradually reduce their presence on the work site to promote the independence and integration of the trainees.
- o The program should be targeted toward persons for whom obtaining regular, competitive-level employment is a realistic goal within the time frame of the services.

The first characteristic, time-limited services, reflects the intention of transitional employment to provide a bridge to employment rather than ongoing support. The actual duration of transitional-employment services varies, but the goals of the program are always to phase out services and to promote independent employment. However, job-retention services may be provided on an on-going basis after the intensive initial services have been phased out.

The provision of training on a real job is also a central characteristic of transitional employment. It enables the training to be tailored exactly to the needs of the client and the characteristics of the workplace. On a job, it is possible to teach clients to recognize and respond to the requests, situations, and cues that occur naturally in the workplace where they expect to remain after training. Given the difficulty often encountered by mentally retarded persons in generalizing skills learned in one setting to other settings, this advantage of training on a real job is substantial. It also enables the job coach to identify special features of the job that might create problems for the client and then to provide appropriate training. These features include communicating with other persons on the job and finding transportation to and from the job. Furthermore, by moving persons into real jobs, the

program helps overcome inertia in the system that may inhibit a person's opportunity to grow.

Another advantage of training on real jobs is that persons receive wages while they learn, which ensures that their work is productive and meaningful. It also serves as a powerful motivation for learning the job and remaining employed.

The presence of a job coach also distinguishes transitional employment from other training programs. While the coach provides the job-specific training that would be provided by a supervisor or co-worker in a typical on-the-job training program, the coach must also use more specialized training methods and deal with a wider array of behavior. Coaches are professional trainers and can draw on many specialized training techniques according to the specific needs of the client. Coaches also deal with the communicative and nonvocational aspects of a job, which are typically unnecessary in on-the-job training programs for persons who are not mentally retarded.

The fourth identifying characteristic of transitional employment is that it is intended for persons for whom competitive employment appears to be an achievable goal. Because the services are time-limited, this goal of achieving competitive employment implies that the services are most appropriate for persons for whom job finding and training are the principal barriers to employment. In such cases, it is reasonable to expect that transitional employment will provide an adequate bridge to employment. Other persons with more debilitating mental retardation or other handicapping conditions may require ongoing support in order to remain employed. In such cases, longer-term support services will be necessary.

Of course, it is often quite difficult to determine the likelihood of a person's achieving competitive employment. Current assessment techniques often fail to indicate accurately a person's potential for competitive employment. This is particularly true as training techniques and our understanding of mental retardation have improved more rapidly than our assessment capabilities. Today, many persons who were previously thought to be unemployable can hold jobs if provided with appropriate support and training. The lack of accurate predictors of employability means that transitional-employment programs must often enroll persons who subsequently find independent employment very difficult.

Thus, in practice, some transitional-employment clients will not move into competitive employment (Kiernan and Stark, 1986, discuss the alternative outcomes).

One alternative outcome for persons with severe handicaps, including severe and profound mental retardation, is supported employment. This is a relatively new program model that combines elements of transitional employment with long-term support. It seeks to serve persons who would be unable to hold a job in the regular labor market without ongoing support. It differs from transitional employment primarily in terms of the expectation that the support and training provided by the program can last indefinitely.

The costs of supported employment and the nature of the benefits are generally different from the costs and benefits of transitional employment. However, the types of services provided by these two programs overlap. Moreover, because it is difficult to determine initially which type of program is more appropriate for a given individual, the two programs often enroll similar groups of persons.

One of the greatest areas of overlap is the provision of job-retention services to persons in transitional-employment programs. Although, by definition, transitional-employment services are time-limited, it is often necessary that some ongoing services be provided to the person to help him or her remain on the job. Job-retention services are necessary because many persons with mental retardation experience great difficulty in coping with nonroutine or crisis situations: substantial changes in the responsibilities of a job, breakdowns of transportation arrangements, personality conflicts with supervisors or co-workers, or family problems. These situations arise in the work and personal lives of everyone, whether disabled or not, but can be more serious for persons with mental retardation. Such persons often lack the resources necessary to deal with these situations, and job-retention services provide them with the requisite support to help them overcome these types of problems and remain on their jobs.

The inclusion of ongoing services such as job retention blurs the distinction between transitional employment and supported employment. As both models evolve and we learn more about the types of individuals for whom each model is most appropriate, further and more precise distinctions may be drawn. In any event, it will be essential to recognize that neither approach will produce permanent results for all clients. The labor market is dynamic, and clients of either program are likely to require different types and levels of services at different times. In particular, some clients will lose jobs for reasons unrelated to their performance. Plant closings and changes in production techniques can cause any worker to lose his or her job. Thus, to the extent that a goal of transitional and supported employment is to keep mentally

retarded persons employed, it is likely that these programs must maintain some ongoing relation with clients.

DEPARTMENT OF

C. PREVIOUS EXPERIENCE WITH TRANSITIONAL-EMPLOYMENT PROGRAMS

Our expectations about transitional employment stem from the assumptions implicit in the program design and from the experience of previous programs. It is useful to review this experience and the present state of knowledge before proceeding to the specifics of the demonstration.

1. Lessons from Previous Transitional-Employment Programs

Since their inception almost fifteen years ago, a number of transitional-employment programs have been operated to serve persons with mental retardation. The basic concepts behind this program model are not new; they draw on ideas developed and used in the fields of education, training, and psychology. Furthermore, transitional assistance to help persons find jobs has been a part of many of the employment and training programs for general populations and has been used to help persons with mental illness since 1958. However, the application of this program model to persons with mental retardation, particularly more severe mental retardation, has a relatively short history.

While isolated attempts to provide transitional-employment services to mentally retarded persons have undoubtedly been made for some time, the early transitional-employment programs described in the literature tended to be small university-based programs. Among these early efforts are the university food-service program operated by the University of Washington (Moss, 1980), the University of Illinois Food Service Training Programs (Rusch and Mithaug, 1980), Project Employability at Virginia Commonwealth University (Wehman, 1981), and Project EARN at Southern Illinois University (Bates, 1986). These programs were typically small, generally serving fewer than 15 persons at a time, and they typically entailed relying on specially trained staff whose backgrounds were in special education, rehabilitation, and training.

These university-based programs collected substantial information about the services delivered to clients and the resulting outcomes. In addition, the needs of the clients and the desire for long-term data on outcomes led program operators to

provide essentially open-ended services. The programs would continue to monitor and provide appropriate services to individuals as long as the individuals desired assistance.

Around the time that these university-based programs were being initiated, some foundations and private organizations also started transitional-employment programs for mentally retarded persons. Examples of these early efforts are the Job Path program in New York City, the Menninger Foundation transitional-employment program in Topeka, Kansas, and Transitional Employment Enterprises in Boston. There have also been a number of more recent state programs to provide transitional-employment services to persons with mental retardation, including large efforts in Massachusetts and Washington.

The efforts of both the private organizations and the states tended to be larger than the university-based programs, and to serve less severely disabled individuals. They also tended to limit the duration of services to a greater extent than did the university-based programs. Further, these programs also generally collected less systematic data on the services provided to clients and the resulting outcomes.

We have learned a great deal from the experience of these and other employment and training programs. The experience gained from operating and evaluating these programs has demonstrated the ability of program operators to find appropriate jobs for clients; the feasibility of training even some profoundly retarded persons to work on competitive jobs; the greater effectiveness of training on competitive-job placements rather than in special training settings; the necessity for follow-up services after persons are placed and trained on competitive jobs; methods for identifying appropriate jobs and reinforcing desired work behaviors; and the required mix of training in production and social skills.

In addition to this information on program operations, we have gained some information about the effects of transitional-employment programs on the labor-market activities of participants. One important source of such information is the National Supported Work Demonstration, which was undertaken from 1975 to 1979. While this effort did not focus on persons with mental retardation, it did provide transitional-employment services to four specific groups of disadvantaged persons: persons recently released from prison, former drug addicts, young school dropouts, and long-term welfare recipients (see Hollister, Kemper, and Maynard, 1984). The goal of

the program was to provide participants with positive work experience that could help them move into better jobs. Participants were not necessarily expected to continue working on the specific job that they held while in the program.

An evaluation of this demonstration found that the services appeared to be effective for the group of long-term welfare recipients, but the results for the other three groups were either much less certain or negative (Hollister, Kemper, and Maynard, 1984). The evaluation also found that services seemed to generate the greatest net change in employment for the persons who were the most disadvantaged. Specifically, the increase in employment (measured as the difference between the treatment and control groups) was greatest among the subgroup of sample members who showed the poorest employment histories.

This result from the National Supported Work Demonstration supports the expectation that transitional employment might be very effective for mentally retarded persons. Since this is a group that would largely be unemployed without assistance, there is room for substantial improvement in their employment rate, even if the projects cannot place all or even most of the persons whom they enroll. The issue for extending these services to mentally retarded persons, then, is whether enough persons can be helped so that the net increase in employment justifies the extra cost of serving this particularly disadvantaged group.

A large-scale demonstration was undertaken in the fall of 1981 to address this issue for young adults with mental retardation. This demonstration, the Structured Training and Employment Transitional Services (STETS) demonstration, was funded by the U.S. Department of Labor and administered by the Manpower Demonstration Research Corporation (see Riccio and Price, 1984). It was fielded in five cities from the fall of 1981 through 1983. It enrolled 284 treatment-group and 211 control-group members during that time. These persons were mentally retarded young adults between the ages of 18 and 25 years with little experience in the regular labor market. The STETS projects provided the participants with up to 18 months of placement, training, and follow-up services.

An evaluation of STETS (Kerachsky et al., 1985) found that this transitional-employment program successfully moved mentally retarded young adults into competitive employment. Twenty-two months after enrollment, members of the treatment group were 62 percent more likely than control-group members to be

employed in a competitive job, and there were similar increases in earnings from competitive jobs. Furthermore, the estimated magnitude of these effects was largest for individuals who were served during the time period when demonstration operations were relatively stable--that is, during the "steady-state" period in the middle of the demonstration, rather than the early start-up and final phase-down periods. The findings also indicated that the services had a greater net effect on the regular job-holding of participants whose IQ scores were in the mild to moderate range than of those with higher scores. This finding is similar to the finding of the National Supported Work Demonstration that the largest effects occurred for the most disadvantaged participants.

A benefit-cost study undertaken as part of the STETS evaluation indicated that the STETS model of transitional employment had the potential of generating benefits that were greater than the costs of the program. The benefits included increased participant earnings and reductions in the use of alternative services, particularly reductions in the use of sheltered workshops. The costs were primarily those associated with operating the program.

The experience of the various employment and training programs provides several important lessons. First, we now know that it is feasible to place, train, and maintain mentally retarded workers on competitive jobs. We also know a great deal about the types of training services that must be provided. In particular, we know that successful training requires substantial initial efforts followed by less intense support. It is also important that the training be provided on the job that trainees are expected to hold, and that persons be trained in both the production and the social aspects of the job. It also seems clear that a careful match between the characteristics of the job and the trainee's interests and abilities is a crucial factor in providing successful training.

We also have gained some understanding of the costs and benefits of transitional-employment programs. In general, it appears that these programs have the potential of benefiting not only the participants, but also the federal, state, and local government budgets. Participants benefit from their increased earnings and from greater self-sufficiency and social integration. Taxpayers benefit primarily in the form of reduced expenditures for the services that would have been used by

participants had they not become employed. However, the lack of long-term follow-up data and the small number of rigorous benefit-cost studies mean that the benefit-cost conclusions are tenuous.

2. Remaining Gaps in Our Knowledge about Transitional Employment

Despite the gains in our knowledge about transitional employment, many questions remain unanswered. We need to know more about how to target services, particularly how to channel persons efficiently into the appropriate employment service (e.g., transitional employment or supported employment). We also need to know more about preparing job coaches for transitional-employment programs and about effective monitoring and organizational structures. Moreover, precise evidence of the effects of transitional employment is somewhat limited. The National Supported Work Demonstration and the STETS demonstration have provided some important preliminary information, but some essential information is still missing.

In particular, no rigorous evaluation has been undertaken of the long-term impact of transitional employment on the employment, income, program use, and quality of the lives of persons with moderate and severe mental retardation. The National Supported Work Demonstration did not serve this population, and, while some such individuals were served in the STETS demonstration, STETS lacked the necessary follow-up data to assess long-term effects. In particular, the STETS demonstration followed the treatment and control groups for 22 months after their application to the program. This time period enabled the evaluation to capture virtually all of the operating costs, but excluded any long-run benefits. Thus, at the end of the 22-month observation period, the evaluation estimated that benefits would have to continue undiminished for at least another seven months in order for the investment in training to be entirely repaid. This outcome seemed likely, but could not be confirmed because of the lack of data.

The Transitional Employment Training Demonstration was designed to address some of these unanswered questions. The ultimate goal of the demonstration is to determine whether transitional employment can be an effective vehicle for enhancing the long-term self-sufficiency of a specific group of persons with relatively severe mental retardation--those whose condition is sufficiently severe that they meet the requirements for SSI benefit receipt. This goal can be achieved only by basing the evaluation on precise and reliable measures of the impacts of transitional employment

both on this group as a whole and on specific subgroups of this overall population. Such an evaluation will in turn provide measures necessary for judging whether the impacts that were generated were worth the resources invested in the demonstration. The forthcoming impact evaluation will be based on up to 36 months of postenrollment data, which should be a sufficiently long time frame to judge reliably the desirability of operating this type of transitional-employment program. In this report, the foundation for achieving this ultimate goal is presented--an assessment of the relative merits of different types of approaches to providing transitional-employment services. Again, this "process" information on staffing patterns, costs, and overall program performance is crucial for planning future employment programs for SSI recipients (and others) with mental retardation.

II. THE TRANSITIONAL-EMPLOYMENT TRAINING DEMONSTRATION

The Transitional-Employment Training Demonstration was undertaken in response to a set of concerns and opportunities. Congress and advocacy groups were concerned about the economic and social integration of persons with disabilities. Policy makers were also concerned about controlling the growing government expenditures for disability programs. The opportunities were provided by the Social Security Disability Amendments of 1980 (P.L. 96-265), which authorized the Social Security Administration to conduct experimental or demonstration projects to further the objectives of the SSI program, and by the growing body of information which indicated that transitional employment was an effective vehicle for helping persons with disabilities become employed.

In responding to these social, fiscal, and conceptual factors, the demonstration sought to expand our existing knowledge about transitional employment. In particular, the demonstration sought to determine the effectiveness of this service for those persons with mental retardation whose disability met the standard of severity required for SSI eligibility. While groups with similar levels of retardation had previously been served, mentally retarded SSI recipients represented a special challenge because their retardation is often accompanied by poverty and extremely limited, or nonexistent, work experience. In addition, the income support provided by the SSI program to recipients gives them different incentives and disincentives to work than those which face the nonrecipient population. These distinctive characteristics of the SSI recipients with mental retardation, along with the fact that they constitute a large proportion of SSI recipients, have generated considerable policy interest in determining the effects of transitional employment for this particular group of individuals.

Thus, the demonstration sought to address the following five basic issues with respect to SSI recipients with mental retardation:

1. Do transitional-employment services improve their labor-market performance?
2. Does the provision of transitional-employment services to this group reduce their SSI payments?

3. To what extent do any such SSI savings offset the costs of providing the services?
4. In what ways do the characteristics and experience of participants influence the effectiveness of the services?
5. Can transitional-employment programs be operated at policy-relevant scales, how do the approaches used to deliver transitional-employment services differ, and do those differences influence the effectiveness of the program?

This last policy issue is the issue of interest for this process analysis. To understand the operational aspects of the demonstration, we must first examine the basic model around which the transitional-employment intervention was designed--that is, the characteristics of the transitional-employment program services offered, the characteristics of the SSI program from which the clients were drawn, the types of demonstration projects that were selected to operate the demonstration services, and the intended target population. We discuss this basic design model in Section A. In order to understand much of the demonstration structure, particularly the recruitment and intake processes, it is essential to understand the basic policy comparison that underlies the demonstration and the forthcoming impact and benefit-cost analyses. This comparison is described in Section B. Finally, in Section C, we provide a brief summary of each of the evaluation components as they were designed as part of the overall demonstration evaluation.

A. THE DEMONSTRATION MODEL

The transitional-employment approach followed in the demonstration represents a balance between several natural tensions that arise in policy research. On the one hand, the demand for precise answers and statistical efficiency requires that the design and implementation of the demonstration programs adhere closely to a well-defined, specific model. On the other hand, the realities of program monitoring and the desire to allow program operators to adapt a program to suit local conditions suggest that a less rigid program specification be used. Moreover, it is desirable that several variations to the transitional-employment approach be considered in order to learn about their relative merits.

The balance made in the demonstration was to specify a set of characteristics that were to be exhibited by all programs but to allow program

operators considerable flexibility within those parameters. These key characteristics were based on previous research into transitional employment, particularly the studies of Wehman (1981), Rusch and Mithaug (1980), and Kerachsky et al. (1985). This procedure generated a set of programs that shared a common set of elements and thus could be considered together as a reasonable representation of what would be produced if a central authority asked a number of service providers to operate transitional-employment programs. The variation in how projects implemented transitional employment also provided an opportunity to learn about the relative merits of those approaches.

Most of the key characteristics required in the demonstration pertained to the types of services that the projects were expected to provide and the persons whom they were to serve. However, the design also specified several modifications to the characteristics of the SSI program.

1. Characteristics of the Transitional-Employment Services

The key characteristics that were to be exhibited by all demonstration programs were specified in the Federal Register announcement that solicited organizations to operate demonstration programs (Social Security Administration, 1984a) and in the associated application package (Social Security Administration, 1984b). All program operators were to work toward the goal of ensuring permanent competitive employment for all participants. To achieve this goal, they were required to:

- o Place participants in competitive jobs with the potential for permanent employment
- o Provide participants with training in specific vocational skills, where such training was provided primarily, if not entirely, in ordinary work environments alongside nonretarded co-workers
- o Provide postplacement support and follow-up as necessary to promote job retention

In addition, the projects were to provide all demonstration-funded services for a client within one year after the date on which the client enrolled in the demonstration. Services could continue after the year if they were funded by a source other than the demonstration. However, projects were strongly encouraged to try to

complete all services, with the exception of long-term job-retention services, within each client's year of demonstration eligibility.

Since one of the reasons for undertaking the demonstration was to learn about the effectiveness of transitional-employment services for SSI recipients with mental retardation, projects were also required to enroll only persons who were currently receiving SSI benefits and showed evidence of mental retardation. For the most part, evidence of mental retardation was obtained from Social Security Administration records.

2. Characteristics of the SSI Program

The SSI program provides income to persons who are poor and are also disabled, blind, or aged. As such, it has a two-part eligibility standard. For a person with mental retardation (or other disability) to be eligible for SSI benefits, that person must be poor and must be sufficiently disabled that he or she cannot engage in substantial gainful activity. Poverty is defined in terms of a person's income and assets, and while the standards are quite complicated (particularly with respect to the types of income and assets that are counted when determining whether a person is poor) poverty for SSI usually means an income of less than \$340 a month. Determining whether a person is disabled is even more complicated, but for the most part the person must have a medically determinable reason why he or she cannot hold gainful employment where he or she earns more than \$300 per month (excluding subsidies and certain impairment-related work expenses).

SSI regulations include several provisions that are intended to encourage SSI recipients to work. A major incentive for work is that earnings are treated differently from other income when a recipient's benefit amount is determined. In general, a person can receive \$20 in income from any source without having his or her benefit reduced. After that \$20, a recipient's SSI benefit is reduced dollar for dollar by the amount of his or her income. However, if the income is from earnings, some of the income is ignored in this calculation. In particular, an additional \$65 in monthly earnings is disregarded, as are half of any earnings above that amount. Thus, a person

who received \$100 in income from a source other than earnings would have his or her SSI monthly benefit reduced by \$80. If that \$100 came from earnings, the person's SSI check would be reduced only by \$7.50.¹

At the start of the demonstration in 1985, there were also two important work incentives that pertained to the disability portion of SSI eligibility: the "trial work period" and the "extended period of eligibility." The trial work period enabled an SSI recipient to work for nine months before a determination would be made about whether he or she was able to engage in substantial gainful activity (and therefore no longer considered disabled). The extended period of eligibility lasted for 15 months after the end of the trial work period, allowing SSI benefits to be resumed immediately without application in any month in which a recipient did not engage in substantial gainful activity (that is, earn over \$300 per month).

The demonstration model added some additional incentives to the SSI rules for persons who were served by the demonstration projects. These additional incentives were thought to be important for ensuring a full test of transitional employment. The authorizing legislation gave the Secretary of Health and Human Services the power to waive regular SSI requirements for demonstration purposes, and it was felt that waivers of several SSI provisions would be important to enable SSI recipients to engage in transitional employment without risking their eligibility for benefits.

The waivers did not protect the amount of a participant's SSI benefit. The benefits of clients who earned wages would be reduced in accordance with regular SSI rules. However, the waivers did ensure that the work performed by persons who accepted a job as part of the transitional-employment training would not affect their eligibility as long as they were receiving demonstration services. Thus, while their SSI check might be reduced because they were earning income in the demonstration, such

¹ This reduction is calculated in three steps. First, \$20 of the earnings are disregarded under the standard procedure. Second, the next \$65 of earnings are disregarded under the special provisions for earned income. Finally, half of the remaining \$15 is disregarded. Thus, only \$7.50 of the \$100 in earnings is treated as "countable" income and taken out of the person's SSI benefit. As earnings rise, the effect of the two fixed disregards becomes relatively less important, and the main incentive is the one that excludes half of the earnings from consideration.

work would not affect their disability status. After persons left the demonstration, they would be covered by the usual rules. The demonstration waivers enabled them only to try transitional employment without risking their eligibility for SSI. Subsequent work was covered by the usual incentives.

Four specific waivers were offered.¹ The first three dealt with the treatment of jobs held by clients while enrolled in transitional employment. These waivers ensured that earnings from such jobs were not to be considered as evidence of substantial gainful activity. In addition, the waivers protected the trial work periods of clients by excluding the time spent on demonstration jobs from being counted as part of a trial work period. Finally, the waivers assured all demonstration clients of a full 15-month extended period of eligibility, regardless of their work experience before or during the demonstration.

The fourth waiver pertained to the asset limitation regulations. Under conventional SSI regulations, an individual could have no more than \$1,600 in countable assets and still be eligible for SSI payments. Countable assets include most assets but exclude some items, such as a home or a car needed for medical care or for work. The fourth waiver modified these regulations to exclude from countable assets any income that a demonstration participant might save from his or her job while enrolled in the demonstration.

The overall SSI regulations and the need for the four demonstration waivers were changed by the Employment Opportunities for Disabled Americans Act (P.L. 99-643), which took effect on July 1, 1987. The changes prescribed by the new law effectively made the first three waivers unnecessary. The new changes eliminated the concept of substantial gainful activity for persons who receive SSI, thus eliminating the necessity for trial work periods and extended periods of eligibility. SSI recipients can now work without risking their eligibility, as long as their disabling condition continues.

In effect, the waivers allowed the demonstration to operate under conditions that are similar to those faced by all SSI recipients under current law. The major difference is that current law provides more long-term incentives for work, since the protections cover all jobs, not just those held while in a transitional-employment

¹ The specific waivers are contained in the Federal Register, vol. 50, no. 85, pp. 18741-2 (May 2, 1985), and in the Social Security Administration's Program Operations Manual System (POMS), Part 04, Section 13010.122.

program. In addition, SSI recipients may be more confident that provisions of the current law will be implemented correctly, since the new law applies to all SSI recipients, and is not simply a special provision that applies only to persons in a demonstration.

3. The Selection of Demonstration Projects

Transitional-employment services in the demonstration were provided by eight training organizations that were selected competitively on the basis of their responses to the announcement of funding availability. More than 700 organizations requested application materials in response to that announcement, and 80 of them submitted proposals. Proposals were screened by a technical review panel, Social Security Administration staff, and staff at Mathematica Policy Research (MPR), and eight organizations were selected to operate the demonstration projects.

These eight organizations and the areas they served are listed in Table II.1. Because the AHEDD project served six different areas, the eight projects served thirteen different sites. As described in Chapter III, the eight organizations varied along many dimensions. Some operated ongoing transitional-employment programs, while others developed new programs for the demonstration. Projects also varied according to the type of organization (some were university-affiliated, while others were nonprofit organizations), as well as by their staffing patterns, their approach to providing nonvocational support services, and, of course, the environments in which they operated.

4. The Target Population

As noted previously, the demonstration sought to test the effectiveness of transitional-employment services for SSI recipients who were mentally retarded. In addition, a decision was made to focus on recipients who were between 18 and 40 years of age. The process of recruiting these SSI recipients into the demonstration began with a search through the SSI files to identify those persons who were receiving payments, were between 18 and 40 years of age, and lived in an area served by a demonstration project, and whose records showed evidence of their mental retardation. Virtually all of the persons thus identified were sent letters from the Social Security Administration to invite them to apply to the demonstration. Many of the persons who did not respond to the initial invitation letter were sent a second

TABLE II.1
DEMONSTRATION PROJECTS AND SITES

| Grantee Name | Abbreviated Name | Sites |
|--|---------------------|--|
| AHEDD, Incorporated | AHEDD | Dover, Delaware Harrisburg, Pennsylvania Lancaster, Pennsylvania Philadelphia, Pennsylvania Pittsburgh, Pennsylvania York, Pennsylvania |
| Association for Retarded Citizens, Monmouth Unit | ARC/MU | Monmouth County, New Jersey |
| The CENTER for the Rehabilitation and Training of the Disabled | The CENTER | Chicago, Illinois |
| The Children's Hospital | Children's Hospital | Boston, Massachusetts |
| Exceptional Children's Foundation | ECF | Los Angeles, California |
| Goodwill Industries, Milwaukee Area | Goodwill | Milwaukee, Wisconsin |
| University of Washington and Portland Community College | UWash/PCC | Portland, Oregon |
| University of Wisconsin, Stout, Vocational Development Center | UWis/Stout | Chippewa, Dunn, Eau Claire, and Pepin counties, Wisconsin |

invitation letter from the demonstration project in their area. Other persons, some of whom received invitation letters, were recruited through referrals from other agencies.

The group of persons who applied were then screened by the projects to determine whether the available services would be appropriate for them. Because of the research goals of the demonstration, all projects were encouraged to keep their screening criteria broad and to try to enroll persons who exhibited a wide range of abilities, particularly persons with more severe disabilities. All persons were informed that their participation in the demonstration was entirely voluntary. Those who agreed to participate were assigned randomly to the treatment group or the control group.

B. THE POLICY COMPARISON MADE IN THE DEMONSTRATION

The demonstration was designed around a specific comparison and policy question. It examined the effect of adding transitional-employment services to the set of services used by mentally retarded SSI recipients who lived in one of the communities served by the demonstration. Since the demonstration communities had very few transitional-employment programs, this analysis indicates the effect of introducing transitional employment to the current service mix.

This comparison explicitly recognizes that in the absence of the demonstration some of the treatment-group members would not have engaged in vocational activities. Others might have received some employment services. In comparison, under the demonstration, all persons enrolled were eligible for transitional-employment services. Thus, the demonstration enabled us to compare a situation in which all persons were offered a specific set of services (transitional employment) with an alternative situation, representing the status quo, in which persons received a mix of services or no services at all.¹

¹ An alternative to this comparison situation would be to assess transitional employment relative to a situation in which no alternative vocational services were available. While such a comparison might provide a better indication of the absolute impact of the services, it is of little policy interest. Persons with mental retardation currently have a number of alternative vocational services available to them (including school programs and sheltered workshops), and it is unlikely that all of these alternatives would be eliminated by the decision to introduce transitional employment into the service system.

This comparison will enable us to assess the effectiveness of adding transitional employment to the current service system. While this is an important policy option, it is only one of many options. Other alternatives would be to substitute transitional employment for the services provided by sheltered workshops or for those of wage-subsidy programs. These and other alternative policy options can be addressed only indirectly (if at all) in the demonstration, since they require different comparisons than the comparison made between transitional employment and the status quo.

An important implication of this comparison is that we are not evaluating transitional employment in a vacuum. In their communities, the demonstration projects substituted for some other employment and service programs. They also relied on some of these programs to augment their own resources. Thus, the findings of the demonstration must be interpreted in light of the environments in which the demonstration was fielded. In particular, the ability, or inability, of the demonstration projects to draw on community resources will affect their costs and their effectiveness.

C. THE EVALUATION DESIGN

The evaluation of the Transitional-Employment Training Demonstration was designed to supplement our knowledge about transitional employment. The purpose of the process analysis component is to document the transitional-employment services that were provided and to assess their relative merits along a number of participant and programmatic dimensions. The impact analysis is designed to estimate the magnitude of the effect that transitional employment had on the employment, earnings, and SSI benefits of the mentally retarded SSI recipients who enrolled, and to measure these effects relative to what would have happened in the absence of the demonstration. The benefit-cost analysis will compare these impact results with the costs of providing the services, so as to assess whether the investment in the demonstration was justifiable in terms of the benefits that it generated.

The major innovative features of this evaluation are its focus on SSI recipients with mental retardation, the relatively large number of persons served, the greater rigor and precision of the estimated impacts of the program, and the inclusion of several approaches to transitional employment within a single overall framework. Previous research has shown that transitional employment can potentially be an effective vehicle for increasing the employment and earnings of many persons with

mental retardation. The demonstration placed emphasis on obtaining better estimates of the effect of adding transitional employment to the existing service system and on making cross-project comparisons of programmatic approaches.

Formulating the research design necessitated developing a strategy for collecting the information relevant to a detailed process analysis of the demonstration and its costs (discussed in subsection 1) and for estimating both what did happen to persons who were offered transitional employment and what would have happened in the absence of such services. In addition, it was necessary to translate the broad policy issues outlined at the beginning of this chapter into specific research expectations. The results of these two tasks are delineated in the following subsections.

1. Documenting the Transitional-Employment Services

The process analysis component of the evaluation relies on descriptive and qualitative information about the procedural facets of the demonstration, the personnel who operated the service components of the projects, and the costs incurred in operating the demonstration. In this respect, the role of MPR as evaluation contractor provided the centerpoint for accumulating the relevant documentation for addressing this goal. In particular, one of the roles of MPR in the demonstration was to monitor and provide technical assistance to the projects as they implemented the demonstration. Thus, as part of this process, MPR evaluation staff visited each project periodically throughout the life of the demonstration to ensure that the transitional-employment concept was being implemented according to the model design and (as we discuss in more depth in the following subsection) to ensure that the intake and randomization processes were being implemented as planned. These site visits provided a wealth of observational data. In addition, three conferences that brought together project and evaluation staff were held during the almost three years of demonstration operations. These conferences focused on operational problems and provided a forum for information-sharing. Of course, as necessary, ongoing telephone contacts between project and MPR staff were maintained throughout. Finally, a client and cost tracking system was set up by MPR in order to collect quantitative information on participation rates and expenditure levels. Further details on

operational aspects were gleaned from monthly progress reports submitted by each of the demonstration projects. These in-person, telephone, and written communications between project and evaluation staff form the basis on which the operational aspects of the demonstration can be analyzed.

2. Making the Policy Comparison: The Experimental Design

One of the simplest and most accurate methods for estimating the impact of adding transitional employment to the service system is to use an experimental design. Under this design, eligible program applicants are assigned randomly to either a treatment group (which is eligible for demonstration services) or a control group (which is precluded from receiving demonstration services, but is allowed to use all other available services in the program environment). The goal of this procedure is to produce two groups that are virtually identical in terms of both observable characteristics (e.g., age, IQ score, gender, and pre-enrollment activities) and unobservable characteristics (e.g., motivation and ability). Some differences might still arise by chance, but they should be small, and those that are measured can reasonably be controlled for statistically in the course of the research.

The experience of the treatment group can be used to determine what happens when the transitional-employment services are available. The experience of the control group indicates what would have happened in the absence of the demonstration. Because the two groups differ only with respect to the opportunity to receive demonstration services, any postrandomization differences that emerge between the groups can reasonably be attributed to the effect of the demonstration services. Experimental designs have been used widely to study social programs (Greenberg and Robins, 1986, review many of such studies), and they have proved to be very powerful and generally to lead to more defensible conclusions than other available evaluation designs (see Betsey, Hollister, and Papageorgiou, 1985).

Because the demonstration was introduced in the thirteen sites as a new or expanded service, its introduction was compatible with an experimental design. That is, randomization allocated new positions that would have been unavailable in the absence of the demonstration. In general, persons who were assigned to the control

group were not denied services that they could have obtained in the absence of the demonstration.¹

Random assignment was conducted as part of the intake process. Projects were permitted to screen applicants in any manner that was consistent with program rules and the ability of the project to provide services. However, because random assignment was judged to be so critical to the integrity of the research design, it was implemented in a manner whereby MPR could control the process carefully. Essentially, when an applicant indicated his or her willingness to cooperate with the requirements of the program and the research, and when the project determined its willingness to accept the applicant, the project's intake worker called MPR to verify that the individual was a first-time applicant (i.e., had not previously been assigned a research status) and to receive the applicant's randomly determined assignment to treatment- or control-group status.

3. Expectations for the Transitional Employment Training Demonstration

The design of the demonstration and its evaluation reflect the expected impacts of transitional employment. These expectations for the demonstration services can be considered under two sets. The first consists of the impacts of transitional employment on employment, earnings, and SSI payments. We will measure the effect of transitional employment on these outcomes for the sample as a whole and for key subgroups of the sample when longer-term data become available. The second set consists of impacts such as changes in the use of service programs other than transitional employment and the effect on the well-being of clients.

¹ The one area in which access to services was restricted pertained to those projects that operated a transitional-employment program in addition to the demonstration program. To keep the distinction between the treatment and control groups clear, control-group members were precluded from enrolling in any transitional-employment program operated by the demonstration training organization. Control-group members could obtain transitional-employment services from other program operators, although such services were not widely available. Three of the eight projects operated a second transitional-employment program and were covered by this restriction. Under the demonstration guidelines, the eight grantee organizations could begin serving control-group members (but could not actively recruit them) after April 1988.

Employment, Earnings, and SSI Receipt. The primary objective of transitional employment is to increase the extent to which clients hold jobs in the regular, competitive labor market. Thus, we would expect to find higher employment rates among members of the treatment group. Correspondingly, we should also find higher earnings for the treatment group as a whole. Given the SSI regulations pertaining to earned income, the increased earnings should be accompanied by a reduction in SSI payments to treatment-group members. A key issue for the analysis is the extent to which the reductions in SSI payments will offset the costs of providing the transitional-employment services.

Subgroup Analysis. One of the issues addressed by the demonstration is whether the characteristics and experience of the participants influence the effectiveness of transitional employment. Such information can be helpful in planning and targeting future programs. For the most part, expectations about the differences among subgroups are ambiguous. Therefore, we have specified the groups for which we might expect to find different impacts, but have not specified the direction of those different impacts.

The subgroups to be considered fall into the following categories:

- o Demographic characteristics
- o Personal characteristics
- o Previous experience and attainment
- o Program features and characteristics

The first category, demographic characteristics, includes such factors as age, race or ethnicity, and gender. Previous studies of disadvantaged groups (although typically not mentally retarded individuals) often show that the effectiveness of programs can vary along such dimensions. Such variation can be caused by many factors, including actual social or cultural differences among individuals or differences perceived by potential employers.

The second category, personal characteristics, pertains to individual-specific traits, such as intellectual ability, personal motivation, and physical ability. These

types of traits are difficult to measure, and we have used only two to define subgroups in the study. The first is intellectual ability, as defined by IQ score. This partial measure of mental retardation was used because no data on adaptive behavior were available. A weakness of this measure is that the IQ data were generally drawn from Social Security records, and, as indicated in Chapter IV, these data have a number of limitations when used for research or treatment purposes. The other subgroup is based on the intake workers' assessment of the probability of the person's success in transitional employment. This variable incorporates many personal characteristics into a single measure.

The third category, the activities and experience of sample members in the period before they enrolled in the program, constitutes an array of factors that reflect both obvious direct experience and whatever personal characteristics cannot be observed directly. These variables include living arrangement, work experience, and the receipt of Social Security benefits in addition to SSI.

While the fourth category, defined by the specific program services received, would appear to include obvious candidates that would condition the effectiveness of the program, it presents two serious problems. In terms of the variables that describe the programs themselves, the distinctions among them ~~cannot easily be quantified~~, nor do only eight projects provide enough variation to distinguish among program features. The second problem with variables that reflect the specific services provided to individual clients is the fact that services were assigned at least to some degree on the basis of need rather than on the basis of random selection. This introduces a selectivity problem into the analysis that might generate biased estimates of the effects of the demonstration on subgroups. Therefore, site is the only variable of this type that can be incorporated in the analysis. Of course, any program effects that are associated with site might also reflect differences among the local areas (i.e., in terms of job opportunities, alternative services, etc.).

Other Impacts. In addition to the impacts on employment, earnings, and SSI payments, transitional-employment services will affect many other aspects of clients' lives. Some of these other effects are closely associated with basic employment outcomes. For example, we would expect to find an increase in hours of work for the treatment group and possibly improvements in wage rates and the characteristics of

the jobs held by treatment-group members who are working.¹ We would also hope to find improvements in job retention.

There may also be effects on the use of other programs by treatment-group members. The evaluation of the STETS demonstration (Kerachsky et al., 1985) found that persons who received transitional-employment services were much less likely to be in sheltered workshops or work-activity centers. To the extent that transitional employment substitutes for these and other vocational services, important savings may accrue to the government. However, costs may appear in the form of increases in the use of services that complement transitional employment--for example, such services as transportation assistance, counseling, and housing assistance.

Finally, a number of effects pertain to the well-being of the clients. The economic status of the clients should be improved by the demonstration, with earning increases outweighing the expected reductions in SSI payments. It is also expected that the services will have an effect on clients whereby their living arrangements, social behavior, service use, and levels of self-sufficiency are more similar to those of the general population. The demonstration may also affect the confidence of clients in their income stream. While the recent changes in the SSI laws provide some income protection for recipients who lose their jobs, some recipients may still be anxious about exchanging the secure stream of SSI payments for a higher, but often more variable, stream of earnings.

¹ The effects on wages for persons who are employed may be positive or negative because the program will affect the mix of persons who work, as well as the wage rates of those persons. The program may make it more likely for marginal workers to be employed at low wages rather than to be unemployed. Thus, the number of low-wage workers may be higher among the treatment group than among the control group, which could lead to lower average wages for working treatment-group members relative to working control-group members. Of course, the average earnings of all treatment-group members are expected to rise, since the proportion of such persons who work will be greater than among controls.

III. THE PROJECTS AND THEIR ENVIRONMENTS

While the eight organizations which provided the demonstration services were chosen to represent different types of organizations and different service environments, they are not representative of the general population of program operators. Indeed, they were selected on the basis of a competitive-procurement process that saw over 700 organizations request information about the demonstration and 80 organizations actually prepare and submit proposals. The grantee organizations thus represent some of the most capable organizations in the country, and all have the administrative capabilities and experience to run fine transitional-employment programs.

These organizations, or host agencies, differed in terms of their basic structure and service orientation, as well as their geographic locations and service environments. These factors influenced both their ability to provide services and the ultimate impacts of those services; they also affected the costs of providing the services. Thus, before we discuss the issues associated with the delivery and costs of services, we review the structure and environment of the eight projects.

A. THE EIGHT HOST AGENCIES

The eight organizations which operated a demonstration transitional-employment project were listed in Table II.1. The following provide brief descriptions of each of the projects.

1. The Association for Habilitation and Employment of the Developmentally Disabled Inc. (AHEDD) (Serving Dover, Delaware; and Harrisburg, Lancaster, Philadelphia, Pittsburgh, and York, Pennsylvania)

AHEDD was founded in 1977 to increase the number and types of vocational opportunities available to disabled persons by encouraging the participation of the private sector in the rehabilitation process. Essentially, the goal of this organization has been to place and train clients with a variety of disabilities in competitive jobs.

AHEDD consists of eight separate field offices in Pennsylvania and Delaware (although only six field offices were included in the demonstration). The offices are staffed by an area manager and at least one on-site trainer. A single management

team, centrally located in Lemoyne, Pennsylvania, and consisting of four staff persons plus support staff members, supervises the activities of the field offices. As of 1984, AHEDD staff were placing approximately 200 clients on jobs each year.

Prior to the demonstration, AHEDD had run a transitional program, the Work Stations in Industry program, that was designed to place and train clients directly in competitive employment, in which an on-site coach provided training at the work site. Although quite similar to the demonstration design, this program did not enroll a client until a job had been found for him or her, and the one-year limit on services began when a client was placed on a job. AHEDD has served a wide range of persons, including persons with severe mental retardation and developmental disabilities. Approximately half of the persons whom AHEDD has placed on jobs have been mentally retarded; the other half have exhibited other disabilities. To support its transitional program and other vocational services (including a financially free-standing, for-profit company that is owned and operated by its employees, most of whom are handicapped), AHEDD provides clients with job-seeking skills training (including "mock interviews" with volunteer employers), counseling services, and transportation training on an as-needed basis.

seriously. We review the structure and environment of the program.

2. Association of Retarded Citizens, Monmouth Unit (Serving Monmouth County, New Jersey)

The Association of Retarded Citizens unit in Monmouth County (ARC/MU) has been serving persons with mental retardation for over 30 years. Although it had not provided community-based transitional-employment services prior to the demonstration, it had provided a variety of other services, many with a vocational focus. In addition to work-activity training centers and sheltered workshops, it also operates a custodial training program.

In 1984, a staff of 100 (including a professional social-work staff which provides counseling and referral services, a clinical psychologist consultant, and a psychiatrist) provided services to over 300 mentally retarded clients on an ongoing basis. In addition to the vocational programs described above, ARC/MU also provided several other types of services to its clientele, including a variety of residential settings, recreational programs, and van transportation.

3. The CENTER for the Rehabilitation and Training of the Disabled (Serving Chicago, Illinois)

The CENTER was founded in 1917 as an orphanage and began to focus on educating mentally retarded children in 1955. Since that time, the focus has shifted to providing a variety of vocational, evaluation, residential, and support services to disabled adults.

The demonstration approach to transitional-employment services adopted by The CENTER is essentially the same approach used in its ongoing Transitional Employment Program (TEP), which began in 1972. This program, which had an average monthly caseload of 27 clients in 1985-1986, provides six months of on-the-job training in a training job, followed by placement into a potentially permanent job and the provision of follow-up services, as necessary. In the training-job setting, training is provided to a group of clients by a job coach. In contrast to one year of total service time imposed in the demonstration, The CENTER's ongoing TEP program provides follow-up support for at least one year following the permanent job placement.

Across all of its vocational programs, the CENTER, with its professional staff of about 150 persons, had an average daily attendance of over 600 disabled persons in 1985; half to two-thirds of its clientele are persons with mental retardation. In fiscal year 1985, 36 percent of its clients were in vocational programs, including TEP and sheltered training in the areas of assembly, packaging, collating, microfilming and records-storing services, and janitorial training. To support these services, The CENTER provides evaluation services, case management, job-seeking-skills instruction and job placement, diagnostic and therapeutic services, transportation training, a behavior-management program for clients with severe behavioral problems, and a number of residential facilities.

4. The Children's Hospital (Serving Boston, Massachusetts)

The Developmental Evaluation Clinic (DEC), a unit within Children's Hospital's Ambulatory Services, receives federal, state, and private support as a university-affiliated facility, and focuses on training professionals in the evaluation and treatment of individuals with mental retardation and other developmental disabilities. In addition to a transitional-employment program, DEC has also provided vocational training in hospital training sites since 1976 (generally without placement

into more permanent jobs). These programs serve severely disabled clients, not all of whom are mentally retarded. In 1984, DEC employed over 100 professionals and interns to run these programs.

Since 1982, DEC has operated its transitional-employment program for adults with mental retardation under Bay State Skills Corporation grants. Services have included a 6-month training program at Children's Hospital, placement into community jobs upon graduation from the training program, and ongoing support. As of 1984, 30 mentally retarded persons had participated in this program. Support services have included individual and group counseling, family support, vocational assessment, and career counseling. In addition, this program at Children's Hospital provides long-term support to its clients (which includes helping clients move from one job to another), in contrast to the one-year limit on demonstration services.

5. Exceptional Children's Foundation (ECF) (Serving Los Angeles, California)

The Exceptional Children's Foundation (ECF) is a unit of the Association for Retarded Citizens. It was established in 1946 to serve children with mental retardation or other developmental disabilities, and has been operating an adult services division for the past 10 years.

Prior to the demonstration, ECF did not provide community-based on-the-job training services in competitive jobs. The programs provided by ECF at that time included four sheltered workshops, three work-training centers contracted to perform packaging and assembly work, and training programs in clerical, janitorial/maintenance, and gardening/landscaping skills. The latter programs primarily served persons with mild retardation. In addition to the various training services, vocational counseling, job preparation, and placement services were available. ECF, with a total of 250 agency staff members in 1987, has served 950 clients annually through its vocational programs.

6. Goodwill Industries, Milwaukee Area, Inc. (Serving Milwaukee, Wisconsin)

Goodwill Industries, the largest rehabilitation agency within the state of Wisconsin, has been providing services to disabled and disadvantaged persons in the Milwaukee area since 1919. In addition to operating a transitional-employment program, Goodwill, Milwaukee, also provides job training through its retail stores, sheltered-employment worksites, and commercial laundry. Specific vocational

services have included vocational evaluation, skills development and training, job counseling, job placement and follow-up, and basic work-skills training. In 1983, with a staff of over 325 individuals, Goodwill served over 3,300 disabled and disadvantaged clients, at least one-quarter whom were mentally retarded.

Since 1982, Goodwill Industries, Milwaukee, has operated the Community Employment Program, a transitional-employment program that serves persons with mental retardation and other disabling conditions. Program services include assessment, job-seeking-skills training, direct placement on potentially permanent jobs, on-the-job training, and support services (including counseling, psychotherapy, remedial education, recreation, and training in independent living skills). As of 1984, Goodwill operated a Placement Services Division, consisting of 15 staff members, that provided job development and placement. In 1983, 132 clients were enrolled in the Community Employment Program.

Support services were provided to Goodwill's demonstration clients via a subcontract with the Advocates for Retarded Citizens in Milwaukee County. This agency, formed in 1949, serves nearly 1,000 persons annually through a variety of services--crisis intervention, problem-solving and advocacy, self-help training, counseling, guardianship, and recreational programs. It also provides information and referral services to several thousand persons each year.

7. University of Washington and Portland Community College (Serving Portland, Oregon)

The University of Washington (UWash), located in Seattle, Washington, set up the demonstration program at Portland Community College (PCC) under the auspices of the Office of Special Services at the college. Because PCC had not run a community-employment program prior to the demonstration, staff were hired specifically for the demonstration. The University of Washington provided training and on-going consulting for the demonstration project.

In 1975, The Employment Training Program at the University of Washington began to operate a supported-employment program designed to provide competitive employment to clients with moderate and severe mental retardation. All clients were trained in cafeterias on the University of Washington's campus, and were then placed and trained in competitive jobs in local food service establishments and were provided with long-term employment-support services. Between 1975 and 1983, the project provided training to over 136 clients. In addition, it has helped set up similar employment programs in at least four community colleges, including PCC.

8. University of Wisconsin-Stout (Serving Chippewa, Dunn, Eau Claire, and Pepin Counties in Wisconsin)

The demonstration program at the University of Wisconsin-Stout (which is located in Menomonie, Wisconsin) was run under the auspices of the Vocational Development Center (VDC), a unit within the Stout Vocational Rehabilitation Institute at the university. Although since 1968 it had provided pre-vocational training and job-placement services to clients with mental retardation, VDC was not running a competitive-employment program with on-the-job training by a job coach prior to the start of the demonstration.

The services provided by VDC prior to the demonstration included Projects with Industry, a program that placed clients into community jobs, with some short-term training provided through funds under the Job Training Partnership Act (JTPA) program. In addition, the VDC provided job-seeking and general work-skills training, psychological testing and vocational evaluation services, independent living skills training, and housing facilities. Through these programs, VDC serves about 900 clients annually. As of 1984, about 20 percent of the clients served at VDC were mentally retarded. Direct service staff include professionals and both graduate and undergraduate students.

B. LOCAL ENVIRONMENTS

The demonstration did not take place in a service-delivery vacuum. Each demonstration project operated within and was influenced by a local service system. Moreover, since the demonstration focused on job placement and training, it was also necessarily influenced by the local employment environment. This section describes selected characteristics of the local environments within which these projects operated.

The demonstration projects interacted with other agencies within the service system by recruiting and accepting referrals and coordinating service delivery to clients. In addition, some interaction between the local Social Security offices and the demonstration projects was expected in order to administer the demonstration waivers, thereby creating an additional service system link. Examining these characteristics of the local service environments, then, helps provide insight into the various facets of the demonstration experience, as well as the services that were available and potentially provided to control-group members. As part of our longer-

term impact analysis (which will be presented in a forthcoming report), we will present differences in the outcomes of treatment- and control-group members. If vocational services similar to those provided to demonstration clients were generally available to control-group members, we would not expect that the impact of the demonstration would be as large. In terms of the employment characteristics of the local environments, such factors as economic conditions, available transportation, and standards of living might also have influenced the ability of projects and clients to obtain jobs, as well as the types of jobs obtained and the wages earned by clients.

1. Service Environments

The demonstration projects were located in geographic areas that ranged from low-density areas in which relatively few services were available for this population to large cities characterized by high service saturation. Table III.1 illustrates this variation by presenting the characteristics of the demonstration sites.

The service environments of projects in relatively high-density areas, such as AHEDD's Philadelphia site, The CENTER, and Children's Hospital, were characterized by a large number of services available to this population (including several other job placement and training programs), as well as by no or only short waiting lists for services, a high degree of service saturation, and competition among agencies for clients. This characterization is reflected in Table III.1 in the large number of area workshops at these sites.

In contrast, projects located in lower-density, rural, or suburban areas, such as AHEDD's Dover site, ARC/MU, UWash/PCC, and UWis/Stout, tended to have little or no noticeable competition for services, particularly for competitive-employment services, with the demand for such services clearly outweighing the supply. While competitive-employment programs in the more urban areas were already an established sector of the service system prior to the demonstration, they were less prevalent in the more rural and suburban areas. Interestingly, the service environment of ECF was described by project staff as similar to the environments of these less urban, lower-density areas.

Table III.1 also presents the characteristics of the Social Security system across sites. In particular, the Social Security Administration administers state supplements in most of the states within which demonstration projects were located. In addition, most states provide Medicaid coverage to all SSI recipients. Finally, the

TABLE III.1

POPULATION AND SERVICE CHARACTERISTICS OF DEMONSTRATION SITES

| | AHEAD | | | | | | | | | | Children's | | | ECF ^b (Los Angeles) | Goodwill (Milwaukee) | UMash/PCC (Portland) | UMis/Stout (Wisconsin) |
|---|---------------------------|-------------------|------------------|---------------------|-------------------|-------------|---------|--------------------------|-------------------------|----------------------|------------|---------|---------|-----------------------------------|-------------------------|-------------------------|---------------------------|
| | Dover, ^a DE | Harrisburg, PA | Lancaster, PA | Philadelphia, PA | Pittsburgh, PA | York, PA | Average | ARC/MU (Monmouth, NJ) | The CENTER (Chicago) | Hospital (Boston) | | | | | | | |
| Population ^c (Oct. 1984) | 98,219 | 52,056 | 56,261 | 1,646,713 | 402,583 | 44,426 | 383,376 | 849,211 | 2,992,472 | 570,719 | 3,096,668 | 620,811 | 365,861 | 130,932 | | | |
| Population per Square Mile (Oct. 1984) | 165 | 6,761 | 8,791 | 12,108 | 7,267 | 8,543 | 7,273 | 802 | 13,119 | 12,092 | 6,647 | 6,480 | 3,357 | 87 | | | |
| Number of Area Workshops ^d | 1 | 3 | 4 | 15 | 5 | 3 | 5 | 3 | 75 | 12 | 5 | 7 | 8 | 5 | | | |
| Any Other Transitional or Supported Employment Programs in the Service Area (Y/N) ^{d,e} | Y | Y | Y | Y | Y | Y | - | Y | Y | Y | Y | Y | N | Y | | | |
| State(S) or Federal(F) Administers Supplements to Federal SSI Payments | F | F | F | F | F | F | - | F | S | F | F | F | S | F | | | |
| Medicaid Eligibility Determined by Federal(F) SSA or State(S) | F | F | F | F | F | F | - | F | S | F | F | F | F | F | | | |
| Number of SSA District Offices in the Service Area ^d | 2 | 1 | 1 | 8 | 11 | 1 | 4 | 2 | 15 | 12 | 15 | 5 | 2 | 1 | | | |

^a Information on Dover pertains to Kent County.^b The service area of ECF encompasses only certain ZIP codes within Los Angeles.^c Population data were obtained from U.S. Bureau of Census (1986 and 1983).^d Data were obtained from interviews with project staff.^e This category includes only programs that provide on-the-job training in the community for persons with mental retardation.

number of SSA district offices in the service areas varied considerably across projects, ranging from only 1 at some of the AHEDD sites and in the UWis/Stout service area to over 10 in Chicago, Los Angeles, Boston, and Pittsburgh.

2. Employment Environments

The employment characteristics of the areas within which demonstration projects were located might have affected demonstration services in a variety of ways. For example, the area unemployment rate might have affected the ability of projects to place clients in jobs. In addition, the types of jobs available in each service area were expected to affect the types of jobs obtained by demonstration clients. Local transportation was also expected to be a concern for the demonstration's target group in obtaining jobs. Finally, the wages earned by demonstration clients reflected state minimum wage laws and prevailing local wage rates.

Table III.2 illustrates the variation in these characteristics across the demonstration sites. In addition, it also provides a comparison of the characteristics of the demonstration sites, individually and as a group, with the national average for each characteristic. A sample of 8 projects selected through a competitive-procurement process cannot be expected to yield a statistically representative sample of communities throughout the country. However, to the extent that the demonstration sites were comparable to the nation as a whole, we are better able to generalize the findings of the demonstration.

Table III.2 indicates that ARC/MU, Children's Hospital, and UWis/Stout, in particular, were located in areas whose economies were relatively strong, as evidenced by growth in nonagricultural employment and/or relatively low unemployment rates. In contrast, AHEDD's Pittsburgh and York sites, The CENTER, and UWash/PCC were located in areas that exhibited little job growth and relatively high unemployment rates.

Reflecting the dispersion across projects in population density, Table III.2 illustrates the considerable variation in the use of public transportation. The percentage of the working population who relied on public transportation to get to work ranged from less than 3 percent in Dover, York, and rural Wisconsin to over 25 percent in Philadelphia, Pittsburgh, Chicago, and Boston. Such variation is not

TABLE III.2
EMPLOYMENT CHARACTERISTICS OF DEMONSTRATION SITES

| | AHEDD | | | | | | | | | | All | | | | | | | | | | | | | | | | | |
|---|-----------|-------|----------------|-------|---------------|-------|------------------|-------|----------------|-----------|----------|-------|-----------------------|-------|----------------------|---------------------|------------------------------|---------------------|-------------------|-------|----------------------|-------|----------------------|-------|-------------------------|---------------------|---------------------|---------------------|
| | Dover, DE | | Harrisburg, PA | | Lancaster, PA | | Philadelphia, PA | | Pittsburgh, PA | | York, PA | | ARC/MU (Monmouth, NJ) | | The CENTER (Chicago) | | Children's Hospital (Boston) | | ECF (Los Angeles) | | Goodwill (Milwaukee) | | UMish/PCC (Portland) | | UMish/Stout (Wisconsin) | | National Average | |
| Area Unemployment Rate ^a | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| May 1984 | 7.3 | 5.4 | 4.4 | 6.7 | 10.8 | 7.8 | 7.1 | 5.2 | 8.1 | 3.5 | 7.1 | 6.4 | 8.1 | 7.2 | 6.5 | 7.2 | 6.5 | 7.2 | 6.5 | 7.2 | 6.5 | 7.2 | 6.5 | 7.2 | 6.5 | 7.2 | 6.5 | 7.2 |
| May 1985 | 6.1 | 5.3 | 4.5 | 6.4 | 9.7 | 7.5 | 6.6 | 3.9 | 8.7 | 3.0 | 7.0 | 5.7 | 7.9 | 6.9 | 6.2 | 7.0 | 6.2 | 7.0 | 6.2 | 7.0 | 6.2 | 7.0 | 6.2 | 7.0 | 6.2 | 7.0 | 6.2 | 7.0 |
| May 1986 | 5.0 | 5.5 | 3.9 | 5.9 | 8.4 | 6.0 | 5.8 | 4.1 | 7.6 | 3.6 | 6.0 | 6.0 | 7.8 | 5.9 | 5.9 | 7.0 | 5.9 | 7.0 | 5.9 | 7.0 | 6.0 | 7.8 | 5.9 | 5.9 | 5.9 | 7.0 | 6.1 | 7.0 |
| May 1987 | n.a. | 3.1 | 2.4 | 4.5 | 6.6 | 4.2 | n.a. | 3.3 | 7.5 | 2.9 | 6.3 | 4.9 | 4.8 | 5.0 | n.a. | 6.1 | n.a. | 6.1 | n.a. | 6.1 | 4.9 | 4.8 | 5.0 | 5.0 | 5.0 | n.a. | 6.1 | 6.1 |
| Percent of Non-Agri. Jobs in Manuf., 1986 ^c | n.a. | 17.7 | 34.0 | 18.2 | 14.5 | 34.8 | n.a. | 10.2 | 18.7 | 36.3 | 23.1 | 25.0 | 16.8 | 18.2 | n.a. | 18.9 | n.a. | 18.9 | n.a. | 18.9 | 25.0 | 16.8 | 18.2 | 18.2 | 16.1 | 18.9 | n.a. | 18.9 |
| Percentage Change in Manuf. Jobs in 1985-1986 ^c | n.a. | -3.1 | 3.3 | -2.5 | -8.4 | -1.9 | n.a. | -1.5 | -2.0 | -5.0 | 1.2 | -0.3 | -4.5 | 5.2 | n.a. | -0.5 | n.a. | -0.5 | n.a. | -0.5 | -0.3 | -4.5 | 5.2 | 5.2 | 16.1 | -0.5 | -0.5 | -0.5 |
| Percentage Change in Non-Agri. Employment in 1985-86 ^c | n.a. | 2.4 | 3.8 | 1.7 | 0.2 | 0.9 | n.a. | 5.0 | 1.2 | 2.6 | 2.2 | 2.1 | 0.9 | 6.7 | n.a. | 2.5 | n.a. | 2.5 | n.a. | 2.5 | 2.1 | 0.9 | 6.7 | 6.7 | 16.1 | 2.5 | 2.5 | 2.5 |
| Percent Using Public Transportation to Get to Work | 0.7 | 15.5 | 4.5 | 30.2 | 28.3 | 2.6 | 13.6 | 5.7 | 32.4 | 33.7 | 10.8 | 14.3 | 15.9 | 2 | 16.1 | n.a. | n.a. | n.a. | n.a. | 14.3 | 15.9 | 2 | 16.1 | 16.1 | 16.1 | n.a. | n.a. | n.a. |
| Per-Capita Money Income ^d (1983) (Dollars) | 6,877 | 8,158 | 7,449 | 6,053 | 8,991 | 7,737 | 7,544 | 7,724 | 8,971 | 9,100 | 10,654 | 8,882 | 9,727 | 7,984 | 8,816 | 10,340 ^d | 8,816 | 10,340 ^d | 8,816 | 8,882 | 9,727 | 7,984 | 7,984 | 8,816 | 10,340 ^d | 10,340 ^d | 10,340 ^d | 10,340 ^d |
| Minimum Wage (Dollars) | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35/3.50 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 |

SOURCES: USDOL (1984, 1985, 1986, and 1987) and U.S. Bureau of Census (1986 and 1983).

^a Figures are not seasonally adjusted. Numbers for 1987 are not directly comparable to earlier figures because of changes in Bureau of Labor Statistics methods.

^b Information on Dover pertains to Kent County.

^c These figures are for the relevant Primary Metropolitan Statistical Areas (PMSAs).

^d National average is based on "disposable personal income."

^e Sites are weighted equally; the average for the AHEDD projects is included in the demonstration average.

n.a. indicates that these data were not available.

surprising given that the service area of, for example, UWis/Stout covered roughly 2,700 square miles and had a population density of 87 persons per square mile, compared with Chicago, with a population density of 13,119 per square mile.

Finally, per-capita income across all the project sites was \$8,816 (about \$1,500 below the national average), ranging from less than \$8,000 at some of the AHEDD sites, Monmouth, and rural Wisconsin to over \$9,000 in Boston, Los Angeles, and Portland. In addition, although most projects were located in states that enforced the federal minimum wage of \$3.35 per hour, Massachusetts was enforcing a \$3.50 minimum wage during the last half of the demonstration period.

IV. PERSONS ENROLLED IN THE DEMONSTRATION

As with most demonstrations that offer a relatively new service, identifying and recruiting a large sample of persons to enroll in the transitional-employment projects posed quite a challenge. Thus, the outreach and selection methods used in the demonstration are of interest, in terms of both their success in obtaining the necessary sample and their implications for interpreting and generalizing the findings about the demonstration.

During the thirteen months of enrollment, the eight demonstration projects enrolled 745 persons, almost 5 percent of all eligible SSI recipients who were living in the catchment areas, by far the largest research sample that has been available to date for analyzing the effects of transitional employment on persons with mental retardation. Half of these persons were assigned to the treatment group, and the other half were assigned to the control group. These persons exhibited a broad range of abilities and experience, and provide a sufficient research sample to yield relatively precise estimates of the effects of the program.

Of course, these persons are not a representative sample of all eligible SSI recipients with mental retardation. Therefore, it is essential that we understand who they are in order to interpret the demonstration findings appropriately. This understanding must be based on a review not only of their measured characteristics, but also of the selection procedure that may have differentially encouraged the enrollment of persons who exhibited different unmeasured characteristics, such as motivation or parental support.

This chapter begins by presenting information on the process implemented by the projects to recruit and select the sample. It then focuses on the characteristics of the randomized sample. These discussions will form the foundation for the final section of this chapter, in which we assess whether the experience of the research sample can be generalized to a wider population of SSI recipients. Moreover, the final section will also address whether or not our randomization efforts were successful in forming two comparable groups of persons with mental retardation.

A. RECRUITMENT AND SAMPLE SELECTION

Applicants to the program were recruited from within a specified target population, consisting of persons who were:

- o SSI recipients
- o Between the ages of 18 and 40
- o Diagnosed as having mental retardation
- o Residing within a specified geographic "catchment" area¹

As presented in Table IV.1, Social Security records indicate that about 13,800 persons met these basic eligibility criteria across the demonstration projects.² The projects relied on several forms of outreach to attract members of the target population to the program. Interested persons (those individuals who responded positively to the outreach effort) were then screened by the projects in order to determine their interest in and appropriateness for the project.

The remainder of this section describes in more detail the methods of recruitment and the systems established by the projects to draw from the eligible population those individuals who were appropriate for and interested in the demonstration services. In addition, Table IV.1 illustrates the recruitment and flow of SSI recipients through these systems.

1. Recruitment

Projects applied various forms of outreach to attract persons from the target population to the program--mailings to prospective enrollees, follow-up telephone calls, and other forms of outreach. The methods of recruitment were designed to attract a broad sample of SSI recipients.

¹ Each project selected a specified geographic area by identifying particular ZIP codes within their service area.

² This estimate does not include SSI recipients whose computer system file did not contain any diagnostic information and whose case folder was not available due to pending claims.

TABLE IV.1

SAMPLE RECRUITMENT FOR THE DEMONSTRATION

| | AHEDD (PA, DE) | ARC/MU (Monmouth, NJ) | The CENTER (Chicago) | Children's Hospital (Boston) | ECF (Los Angeles) | Goodwill (Milwaukee) | Wash/PCC (Portland) | UMis/Stout (Rural Wisconsin) | Total | Data Source |
|--------------------------------------|-------------------|--------------------------|-------------------------|------------------------------------|----------------------|-------------------------|------------------------|------------------------------------|--------|--------------------------|
| Eligible SSI Recipients ^a | 4,000 | 700 | 1,600 | 1,500 | 2,700 | 2,000 | 800 | 500 | 13,800 | SSA Records ^b |
| Outreach | | | | | | | | | | |
| Initial letters | 2,802 | 627 | 1,582 | 1,468 | 2,664 | 1,905 | 694 | 432 | 12,174 | MPR Records |
| (Percent of eligible recipients) | (70.1) | (89.6) | (98.9) | (97.9) | (98.7) | (95.3) | (86.8) | (86.4) | (88.2) | -- |
| Follow-up: | | | | | | | | | | |
| Follow-up letters | 1,961 | 370 | 712 | 826 | 681 | 1,187 | 480 | 0 | 6,217 | MPR Records |
| Phone calls | 564 | 135 | 957 | 208 | 15 | 208 | 0 | 27 | 2,114 | Project Tallies |
| Referrals: | | | | | | | | | | |
| Referrals--total | 54 | 103 | 3 | 42 | 204 | 32 | 54 | 62 | 554 | Project Tallies |
| Referrals--net ^c | 43 | 33 | 2 | 38 | 176 | 14 | 29 | 7 | 342 | Project Tallies |
| Positive Responses ^d | 640 | 137 | 256 | 226 | 348 | 505 | 195 | 97 | 2,404 | Project Tallies |
| (Percent of eligible recipients) | (16.0) | (19.6) | (16.0) | (15.1) | (12.9) | (25.3) | (24.4) | (19.4) | (17.4) | -- |
| Intake Interviews | | | | | | | | | | |
| Scheduled | 277 | 116 | 127 | 143 | 218 | 212 | 145 | 97 | 1,335 | Project Tallies |
| Conducted ^e | 207 | 113 | 81 | 109 | 196 | 170 | 127 | 94 | 1,097 | Project Tallies |
| (Percent of positive responses) | (32.3) | (82.5) | (31.6) | (48.2) | (56.3) | (33.7) | (65.1) | (96.9) | (45.6) | -- |
| Enrollments | | | | | | | | | | |
| Total | 158 | 80 | 53 | 57 | 154 | 71 | 92 | 80 | 745 | MPR Records |
| (Percent of positive responses) | (24.7) | (58.4) | (20.7) | (25.2) | (44.3) | (14.1) | (47.2) | (82.5) | (31.0) | -- |
| Controls | 77 | 41 | 26 | 28 | 77 | 35 | 47 | 39 | 370 | MPR Records |
| Treatments | 81 | 39 | 27 | 29 | 77 | 36 | 45 | 41 | 375 | MPR Records |

^a Eligible SSI recipients were those who were living in the designated catchment area, were between 18 and 40 years of age, and had a diagnosis of mental retardation.

^b Estimated from SSA records as of August 1986.

^c Net referrals is the number of persons referred to the demonstration who were not sent an invitation letter.

^d Positive responses include the following: postcards returned that indicated interest; persons who called to express interest; persons contacted by telephone who expressed interest; and referrals who expressed interest.

^e Intake interviews "conducted" indicates the number of persons who participated in at least one intake session.

The outreach effort was initiated by sending personalized letters to eligible SSI recipients (or, when appropriate, their representative payees) and inviting them to apply to their local demonstration project.¹ Eligible persons were identified by the Social Security Administration, which screened the case folders of over 20,000 SSI recipients who lived in a catchment area and were between 18 and 40 years of age to identify those persons with mental retardation. (Appendix A includes a full discussion of the selection of cases and the processing of letters.) As indicated in Table IV.1, a total of 12,174 letters were sent to eligible persons (or their representative payees) across the demonstration sites, representing almost 90 percent of the eligible population.²

In addition, follow-up letters were sent and telephone calls were made to persons who did not respond to the initial mailing. A total of 6,217 follow-up letters were sent to such persons, which indicates that about half of the persons who were sent one letter were sent a second letter. This percentage may vary across sites because of (1) different response rates to the initial letter and (2) administrative reasons. For example, one project had such a good response to the initial mailing that it requested that no more letters be sent until it could respond adequately to the flow of applicants. Moreover, since some of the initial letters were sent out late in the enrollment period, adequate time was unavailable for a follow-up mailing.

A total of 2,114 telephone calls were also made by project staff to persons who had received letters but had not responded to the mailings. The projects appear to have approached the telephone calling differently, since some projects placed relatively more emphasis on this form of outreach. The CENTER, for example, contacted 957 persons (or 61 percent of the individuals who were sent letters in their catchment area), while UWash/PCC chose to not make any telephone calls given that the responses to the other forms of outreach were adequate.

¹ A representative payee is appointed to receive and manage the use of a recipient's SSI payments in the event that the recipient is determined to be incapable of handling his or her own funds. Over 80 percent of those SSI recipients who were eligible to receive a letter had a representative payee.

² Letters were sent to all eligible persons identified by the Social Security Administration, with the exception of persons who lived in state institutions to whom the project which served that catchment area requested that letters not be sent.

Each project also conducted a variety of other forms of outreach, which included making presentations about the project, mailing material to other service providers and community groups, and encouraging service providers with whom they had contact on a regular basis to refer clients. Projects often worked with the school systems to target students who were close to graduation. The media also helped disseminate information about the projects to a wider audience.¹ At least one project also worked with the SSA district offices to obtain referrals from that source. All of these efforts helped generate a total of 554 referrals from other agencies, 342 of whom had not received invitation letters.

While sending letters to recruit applicants appears to have been an unusual method of recruitment for many of the projects, which had traditionally relied on referrals from other service agencies, some of the projects believed that the letters reached persons who were not already connected to the service system. In addition, letters were thought to have reached persons who would typically not have been served by this type of program--that is, the recruitment process invited the disabled person to apply, rather than inviting another service provider (who perhaps had more traditional views) to refer clients. At least one project also believed that other service providers may have perceived that the letters were less threatening, since they were initiated from an organization (SSA) that was outside of the local service system and was thus not in direct competition for funding. In addition, one staff member noted that the strength of this recruitment approach was that it acted as a preliminary screening procedure: although a wide population received the letter, those persons who responded (i.e., the SSI recipient or his or her representative payee) (1) understood that they were expected to respond, (2) understood how to respond, and (3) responded voluntarily. Hence, this method of recruitment effectively screened out a number of persons who did not have sufficient interest, understanding, or motivation to take the action of contacting the demonstration project. In addition, representative payees who did not support this type of program for the SSI recipient had the option of not responding.

¹ Sometimes, the projects initiated the media outreach, while at other times the program itself caught the eye of the media.

Conversely, at some of the projects, the letter approach to recruitment, by itself, did not generate enough applicants. For the most part, the follow-up procedures and referrals were necessary supplements to the initial mailing.

2. The Selection Process

Approximately 2,400 persons, or 17 percent of the eligible population, responded to the outreach efforts with interest. Each project established an intake system through which interested persons were assessed on an individual basis in order to determine their suitability for the project. Projects were encouraged to devise an intake system that met both their own needs and those of the overall demonstration. However, demonstration guidelines were minimal. Beyond the basic criteria identified earlier (SSI recipients between the ages of 18 and 40 who had a diagnosis of mental retardation and resided in the catchment area), projects were encouraged to enroll individuals who had a reasonable chance of success but who also represented a wide range of abilities and characteristics, including individuals who showed severely limited abilities. Indeed, a goal of this demonstration was to serve more severely impaired persons who might not typically be enrolled by this type of program. In addition, the demonstration required that once a person applied to a demonstration project his or her contact with project staff be relatively brief, so as to avoid raising unduly high expectations for services among those individuals who would eventually be assigned to the control group. Therefore, direct contact with applicants prior to randomization was to be limited to a total of two hours, and the process was to be completed within two weeks' elapsed time, starting with the point of application. Beyond these specifications, the intake procedures developed by projects varied along several dimensions (as shown in Table IV.2).

Typically, the first direct contact with the client was made by telephone.¹ During this initial telephone call, project staff generally provided further information about the project. In addition, as indicated in Table IV.2, most projects conducted pre-screening activities during this first contact, obtaining information about the interested person in order to determine whether the person was "broadly" eligible for

¹ Enclosed in the invitation letter was a pre-addressed postcard. Persons who received invitation letters were instructed to send the postcard to the project office (staff would then telephone the person after the postcard was received) or to call the project office if interested.

TABLE IV.2

CHARACTERISTICS OF THE INTAKE PROCESS

| Characteristics | AHEDD (PA, DE) | ARC/MU (Monmouth, NJ) | The CENTER (Chicago) | Children's Hospital (Boston) | ECF (Los Angeles) | Goodwill (Milwaukee) | UMash/PCC (Portland) | UWis/Stout (Rural Wisconsin) |
|---|-------------------|--------------------------|-------------------------|------------------------------------|----------------------|-------------------------|-------------------------|------------------------------------|
| Intake and Screening Procedures | | | | | | | | |
| Pre-screening ^a | X | X | X | X | X | X | X | |
| One-session intake | X | X | | | X | X | | X |
| Two-session intake ^b | | X | X | X | | | | |
| Work samples | | X | X | | | | | |
| Collection of client records ^c | X | X | X | X | X | X | | X |
| Possible Locations of Intake Interviews | | | | | | | | |
| Project office | X | X | X | X | X | X | | X |
| Applicant's home | X | X | | | X | X | | X |
| Other location | X | X | | | X | X | | X |
| Composition of Intake Staff | | | | | | | | |
| Project coordinator(s) ^d | X | | | X | X | X | X | X |
| Job coaches | X | | X | | | | | |
| Other direct service staff | | X | X | | X | | X | |
| Final Decision Typically Made by: | | | | | | | | |
| Individual intake staff member | | | | | | | | |
| A group of intake staff members | X | X | X | X | X | X | X | X |
| A group of project staff members | | | | | | | | |

NOTE: X indicates that the project exhibited the characteristic.

SOURCE: Interviews with project staff.

^a Screening was undertaken prior to intake (typically during the initial telephone conversation).^b Two or more in-person meetings were held with prospective applicants during the intake period.^c This category includes medical records and/or service records obtained from other agencies that provided services to the applicant.^d Program coordination staff includes staff members who generally reported directly to the project director and who had some administrative responsibility, often having oversight responsibility for more than one other staff member.

the program. However, the extent and content of this pre-screening varied across projects. While most of the projects encouraged almost all persons to apply to the program (unless they clearly did not meet the standard criteria identified earlier), The CENTER and Goodwill, for example, chose to screen individuals out at this point for reasons beyond not meeting the basic criteria. For example, clients were screened out if during the telephone call the project intake person felt that they were not interested in working in the community, could not travel by themselves and were unwilling to be travel-trained, had experienced uncontrollable seizures in the past year, could not work in a standing position, or had a medical reason that they could not work.

During or after the initial telephone contact, the project scheduled at least one intake session with the applicant. As indicated in Table IV.2, ARC/MU, The CENTER, Children's Hospital, and UWash/PCC set up a two-session intake system, allowing more than one opportunity to meet with the applicant prior to making an enrollment decision. The other projects generally conducted one-session intakes, although some held two-session intakes in certain circumstances.¹ All of the projects conducted at least some of the intake sessions at the project office, while some of the projects (AHEDD, ARC/MU, ECF, Goodwill, and UWis/Stout) also held the sessions at other locations as necessary, including an applicant's home.

In the intake sessions, applicants and their families (or guardians or other service providers who accompanied the client to the session) were typically provided with additional information about the program and in turn provided information about the applicant to intake staff, to enable them to assess his/her appropriateness for the program. Both the criteria for defining and the methods for determining "appropriateness" varied among projects. In addition to collecting the information included in the demonstration intake form (see Appendix A for a full discussion of this instrument), each project also asked a set of additional questions which were unique to that project. Moreover, as indicated in Table IV.2, all projects attempted to collect records on applicants from their previous service providers. In a few cases, projects asked applicants to complete some simple work tasks in order to assess the applicant's

¹ For example, a few clients who were still in school at the time they were initially contacted applied to the program at that time, but did not complete the intake process until they had finished school.

abilities and interest. The CENTER required all applicants to attend a training site and work for an hour under the supervision of a job coach and to submit a physician's report. ARC/MU also had a work-observation component in their intake process, but required it for only a few applicants.

The criteria for defining appropriateness varied not only across projects but also over time and among staff within each project. Factors that led to immediate rejection at some projects included the following: mental illness, uncontrollable seizures, an inability to self-administer medication, and an inability to travel alone and an unwillingness to accept travel training, as well as certain physical limitations, such as the inability to work in a standing position. Beyond these criteria, project staff considered many other dimensions which helped predict vocational success: inappropriate behavior, emotional problems, attitude and enthusiasm towards working, the nature of the applicant's support system, the availability of transportation, grooming, communication skills, vocational history, attendance and punctuality for the intake sessions, IQ score, harmful behavior toward others, and medical problems. Essentially, each applicant was assessed as having certain positive attributes and certain negative attributes along these dimensions. The staff member or group of staff members who made the enrollment decision assessed these attributes and weighed the attributes in a fairly subjective manner. In essence, enrollees who exhibited a range of characteristics appeared to be appropriate for the program. In general, however, the decisionmaker must have formed the perception that the applicant could be served given the available services.

As the demonstration enrollment period progressed, projects revised and refined this screening process in a way that reflected their experience with clients enrolled early on. Specifically, projects became more aware of what "time-limited" service meant and of the characteristics of applicants that indicated whether or not they could be served within that time frame.

The decision to enroll an applicant may also have been a reflection of the staff members who were involved in the intake process and decision-making. As indicated in Table IV.2, the composition of the intake staff and decision-makers varied considerably among projects. For example, while ARC/MU, Goodwill, and UWis/Stout devised systems whereby a single staff member (or a few staff members independently) conducted intakes and made the randomization decisions, the rest of the projects used a group approach, sometimes involving a set of staff members in the

decision-making beyond the intake staff. Another dimension along which the projects varied was whether or not job coaches or other direct service staff personnel were involved in the intake process.

In addition to these program screening activities, each eligible SSI recipient who came into contact with the program had to make an explicit or implicit decision to be enrolled. This "self-screening" took several forms. For example, some individuals chose not to respond to outreach efforts, while others responded but indicated that they were not interested. In addition, although some applicants who were initially interested indicated explicitly at some point in the intake process that they were no longer interested (this could have been prior to scheduling an intake interview or during or after intake sessions), the decision not to complete the intake process was sometimes more subtle--for example, not attending scheduled interviews. Although each project continued to pursue these applicants by rescheduling the session, each project had a threshold level beyond which no more sessions would be scheduled. For example, while The CENTER would, as a rule, allow no more than three no-shows for scheduled interviews, other projects repeatedly scheduled as many as five or more interviews for a given individual. Overall, as indicated in Table IV.1, 82 percent of the persons who were scheduled for intake interviews actually participated in intake.

Whenever possible, project staff used intake data forms (which were sent to MPR) to note the reasons for self-screening, ranging from issues inherent in the service system (such as concerns about the appropriateness of competitive employment and the ability of the service system to provide adequate support) to concerns at an individual level (such as satisfaction with current work or service arrangements).

It is clear that many SSI recipients with handicaps and their parents have concerns about the appropriateness of competitive employment for persons with more severe retardation. Over the last ten years, parents have witnessed many changes in professional opinions about the feasibility and desirability of community integration and competitive employment. Ten years ago, many parents accepted as an article of faith that a sheltered workshop was the most that could be hoped for for their son or daughter. As professional opinion changed to embrace the concepts of normalization and competitive employment for persons with mental retardation, these parents sometimes became confused about the goals that were appropriate for their sons and

daughters. In addition, some parents feared that physical or emotional harm might come to their children either during travel to or at a competitive job site.

Even if parents were certain that competitive employment was right for their children, they might still have had doubts about the ability of the service system to deliver a coordinated set of necessary services. In particular, some may have feared that their children would be placed on jobs without a long-run support system being in place.

These general concerns about an offer of transitional-employment services were probably exacerbated in the demonstration. The demonstration was scheduled to run only for 30 months, which may have heightened concern about whether the necessary long-run supports would be provided. In addition, the sponsorship of the demonstration by the Social Security Administration (SSA) may have raised concerns. In particular, the demonstration began shortly after a period of substantial adverse publicity about the social security disability review process. While special waivers to protect the SSI eligibility of participants were instituted in the demonstration and a national moratorium on disability reviews was announced just prior to the demonstration, it is likely that the parents of many SSI recipients may have been worried about their enrolling in an employment program sponsored by SSA. In addition, the applicant's representative was sometimes concerned about whether the applicant would be randomized into the control group, thus disappointing and discouraging the applicant and potentially prohibiting the applicant from enrolling in the host agency's on-going supported-work program until April 1988.¹

It is also likely that some SSI recipients who were exposed to the outreach were already working or were enrolled in another program that provided competitive-employment services. Some may have been happy with their current services or their lack of services and, thus, had no interest in moving to a new program. Moreover, some applicants may simply not have been interested in the type of work (janitorial, food service, etc.) that was offered by a project. In addition, some of the invitation letters were presumably not received, and, in speaking with project staff, it appeared

¹ This demonstration requirement was designed to keep the distinction clear between treatment- and control-group members.

that some individuals who received invitation letters were clearly not mentally retarded (some had other impairments that may have made them eligible for SSI).¹

Many of the projects found that obtaining referrals from service providers was more difficult than they had originally anticipated. Two particular instances arose repeatedly. First, several sheltered workshops appeared to worry about losing funding if they referred a client to the demonstration program. Referrals from sheltered workshops had at least two cost implications for the workshops: (1) prospective clients were needed to refill the open workshop position, and (2) the persons who were most appropriate for referral were among the most productive workshop clients. Second, group homes often required that residents have a full-time day activity, something that could not always be guaranteed under transitional employment (either because of temporary job losses or because the resident's job involved working something other than standard daytime hours). In both cases, the workshop or residence was reluctant to refer persons to the demonstration. Some projects also noted that historical precedent within an agency or service area led some case managers to refer potential applicants to more traditional work settings.

Given the variety of intake systems adopted by the projects and the reasons for screening (both project- and self-screening), it is not surprising that randomization rates differed across projects. As indicated in Table IV.1, ARC/MU, ECF, UWash/PCC, and UWis/Stout appear to have exhibited relatively lower levels of screening (whether due to program- or to self-screening). The percentage of positive responses that were randomized was above the median for these projects, which might be explained by several potential and probably interacting reasons. First, as indicated in Chapter III, these four projects were located in service areas in which few or no other transitional-employment programs were operating during the enrollment period; hence, eligible persons were less likely to have already been served by a transitional-employment program. Moreover, each of these projects appears to have been located within a service environment that was relatively supportive of competitive employment for mentally retarded persons, at least as indicated by the ability of the project to obtain a relatively high proportion of its clients through referrals. Second,

¹ In addition, some initial invitation letters were sent out during the last month of randomization, not allowing enough time for the recipient to respond.

these projects may have screened fewer people out during the intake process. Not only did these four projects appear to have undertaken a minimal amount of pre-screening (relative to The CENTER and Goodwill), but they also allowed applicants several no-shows for scheduled interviews; ARC/MU, ECF, and UWis/Stout were also flexible in conducting intakes in several locations for the convenience of the applicant. Interestingly, these four projects are unique in that they had never operated a transitional- or supported-employment program prior to the demonstration. It is possible that the projects which had previously operated programs had developed more screening criteria and were thus more likely to screen applicants out prior to enrollment. In addition, unlike The CENTER and Children's Hospital, these four projects did not target jobs only in certain industries, and thus did not limit the types of persons who were appropriate and interested.

Across projects, the intake process culminated in the randomization of 745 persons into the demonstration--375 as treatment-group members and 370 as control-group members. The next section presents the characteristics of this group of individuals.

B. CHARACTERISTICS OF THE SAMPLE

As indicated earlier, the demonstration projects were expected to enroll people who:

- o Were SSI recipients
- o Had a diagnosis of mental retardation
- o Were between the ages of 18 and 40
- o Resided in the catchment area
- o Had a reasonable chance of success but who also represented a wide range of abilities and characteristics, including individuals whose abilities were more severely limited

It appears that the projects largely did randomize persons who exhibited these intended characteristics. Table IV.3 presents the characteristics of the full sample of 745 persons as measured at intake, and disaggregated by treatment- and control-group status.

TABLE IV.3

CHARACTERISTICS OF THE RESEARCH SAMPLE
AT ENROLLMENT, BY RANDOMIZATION STATUS
(Entries in the Table are Percent of the Sample with
the Characteristic unless Otherwise Specified)

| | Treatment- Group Members | Control- Group Members | Total Sample |
|--|--------------------------------|------------------------------|-----------------|
| Project | | | |
| AHEDD | 21.6% | 20.8% | 21.2% |
| ARC/MU | 10.4% | 11.1% | 10.7% |
| The CENTER | 7.2% | 7.0% | 7.1% |
| Children's Hospital | 7.7% | 7.6% | 7.7% |
| ECF | 20.5% | 20.8% | 20.7% |
| Goodwill | 9.6% | 9.5% | 9.5% |
| UWash/PCC | 12.0% | 12.7% | 12.3% |
| UWis/Stout | 10.9% | 10.5% | 10.7% |
| Age | | | |
| Younger than 22 | 22.4% | 22.2% | 22.3% |
| 22-25 | 30.4% | 28.9% | 29.7% |
| 26-30 | 25.1% | 26.8% | 25.9% |
| 31-35 | 11.5% | 12.2% | 11.8% |
| 36-40 | 8.8% | 6.8% | 7.8% |
| Older than 40 | 1.9% | 3.2% | 2.6% |
| Average age (years) | 26.4% | 26.6% | 26.5% |
| Gender | | | |
| Female | 41.1% | 40.5% | 40.8% |
| Male | 58.9% | 59.5% | 59.2% |
| Race | | | |
| Black | 32.5% | 28.1% | 30.3% |
| White and other | 67.5% | 71.9% | 69.7% |
| Measured IQ Score | | | |
| Greater than 70 | 10.9% | 8.9% | 9.9% |
| 55 to 70 | 50.4% | 46.8% | 48.6% |
| 40 to 54 | 32.5% | 37.6% | 35.0% |
| Below 40 | 6.1% | 6.8% | 6.4% |
| Average IQ score | 57.1 | 56.0 | 56.6 |
| Total Income per Person during Year prior to Enrollment (Dollars) | \$5,113 | \$5,004 | \$5,058 |
| Average Number of Years on SSI | 6.4 | 6.6 | 6.5 |

TABLE IV.3 (continued)

| | Treatment- Group Members | Control- Group Members | Total Sample |
|---|--------------------------------|------------------------------|-----------------|
| Total SSI Received per Person during Year prior to Enrollment (Dollars) ^a | \$3,691 | \$3,584 | \$3,638 |
| Receipt of Transfers ^b | | | |
| Food stamps | 19.0% | 17.8% | 18.4% |
| Welfare ^c | 15.6% | 12.4% | 14.0% |
| Medicaid | 93.0% | 93.0% | 93.0% |
| Concurrently Receiving Social Security Benefits | 32.3% | 29.7% | 31.0% |
| Total Other Unearned Income per Person during Year prior to Enrollment (Dollars) | \$970 | \$971 | \$970 |
| Vocational Activity during the Year prior to Enrollment | | | |
| Percent of sample with some vocational activity: ^d | 66.7% | 70.5% | 68.6% |
| Regular job | 9.9% | 11.1% | 10.5% |
| Mainstream job training or volunteer job | 8.3% | 8.4% | 8.3% |
| Work in sheltered workshop or enclave | 32.8% | 34.1% | 33.4% |
| Other type of job | 15.7% | 17.0% | 16.4% |
| Percent of sample with no vocational activity | 33.3% | 29.5% | 31.4% |
| School | | | |
| In school at enrollment | 15.7% | 13.6% | 14.7% |
| Not in school | 84.3% | 86.4% | 85.3% |
| Total Earned Income per Person during Year prior to Enrollment (Dollars) | \$452 | \$449 | \$450 |
| Living Arrangement | | | |
| In a supervised or semi-supervised setting | 15.6% | 21.2% | 18.4% |
| With parents | 64.5% | 60.6% | 62.6% |
| Independent | 19.9% | 18.2% | 19.1% |
| Unassisted Use of Public Transportation | | | |
| Has used regularly | 76.7% | 77.6% | 77.2% |
| Has not used regularly | 23.3% | 22.4% | 22.8% |

TABLE IV.3 (continued)

| | Treatment- Group Members | Control- Group Members | Total Sample |
|---|--------------------------------|------------------------------|-----------------|
| Physical, Social, and Emotional Characteristics ^b | | | |
| Has been institutionalized | 17.9% | 18.1% | 18.0% |
| Is receiving psychiatric treatment | 12.5% | 16.1% | 14.3% |
| Has one or more physical disabilities that limit employment ^e | 38.9% | 40.8% | 39.9% |
| Has one or more emotional problems that limit employment ^f | 22.3% | 26.3% | 24.3% |
| Exhibits social behavior inadequate for job interview situation ^g | 46.9% | 45.3% | 46.1% |
| Cannot speak clearly in sentences | 27.0% | 25.7% | 26.4% |
| Exhibits at least one of these characteristics | 82.7% | 82.9% | 82.8% |
| Intake Worker's Opinion of Probability of Success in Competitive Job | | | |
| High | 36.0% | 34.1% | 35.0% |
| Medium | 52.3% | 53.5% | 52.9% |
| Low | 11.7% | 12.4% | 12.1% |
| Sample Size | 375 | 370 | 745 |

SOURCE: Intake Data Collection Form and SSA records data.

^a SSI payment includes an imputation of the state supplemental payment for sample members at the CENTER and UWash/PCC because individual-level data on the state supplementation were not available for Illinois and Oregon which have state-administered SSI supplements.

^b Categories are not mutually exclusive.

^c Welfare includes Aid to Families with Dependent Children (AFDC) and General Assistance.

^d For persons with a job, the classifications are hierarchical and mutually exclusive. Thus, some persons who held regular jobs may also have been in a workshop for part of the year.

^e Physical disabilities include severe visual or hearing impairment, seizure disorders, cerebral palsy, general health problems, arm/head mobility problems, whole body range-of-motion limitations, and ambulatory limitations.

TABLE IV.3 (continued)

^f Emotional problems include emotional impairment, mental illness, chemical or drug dependency or abuse, and maladaptive, anti-social, or disruptive behavior.

^g Inadequate social behavior includes inattention to interview, inability to respond appropriately to questions and conversation, inability to make eye contact with interviewer, inability to display appropriate greetings, postures, or gestures, inadequate grooming or attire, physical appearance and characteristic not "normal," and exhibition of unusual behavior or gestures.

As shown in Table IV.3, over 40 percent of the sample were enrolled in two projects, AHEDD and ECF. The remainder of the sample was distributed fairly evenly across the other projects. The average age at enrollment was 26 years; 22 percent of the sample were younger than age 22 (and hence eligible for special education services), and 10 percent were older than age 35. Forty-one percent of the sample were female. Two-thirds of the sample were white, 30 percent were black, and most of the remainder were of Hispanic origin.

Precise data on mental retardation (covering intellectual capacity and adaptive behavior) were unavailable to the demonstration. We were, however, able to obtain information on IQ scores, although this information contains several limitations when used for research purposes. Consequently, our information about the intellectual capacity of sample members should be interpreted with caution.

The main source of IQ data was Social Security case folders, which contain the evidence used by Social Security to determine whether a person is sufficiently disabled to qualify for SSI benefits. The IQ scores are based primarily on Wechsler and Stanford-Binet tests administered prior to a person's application for SSI benefits. For 12 percent of the sample members, their Social Security case folders did not contain IQ information, and we attempted to obtain IQ scores for these persons from the projects, which had often solicited IQ information from referral agencies. This process yielded IQ information for all but 29 of the 745 sample members.

The IQ information obtained from Social Security records is potentially problematic because it is collected for administrative rather than for research purposes. In particular, generally little effort is made to resolve inconsistencies or missing information that has no bearing on administrative matters, regardless of its potential importance for research. For example, the records of many sample members contained more than one IQ score. If all of these scores were below 60, then the differences would not be important for determining SSI eligibility. However, the interpretation of our findings will depend significantly on whether a person has an IQ score of, say, 59 or 39. In these types of cases, we reviewed the test dates and all other available information to select the most accurate score. Nevertheless, the information on IQ scores presented herein may still misstate the overall ability of sample members, even though it was obtained from Social Security records data that have been reviewed by disability-determination staff.

With these qualifications in mind, the available evidence suggests that sample members exhibited a wide range of measured intellectual capabilities. While the average IQ score was 57 (which is considered to be in the mild range, close to moderate), 6 percent of the sample would be considered severely or profoundly retarded, on the basis of an IQ score below 40. Thirty-five percent of the sample would be considered moderately retarded (with an IQ score of between 40 and 54), while 49 percent of the sample had IQ scores in the mild range (an IQ score of between 55 and 70). Ten percent of the sample members had an IQ score of greater than 70 (indicating no mental retardation). All of the persons whose IQ scores were over 70 contacted the program after receiving an invitation letter from SSA. Given SSI disability criteria, these persons had other handicapping conditions that made employment difficult.¹

The projects enrolled a group of persons who were relatively economically disadvantaged. Their average total income from all sources during the year prior to enrollment was \$5,058. SSI payments accounted for roughly 72 percent of this total. As required by the eligibility criteria, all of the sample members received SSI benefits, and, on average, had been receiving SSI payments for over 6 years. In addition to SSI payments, 18 percent of the sample members (or the households of sample members) reported receiving food stamps, and 14 percent reported receiving welfare (including Aid to Families with Dependent Children and General Assistance). Almost all (93 percent) of the sample members reported receiving Medicaid benefits, and 31 percent concurrently received SSI and Social Security benefits. Unearned income from all sources (other than SSI payments) accounted for roughly 20 percent of the average total income during the year prior to enrollment.

Not surprisingly, most of those persons who enrolled in the demonstration had not recently had work experience in the regular unsubsidized labor market. While 69 percent, or just over two-thirds, of the sample had had some type of vocational

¹ Where an applicant for SSI alleges more than one impairment and is found disabled on the basis of one of them, the case records may cite both impairments even if the evidence to support the second diagnosis is incomplete. Hence, it is possible for some individuals to be identified as mentally retarded and to have been enrolled in the demonstration even though their measured intellectual limitations were not sufficiently severe to contribute to a finding of disability.

activity at some point during the year prior to enrollment, only about 10 percent of the sample had held a regular job--defined as paid employment that entailed working without special supervision with non-handicapped co-workers, performing work that was typically undertaken by non-handicapped workers. Another 8 percent of the sample had gotten close to the regular job market through mainstream job training (in a program not limited to persons with disabilities) or a volunteer job at some point during the year prior to their enrollment. For one-third of the sample, the closest they got to a competitive job was a position in a sheltered workshop, while 16 percent of the sample had worked for a family member, in a job-training program specifically for disabled people, or an activity center. In addition, at the time of enrollment, 15 percent of the sample were attending school or participating in an educational program.

Given the small percentage of the sample who worked in regular jobs during the year prior to enrollment, it is not surprising that the average earned income during that year was only \$450. This earnings figure constitutes only 9 percent of the total income for this sample.

In addition to the various types of financial support received by the sample members, the majority of the sample appeared to need support in their daily living. Almost two-thirds (63 percent) of the sample members lived with their parents. Eighteen percent of the sample lived in a supervised or semi-supervised setting (including a supervised apartment or a place where a counselor dropped in at least once a week, and group homes, care homes, and halfway houses). Only 19 percent lived independently (or with a spouse, children, or unrelated housemate). Twenty-three percent of the sample had never traveled unassisted via public transportation on a regular basis.

When individuals applied to the projects, staff were asked to record any conditions or characteristics that would seriously limit an individual's ability to obtain and retain a job. Since intake staff had only a limited opportunity to meet with the applicants prior to random assignment, they could record only those conditions that were reported by applicants or referral agencies or those that became obvious during the intake process. This information indicates that 83 percent of the sample members had at least one such limitation and, although the types of impairments exhibited by individuals varied widely, social or physical limitations were more common. Almost half (46 percent) of the sample members were assessed as having a social behavior

that was inappropriate for a job interview situation (such as inattentiveness to the interviewer or an inability to respond appropriately to questions and conversation; an inability to make eye contact with the interviewer; an inability to display appropriate greetings, postures, or gestures; inadequate grooming or attire; physical appearance and other characteristics judged as not "normal"; and exhibition of unusual behavior or gestures). Forty percent of the sample members were assessed as having one or more physical disabilities (such as a severe visual or hearing impairment, seizure disorders, cerebral palsy, general health problems, arm or head mobility problems, whole body range-of-motion limitations, and ambulatory limitations) that might limit employment success. Over one-quarter of the sample members could not speak clearly in sentences. Twenty-four percent were assessed as having an emotional problem (such as an emotional impairment, mental illness, chemical or drug dependency or abuse, and maladaptive, anti-social, or disruptive behavior) that might limit employment. In addition, 18 percent of the sample members had been institutionalized prior to enrolling in the program, and 14 percent were receiving psychiatric treatment at the time of enrollment. In sum, the persons who were enrolled represent a fairly disabled group who would not have found it easy to obtain or to hold a job on their own.

Finally, in the intake interview, the intake staff were asked to record their opinion about the probability of the applicant's completing training and being successful in a competitive job. Only 35 percent of the sample members were considered to have a high probability of success. Staff predicted a low probability of success in 12 percent of the cases, indicating that staff did appear to take some risks in order to enroll a sample that included severely impaired persons.

In summary, the demonstration projects, for the most part, did enroll persons who met the demonstration criteria (SSI recipients between the ages of 18 and 40 with a diagnosis of mental retardation). In addition, the research sample included individuals of diverse demographic characteristics, impairments, and employment backgrounds. However, despite being fairly severely impaired, the persons enrolled by the projects had generally engaged in some type of vocational activity in the year prior to enrollment and could use public transportation (although this group was not very productive economically, as evidenced by their low earnings and the small proportion of the sample who worked in a regular job). Consequently, it would appear

that this is a sample of persons who were capable of working and who could be more productive economically if provided with job placement and training assistance.

C. SELECTION ISSUES

Three interesting issues for the impact analysis can be assessed at this time in terms of the persons who were enrolled in the demonstration. First, it is important to determine whether the random assignment process worked as expected, since it is possible that the randomization process generated treatment and control groups that differed along various dimensions. Second, it is useful to determine the extent to which the eight projects enrolled different types of persons. Such information is essential for interpreting differences among the outcomes observed for the projects. Finally, in assessing our ability to generalize the findings from the demonstration, it is important to determine how the sample compares with all of the persons who were invited to participate in the demonstration.

1. Comparison of the Treatment and Control Groups

Two aspects of the randomization process were expected to yield comparable treatment and control groups. First, sample members were assigned randomly to treatment- and control-group status. This process ensures that the two groups consist of individuals whose observed and unobserved characteristics are, on average, as similar as possible at the time of their application to the demonstration. Second, the host agencies were prohibited from serving control-group members in their on-going supported-work programs until April 1988. These two aspects of randomization, if implemented properly, ensure that the control group yields reliable estimates of what would have happened to treatment-group members in the absence of the demonstration. Thus, differences in the outcomes for the treatment and control groups serve as reliable estimates of the impacts of the demonstration.

Based on our monitoring of the demonstration projects, we believe that these facets of the randomization process were implemented as designed. In addition, differences in the characteristics of the treatment and control groups at enrollment that may have occurred by chance were assessed by comparing the mean values of prerandomization characteristics for treatment and control groups. This comparison was based on standard comparison-of-means tests (using t-statistics) and, for sets of interrelated variables, chi-square tests which compared distributions for treatments

and controls. The characteristics examined were those that appeared in Table IV.3 and discussed earlier in terms of the overall sample.

Based on these statistical tests and project monitoring, we concluded that the randomization process was successful in yielding a control group that was comparable to the treatment group not only along observed dimensions but, in all likelihood, along unobserved dimensions as well. (See Appendix B for a full discussion of the statistical tests of random assignment.)

2. Comparison of the Characteristics of the Sample Across Projects

Table IV.4 presents the characteristics of the research sample members by project. Differences across projects reflect both the characteristics of persons who responded with interest through the intake process and the screening criteria that projects used to determine the appropriateness of persons for the program. These differences were found to be statistically significant for all characteristics except treatment status, gender, total unearned income (other than SSI), and the percentage of the sample who exhibited at least one physical, social, or emotional limitation.

Despite these differences across projects, none of the projects tended predominantly to enroll people whom they perceived to be high or low risks for competitive employment. The differences among projects basically reflect decisions about the types of clients whom a project was capable of and willing to serve. Interestingly, the projects that randomized a smaller proportion of the group of persons who initially expressed interest in the program (AHEDD, The CENTER, and Children's Hospital, in particular) did not necessarily perceive that the individuals whom they did randomize had a high probability of success in competitive employment. However, the projects that randomized a higher proportion of the interested responses (ARC/MU, UWash/PCC, and UWis/Stout, in particular) were more likely to perceive that the randomized individuals had a high probability of success.

Overall, the evidence indicates that the samples randomized by each individual project can be described in the same general manner as for the entire sample--namely, each project randomized persons who for the most part met the basic demonstration criteria and who represented diverse characteristics. In addition, each project enrolled a sample who appeared to be capable of working, yet in the year prior to enrollment had not been economically productive.

TABLE IV. 4

CHARACTERISTICS OF THE RESEARCH SAMPLE AT ENROLLMENT
BY PROJECT

(Entries in the Table are Percent of the Sample with the Characteristic unless Otherwise Specified)

| | AHEAD (PA, DE) | ARC/MU (Monmouth, NJ) | The CENTER (Chicago) | Children's Hospital (Boston) | ECF (Los Angeles) | Goodwill (Milwaukee) | UWash/PCC (Portland) | UMis/Stout (Rural Wisconsin) | All Project |
|--|-------------------|--------------------------|-------------------------|------------------------------------|----------------------|-------------------------|-------------------------|------------------------------------|----------------|
| Experimental Status ⁺ | | | | | | | | | |
| Treatment | 51.3 | 48.8 | 50.9 | 50.9 | 50.0 | 50.7 | 48.9 | 51.3 | 50.3 |
| Control | 48.7 | 51.2 | 49.1 | 49.1 | 50.0 | 49.3 | 51.1 | 48.7 | 49.7 |
| Age | | | | | | | | | |
| Younger than 22 | 27.2 | 23.7 | 13.2 | 15.8 | 17.5 | 29.6 | 32.6 | 12.5 | 22.3 |
| 22 or older | 72.8 | 76.3 | 86.8 | 84.2 | 82.5 | 70.4 | 67.4 | 87.5 | 77.7 |
| Average age | 25.8 | 26.5 | 26.7 | 26.4 | 27.4 | 25.7 | 24.8 | 28.6 | 26.5 |
| Gender ⁺ | | | | | | | | | |
| Female | 37.3 | 45.0 | 41.5 | 52.6 | 35.7 | 36.6 | 40.2 | 48.7 | 40.8 |
| Male | 62.7 | 55.0 | 58.5 | 47.4 | 64.3 | 63.4 | 59.8 | 51.3 | 59.2 |
| Race | | | | | | | | | |
| Black | 33.5 | 22.5 | 45.3 | 42.1 | 48.1 | 33.8 | 9.8 | 0.0 | 30.3 |
| White and other | 66.5 | 77.5 | 54.7 | 57.9 | 51.9 | 66.2 | 90.2 | 100.0 | 69.7 |
| Measured IQ Score | | | | | | | | | |
| Greater than 70 | 10.8 | 1.3 | 5.7 | 10.5 | 10.4 | 15.5 | 6.5 | 17.5 | 9.9 |
| 55-70 | 44.9 | 46.3 | 69.8 | 64.9 | 52.0 | 46.5 | 32.6 | 46.3 | 48.6 |
| 40-54 | 35.4 | 45.0 | 17.0 | 22.8 | 31.8 | 35.2 | 50.0 | 33.8 | 35.0 |
| Below 40 | 8.9 | 7.5 | 7.6 | 1.8 | 5.8 | 12.8 | 10.9 | 2.5 | 6.4 |
| Average IQ Score | 55.9 | 53.0 | 58.2 | 59.5 | 57.7 | 58.7 | 52.5 | 58.9 | 56.6 |
| Total Income per Person during Year prior to Enrollment | 4,283 | 4,463 | 4,894 | 4,715 | 6,401 | 5,360 | 3,912 | 6,003 | 5,058 |
| Average Number of Months on SSI | 77.7 | 63.5 | 70.5 | 68.1 | 91.1 | 78.7 | 68.6 | 88.5 | 77.8 |
| Total SSI Received per Person during Year prior to Enrollment (Dollars) | 3,283 | 2,827 | 3,692 | 3,302 | 5,038 | 3,606 | 2,704 | 3,755 | 3,638 |
| Receipt of Transfers ^a | | | | | | | | | |
| Food Stamps | 27.6 | 12.5 | 43.4 | 14.0 | 6.5 | 14.1 | 27.8 | 8.8 | 18.4 |
| Welfare | 21.9 | 2.6 | 37.7 | 5.4 | 7.9 | 14.1 | 19.0 | 6.3 | 14.0 |
| Medicaid | 92.9 | 97.5 | 69.8 | 96.5 | 96.8 | 100.0 | 82.6 | 100.0 | 93.0 |
| Concurrent Beneficiary | 21.5 | 36.3 | 34.0 | 35.1 | 26.6 | 38.0 | 28.3 | 45.0 | 31.0 |
| Total Other Unearned Income per Person during Year prior to Enrollment (Dollars) | 621 | 1,036 | 964 | 971 | 966 | 1,367 | 884 | 1,357 | 970 |
| Vocational Activity during Year prior to Enrollment | | | | | | | | | |
| Had some kind of vocational activity: | 55.7 | 87.5 | 41.5 | 63.2 | 68.8 | 54.9 | 79.3 | 96.2 | 68.6 |
| A regular job | 9.5 | 15.0 | 7.6 | 17.5 | 11.0 | 7.0 | 8.7 | 8.8 | 10.5 |
| Mainstream job training or volunteer job | 12.7 | 7.5 | 11.3 | 3.5 | 7.1 | 4.2 | 9.8 | 6.3 | 8.3 |
| Work in sheltered workshop or enclave | 23.4 | 48.8 | 13.2 | 26.3 | 37.7 | 32.4 | 12.0 | 73.8 | 33.4 |
| Another type of job | 10.1 | 16.3 | 9.4 | 15.8 | 13.0 | 11.3 | 48.9 | 7.5 | 16.4 |
| Had no vocational activity | 44.3 | 12.5 | 58.5 | 36.8 | 31.2 | 45.1 | 20.7 | 3.8 | 31.4 |

TABLE IV.4 (continued)

| | AMHDB (PA, DE) | ARC/WU (Monmouth, NJ) | The CENTER (Chicago) | Children's Hospital (Boston) | ECF (Los Angeles) | Goodwill (Milwaukee) | UMash/PCC (Portland) | UMIs/Stout (Rural Wisconsin) | All Project |
|--|-------------------|--------------------------|-------------------------|------------------------------------|----------------------|-------------------------|-------------------------|------------------------------------|----------------|
| School | | | | | | | | | |
| In school at enrollment | 21.5 | 10.0 | 11.3 | 17.5 | 13.7 | 12.7 | 21.7 | 1.3 | 14.7 |
| Not in school | 78.5 | 90.0 | 88.7 | 82.5 | 86.3 | 87.3 | 78.3 | 98.7 | 85.3 |
| Total Earned Income per Person during Year prior to Enrollment (Dollars) | 379 | 600 | 238 | 442 | 397 | 387 | 324 | 891 | 450 |
| Unassisted Use of Public Transportation | | | | | | | | | |
| Has used regularly | 70.3 | 53.8 | 90.4 | 87.7 | 83.1 | 85.9 | 78.3 | 77.5 | 77.2 |
| Living Arrangement | | | | | | | | | |
| In a supervised or semi- supervised setting | | | | | | | | | |
| With parents | 12.0 | 24.7 | 13.2 | 8.8 | 17.6 | 11.3 | 20.9 | 40.0 | 18.4 |
| Independent | 67.7 | 67.5 | 60.4 | 70.2 | 57.5 | 66.2 | 71.4 | 40.0 | 62.6 |
| | 20.3 | 7.8 | 26.4 | 21.1 | 24.8 | 22.5 | 7.7 | 20.0 | 19.1 |
| Physical, Social, and Emotional Disabilities ^a | | | | | | | | | |
| Has been institutionalized | 17.1 | 26.3 | 18.9 | 19.3 | 7.2 | 14.1 | 17.4 | 35.0 | 18.0 |
| Is receiving psychiatric treatment | 13.5 | 6.3 | 21.2 | 28.1 | 23.4 | 4.2 | 3.3 | 13.8 | 14.3 |
| Has 1 or more physical disabilities that limit employment ^c | 30.4 | 13.8 | 28.3 | 42.1 | 57.8 | 45.1 | 38.0 | 53.8 | 39.9 |
| Has 1 or more emotional problems that limit employment ^d | 21.2 | 2.5 | 25.0 | 45.6 | 33.8 | 11.3 | 20.0 | 35.0 | 24.3 |
| Exhibits social behavior inadequate for job interview situation ^e | 50.3 | 36.3 | 52.8 | 61.4 | 22.1 | 69.0 | 73.9 | 26.3 | 46.1 |
| Cannot speak clearly in sentences | 36.1 | 30.0 | 28.3 | 17.5 | 19.0 | 20.0 | 39.1 | 13.8 | 26.4 |
| Exhibits at least one of these characteristics ^f | 81.5 | 73.8 | 84.9 | 93.0 | 83.0 | 84.5 | 88.0 | 77.5 | 82.8 |
| Intake Worker's Opinion of Probability of Success In Competitive Job | | | | | | | | | |
| High | 24.1 | 60.0 | 22.6 | 26.3 | 9.1 | 35.2 | 53.3 | 75.0 | 35.0 |
| Medium/Low | 75.9 | 40.0 | 77.4 | 73.7 | 90.9 | 64.8 | 46.7 | 25.0 | 65.0 |
| Sample Size | 158 | 80 | 53 | 57 | 154 | 71 | 92 | 80 | 745 |

NOTE: These data come from the Intake Data Collection Form.

^a Categories are not mutually exclusive.^b Welfare includes Aid to Families with Dependent Children (AFDC) and General Assistance.^c Physical disabilities include severe visual or hearing impairment, seizure disorders, cerebral palsy, general health problems, arm/head mobility problems, whole body range-of-motion limitations, and ambulatory limitations.^d Emotional problems include emotional impairment, mental illness, chemical or drug dependency or abuse, and maladaptive, anti-social, or disruptive behavior.^e Inadequate social behavior includes inattention to interviewer, inability to respond appropriately to questions and conversations, inability to make eye contact with interviewer, inability to display appropriate greetings, postures, or gestures, inadequate grooming or attire, physical appearance and characteristics not "normal," and exhibition of unusual behavior or gestures.^f Percentages across projects are not statistically different, based on chi-square tests (for the categorical variables) and F-tests (for the continuous variables) at 5 percent significance level.

3. Comparison of the Research Sample with the Eligible Population

The process of recruiting and screening eligible persons for the demonstration did not generate a representative sample of all SSI recipients with mental retardation. Thus, it is interesting to examine how persons who were enrolled differed from those who were not enrolled. A limited comparison can be made by using Social Security records, but much of this comparison must be undertaken by considering how the recruitment and screening process would have affected different types of persons.

Table IV.5 presents the available records data for sample members and those persons who were sent invitation letters (invitees) but were not enrolled. A comparison of these data indicate that the research sample is somewhat younger and much more likely to have held a job prior to the demonstration. Sample members were about a year younger than the group of invitees and, correspondingly, had received SSI benefits for a shorter period of time. Sample members were almost twice as likely to have had reported wages prior to the demonstration, although all reported wages tended to be quite low.

In addition to these measured differences, the selection process is likely to have generated a sample that differed from all SSI recipients with mental retardation. The demonstration asked SSI recipients to make a potentially large change in their lives—that is, to enter the labor market, with all of its risks and opportunities. The persons who accepted this challenge are likely to have differed from those who chose otherwise. In particular, they may have been more motivated and less satisfied with their current service arrangement, to have had better supports for dealing with work and life, and to have possessed better adaptive skills. These differences suggest that any attempt to generalize the demonstration findings beyond the sample of SSI recipients who volunteered and were accepted into the demonstration must be undertaken with extreme care.

Nevertheless, the sample that was enrolled is quite useful. In one way or another, it is likely that future policy in this area would give SSI recipients a choice about whether to enroll in transitional employment. Thus, the persons who would be served would share many of the traits found in our sample. The major differences would pertain to the selection criteria used by the projects, since ongoing programs might not be encouraged to enroll as wide a range of persons as were the demonstration projects.

TABLE IV.5

COMPARISON OF THE CHARACTERISTICS OF SAMPLE MEMBERS
WITH THE CHARACTERISTICS OF THOSE INDIVIDUALS
WHO WERE SENT INVITATION LETTERS

| Characteristics | Total | | AIHDD | | ARC/MU | | The CENTER | | Children's Hospital | | ECF | | Goodwill | | Unash/PCC | | Unis/Stout | |
|--|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|---------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | Sample Members | Other Invitees | Sample Members | Other Invitees | Sample Members | Other Invitees | Sample Members | Other Invitees | Sample Members | Other Invitees | Sample Members | Other Invitees | Sample Members | Other Invitees | Sample Members | Other Invitees | Sample Members | Other Invitees |
| Age | | | | | | | | | | | | | | | | | | |
| Younger than 22 | 23.9 | 20.4 | 28.5 | 19.1 | 24.6 | 24.3 | 14.0 | 25.2 | 23.3 | 17.6 | 18.4 | 17.7 | 28.4 | 23.4 | 33.8 | 19.4 | 14.7 | 21.9 |
| 22-30 | 54.7 | 48.6 | 51.4 | 49.5 | 52.3 | 47.0 | 74.0 | 50.7 | 46.5 | 45.1 | 61.4 | 50.3 | 55.2 | 46.1 | 48.6 | 47.0 | 50.7 | 33.4 |
| Older than 30 | 21.5 | 30.9 | 20.1 | 31.4 | 23.1 | 28.6 | 12.0 | 24.1 | 30.2 | 37.4 | 20.2 | 32.0 | 16.4 | 30.5 | 17.6 | 33.7 | 34.7 | 24.7 |
| Average age | 26.7 | 27.9 | 26.0 | 28.1 | 26.8 | 27.4 | 26.2 | 26.7 | 27.1 | 28.7 | 27.5 | 28.2 | 25.8 | 27.7 | 25.3 | 28.2 | 28.9 | 27.3 |
| Gender ^a | | | | | | | | | | | | | | | | | | |
| Female | 41.2 | 45.2 | 36.8 | 47.8 | 44.6 | 51.0 | 40.0 | 46.1 | 51.2 | 43.8 | 39.5 | 42.6 | 40.3 | 44.6 | 37.8 | 46.8 | 49.3 | 44.1 |
| Male | 58.8 | 54.6 | 63.2 | 52.1 | 55.4 | 49.0 | 60.0 | 54.0 | 48.8 | 56.2 | 60.5 | 57.4 | 59.7 | 55.4 | 62.2 | 53.2 | 50.7 | 55.9 |
| Race ^a | | | | | | | | | | | | | | | | | | |
| Black | 28.3 | 26.7 | 29.9 | 26.5 | 23.1 | 16.5 | 42.0 | 28.3 | 34.9 | 10.3 | 46.5 | 37.0 | 34.3 | 38.3 | 10.8 | 10.3 | 1.3 | 0.3 |
| White or other | 63.0 | 64.6 | 65.3 | 62.6 | 72.3 | 75.7 | 42.0 | 63.2 | 53.5 | 80.0 | 42.1 | 53.4 | 58.2 | 52.0 | 81.1 | 79.1 | 88.0 | 96.2 |
| Marital Status | | | | | | | | | | | | | | | | | | |
| Married | 3.3 | 2.8 | 3.5 | 3.4 | 0.0 | 2.2 | 6.0 | 1.8 | 4.7 | 1.5 | 3.5 | 2.4 | 7.5 | 3.9 | 0.0 | 4.3 | 2.7 | 2.8 |
| Not married | 96.7 | 97.2 | 96.5 | 96.6 | 100.0 | 97.9 | 94.0 | 98.2 | 95.3 | 98.5 | 96.5 | 97.6 | 92.5 | 96.1 | 100.0 | 95.7 | 97.3 | 97.2 |
| Mean Number of Years on SSI | 5.4 | 6.2 | 5.5 | 6.1 | 4.3 | 5.6 | 4.6 | 5.5 | 4.5 | 6.4 | 6.3 | 6.9 | 5.4 | 5.7 | 4.7 | 5.6 | 6.3 | 7.7 |
| Percent Receiving Title II Benefits ^b | 31.1 | 31.8 | 22.9 | 29.2 | 38.5 | 33.3 | 28.0 | 20.6 | 34.9 | 35.6 | 24.6 | 33.1 | 40.3 | 38.3 | 27.0 | 33.0 | 46.7 | 35.3 |
| Percent with Wages ^b | 30.2 | 16.2 | 21.5 | 15.9 | 49.2 | 27.0 | 10.0 | 15.6 | 20.9 | 25.1 | 18.4 | 8.2 | 28.4 | 14.6 | 29.7 | 20.4 | 69.3 | 25.7 |
| Mean Monthly Earnings (Dollars) ^b | 31.64 | 15.72 | 27.43 | 16.57 | 42.76 | 19.55 | 10.34 | 11.53 | 28.53 | 30.56 | 28.29 | 8.43 | 30.09 | 12.94 | 22.50 | 16.61 | 77.15 | 26.40 |
| Mean SSI Monthly Payment | 301.95 | 296.62 | 264.78 | 255.76 | 232.20 | 296.43 | 340.48 | 245.30 | 290.91 | 239.15 | 405.09 | 419.15 | 307.21 | 319.84 | 232.27 | 236.95 | 320.05 | 171.13 |
| Sample Size ^d | 633 | 11,462 | 144 | 2,627 | 65 | 559 | 50 | 1,518 | 43 | 1,412 | 114 | 2,536 | 67 | 1,804 | 74 | 609 | 75 | 397 |

SOURCE: Social Security records selected on one of three dates in November 1984 and January and August 1985. The statistics in this table refer to the date on which the data were drawn.

^a Percentages may not sum to 100 due to missing data.^b These data refer to the month during which the data were drawn from the SSA files.^c Includes both federal and state payments.^d The group of research sample members does not include persons who were referred to the demonstration. The sample of invitees does not include the 633 sample members. Data were also missing from this data source for an additional 79 invitees.

V. SERVICES PROVIDED BY THE PROJECTS

The service model, or intervention, to be tested in the Transitional Employment Training Demonstration was designed to help participants secure and maintain permanent or potentially permanent employment in competitive jobs. As described in Chapter II, the demonstration model consisted of three interrelated service components: job development and placement services necessary to obtain potentially permanent employment for clients; training in specific job skills, with the largest percentage of training time being in permanent jobs; and support and follow-up services. Furthermore, the intensity of project services was to be reduced gradually during the service period in order to promote the participant's eventual independence from project staff.

Although these guidelines specified a single general model that all projects were expected to follow, projects were also encouraged to develop an approach for implementing this model that reflected site-specific conditions and factors, such as the organizational structure, experience, and philosophy of the host agency and its existing programs, the available staff, and the local labor market.

These approaches varied in innumerable ways. Some of the differences in approaches were more explicit, such as whether or not demonstration clients received pre-placement vocational training, the ratio of clients to staff, and the types of jobs that were targeted by project staff. Others were more subtle, ranging from the ability of the job developer to market the program to potential employers to the degree to which staff addressed the individual needs of clients.

Documenting all of the variations in the "transitional employment" services that clients received in the demonstration would be a monumental task. However, we can begin to understand what it meant for a person to receive demonstration services by focusing on the general services that were provided to clients and on the decisions that were made by the projects in providing these services, in terms of both designing the organizational structure and delivering the services. Another perspective on the service-delivery process is contained in the paper "Making the Move" (Mathematica Policy Research, 1987), which presents case histories of several demonstration clients.

In many respects, these case histories provide a more enlightening view of the demonstration--that is, they provide a more descriptive, human profile of a selected group of the persons served by the project, the types of specific mental and physical handicaps that had to be overcome (and how), the types of support (professional and parental) that facilitated or hindered the success of clients in jobs, the services that were used to help clients acquire and sustain jobs, and other factors (such as self-motivation, etc.) that provide a more personal view of the characteristics of clients, the problems they face, and their success or failure at overcoming them.

A. THE GENERAL SERVICE APPROACH

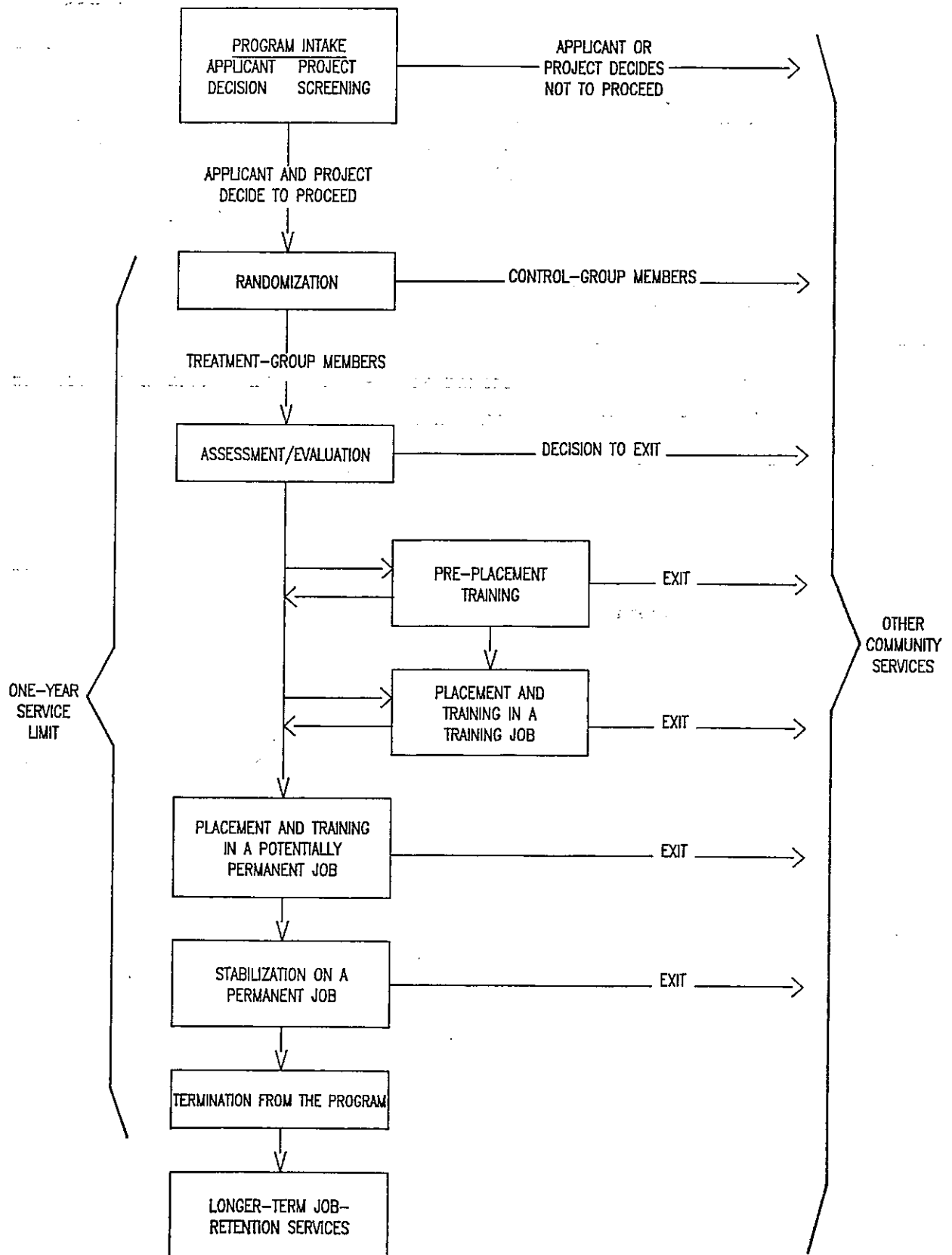
In order to understand the variety of approaches implemented by the projects, it is useful first to review the general pattern of services provided by all of the demonstration projects. Figure V.1 illustrates this general pattern.

As we described in Chapter IV, the service process began at intake, at which time a mutual decision between the program and the applicant was made to proceed with randomization. After randomization, each project chose to have a mechanism through which the strengths and limitations of the clients were assessed. In addition, some clients received pre-placement training (activities that prepared the client for job placement, such as job-seeking-skills training or work-skills training).

Clients were then placed into a job. Projects could choose either to channel clients directly into a potentially permanent job (a job placement that was designed to continue after the client's eligibility for program services expired) or first to provide training on a training job (a temporary job placement intended as a training site) and then move the client into a permanent placement later in the service period. In addition to providing skills training, the training jobs allowed staff to assess the strengths and limitations of clients further.

For the most part, after placement into a potentially permanent job, clients were provided with on-the-job training by a job coach in order to develop the client's work performance and skills in interacting with the employer and co-workers. Off-the-job support services, such as travel training and individual counseling, were also provided. These training and support services were gradually phased down as the client learned the job. This process was intended to stabilize the client on the job. Stabilization was to be effected prior to the end of the client's one year of service, at

FIGURE V.1
THE GENERAL FLOW OF DEMONSTRATION SERVICES



which point he or she exited, or "terminated," from the program. Since the ultimate goal was long-term-job retention, however, projects were expected to arrange for long-term job-retention supports (such as those required for retraining, job replacement, and case management) prior to the client's termination.

Figure V.1 also indicates that some clients exited the program prior to completing one year of services. Although the decision to exit the program was sometimes explicitly made by clients or project staff, implicit decisions were also made in which a client did not receive services but also did not formally exit the program until completing his or her year of service eligibility.

The approaches adopted by the projects to implement these services varied considerably, as illustrated in Table V.1. For example, while most projects chose to provide some type of vocational-skills training prior to placing clients on a potentially permanent job, the proportion of clients who were expected to participate in these pre-placement activities varied across projects. Moreover, while all projects placed clients into potentially permanent jobs, some projects that relied on training-job placements expected to provide little training on the potentially permanent jobs. Finally, the variation among projects was also evident in the methods they used to assess clients and to provide them with the various types of support and follow-up services.

B. VARIATION IN PROJECT STAFFING

Projects were staffed in a variety of ways in order to provide all of these services. The major differences pertained to (1) the size of staff, (2) the degree of specialization among the staff, and (3) the educational and experiential backgrounds of the staff. The configuration chosen by a given project depended on a number of factors, including the project's budget, the backgrounds of the available staff, and the traditional policies of the host agency. This staff-configuration decision, in turn, affected the manner in which the services for a given client were coordinated across staff members and how the direct-service staff were supervised. This section describes the various organizational structures adopted by the demonstration projects. In addition, Table V.2 illustrates these variations.

TABLE V.1

COMPONENTS OF PROJECT SERVICES

| | AHEDD (PA, DE) | ARC/MU (Morrison, NJ) | The CENTER (Chicago) | Children's Hospital (Boston) | ECF (Los Angeles) | Goodwill (Milwaukee) | UWash/PCC (Portland) | UWis/Stout (Rural Wisconsin) |
|--|-------------------|--------------------------|-------------------------|------------------------------------|----------------------|-------------------------|-------------------------|------------------------------------|
| Placement and Vocational Training Services Offered | | | | | | | | |
| Pre-placement vocational training | na | S | na | na | S | S | na | S |
| Placement and training on a training job | na | S | M | M | M | S | M | S |
| Placement on a potentially permanent job | M | M | M | M | M | M | M | M |
| On-the-job training on a potentially permanent job | M | M | S | S | M | M | M | M |
| Assessment and Evaluation | | | | | | | | |
| Pre-placement evaluation | X | X | na | na | X | X | na | X |
| Formal periodic case review | X | na | X | X | X | na | X | X |
| Support and Follow-Up Services | | | | | | | | |
| Job-seeking-skills training | X | X | X | X | X | X | na | X |
| Transportation training/ provision of transportation | X | X | X | X | X | X | X | X |
| Formal periodic client counseling | na | na | X | X | X | na | na | na |
| On-the-job crew meetings | na | na | X | X | X | na | na | na |
| Off-the-job client support groups | na | X | na | X | X | X | na | na |
| Regular follow-up contact with client/employer | X | X | X | X | X | X | X | X |

na indicates that this service was not provided at this project.

M indicates that the project approach was designed to provide most or all of the clients with this service.

S indicates that the project approach was designed to provide at least some of the clients with this service.

X indicates that this service was provided at this project. However, we did not collect data on the number of clients who received the service.

TABLE V.2

ORGANIZATIONAL STRUCTURE OF PROJECT STAFF

| | AHEDD (PA, DE) | ARC/MU (Monmouth, NJ) | The CENTER (Chicago) | Children's Hospital (Boston) | ECF (Los Angeles) | Goodwill (Milwaukee) | UWash/PCC (Portland) | UWis/Stout (Rural Wisconsin) |
|--|-------------------|--------------------------|-------------------------|------------------------------------|----------------------|-------------------------|-------------------------|------------------------------------|
| Average Client to Staff Ratio | | | | | | | | |
| for Period of Peak Enrollment^a | | | | | | | | |
| All staff | 6.2 | 3.9 | 2.5 | 6.3 | 4.5 | 5.2 | 6.1 | 8.0 |
| Direct service staff | 8.5 | 4.6 | 3.7 | 7.4 | 5.7 | 9.0 | 7.3 | 9.7 |
| Other staff | 23.12 | 28.5 | 8.1 | 42.3 | 21.2 | 9.5 | 37.1 | 46.4 |
| Direct Service Staff Includes: | | | | | | | | |
| Program coordination staff ^b | X | X | X | X | X | X | X | X |
| Job coaches | X | X | X | X | X | X | X | X |
| A specialized job-development staff ^c | | X | X | X | X | | | |
| A specialized support-services staff ^d | | | X | X | X | X | | |
| Background of Direct Service Staff | | | | | | | | |
| Program coordination staff:^b | | | | | | | | |
| Percent with undergraduate degree | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Percent with postgraduate studies | 22 | 100 | 50 | 100 | 25 | 50 | 100 | 100 |
| Percent with previous experience in working with mentally retarded persons | 78 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Job coaching staff: | | | | | | | | |
| Percent with undergraduate degree | 100 | 17 | 75 | 100 | 80 | 58 | 73 | 66 |
| Percent with postgraduate studies | 22 | 0 | 0 | 25 | 30 | 17 | 55 | 14 |

TABLE V.2 (continued)

| | AHEDD (PA, DE) | ARC/MU (Mannmouth, NJ) | The CENTER (Chicago) | Children's Hospital (Boston) | ECF (Los Angeles) | Goodwill (Milwaukee) | UWash/PCC (Portland) | UWis/Stout (Rural Wisconsin) |
|--|-------------------|---------------------------|-------------------------|------------------------------------|----------------------|-------------------------|-------------------------|------------------------------------|
| Percent with previous experience in working with mentally retarded persons | 61 | 17 | 100 | 75 | 60 | 42 | 73 | 45 |

SOURCE: Interviews with project staff.

^a Average client-to-staff ratio is defined as the number of currently enrolled clients divided by the total number of staff members (the sum of full-time equivalents) for the period of highest client load: April 1986 through September 1986.

^b Program coordination staff include staff members who generally reported directly to the project director and who had some administrative responsibility, often having oversight responsibility for more than one other staff member.

^c Includes only staff members whose specialization and primary responsibility was job development.

^d Includes only staff members whose specialization and primary responsibility was providing and/or arranging for support services for clients.

One dimension along which projects varied was the client-to-staff ratio established during program operations. Table V.2 indicates that this ratio varied from relatively few clients per direct-service-staff person at ARC/MU, The CENTER, and ECF to a relatively large number of clients per staff person at AHEDD, Goodwill, and UWis/Stout. Other staff (primarily managers and service coordinators) appeared to play a more significant role in operating the project at The CENTER and Goodwill than at the other projects.

The projects also differed in terms of the degree to which their staffs specialized in service functions. Table V.2 indicates that, while every project had job coaches and a program-coordination staff (defined here as staff members who reported to the project director and who had some administrative responsibility, often having oversight responsibility for job coaches), five of the eight projects also had staff persons who provided other specialized functions.

What this staff-specialization scenario implies is that, at some projects, each client received services from a set of staff persons. At other projects, staff played multiple roles in providing services to clients.¹ For example, the job coaches at AHEDD and UWash/PCC were responsible for providing virtually all services to the project clients. These coaches, who were given a more general job title of "employment specialists," developed appropriate jobs, provided all necessary training (including travel training and training in social skills, if necessary), and provided referrals to other agencies as necessary. At other projects--Goodwill and UWis/Stout, for example--the project coordinators explicitly took on multiple roles.

Regardless of the staffing configuration, each project had to be concerned about how services for a given client were coordinated across the staff persons who worked with the client.² Besides ad-hoc communication among staff members, projects sometimes encouraged such coordination via periodic staff meetings at which the goals and progress of each client were reviewed. Obviously, this formal method of

¹ It is important to note that the staff of projects occasionally took on other roles, as necessary, in order to serve clients adequately.

² Even staff who played multiple roles sometimes shared responsibility for clients with other staff members.

coordination was more essential if the number of staff members who were responsible for serving each client was large.

The educational and experiential backgrounds of staff members also varied considerably across projects. As indicated in Table V.2, most of the program coordinators had previously worked with mentally retarded persons, and many had received formal graduate training. In comparison, the backgrounds of the job coaches were less consistent. For example, a relatively high proportion of the job coaches at UWash/PCC had formal graduate training in special education, rehabilitation, or a related field. Although coaches at other projects did not necessarily have graduate training, or even an undergraduate degree, they had often previously worked with persons who were mentally retarded. ARC/MU appears to be an exception to this rule: few of its coaches had completed college, and only 17 percent had previously worked with mentally retarded persons. Interestingly, as we shall see later in this report, the staff at ARC/MU were particularly successful at placing and training their clients.

While formal training and work experience were considered in selecting staff members, project coordinators indicated that they often relied more on other, less tangible characteristics. In particular, they looked for job coaches who had experience with business or industry, maturity, enthusiasm, patience, communication skills, and a positive attitude towards persons with mental retardation.

Given the variation in the staff levels, specialization, and backgrounds of projects, it is not surprising that the modes of supervision also varied considerably across projects. In addition to direct interaction with their staff, some supervisors monitored both the progress of clients and the performance of staff by talking with clients and employers. The client records that staff were expected to maintain were also used as a supervisory tool.

Projects made trade-offs between the backgrounds and specialization of staff and supervisory modes according to their budgets and the types of staff whom they could attract. For example, the project coordinator at UWash/PCC provided less direct supervision of staff, given the high proportion of formally trained staff members. Alternatively, the coordinators at UWis/Stout, which hired undergraduate college students as job coaches (due to the availability of personnel and budgetary

constraints), not only took on responsibility for all aspects of client service (besides coaching), but also carefully trained and monitored the coaches.

Essentially, then, this variation in staffing patterns indicates that the projects were afforded a great deal of choice about their organizational structure. The degree to which these patterns were effective at generating the outcomes for clients will be addressed in Chapter VI.

C. THE VARIATION IN SERVICE PROVISION ACROSS PROJECTS

As indicated earlier, the primary service features of the demonstration were job placement, on-the-job training, support services, follow-up support services, and the one-year time limit. Given the variation in service components and organizational structure across projects, it is not surprising that the provision of these services also varied in many, less explicit ways.

Each project faced numerous decisions in providing these service features. For example, project staff had to determine the factors that would be considered in matching clients with jobs, the manner and setting in which training would occur, the role of the project in providing and arranging for support services, the types of on-going services that would be arranged, and the manner in which clients would flow through and exit from the program within the one-year time frame.

Despite the differences among projects in how they decided to provide services, some common themes emerged. For example, projects did assess and address, at least in some way, the individual needs and interests of clients. This common process was evident in job development and placement (in terms of the factors that were to be considered in matching clients with jobs), in training and support (in terms of the type of training placements that were made and the manner in which training was tailored in response to the limitations of clients), and in follow-up (in terms of the necessity of identifying and arranging for support services on an individual basis).

Another common theme throughout service provision was the importance of the family and other service providers in the placement, training, and support processes. Parents, spouses, friends and service-agency staff often played an important role in determining the types of jobs to be developed, in supporting the

training process, and in working with project staff to provide support and follow-up services.

Finally, each of the projects found that some clients were more difficult to serve than others. To the degree possible, projects tried to anticipate these relative difficulties during the intake process, and to screen persons out at that time who could not be served effectively by transitional employment. Projects did, however, enroll persons whom they were subsequently unable to serve, as evidenced by the fact that not all clients were placed into jobs, and by the fact that some clients were unable to hold a job, sometimes being placed several times before a no-service decision was made.

This section reviews each of these primary service features in terms of both the variation and the commonality of service provision among projects.

1. Job Development and Placement

A critical service feature of the demonstration was the development of job placements and the actual placement of clients into competitive, potentially permanent jobs. Indeed, none of the other service features is even relevant without job placement. Each of the eight projects provided this service, which entailed contacting employers in the service area, finding jobs that met the demonstration guidelines and that were suitable for clients, and placing clients in those jobs.

An important aspect of job development and placement was the ability of the projects to "match" each client with an appropriate job. Project staff considered many factors in making job matches, the most important of which appeared to be (1) the requirements of the job or employer, (2) the abilities of the clients, (3) the clients' transportation needs, (4) the clients' job interests, and (5) the job requirements set by the clients' family, group home, or other advocates. Although each of these factors entered into the job-matching process at each project, the manner in which projects assessed, weighed, and addressed these factors varied.

As a starting point in matching clients with jobs, project staff collected information on the employer's needs and interests and on the requirements of the job. Much of this information was collected during in-person appointments with the employer. Information collected by the job developer about the employer and job covered such factors as hours, wages, the specific tasks required on the job, and the

level of supervision provided by the employer. In addition, staff sometimes asked the employer for a tour of the worksite, allowing staff to assess the job tasks required and the working environment offered by the employer first-hand.

Projects chose not to develop certain types of jobs, including jobs that required a good deal of task variation (that is, required a variety of tasks or frequent changes in tasks or schedules) and jobs in poor or dangerous work environments. As a rule, some projects did not develop jobs at fast-food establishments because such employers are traditionally characterized by high turnover among managerial staff. Such turnover is not conducive to developing a stable employment environment for clients. In addition, these jobs provide little opportunity for clients to develop a career (i.e., one with good benefits, anticipated pay increases, and the potential for development within the company). While many projects did develop jobs for clients on night shifts (primarily because those jobs were available), some chose not to develop such jobs because transportation arrangements were considered to be too difficult or dangerous and because night jobs placed more stress on the job coaches.¹

In conjunction with the information on job requirements, the strengths and limitations of clients were considered to be primary factors in matching a client with a job. In anticipating strengths and limitations, several projects conducted pre-placement evaluations that assessed, among other items, stamina, fine- and gross-motor skills, and ability to follow directions and to attend to tasks. Moreover, assessment was a large part of any training (or volunteer) job placement. In addition, projects used information from initial placements in making future job placements for clients who lost their jobs.

Another critical element in ensuring placement success was arranging for participants to travel to and from their jobs. Most importantly, projects did not develop jobs in geographical areas that were inaccessible to clients. As much as possible, projects targeted jobs that were easily accessible to public transportation or that were near clients' homes (job developers sometimes drove through certain geographic areas, taking note of companies that might be appropriate). In the more urban areas--Boston and Chicago--clients were encouraged to use public

¹ In addition, evening and night jobs often required developing special arrangements for any clients who lived in group homes, because the job schedule conflicted with regular group home schedules.

transportation. Projects in other locations without extensive public transportation systems had to be more creative in developing transportation plans for clients. In addition to public transportation, projects encouraged parents or guardians to provide transportation whenever possible, worked with the local transportation authorities in arranging for subsidized taxi services for some clients, and worked with area sheltered workshops in providing transportation to some clients whose travel plans matched those of the workshop vans. In addition, a few clients at UWis/Stout, with support from the demonstration project, relocated into a town in order to work. No matter what travel arrangements were made, however, project staff provided travel training when necessary.

Projects also took into account the job interests of clients. Often, clients' interests were assessed during intake, during the assessment conducted by the projects after randomization, or during one-to-one sessions with the job developer. All of the projects also gave the clients the final decision in accepting or rejecting a potential job placement. However, the approach implemented by The CENTER and Children's Hospital did explicitly limit clients' job choices to the specific industries in which training jobs were provided (primarily food service, janitorial, and laundry and housekeeping).

Not surprisingly, prior to their placement on jobs, clients often had no idea of the types of jobs they wanted, or they had an unrealistic view of their ability to obtain certain jobs. Indeed, very few individuals before obtaining their first job know enough about the variety of jobs to choose one in which they are capable of being both successful and satisfied. When necessary, project staff worked with clients to help them consider other opportunities that appeared to be more feasible. For example, a client who wanted to obtain a job as a musician was guided by project staff to consider other jobs in, for example, a music store, or jobs that might have enabled him or her to earn money to buy the musical items that he or she enjoyed. This type of client counseling was important in matching clients with jobs that were realistic and in which the clients felt comfortable. After all, these clients were making big and potentially long-term changes in their lives. Indeed, this concern for the interests of clients may be as important in promoting job success as are other aspects of the job match. In addition, for clients who had been placed on a job but who wanted more money or more hours or did not like that type of work, project staff helped them

either work with their current employer to make a change in position or job task or obtain a new job.

In addition to taking the interests of clients into account, project staff indicated that the job-placement concerns and interests of parents (or group-home staff) also seemed to affect job success for clients. Some parents, for example, had unrealistic expectations about the types of job at which their sons or daughters could be successful. Other parental concerns centered on the safety of the job, transportation to the job, job hours, and the overall impact on the level and stability of income, including SSI benefits. Group-home staff were concerned most often about the client's working hours and the transportation arrangements that might involve group-home staff (such as placing a client on a bus).

Several projects systematically involved parents or group-home staff in the placement decision. Although most parents agreed with project-placement decisions, these projects developed formal joint decision-making procedures with the principal persons (parents, spouses, or key service staff) who influenced the decisions of the clients. The development of such procedures followed a few experiences in which such persons vetoed placement arrangements after they had been made. Projects also considered the support of these persons essential in ensuring success on a job. In addition, if a parent continually rejected several proposals by staff for specific available placements, it often was taken by project staff to indicate that the parent was actually uneasy about his or her son's or daughter's holding any type of job.

These factors--job specifications, the abilities and interests of clients, transportation needs, and the concerns of the client's support networks--were all considered in making a decision to match a client with a job. While these items helped define the type of job that staff developed for a client, they also placed constraints on the process of developing jobs for individual clients. Placing clients whose abilities were particularly limited or who had specific transportation and specific job interests was more difficult. On a case-by-case basis, project staff had to weigh these factors in finding a job for the client. UWis/Stout, for example, found that, since arranging for transportation in rural Wisconsin was the greatest challenge, transportation needs sometimes necessarily outweighed the job interests of clients.

As part of the pre-randomization screening process, projects also tried to anticipate the constraints imposed on job placement for specific individuals. As

indicated in Chapter IV, projects often assessed the abilities, transportation needs, and job interests of clients, as well as the concerns of parents prior to enrollment. When these factors appeared to impose too many unresolvable constraints on job development, projects may have chosen to screen the applicant out. To the degree that the projects were actually able to do so, they were then able to focus their attention on clients who would be easier to place, thereby also increasing the likelihood that the project could find jobs that would "suit" the participants. It also meant that project resources could be diverted more toward providing vocational training and support services to those persons who were placed on jobs. Despite these screening efforts, however, unanticipated limitations for some clients did become evident to project staff after enrollment. These situations were probably more likely in the demonstration than they would be in an on-going program, because the demonstration limited pre-enrollment contact between clients and projects.

Job placements were also not always successful. Clients lost jobs for a variety of reasons, including inappropriate job matches. For example, one client who would not smile and was placed in a position with customer-contact requirements subsequently lost her job for that very reason. As indicated in Table V.3, 42 percent of the demonstration clients who had been placed on a job (training job or potentially permanent job) held more than one job. On average, clients who were placed on a job held 1.7 jobs, one of which was a permanent job. Seven percent of the clients who had been placed on a job held more than three jobs; one client had six jobs during the demonstration period.

In summary, the decisions made by projects in providing job-development and placement services clearly interacted with the service design and screening criteria of the projects and the types of clients whom they enrolled. For example, as indicated earlier, projects used client evaluations and placements in training jobs to assess the strengths and limitations of clients, since such assessments could not always be made adequately prior to enrollment. Moreover, once clients were enrolled in the program, project staff had to be flexible in addressing needs, interests, and concerns at an individual level in order to make successful job matches.

2. Job Training

The job-training component of this demonstration consisted of (1) on-the-job training by a job coach in a potentially permanent job, (2) time-limited training (within

TABLE V.3

CHARACTERISTICS OF JOB PLACEMENTS

(Sample: Treatment-Group Members Placed on a Job)

| | AHEDD (PA, DE) | ARC/MU (Monmouth, NJ) | Children's | | | | Goodwill (Milwaukee) | UWash/PCC (Portland) | UWis/Stout (Rural Wisconsin) | All Projects |
|--|-------------------|--------------------------|-------------------------|----------------------|----------------------|--|-------------------------|-------------------------|------------------------------------|-----------------|
| | | | The CENTER (Chicago) | Hospital (Boston) | ECF (Los Angeles) | | | | | |
| Percent Placed on a Job Who Were Placed on More Than One Job During the Service Period | 28.1 | 44.4 | 30.0 | 48.3 | 60.4 | | 31.6 | 29.7 | 46.4 | 42.1 |
| Average Number of Job Placements | 1.5 | 1.6 | 1.4 | 1.8 | 2.4 | | 1.5 | 1.4 | 1.6 | 1.7 |
| Average Number of Permanent Job Placements | 1.5 | 1.6 | 0.3 | 0.8 | 0.9 | | 1.3 | 0.8 | 1.1 | 1.1 |
| Total Number of Job Placements | 48 | 58 | 27 | 53 | 128 | | 28 | 53 | 44 | 439 |
| Number of Treatment Group Members Placed on a Job | 32 | 36 | 20 | 29 | 53 | | 19 | 37 | 28 | 254 |

SOURCE: Client Tracking System data.

one year of service), and (3) an option for providing training prior to placement on a potentially permanent job. The goal of the demonstration training was to help the client reach a competitive level of production and to develop work-appropriate behavior and social skills within a relatively short period of time.

The approaches taken to meet this goal varied considerably across the eight demonstration projects. Once again, such variation reflects a complex set of choices made by each project: (1) the degree to which and the manner in which they would provide vocational training prior to placement on potentially permanent jobs, and (2) the type of training plan that was developed and the degree to which individual needs would be addressed as part of that plan. This section describes in relatively general terms these two facets of the training process. However, it does not describe the specific methods of training utilized by project staff. For information on these methods, see, for example, Wehman (1981) or Rusch (1986).

As indicated in Table V.1, all of the projects except AHEDD provided at least some clients with training-job placements prior to placing them on a potentially permanent job. Differences across projects in the nature of this training were due to the different goals of the training placements. For example, the goal of the training programs run by The CENTER and Children's Hospital was to help clients develop specific skills and a work history prior to their placement on a permanent job, so as to enhance their success on that permanent placement. Moreover, through this train-then-place approach, specific skill and behavioral deficiencies could be identified and addressed prior to a potentially permanent placement. Given these goals, all clients served by these projects were expected to work in training jobs typically for 4 to 7 months, progressively working up to full-time hours and earning at or above the minimum wage. Clients were trained in a crew-type approach in which one coach trained and/or monitored several clients at one time. Once a client completed training and was placed in a potentially permanent job in the same industry in which he or she had been trained, The CENTER and Children's Hospital provided on-the-job training only when necessary. Although both projects offered job-coaching services to the employers who hired clients, Children's Hospital provided on-the-job training on a permanent job only for about a third of the clients who were placed on such jobs. In particular, they provided training only for those clients whose employer requested a coach, or whom project staff felt needed a job coach on-site. No permanent job employers chose to accept The CENTER's coaching services; hence, no training on a

permanent job was provided to clients at The CENTER who were placed on such jobs. However, off-the-job support services were provided by both projects to clients placed in permanent jobs. In general, it was expected that clients on training jobs at these projects would not "roll over"--that is, be hired permanently by a training-site employer.

Although ECF and UWash/PCC placed some clients into training jobs, the goal of training-job placements at these projects was specifically to identify and address the limitations of clients.¹ Only some clients who were known or suspected to have special limitations (such as behavioral problems) were placed in training jobs. The length of time on such jobs varied according to the needs of an individual client. In addition, these projects also manipulated the work environment on training jobs in order to assess the performance of clients under different working conditions. ECF did so by placing some clients in a few different types of training jobs. Alternatively, UWash/PCC actually manipulated the environment of the PCC cafeteria dishroom by simulating busy periods, for example. Consistent with this goal of addressing the limitations of clients, as opposed to developing a work history, clients in training jobs at these projects did not necessarily earn the minimum wage.² While it was not expected that clients would "roll over" into a permanent job at UWash/PCC, some clients at ECF did "roll over" from their training jobs into permanent jobs.

Finally, although ARC/MU, Goodwill, and UWis/Stout focused on placing clients directly into potentially permanent placements, some clients at these projects were placed in pre-placement volunteer or training jobs. Essentially, the purpose of training jobs at ARC/MU and UWis/Stout was to establish an arrangement with some employers that enabled a client to be trained on a job without committing the employer to hire that client, yet an implicit understanding was reached that the client would be rolled over into a permanent job if the employer was pleased with the client

¹ ECF also placed some clients into a sheltered workshop pre-placement training setting, the goal of which was to assess and to train clients to overcome specific behavioral deficiencies. In addition, this placement provided an activity for the clients to engage in while they were waiting to be placed.

² Indeed, since clients at UWash/PCC were actually enrolled as students at the community college, they did not earn any wages when they worked in the dishroom training site.

or if a permanent position became available. In addition, Goodwill placed clients into training jobs or volunteer jobs that were clearly temporary in nature, with no expectations of rollover. Goodwill staff felt that these temporary jobs would enable the client to gain work experience--essentially encouraging the client to engage in some activity--while a permanent job was being developed.

No matter what the goal of the training jobs was, their ultimate purpose was to promote success in a potentially permanent job. However, these training jobs were only an intermediate step in the intended flow of clients through the demonstration services. Projects were expected to allow adequate time during the service year for training and support services on a potentially permanent job. All of the projects placed clients into potentially permanent jobs, and all offered on-the-job training on these jobs--even those projects that provided the preliminary training described earlier. For some projects (AHEDD, ARC/MU, Goodwill, and UWis/Stout), most clients were to be placed in potentially permanent jobs as soon after randomization as possible (i.e., relatively early in the service period). For other projects (The CENTER and Children's Hospital), placements into permanent jobs were to occur only after the client had completed training (i.e., relatively late in the service period). Those projects that adopted the training-job approach rarely provided on-the-job training in a potentially permanent job. Rather, these projects looked for permanent job placements that closely resembled the training job so as to make additional training on the permanent job unnecessary. Finally, another set of projects (ECF and UWash/PCC) provided several options for clients (some which were "immediate" placements), while others required a training period prior to placement.

When projects offered both training-job and permanent-job placements, the decision about the appropriate initial placement depended largely on the needs of each individual client. As indicated earlier in this chapter, several projects conducted client evaluations prior to job placement. In general, these evaluations appeared to be most helpful in allowing staff to observe and interact with the client. The evaluations enabled staff to detect some physical and behavioral problems, and, for example, helped ECF determine whether or not specific clients should be placed into training jobs and, if so, which training sites should be used. In determining the best method of training a client, however, projects largely felt that actually observing the client on the job was the most useful assessment.

Each project, in some manner, prepared a plan for training each client, although such plans were quite informal at some projects. In developing training plans, all of the projects required that, at a minimum, the coach and/or coordinator visit and observe the job site prior to the client's first day in order to learn and understand the requirements of the job. Indeed, coaches at a few projects typically started the job prior to the client's first day. The training plan was often in the form of a task analysis--a list of all the specific tasks required to accomplish the job. At some projects, however, the task analysis was more formalized than at others. Some projects also conducted periodic reviews of the client's progress relative to the individualized training plan.

Reinforcements for good behavior and production were also sometimes incorporated into training plans, but, once again, the explicitness with which they were used and documented and the types of reinforcements that were applied varied considerably across projects. For example, while at least one project relied heavily on the formal use of reinforcements that were internal to the workplace and that were meaningful to the client, the reinforcements at other projects were more often in the form of verbal praise or warnings, discussions with clients about problems, or a series of formal written warnings.

In training, coaches were also often instrumental in restructuring jobs or in creating work aids that helped clients overcome their unique limitations. Often, for example, coaches added steps or reordered steps in a job to make it easier for a client. Clients who could not read were often given illustrated cue cards that depicted the steps to be completed or were taught to recognize the items they used, rather than to read labels. Physical limitations were also addressed, as necessary. For example, one coach who was working with a particularly frail client helped her develop a sweeping technique that was less strenuous for her. A client who was very short was given a stool and a specially made long-handled scrubber so that she could better (and more safely) perform her cleaning job.

Another area in which projects were required to respond to the diverse needs of the clients as part of on-the-job training was developing interpersonal skills. Jobs involve substantial interactions among persons. Many of the demonstration clients lacked the skills to communicate appropriately with their supervisors, co-workers, and customers. In turn, supervisors and co-workers required help in interacting properly with the client. In response to these needs, coaches would encourage interaction between the client and other persons at the job site by sitting with co-workers during

breaks, requiring the clients to ask their supervisors questions directly, rather than always relying on the coach, and encouraging the supervisors to talk directly with the clients in giving instructions or feedback.

Table V.4 indicates that about 60 percent of the total direct service time provided to clients placed on a job (149 hours, on average) was devoted to providing the types of on-the-job services described above. Indeed, staff devoted an average of 10 to 15 minutes to on-the-job training per hour of client work. These data must be viewed with caution, however, because the sample sizes on which they are based are small, and the standard deviations (which are presented in parentheses) are large. It appears that the amount of hours devoted by staff varied considerably across individuals, even within a single project. Such variation seems to confirm our observations made during site visits that the projects adjusted the level of support to the level of individual clients.

3. Support Services

In addition to job placement and training, support services were also expected to be an integral part of the demonstration services to help clients obtain and retain jobs. While all of the projects provided or arranged for such services, projects faced choices about the types of services that they provided, the manner in which they provided them, and the proportion of clients who would be provided with such services. Some projects relied on assessment and decision-making tools to identify and make arrangements for appropriate support services. In addition, the role taken by demonstration staff in providing or arranging for support services varied across projects and across services even within a single project.

The diversity among demonstration clients meant that projects had to be able to provide or arrange for a wide variety of support services. As indicated in Table V.1, support services included job-seeking-skills training (sometimes including mock interviews with local employers), transportation training or transportation service arrangement, and formal client counseling on an individual basis according to a regular schedule. Some of the projects that adopted crew-type training models created on-the-job crew meetings which allowed clients a chance to talk with each other about problems and concerns and to share their experience about working. Alternatively, other projects set up off-the-job client-support groups to serve these purposes. Finally, some projects also created parental-support groups.

TABLE V.4

STAFF HOURS OF DIRECT PROGRAM SERVICE

| | Children's | | | | | | | | All Projects |
|--|-------------------|----------------------|-------------------------|------------------------------------|----------------------|-------------------------|-------------------------|---------------------------------|---------------|
| | AHEDD (PA, DE) | ARC/MU (Monmouth) | The CENTER (Chicago) | Children's Hospital (Boston) | ECF (Los Angeles) | Goodwill (Milwaukee) | UWash/PCC (Portland) | UWis/Stout (Rural Wisconsin) | |
| Total Number of Staff Hours | | | | | | | | | |
| Per Client for: | | | | | | | | | |
| All clients in subsample | 27.6 (34.4) | 148.1(232.5) | 56.7 (60.9) | 154.3 (78.2) | 201.3 (249.4) | 82.2 (74.6) | 131.5 (96.6) | 142.4 (180.4) | 113.8 (159.7) |
| Clients with a placement | 49.3 (39.6) | 148.1(232.5) | 63.6 (61.2) | 154.3 (78.2) | 266.5 (257.7) | 113.8 (82.9) | 142.0 (92.8) | 198.6 (199.0) | 149.3 (172.6) |
| Clients terminated with a job | 56.5 (41.8) | 146.4(245.1) | 155.0 (N.A.) | 217.8 (57.6) | 309.7 (311.2) | 138.6 (90.8) | 133.6 (68.0) | 283.9 (291.2) | 173.2 (207.8) |
| Percent of Total Staff Hours | | | | | | | | | |
| in On-the-Job Training for: | | | | | | | | | |
| Clients with a placement | 43.2 (24.8) | 79.2 (16.0) | 81.8 (13.5) | 46.2 (13.2) | 74.4 (27.1) | 25.9 (20.3) | 37.4 (35.0) | 47.9 (35.8) | 56.3 (30.8) |
| Clients terminated with a job | 53.2 (22.3) | 78.9 (16.8) | 93.5 (N.A.) | 44.1 (9.7) | 68.1 (35.2) | 35.8 (16.5) | 59.8 (16.4) | 45.9 (45.1) | 61.1 (27.1) |
| Average Number of Staff Hours | | | | | | | | | |
| in On-the-Job Training Per | | | | | | | | | |
| Hour of Client Work for: | | | | | | | | | |
| Clients with a job | 0.20(0.31) | 0.21(0.28) | 0.16(0.12) | 0.11 (0.06) | 0.48 (0.36) | 0.32(0.55) | 0.10(0.16) | 0.17 (0.19) | 0.23 (0.30) |
| Clients terminated with a job | 0.16(0.27) | 0.15(0.21) | 0.09(N.A.) | 0.07 (0.02) | 0.37 (0.37) | 0.12(0.19) | 0.15(0.17) | 0.23 (0.29) | 0.19 (0.25) |
| Sample Sizes | | | | | | | | | |
| Number of Clients in Subsample | 26 | 11 | 9 | 9 | 20 | 10 | 13 | 12 | 110 |
| Number of Clients in Subsample with Job Placement | 12 | 11 | 8 | 9 | 15 | 6 | 12 | 8 | 81 |
| Number of Clients in Subsample Terminated with a Job | 8 | 10 | 1 | 3 | 8 | 4 | 5 | 3 | 42 |

NOTE: Standard deviations are presented in parentheses. The data sources for this table are the Client Tracking System data and the Client Service Record data. These data are based on the Client Service Record subsample, which consists of 110 randomly selected treatment-group members. See Appendix A for a description of this data source.

Many clients required assistance with aspects of their lives other than work, and, consequently, the projects provided support by helping clients make decisions about living arrangements and any subsequent moves, by providing information on how to budget and bank, and by providing support to dealing with emotional problems (such as handling depression over the loss of a job). In addition, clients were referred to service providers, as necessary, for a variety of other problems, ranging from drug and alcohol problems to child-care services.

Support was also sometimes provided to parents in the context of helping them understand their role as a support for their son or daughter. This often meant explaining the new restrictions that a client's working would place on the family. It would, for example, be more difficult to take an extended family vacation without jeopardizing the client's job. Moreover, family members were often expected to reinforce the importance of employment to the client and to help with the client's grooming and attendance. Whether this interaction with parents took place in regularly scheduled meetings or on an as-needed basis, the important element appears to have been laying out in advance and periodically reinforcing the expectations of the project and the expectations of an employer about the client.

Another area of support provided by the projects was to help clients negotiate the SSI system. In addition to monitoring the implementation of the SSI waivers for demonstration clients, project staff also encouraged and reminded clients to report their earnings, provided clients with information about overpayments, and generally acted as advocates for the clients in dealing with SSI-related questions and problems. These services seemed to be most important at the projects that were located in areas with several district offices.

While client records and intake and pre-placement evaluations were sometimes useful in identifying support needs, problems that required support were most often identified by observing the on-the-job behavior of clients. In addition, problems sometimes became evident through regular counseling or client support-group sessions. Consequently, most of the services described above were provided on an as-needed basis to individual clients.

In addition, projects faced decisions about when a service should be provided by the project and when clients should be referred to other service providers. These decisions often seemed to stem from the philosophy adopted by the projects about their role in developing a client's overall service package, as well as from the project resources that were realistically available to meet various service needs. For

example, some projects tended to focus their services quite specifically on training, referring clients to other service providers for problems beyond the realm of on-the-job training, travel training, job-seeking-skills training, and counseling devoted to resolving on-the-job problems. In contrast, other projects appeared to focus more broadly on such problems as residential instability that might affect a client's ability to obtain or retain jobs. Goodwill combined both approaches. While Goodwill, itself, provided services that focused more specifically on job-seeking and job training, it subcontracted the provision of broader support and case management to the Milwaukee Association for Retarded Citizens.

In summary, the support services provided to each client were usually determined by individual needs. It is not surprising that a variety of types of support were required, given the diversity of clients who were served. Projects chose to provide support services in-house that were within their resources, and referred clients to other service providers for those services that were not available in-house. It is also clear that projects screened some applicants out prior to enrollment whose support needs were not likely to be resolved within the 12-month service period. Finally, no matter where the line was drawn as to what services would be provided in-house, at least one staff member at each project was responsible for detecting and resolving problems (sometimes through referrals) that required support services.

4. Follow-Up Services

In addition to the support services described in the preceding section, the demonstration projects also developed procedures for ensuring the eventual independence of the clients from the project staff. This was especially important in this demonstration, given that the services were to be limited to a one-year transitional period. Two service features were adopted by the projects to promote the independence of the participants. First, projects adopted a planned and graduated approach for reducing the involvement of the project staff on the job site during the demonstration period. Second, project staff arranged for postprogram support, as necessary, to enable clients to retain their jobs.

As indicated earlier in this chapter, training and support services were gradually phased down as the client learned and became stabilized on the job. The manner and speed at which coaching services were reduced depended largely on the needs of the client. During this period, coaches left the client's side for gradually longer periods of time, until, eventually, the presence of the coach was no longer

necessary at the job site on a full-time basis. The formal point at which the services began to be phased down was sometimes defined on the basis of documentation kept on the performance of the client. Most projects, however, relied on the job coach's judgment about when to begin this phase-down. In making these judgments, coaches considered the client's ability to perform most or all of the job tasks independently and with sufficient speed and accuracy. In addition to job performance, factors that might also have affected the speed at which phase-down occurred included the client's emotional and psychological needs and his or her satisfaction with the job. Projects may also have attempted to phase down more quickly for clients who were approaching their one-year anniversary date. Given these factors, it is not surprising that the time required for individual clients to become stabilized on a job varied considerably. Some clients were able to perform independently on a job within three days, while others required nearly full-time coaching for several months.

Within the one-year service period, staff rarely withdrew services totally from clients who were working on jobs. Even after clients were working independently on a job, the projects generally continued to contact the clients and/or their employers periodically. Although many projects instituted formal schedules which specified a minimum frequency for making these contacts, the staff at each project actually provided this contact on a schedule designed to meet the needs of the client (i.e., more or less frequently than the formal schedule). Indeed, during this follow-up phase, clients sometimes explicitly asked staff for help with a problem, and employers sometimes requested retraining or training on a new task. In a few cases where a client lost his or her job, the projects tried to find a new placement and provide training as part of their follow-up services.

Finally, each project arranged postprogram support services for clients as necessary. Besides attempting to draw the employer and co-workers to the training process (thereby establishing a stronger bond between the other workers and the client), projects explicitly asked specific individuals in each client's life to serve as on-going supports. These support persons included, for example, an acquaintance of the client through some other activity, a security guard at the client's place of employment, and a bus driver who provided transportation to the client.

Projects also referred clients (both with and without a job) to a variety of different service providers upon termination. These service providers included other types of vocational programs and programs that provided longer-term job follow-up, job-placement programs, and case-management agencies.

With the exception of UWis/Stout, which was unable to secure continued funding for providing competitive employment services as of the end of the demonstration, all of the projects themselves expected to provide post-termination follow-up support (under nondemonstration funding) to virtually all clients terminated with a job. These services ranged from continued active coaching services to helping clients resolve problems on an as-needed basis.

5. Time-Limited Service

One of the key features of the demonstration was the one-year service limit, beginning at the point of randomization. This time limit had certain implications for the delivery of services. In particular, projects had to decide how the service components for each client should be configured within a one-year time frame. In addition, projects could decide to terminate clients prior to the end of their service year if the demonstration services did not appear to be sufficient to place clients successfully in competitive employment. Some projects went through this formality, while others did not.

Table V.5 indicates that clients were enrolled in the demonstration for an average of 10.5 months. It should be noted that the average number of enrollment months across projects reflects, in part, the decisions made by the individual projects about terminating clients prior to the end of their service year.

In addition, Table V.5 disaggregates the total enrollment time per client into the average number of months spent in various service components. Overall, clients spent 37 percent of their total enrollment time in training.¹ This training time consisted of an average of 2.9 months of training in training and permanent jobs plus one month of follow-up training and support. In addition, clients were not in training but were receiving other types of services (predominately job-placement services) or were temporarily not receiving services for an average of approximately six and one-half months.

This table also indicates that the proportion of the total service time spent in training in a training job--an intermediate step to permanent employment--was relatively high at some projects. For example, clients at Children's Hospital spent an

¹ These averages were computed across all clients, even those who did not receive job training.

TABLE V.5

TIME SPENT IN PROGRAM SERVICE

| | AHEDD (PA,DE) | ARC/MU (Monmouth, NJ) | The CENTER (Chicago) | Children's Hospital (Boston) | ECF (Los Angeles) | Goodwill (Milwaukee) | UWash/PCC (Portland) | Uwis/Stout (Rural Wisconsin) | All Projects |
|--|------------------|--------------------------|-------------------------|------------------------------------|----------------------|-------------------------|-------------------------|------------------------------------|-----------------|
| Average Number of Enrollment Months | 9.5 | 11.9 | 6.9 | 10.0 | 11.7 | 9.3 | 11.2 | 12.0 | 10.5 |
| Time in Service Components (Average Number of Months) | | | | | | | | | |
| Training: | | | | | | | | | |
| Total | 1.77 | 6.38 | 3.21 | 7.59 | 4.55 | 2.61 | 4.00 | 3.59 | 3.92 |
| Training on a training job | 0.00 | 0.09 | 2.61 | 5.35 | 2.44 | 0.17 | 1.33 | 0.86 | 1.38 |
| Training on a permanent job | 1.11 | 4.56 | 0.02 | 0.00 | 1.15 | 1.75 | 1.41 | 2.06 | 1.51 |
| Follow-up support on a permanent job | 0.66 | 1.72 | 0.58 | 2.24 | 0.96 | 0.68 | 1.26 | 0.67 | 1.02 |
| Other time ^a | 7.65 | 5.51 | 3.72 | 2.38 | 7.18 | 6.74 | 7.20 | 8.45 | 6.59 |
| Total Number of Treatment- Group Members | 81 | 39 | 27 | 29 | 77 | 36 | 45 | 41 | 375 |

SOURCE: Client Tracking System data.

^a

Other time includes time in program evaluation and pre-placement training, and time during which clients were not receiving training but were receiving support services and/or staff were developing jobs for clients. Also included in "other service time" is time during which clients were temporarily not receiving program services, for several reasons, including awaiting program service, and health and other personal reasons that needed to be resolved before program services could be resumed.

average of 54 percent of their total service time in training-job training. Clients at The CENTER and ECF also spent a relatively high proportion of their total service time in training jobs.

The demonstration projects appeared to approach planning within a one-year time frame as a continuous process throughout the service year. One staff member described this planning as "an ongoing process of setting things into place, with the goal of having everything in place at the point 12 months after randomization." At some projects, periodic reviews of each client's progress helped remind staff of the time frame within which they were working and the necessity of planning services.

Sometimes, however, services beyond 12 months appeared to be necessary in order to stabilize a client on a job, arrange the long-term supports for the client, or meet an employer's expectations prior to withdrawing services. For example, one project worked over several months to arrange a waiver of a written civil service examination for a client who had stabilized on his job but who was required, according to the arrangement made with the employer, to have a full-time coach at the job site until the exam was waived (or passed). The waiver was finally obtained, and the client was terminated with a potentially permanent job after receiving demonstration services for 21 months. In another case, the ongoing social-service support required by a client on a job in order to ensure future job retention was difficult to arrange. Because this client was so successful on this job, the support agency that typically would have served him began to doubt whether he was in fact mentally retarded; it took several months to set adequate support into place. In these and similar cases, projects were permitted to provide services beyond 12 months.

Table V.6 indicates that 14 percent of all clients received demonstration services beyond 12 months.¹ More interestingly, 29 percent of the clients who terminated with a potentially permanent job exited the program beyond 12 months. However, given that most of the projects offered on-going services, under other funding, to clients terminated with a job, these numbers must be interpreted with caution. Many clients continued to receive some project services (provided under nondemonstration funding) after being terminated.

¹ These persons were enrolled for an average of 1.4 months longer than the intended one-year service period.

TABLE V.6

CHARACTERISTICS OF PROGRAM TERMINATIONS

| | AHEDD (PA,DE) | ARC/MU (Monmouth, NJ) | The CENTER (Chicago) | Children's Hospital (Boston) | ECF (Los Angeles) | Goodwill (Milwaukee) | UWash/PCC (Portland) | UW/Stout (Rural Wisconsin) | All Projects |
|--|------------------|--------------------------|-------------------------|------------------------------------|----------------------|-------------------------|-------------------------|----------------------------------|-----------------|
| Total Enrollment Time | | | | | | | | | |
| Percent of treatment group enrolled: | | | | | | | | | |
| 0-1 months | 6.2 | 0.0 | 11.1 | 0.0 | 0.0 | 5.6 | 0.0 | 0.0 | 2.7 |
| 2-3 months | 9.9 | 0.0 | 11.1 | 3.5 | 0.0 | 22.2 | 2.2 | 0.0 | 5.6 |
| 4-6 months | 7.4 | 2.6 | 25.9 | 13.8 | 5.2 | 2.8 | 4.4 | 0.0 | 6.7 |
| 7-9 months | 3.7 | 2.6 | 11.1 | 17.2 | 5.2 | 2.8 | 2.2 | 0.0 | 4.8 |
| 10-12 months ^a | 69.1 | 64.1 | 37.0 | 31.0 | 79.2 | 33.3 | 91.1 | 87.8 | 66.7 |
| >12 months | 3.7 | 30.8 | 3.7 | 34.5 | 10.4 | 33.3 | 0.0 | 12.2 | 13.6 |
| Treatment-Group | | | | | | | | | |
| Members Terminated with a Potentially Permanent Job | | | | | | | | | |
| Percent terminated: | | | | | | | | | |
| Before 12 months | 8.7 | 7.7 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.7 | 5.5 |
| At 12 months ^a | 78.3 | 53.9 | 50.0 | 11.1 | 76.2 | 50.0 | 100.0 | 60.0 | 65.4 |
| After 12 months | 13.0 | 38.5 | 0.0 | 88.9 | 23.8 | 50.0 | 0.0 | 33.3 | 29.1 |
| Average number of months of enrollment | 12.1 | 12.2 | 11.6 | 13.1 | 13.3 | 13.2 | 12.0 | 12.2 | 12.5 |
| Number of treatment- group members terminated with a permanent job | 23 | 26 | 4 | 9 | 21 | 12 | 17 | 15 | 127 |
| Treatment-Group | | | | | | | | | |
| Members Terminated without a Permanent Job: | | | | | | | | | |
| Percent terminated: | | | | | | | | | |
| Before 12 months | 51.7 | 30.8 | 87.0 | 70.0 | 23.2 | 62.5 | 28.6 | 11.5 | 43.2 |
| At 12 months ^a | 48.3 | 53.9 | 8.7 | 20.0 | 71.4 | 12.5 | 71.4 | 88.5 | 51.2 |
| After 12 months | 0.0 | 15.4 | 4.4 | 10.0 | 5.4 | 25.0 | 0.0 | 0.0 | 5.7 |
| Average number of enrollment months | 8.5 | 11.2 | 6.1 | 8.6 | 11.1 | 7.4 | 10.7 | 12.0 | 9.5 |
| Percent terminated due to: | | | | | | | | | |
| Completion of 12 months | 58.6 | 76.9 | 13.0 | 10.0 | 78.6 | 25.0 | 71.4 | 80.8 | 56.5 |
| Project concerns ^b | 19.0 | 7.7 | 47.8 | 75.0 | 12.5 | 58.3 | 21.4 | 15.4 | 27.8 |
| Client resignation ^c | 22.4 | 15.4 | 39.1 | 15.0 | 8.9 | 16.7 | 7.1 | 3.9 | 15.7 |
| Number of treatment- group members terminated without a permanent job | 58 | 13 | 23 | 20 | 56 | 24 | 28 | 26 | 248 |

SOURCE: Client Tracking System data.

^a

This category includes those clients who were terminated within one week of their termination date.

^b

Includes terminations due to the lack of client or family cooperation, an inability to contact client, and project concerns about the client's chances of becoming permanently employed given his or her degree of disability.

^c

Includes those individuals who moved out of the catchment area, were terminated for health reasons, were deceased or institutionalized, or resigned for other reasons.

As indicated earlier in this chapter, projects also had the option of terminating clients, as necessary, prior to their 12-month anniversary date. Table V.6 illustrates the choices made by projects in terminating clients prior to the one-year service limit. For example, AHEDD, The CENTER, Children's Hospital, and Goodwill terminated a higher proportion of clients in the first 6 months than did the other projects, even terminating some clients in their first month. Alternatively, ARC/MU, ECF, UWash/PCC, and UWis/Stout terminated the vast majority of clients after month 9, reflecting their policies to keep clients on the project rolls until the clients' 12-month anniversary dates.

To some degree, these patterns reflect the different approaches taken in making no-service decisions. While some projects chose to terminate some clients prior to their completing a year, other projects may have kept those same clients on the rolls even though they may not necessarily have provided active services to them. While it was often hoped that a more appropriate job would be found, or that a client would become more interested in employment, these persons were essentially placed in a holding status, which in many cases reflected an implicit no-service decision. Most project attention was devoted to other clients, while staff waited to see whether the client would change his or her interest. These persons remained enrolled and were terminated prior to the end of their year only if they moved out of the service area. Of course, situations changed in some instances, and the project was able to resume active service.

In summary, the projects approached the one-year limit on services in several ways. For the most part, projects were able to place and train clients within the year; the average length of participation was 10.5 months, and approximately 85 percent of the persons who were enrolled terminated prior to the end of their year of eligibility. Nevertheless, it was clear that for a number of the mentally retarded SSI recipients who were enrolled the projects needed more than one year in order to move clients into the competitive labor market successfully. However, in most of these cases, the projects were able to complete the transition with only an extra month or two of services. Regardless of the time taken to complete the initial placement and training, projects provided longer-term job-retention services either directly (using nondemonstration funding) or through arrangements with other agencies or with parents.

VI. AN ANALYSIS OF THE SERVICE DELIVERY PROCESS

Chapter V described the general model of transitional employment and the various approaches implemented by the eight demonstration projects. However, in that chapter, we did not assess whether these approaches met the service goals of the demonstration. This chapter, which is based on data collected on the flow of clients through various program services and on interviews with site staff, assesses this issue by examining the delivery of transitional-employment services by the projects and the client outcomes generated by these services. In addition, it assesses the costs of providing transitional employment.

These aspects of program operations--service delivery and program costs--provide information for examining variations in the approaches adopted by projects and their short-term performance in order to draw conclusions about the effectiveness of methods for delivering transitional-employment services. This analysis is inherently imprecise. Given the many factors that influence differential performance, the eight demonstration projects provide only a limited base of information for identifying the specific effects of those many factors. However, the general process information, when coupled with our observations of demonstration operations over the last 25 months, does provide a basis for drawing a number of general conclusions about effective transitional-employment programs. The final section of this chapter presents these conclusions.

Of course, while the service-delivery outcomes examined herein are critical to the success of transitional employment, they essentially represent only an intermediate goal. Although it is important for the projects to place and train clients, and to do so in an efficient manner, an analysis in this area reveals only what happened to clients during their participation in the program. In order to judge whether the operational and programmatic aspects of the demonstration were successful at achieving the ultimate goal of the demonstration--to increase the employment and earnings of clients above what they would have been had the demonstration not been implemented--one must examine the impacts of the demonstration. Furthermore, in order to judge whether the demonstration was a worthwhile investment of resources, one must compare the operational costs of the demonstration with the impacts (tangible and intangible) that the demonstration

generated. Thus, the assessments and conclusions of the process analysis that are presented in this chapter must be taken as a foundation for interpreting the impact estimates that will be based on longer-term data, as well as the benefit-cost comparisons that will rely on these longer-term impacts. Here, we examine the delivery of services and reach conclusions about whether and how the demonstration can be operated on a policy-relevant scale, if it is judged desirable in the long run.

A. AN ASSESSMENT OF SERVICE DELIVERY

In addition to providing a foundation for interpreting the impact estimates, an examination of the delivery of services helps us define the extent to which the demonstration model was implemented as intended. As we indicated in Chapter V, the transitional-employment model included four basic features:

1. Job development and placement
2. Job permanence through on-the-job training, support, and follow-up services
3. The arrangement of longer-term support services¹
4. A one-year time limit on the provision of demonstration services

This section examines the performance of the projects in these four areas. We consider the extent to which the projects implemented each feature and the extent to which they achieved the demonstration goals for all clients and for subgroups of clients.

Overall, the data presented in this chapter indicate that the four basic service features of the demonstration model were implemented. The data also indicate that placing and training a diverse group of SSI recipients with mental retardation is difficult.

¹ In this chapter, it is important to recognize that, although these longer-term support services are considered essential for ensuring that clients can be stabilized on their transitioned jobs, their success in this demonstration cannot be judged adequately until longer-term data are available. Thus, the training and support services provided under the demonstration should be judged more in terms of whether clients "transitioned" from the demonstration into a job, and, hence, "stabilization" must be viewed qualitatively.

Our review indicates that over two-thirds (68 percent) of the clients in the demonstration were placed on jobs during the service period. About three-quarters of those who were placed on jobs were placed on potentially permanent jobs, and the remaining quarter were placed only on training jobs.

The training and support services enabled just over one-third of all demonstration clients to exit the program with potentially permanent jobs in the competitive labor market. Another 8 percent of the clients who were enrolled exited the program with other types of community-based jobs that might ultimately have evolved into permanent, competitive positions.¹ Almost 20 percent of the clients exited the program with jobs in sheltered workshops or enclaves. These persons were often those who had been enrolled in a workshop program or enclave prior to or even during the demonstration. Finally, about 40 percent of the clients terminated without any type of job. Of course, in the long-term, the expectations and activities of these clients may be influenced by their experience in the demonstration.

For the most part, these outcomes were achieved within the one-year time limit for demonstration services. However, it is clear that some clients required a longer service period, either because finding appropriate job placements for them was difficult or because they required a longer training period.

Because of the time limit imposed on the provision of services, it was essential that projects could identify and plan for the long-term needs of clients as part of the transitional services. Projects adopted a variety of approaches for arranging job-retention services that would continue after the clients' eligibility for demonstration services had expired. This process was clearly difficult in the service environments of the projects, and, again, only long-term observations will tell whether the available services were adequate.

The remainder of this section discusses these results in more detail. In addition, this section concludes with a discussion on the delivery of services to subgroups of the treatment group.

¹ Other types of community-based jobs include subsidized jobs, jobs that paid subminimum wages, placements in which the job coach was still providing on-site training services, and jobs that were intended to be temporary in nature.

1. Placement in Competitive, Potentially Permanent Jobs

The placement process is summarized in Table VI.1. Roughly two-thirds of the demonstration clients were placed on a job within the service period. Moreover, nearly 50 percent of all clients were placed on a potentially permanent job, ranging from 90 percent at ARC/MU to 19 percent at The CENTER.¹ These two projects are clearly outliers; the remaining six projects had fairly similar placement rates.

Variation across projects is likely to reflect numerous factors that interact to influence the ability of projects to place clients on jobs. They include such factors as regional economic conditions, programmatic approaches (such as the time available within the service period to develop permanent jobs for each client, market the program to potential employers, and assess the job interests of clients and parents prior to developing jobs), staff resources to develop jobs and train clients once placements were arranged, and the characteristics of the clients enrolled.

Variation across projects is also determined by the decisions made by projects about training jobs—that is, decisions to develop and use temporary jobs that were intended as training sites rather than as permanent placements. This source of variation is particularly important, since training prior to placement on a permanent job lies at the heart of a long debate among transitional-employment programs and between these programs and sheltered workshops.

The evidence in Table VI.1, like the general policy debate, is somewhat mixed on this issue. While a comparison between ARC/MU (which emphasized direct permanent placements) and The CENTER (which emphasized a structured train-then-place approach) might suggest that the direct-placement approach is preferable, the remaining six projects (which adopted a mixture of approaches) exhibited relatively similar placement rates and rates of termination with a potentially permanent job.²

¹ As indicated by the statistical tests presented in Appendix D, the percentage of clients who were placed on a permanent job was found to differ significantly from the mean (across projects) only at ARC/MU and The CENTER.

² Indeed, as indicated by the statistical tests presented in Appendix D, the percentage of clients terminated with a potentially permanent job differed significantly from the overall project mean only at ARC/MU and The CENTER.

TABLE VI.1

CHARACTERISTICS OF JOB PLACEMENTS
(Sample: All Treatment-Group Members)

| Percent of Treatment Group | AHEDD (PA,DE) | ARC/MU (Monmouth, NJ) | The CENTER (Chicago) | Children's | | | Goodwill (Milwaukee) | ECF (Los Angeles) | UWash/PCC (Portland) | UWis/Stout | | All Projects |
|---|------------------|--------------------------|-------------------------|----------------------|----------------------|-------------------------|-------------------------|----------------------|-------------------------|-------------------|------|--------------|
| | | | | Hospital (Boston) | ECF (Los Angeles) | Goodwill (Milwaukee) | | | | (Rural Wisconsin) | | |
| Placed on any job | 39.5 | 92.3 | 74.1 | 100.0 | 68.8 | 52.8 | 82.2 | 65.9 | | | 67.5 | |
| Placed on training job | 0.0 | 5.1 | 74.1 | 100.0 | 49.4 | 8.3 | 53.3 | 31.7 | | | 34.4 | |
| Placed on permanent job | 39.5 | 89.7 | 18.5 | 44.8 | 45.5 | 47.2 | 51.1 | 56.1 | | | 48.8 | |
| Stabilized on permanent job | 28.4 | 66.7 | 18.5 | 44.8 | 32.5 | 33.3 | 40.0 | 41.5 | | | 37.1 | |
| Terminated: | | | | | | | | | | | | |
| With a permanent job | 28.4 | 66.7 | 14.8 | 31.0 | 27.3 | 33.3 | 37.8 | 36.6 | | | 33.9 | |
| With another community-based job | 0.0 | 0.0 | 3.7 | 13.8 | 18.2 | 13.9 | 2.2 | 12.2 | | | 8.0 | |
| With a job in a sheltered workshop or enclave | 12.3 | 15.4 | 0.0 | 13.8 | 32.5 | 0.0 | 26.7 | 34.1 | | | 18.9 | |
| Without a job | 59.3 | 17.9 | 81.5 | 41.4 | 22.1 | 52.8 | 33.3 | 17.1 | | | 39.2 | |
| Total Number of Treatment-Group Members | 81 | 39 | 27 | 29 | 77 | 36 | 45 | 41 | | | 375 | |

SOURCE: Client-Tracking System data.

The mixture of performances is consistent with our observations in the process analysis that the use of training jobs creates operational advantages and disadvantages to the goal of moving clients into competitive employment within a limited time frame.

The disadvantages faced by projects that chose to use fixed training sites or required a minimum length of time in training placements were constraints on (1) their ability to meet the job-placement needs of clients, and (2) their ability to place clients into permanent jobs within the one-year period. The use of fixed training sites required that clients be able to travel to the training sites and that they be interested in the work offered at the training site. Consequently, projects that used fixed training sites could enroll only those persons who met these requirements. Projects that imposed minimum lengths of time for training placements were also constrained, in that clients who learned the job quickly may have been delayed in being placed on a permanent job, while clients who had more difficulty in learning the job had less time available within the one-year period of demonstration services to be placed on and to learn a permanent job.

The training-job approach also meant that some clients were never given the chance to work in and to learn potentially permanent jobs. For example, only 30 percent of the clients at the CENTER completed the training program and were given the opportunity to be placed and trained on potentially permanent jobs. While the fraction of clients who completed the training at Children's Hospital was much higher (62 percent), a third of the clients were nevertheless excluded from receiving on-the-job training in a potentially permanent job.

Projects such as ECF, UWash/PCC, and UWis/Stout, which provided a mix of training and permanent jobs as initial placements, were in a better position to meet the travel and job-placement needs of their clients. These projects could tailor the match between the client and the training or permanent job more effectively and could establish training schedules that were more individual-specific than was possible in projects which required that persons start with a training job.

The advantage of using training jobs was that they increased the flexibility to enroll persons who exhibited a wider range of skills and behavior. Training sites enhanced the ability of projects to control the pace of work and the general environment on a training job, and thus gave projects greater flexibility to deal with

persons whose impairments made competitive employment more difficult and uncertain. In addition, clients could be placed into training jobs fairly soon after enrollment, rather than having to wait for permanent jobs to be developed for them. Finally, training sites gave projects a place to evaluate clients, and thus afforded them an opportunity to design more effective training plans. It may have been the relatively greater control that Children's Hospital and UWash/PCC had over the jobs in their training sites that enabled them to move more clients through the training and into permanent jobs than did The CENTER, which had less control over the work structure and flow of its training jobs.¹

Table VI.2 examines another aspect of job placement: the characteristics of the jobs held by clients when they exited the program.² It is clear that clients left the program with a wide variety of potentially permanent jobs. On average, clients who were terminated with a job were working 27.3 hours per week at an expected wage rate of \$3.95 per hour, or about \$110 per week.³

The job-characteristic figures reflect one of the constraints imposed on projects that used fixed training jobs--that is, their limited ability to place clients in a wide range of occupations and industries (compare, for example, The CENTER and Children's Hospital with ECF).⁴ Because of this constraint, The CENTER and Children's Hospital enrolled only those program applicants who were interested in the

¹ The training jobs at Children's Hospital and UWash/PCC were in cafeterias at those two establishments (in addition, Children's Hospital offered training in the hospital's housekeeping department). Consequently, the program could exercise substantial control over the work flow and environment. In contrast, the CENTER used training sites established in several Chicago-area firms and, consequently, was less able to control the work flow and the general work environment.

² In addition, Appendix Tables C.1 and C.2 contain supplemental information on the characteristics of, respectively, training jobs and potentially permanent job placements in the in-program period; Appendix Table C.3 presents the characteristics of all job placements, including both training and potentially permanent jobs.

³ Expected hours and wages indicate the hours and wages that the client was expected to work at the time of termination. Obviously, actual hours, for example, could vary from week to week, given absences and overtime.

⁴ Indeed, as indicated by the statistical tests presented in Appendix D, the percentage of clients terminated with a potentially permanent job differed significantly from the overall demonstration-wide mean at ARC/MU and The CENTER.

TABLE VI.2

CHARACTERISTICS OF TERMINATION JOBS
FOR CLIENTS TERMINATED WITH A POTENTIALLY PERMANENT JOB

| Type of Job ^a (Percent of Clients Terminated with a Job) | AHEDD (PA,DE) | ARC/MU (Monmouth, NJ) | The CENTER (Chicago) | Children's Hospital (Boston) | ECF (Los Angeles) | Goodwill (Milwaukee) | UWash/PCC (Portland) | URIs/Stout (Rural Wisconsin) | All Projects |
|---|---------------|-----------------------|----------------------|------------------------------|-------------------|----------------------|----------------------|------------------------------|--------------|
| Food service occupations | 52.2 | 15.4 | 25.0 | 44.4 | 4.8 | 25.0 | 52.9 | 46.7 | 32.3 |
| Cleaning and custodial occupations | 26.1 | 11.5 | 75.0 | 55.6 | 23.8 | 75.0 | 29.4 | 26.7 | 31.5 |
| Light assembly/sorters/packers | 13.0 | 57.7 | 0.0 | 0.0 | 9.5 | 0.0 | 0.0 | 13.3 | 17.3 |
| Clerical | 0.0 | 3.9 | 0.0 | 0.0 | 57.1 | 0.0 | 5.9 | 13.3 | 12.6 |
| Personal service occupations | 8.7 | 11.5 | 0.0 | 0.0 | 4.8 | 0.0 | 11.8 | 0.0 | 6.3 |
| Landscaping/grounds maintenance | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Average Expected Hours of Work per Week for Termination Job | 21.8 | 31.0 | 35.0 | 32.4 | 32.3 | 21.1 | 23.8 | 26.0 | 27.3 |
| Average Expected Wage Rate per Hour for Termination Job | 3.60 | 4.07 | 4.95 | 5.18 | 4.29 | 3.70 | 3.49 | 3.48 | 3.95 |
| Average Expected Weekly Wage for Termination Job | 79.75 | 128.06 | 171.75 | 168.18 | 142.01 | 79.60 | 83.49 | 90.52 | 110.86 |
| Total Number of Treatment-Group Members Terminated with a Potentially Permanent Job | 23 | 26 | 4 | 9 | 21 | 12 | 17 | 15 | 127 |

SOURCE: Client Tracking System data.

^a Food service occupations include dishwashers, food preparation, and bus persons. Cleaning and custodial occupations include janitors, housekeepers, car washers, and laundry aides. Light assembly/sorters/packers includes carriers, quality control checkers, hand and machine assembly, welder/sealers, sorters, packers, and offset printers. Clerical jobs include office occupations, librarian's aid, and telephone clerk. Personal service occupations include school bus aide, salesperson, childcare, and locker room attendant.

industries in which training was provided. This restriction may have contributed to lower-than-average rates of enrollment at these two projects (see Chapter IV).

Table VI.2 also indicates that those clients who terminated with a job at The CENTER, Children's Hospital, and ECF were more likely to hold jobs characterized by longer hours and higher wages.¹ These results are based on relatively small samples (particularly at The CENTER and Children's Hospital) and should be interpreted with some caution. Comparisons of the work hours and earnings of clients at different projects is problematic, since the clients who completed the training and were terminated with potentially permanent jobs are likely to have differed across projects. For example, the graduates of a project that placed only its most able clients are likely to have achieved higher average earnings than is true of graduates of a project that also successfully moved many marginal workers into employment at the minimum wage. This process may explain part of the higher average earnings among persons terminated with jobs from The CENTER and Children's Hospital. Because persons who completed the training at these projects may have resembled the most able clients at other projects, comparisons of their wages and hours with those of the average persons terminated from the other projects may be misleading.

Nevertheless, the differences are also likely to reflect some of the differences in the project approach adopted by The CENTER and Children's Hospital. For example, by the time that clients at these projects were placed on potentially permanent jobs, the job developers could cite for the client an extensive work history that included working up to full-time hours at a wage level above the minimum wage. In addition, the higher wages may also have been due to conditions and prevailing wage rates in the local economies of Chicago, Boston, and Los Angeles (Boston, for example, has a very low rate of unemployment and a higher minimum wage than the other sites).

2. Job Permanence

However, job placement is only part of the story. The goal is long-term employment. The transitional-employment model contends that on-the-job training

¹ In this case, more formal statistical tests were possible. As indicated in Appendix D, differences among projects in hours and wages were statistically significant.

and support and follow-up services are necessary in order to ensure permanence on a job. In addition, job permanence is fostered by matching the abilities and interests of clients with the demands and opportunities of their jobs.

As we indicated in the previous section, although about two-thirds of the demonstration clients were placed on jobs during the service period, only one-third of all clients exited the program with a potentially permanent competitive job. This relationship between job placement and job permanence is illustrated in Table VI.3, which indicates that job placement is clearly only the first step in meeting the goals of the program. As with other outcomes, the fraction of clients who exited with jobs varied considerably across projects. As we noted, the projects with training jobs tended to show lower percentages of permanent job placements, due to placing some clients only on training jobs.

Interestingly, the proportion of persons placed on permanent jobs who were subsequently stabilized in or terminated from the demonstration with a permanent job is quite similar across the eight projects. The relative constancy in this aspect of project performance is encouraging, given that the projects varied in so many other ways. The variation that is present reflects differences in such factors as the manner in which transitional-employment services were provided (these factors include job-matching abilities, training techniques, the degree to which the project addressed the strengths and limitations of clients, and the types of individual support and follow-up services provided to clients), the characteristics of the clients who were placed on jobs, and the staff resources available for providing services.

3. Follow-Up Services for Long-Run Job Retention

As indicated in Chapter V, projects did arrange a variety of follow-up services beyond the 12-month demonstration period for clients who were terminated with a job. For example, projects sometimes attempted to teach the clients, their families, or some other support person how to obtain services when necessary. The effectiveness of such efforts cannot be assessed in the short-term, and some uncertainty remains about the ability of the client or support person actually to follow through in the long-term. Projects also referred some clients at termination to other service providers to meet explicit service needs or for case-management services.

TABLE VI.3

CHARACTERISTICS OF JOB STABILITY

| | AHEDD (PA, DE) | ARC/MU (Monmouth) | The Center Hospital (Chicago) | Children's Hospital (Boston) | ECF (Los Angeles) | Goodwill (Milwaukee) | UWash/PCC (Portland) | UWIs/Stout (Rural Wisconsin) | All Projects |
|--|-------------------|----------------------|-------------------------------------|------------------------------------|----------------------|-------------------------|-------------------------|---------------------------------|-----------------|
| Percent of All Clients Who Terminated with a Potentially Permanent Job | 28.4 | 66.7 | 14.8 | 31.0 | 27.3 | 33.3 | 37.8 | 36.6 | 33.9 |
| Percent of Clients Placed on a Job Who Terminated with a Potentially Permanent Job | 71.9 | 72.2 | 20.0 | 31.0 | 39.6 | 63.2 | 45.9 | 53.6 | 50.0 |
| Percent of Clients Placed on a Potentially Permanent Job Who: Stabilized on permanent job Terminated with a potentially permanent job | 75.0 71.9 | 74.3 74.3 | 100.0 80.0 | 100.0 69.2 | 85.3 61.8 | 70.6 70.6 | 73.9 73.9 | 76.0 60.0 | 78.8 69.0 |
| Sample Sizes: | | | | | | | | | |
| Total Number of Clients | 81 | 39 | 27 | 29 | 77 | 36 | 45 | 41 | 375 |
| Number of Clients Placed on a Job | 32 | 36 | 20 | 29 | 53 | 19 | 37 | 28 | 254 |
| Number of Clients Placed on Potentially Permanent Job | 32 | 35 | 5 | 13 | 34 | 17 | 23 | 25 | 184 |

SOURCE: Client-Tracking System.

However, the most common arrangement made by project staff was to provide the job-retention services themselves under other funding. This option tended to be selected for several reasons. Some projects found it difficult to find other agencies that were willing (and, given funding requirements, were able) to provide follow-up services without first having trained the client. The projects had also invested a great deal in the clients; hence, they may have been hesitant to allow another service provider to intervene. Given the relative newness of transitional employment, the projects were concerned that other agencies would lack the expertise necessary to provide adequate services to keep a person on a competitive job. They were also concerned that other agencies would not take an appropriately long-term view of services.

In addition, the projects had several incentives to provide the ongoing services themselves. The demonstration projects had developed a stable, trusting relationship with their clients, which facilitated further interaction. Moreover, when local funding was available, the projects were in a good position to obtain that funding and provide the job-retention services.

4. Time-Limited Services

An essential feature of this demonstration was the provision of services within a one-year time frame. As we observed in Chapter V, some clients (roughly 15 percent overall) were enrolled in the program for longer than 12 months. Others could not be placed and stabilized on permanent jobs within a 12-month period due to a variety of reasons--a lack of interest by the client, the client's employment limitations, or the inability of the project to provide services in a timely manner. Nevertheless, over two-thirds of the clients who exited the program with potentially permanent jobs were enrolled for 12 months or less.¹ These findings would seem to imply that, although the 12-month service period was not adequate for some clients, it was feasible for many of the SSI recipients who were enrolled in the demonstration.

¹ It is important to note that, even after exiting the program, some of these persons did receive additional services from the host agencies under nondemonstration funding, ranging from continued, active on-the-job monitoring to the resolution of problems only when required by the client.

As we noted earlier, projects that required every client to go through a training program necessarily had less time during the 12-month period to develop, train, and stabilize clients on permanent jobs. Clients who were placed on training jobs at Children's Hospital (and ECF) spent an average of 5 of their available 12 months on those training jobs prior to being placed on permanent jobs.

Although these projects expected that training on training jobs would reduce the amount of time necessary for training on permanent jobs in order to stabilize the clients, this expectation did not necessarily appear to bear out. For example, a number of the clients placed by Children's Hospital on permanent jobs required as much on-the-job training on their permanent jobs as did many of the clients who were placed by ARC/MU directly into permanent jobs. In essence, although training jobs allow for skills training and the resolution of problems that are observed in the training-job setting, clients who are subsequently placed on permanent jobs must still learn a new route to work, become familiar with a new work environment and supervision, and, potentially, learn new skills associated with these permanent jobs.

One response of The CENTER to this problem of completing training on a training job, providing permanent job placement, and ensuring job stability was to operate under what was essentially a time frame of longer than one year, in which it planned to provide follow-up support (under nondemonstration funding) to clients for one year after their placement on permanent jobs. While only long-term data will tell whether the availability of this extra period of service eligibility will be effective in moving clients into and stabilizing them in competitive employment, it is clear that the approach adopted by The CENTER requires more time and resources than alternative direct-placement approaches that appear at this time to be more successful.

Given the one-year limit imposed by the demonstration, we cannot determine how many other SSI recipients with mental retardation could be served if the time limit were longer than one year. The projects were encouraged to recruit clients who exhibited a wide range of abilities, but they also screened out persons for whom the time-limited services were obviously inappropriate. This screening limits our ability to generalize the findings from the demonstration to the entire population of SSI recipients (or other groups) with mental retardation.

Another factor that affected the ability of the projects to deliver services within the one-year limit was the demonstration requirement that each client's year of eligibility begin on the day that he or she was randomized into the treatment group. Since finding appropriate placements took a substantial amount of time (on average, clients were enrolled for 2.5 months prior to their first placement), clients generally had less than a year in which to receive on-the-job training. If the "clock" had started with the initial placement rather than with random assignment, then we expect that a greater proportion of all clients could have been stabilized on jobs within the year. Of course, such changes have cost and funding implications that would have to be addressed if the model were to be changed in this way.¹

In summary, then, a one-year time frame does appear to be adequate to serve many SSI recipients with mental retardation. The short-term data indicate that the projects could have been more successful at stabilizing clients on jobs within a 12-month period had the service period begun when a client was placed on a potentially permanent, competitive job, although additional costs would likely have been incurred under such a program structure.

5. The Delivery of Services to Subgroups of the Sample

An analysis of differential service receipt, documented in Appendix D, found that the demonstration was equally successful at serving clients with a wide range of disabilities and personal characteristics (such as physical, emotional, social, or speech problems; age and gender; living arrangement; and previous job history). The few differences in service delivery among subgroups of the sample, controlling both for other sample member characteristics and for projects, included the following:

- o Those clients who had held regular jobs in the year prior to enrollment were more likely to have been placed on permanent jobs during the service period.

¹ There are two particularly important cost implications. First, since clients would be eligible to receive more on-the-job training and support, average costs could rise. Second, some way would have to be found to fund the job-development and placement activities that would occur prior to enrolling a client. These placement activities can require substantial resources.

- o Clients whom intake workers rated as having a high probability of success in competitive employment were more likely to be placed on jobs than those who were rated as having a medium or low probability.

In addition, the process data presented in Chapter V indicated that clients with multiple employment limitations appear to have been more difficult to serve.

Our conclusion is that, for the most part, the projects were successful at serving equally all of the key subgroups analyzed. Thus, treatment-control differences for these subgroups should reflect real differences in impacts rather than differences in service receipt. (These treatment-control differences among subgroups will be examined when the results of the longer-term impact analysis are available.) It should be noted that these conclusions about the provision of services to subgroups indicate only that the projects were able to serve these groups; the analysis does not indicate whether differential program costs were associated with serving the different groups.

B. THE COSTS OF PROVIDING TRANSITIONAL EMPLOYMENT

Costs constitute another aspect of the performance of projects. Cost information indicates the resources used to deliver program services and provides an index of the intensity of the services that were provided. Further, cost information is essential to future planning and budgeting efforts. Finally, costs serve as an important basis for judging the size of the impacts of the program--that is, they are necessary for comparing the costs and benefits of the program, an undertaking that will await the results of the longer-term impact analysis.

1. Expenditure Data

Information on costs was obtained from expenditure reports that were submitted by the eight projects to MPR on a monthly basis. These reports included all project-related expenditures, including those funded by the Social Security Administration, as well as those funded by other sources.¹ While these cost reports were unaudited, project directors did certify that they were accurate. In addition, we confirmed much of the information and collected some additional cost information during discussions with project managers and financial staff.

¹ Projects were required to obtain at least 25 percent of their funding from sources other than the Social Security Administration.

The process of confirming the cost data indicated that all key costs were generally represented in the cost reports. For the most part, projects maintained accounting systems for tracking the direct costs associated with specific grants or contracts. These systems made it relatively easy to identify the costs of serving the treatment-group members. In particular, projects were able to track the labor costs incurred in the demonstration; these costs accounted for almost three-quarters of total operations costs. The grantee agencies assigned other direct costs (for example, occupancy, telephone, travel, and supplies) to the projects based on invoices or their standard cost-allocation procedures. Indirect costs--those associated with running the grantee organizations and providing general management assistance to the project--were generally based on the audited indirect-cost rates of the grantee organizations.

Our cost analysis focuses on "operations costs"--that is, those costs incurred to provide placement, training, and support services during the one-year period of eligibility. For the most part, we have ignored the particular sources of the demonstration funding and costs incurred for activities other than providing services to clients. This focus provides the information necessary for budgeting and planning ongoing transitional-employment programs.

One important implication of this focus on operational costs is that we have excluded from consideration those expenditures for wages that were paid to clients by the projects. This exclusion affected the costs primarily of Children's Hospital and ECF, where clients who worked in training jobs were often placed on the project payroll. Under this arrangement, the project paid the workers and then billed the employer for those wages. Since only these two projects used this arrangement, these wages were excluded so as to facilitate drawing cross-project comparisons. Furthermore, since these costs are offset by the revenue from employers, they are less important to potential funders of transitional employment than are the costs of providing the job-coaching and other services.

We also excluded the approximately \$400,000 in project expenditures that were made during the seven months of the demonstration, since no clients were enrolled or served during this period. During this start-up period, the eight demonstration projects used these funds to plan their demonstration programs, hire staff, inform other service agencies about the demonstration, and undertake preliminary job-development activities. In addition, some start-up costs were attributable to a delay in the start of enrollment while the Social Security

Administration¹ worked to implement the SSI waivers that were part of the demonstration. Because the projects had hired staff in anticipation of an earlier beginning of enrollment and wanted to be ready to serve clients as soon they were enrolled, this delay led to staff costs even before clients had been enrolled.

While some planning and start-up costs will be incurred by all projects and should be amortized over the life of the organization, these costs would be disproportionately represented in the total cost figures for the demonstration if these initial seven months were included. Consequently, we have subtracted all costs incurred prior to the enrollment of clients.

Finally, we have also excluded from our analysis the costs incurred by the Social Security Administration and MPR to monitor the projects. In addition, we have omitted any impacts that the projects may have had on the costs of sheltered workshops and other service agencies. Such impacts might have occurred if treatment-group members changed their use of these other agencies. We will return to these issues when we examine the benefits and costs of transitional employment, based on the longer-term impacts of the demonstration.

2. Costs in the Demonstration

Total expenditures (including payments to clients and the initial start-up costs) for the demonstration were substantial. Almost \$4-million was allocated in the initial grants from the Social Security Administration and in the local matching funds obtained by the projects. Because enrollment in the demonstration was lower than expected, only \$3.6-million of this amount was actually spent. As indicated in Table VI.4, even when only the operations costs are included, over \$2.8-million was spent on providing transitional-employment services to clients.

While these total-cost estimates indicate the overall scale of the demonstration, they provide a poor guide to the level of resources that would be required to fund ongoing transitional-employment programs. Such programs would differ from the demonstration in terms of the number of clients who are served and in the general structure under which projects operate. These factors led us to develop more refined cost measures.

¹ These waivers were outlined in Chapter II.

TABLE VI.4
ESTIMATES OF PROJECT COSTS
(dollars)

| | AHEDD (PA, DE) | ARC/MU (Monmouth) | The Center (Chicago) | Children's Hospital (Boston) | ECF (Los Angeles) | Goodwill (Milwaukee) | UWash/PCC ^a (Portland) | UWis/Stout (Rural Wisconsin) | All Projects |
|---|-------------------|----------------------|-------------------------|------------------------------------|----------------------|-------------------------|--------------------------------------|---------------------------------|-----------------|
| Total Operational Expenditures | 308,647 | 381,483 | 379,556 | 161,731 | 630,812 | 328,112 | 454,456 | 221,153 | 2,865,950 |
| Average Operational Expenditure per Client | 3,810 | 9,782 | 14,058 | 5,577 | 8,192 | 9,114 | 10,099 | 5,394 | 7,643 |
| Estimated Average Operational Expenditure for an Ongoing Program ^c | 2,800 | 5,500 | 7,200 | 4,700 | 7,300 | 6,200 | 8,100 | 4,400 | 5,600 |
| Estimated Average Direct Labor Cost per Client ^d | 266 | 1,038 | 631 | 1,630 | 2,101 | 698 | 1,742 | 1,061 | 1,159 |
| Ratio of Total Labor Cost to Direct Labor Cost | 5.7 | 3.7 | 7.0 | 1.8 | 2.0 | 6.0 | 2.4 | 1.9 | 3.7 |
| Ratio of Total Cost to Total Labor Cost for 1986 | 1.8 | 1.5 | 1.6 | 1.6 | 1.7 | 1.5 | 2.0 | 2.2 | 1.8 |
| Number of Treatment-group Members | 81 | 39 | 27 | 29 | 77 | 36 | 45 | 41 | 375 |

^a Because the University of Washington primarily provided technical assistance to start this project, their costs have been excluded from the operational cost. The University of Washington costs totaled approximately \$160,000.

^b These costs exclude payments for clients, wage subsidies, and project costs incurred prior to the start of enrollment.

^c These costs are estimated as the product of average direct labor cost per client, the ratio of total labor cost to direct labor cost, and the ratio of total cost to total labor cost. This product is rounded to two significant digits in the table.

^d These estimates include the wages and fringe benefits of staff time devoted directly to serving specific clients. These estimates are derived from Client Service Record data and project expenditures during 1986.

The first refinement was to divide the total operational expenditures by the number of persons served in order to estimate the average cost per client. In this way, cost comparisons between projects of different sizes can be made more easily. In addition, average costs can be compared directly with the impact estimates, which indicate the average effect of the intervention.

The second row of Table VI.4 presents the average cost figures for the demonstration as a whole and for the eight projects. These average costs, which reflect operations over the 25 months in which treatment-group members were enrolled and served, averaged \$7,643 per client enrolled. These costs varied considerably across projects, from \$3,800 to over \$14,000. They also varied across clients within each project--from relatively low costs that were incurred for those clients who dropped out or were terminated early in their year of eligibility to costs in excess of \$25,000 that were incurred for some particularly difficult and time-consuming cases.

The variation in such costs was due to many factors. At the CENTER and Goodwill, a major factor was the shortfall in their actual enrollment compared with their targets. When enrollment fell short, these projects were left with management structures and staffing levels that exceeded their desired levels, thus generating higher-than-expected costs. Other factors that led to variations in costs were cross-project differences in client-to-staff ratios, the extent to which the projects provided off-the-job support services directly rather than obtaining such services through other agencies, and the levels of staff wages.

Of course, average costs are also affected by the intensity of the services provided and the period over which those services were provided. As indicated in Chapter V, projects differed according to the average number of hours of direct service they provided to clients and the average length of time that clients were enrolled. These differences reflect choices about screening applicants and about the various approaches to delivering transitional-employment services. These choices affect costs, and may possibly affect the impacts generated by the services.

3. Costs for Ongoing Transitional Employment Programs

While the total and average costs incurred by the projects provide useful information about the intensity of the services provided in the demonstration, they are

of limited use for planning future transitional-employment efforts. Projects in the demonstration were subject to a number of constraints that affected their costs but would not be present in an ongoing program. As a rule, these constraints probably raised costs but had little effect on the impacts of the program. The major exception to the rule is that limitations on the length of the program intake process may have kept intake and screening costs lower than they would be in an ongoing program and may have affected program impacts.

In order to estimate the costs that would be incurred by a permanent program to provide transitional-employment services, we made a second refinement to our cost estimates. This refinement sought to estimate the costs that would have been incurred by the eight demonstration projects had they not been constrained by the demonstration schedule. This schedule implied that the demonstration projects could not at any time operate in a "steady-state" mode in which they resembled an ongoing program. Instead, the demonstration timetable required that the projects build up their enrollments and begin providing services quickly during the first year. The projects were then to turn the process around, stopping enrollment and completing all of the necessary services for the remaining clients. Thus, for most of the time, projects were not at their optimum scale, and they were forced to juggle their staff in response to the changing client intake requirements. Both of these factors led to increased costs compared with those that would be observed for more stable ongoing programs.

To estimate what the average costs would have been had the projects been able to operate more like ongoing programs, we sought to identify the direct labor costs of the intervention and then add to those costs the various indirect costs that would be incurred in an ongoing program. The direct labor costs are the wages and fringe benefits paid to staff for the time they devoted to working directly with or on behalf of clients. These costs were estimated on the basis of data from the Client Service Records maintained by project staff (see Appendix A) and information on staff wage rates. For the most part, we would expect that these direct labor costs are representative of the direct labor costs that would be incurred by an ongoing program. In the demonstration, projects spent between \$266 and \$2,101 in staff labor working directly with clients.

Two types of indirect costs were added to these direct labor costs. The first indirect cost captured the time that job coaches and other direct service staff spent

not working directly with specific clients. This time includes general job development, staff training and development, general outreach and recruiting, interagency coordination, and, in some cases, down time for coaches between clients. These indirect costs are captured by the ratio of the total wages and fringe benefits paid to direct-service staff (primarily job coaches and counselors) to the estimated costs for direct services. The second indirect cost captures general program and host organization administration, as well as other direct costs of program services, such as travel, occupancy, and telephone. These indirect costs are captured by the ratio of total operations costs to the total costs of direct-service staff.

Both of these indirect cost ratios varied over the course of the demonstration. During the initial months of operations, job coaches and counselors devoted much of their time to recruiting clients, establishing relationships with other service providers, and learning their jobs. Consequently, the ratio of total direct-service staff labor costs to direct-service costs was higher than later in the demonstration, when coaches and counselors devoted proportionally more of their time to working directly with clients. Similarly, the ratio of total costs to total direct-service staff labor costs fell as the demonstration progressed. The decline in this ratio reflected the hiring of additional coaches as enrollments increased and the consequent spreading of management and fixed costs over a larger base of direct-service staff.

In estimating the costs that would be observed for an ongoing transitional-employment program, we attempted to determine the values that these two indirect cost ratios would have in such a program. The best evidence we had from the demonstration about the long-term value of these ratios was from operations during 1986. This year, in the middle of the demonstration, is the period when the demonstration projects most closely resembled ongoing programs. When we took the values observed for the two indirect-cost ratios during that year as our estimate of the long-term values, the observed ratio of total direct-service staff labor cost to direct service costs ranged from under 2 to 7 during 1986. The observed ratios of total operational costs to total direct-service staff labor cost varied, ranging from 1.5 to 2.2 in 1986.

Of course, even these values may be too high because we have not fully accounted for the extra costs imposed by the structure of the demonstration. In particular, the costs incurred to recruit persons who were ultimately assigned to the

control group have not been netted out from the cost ratios. Similarly, the effects of the extra record keeping of the demonstration and other special demonstration conditions have not been taken into account. Thus, even the indirect-cost ratios observed during 1986 may overstate the ratios that would be observed for an ongoing program.

When the estimates of direct service costs per client are multiplied by the two indirect-cost ratios, the resulting cost estimates indicate the average costs that would be incurred to serve persons in an ongoing program. Table VI.4 (row 3) presents these cost estimates, as well as the underlying direct service cost and indirect-cost estimates (rows 4 and 6).

These results suggest that average costs in an ongoing program similar to the demonstration would be approximately 25 percent less than those observed during the demonstration--\$5,600 per client, compared with \$7,643. Furthermore, these results, coupled with the information on start-up costs, indicate that the average expenditures during the first year or so of operations may be as much as 55 percent more than the average costs incurred once the projects in an on-going program have reached their steady-state level of operations.¹ These higher costs would be incurred from setting up the project, training staff, developing procedures, and spreading the project-management costs over a relatively small number of clients.

The figure of \$5,600 per person enrolled represents our best single estimate of the costs of operating a transitional-employment program such as was operated in the demonstration. It is based on observations from the eight projects and reflects the experience of serving 375 SSI recipients with mental retardation. As such, it reflects the costs for delivering the services described in Chapter V and the earlier sections of this chapter, and for generating the impacts that will be presented in the later report.

Of course, the \$5,600 figure assumes that an ongoing program would operate a mix of projects similar to the mix under the demonstration. Because the costs

¹ In the demonstration, start-up costs--those incurred prior to the enrollment of clients--amounted to \$400,000, or \$1,067 per client enrolled. When these costs are added to the actual average costs observed in the demonstration, they indicate that the average costs for a beginning program could be \$8,710, or 56 percent more than the \$5,600 that we estimate it would cost an ongoing program to run in steady state.

estimated for the projects differed, changes in this mix would change the overall average. As shown in Table VI.4, the estimated average cost for ongoing operations ranged from \$2,800 per person enrolled at AHEDD to \$8,100 at UWash/PCC. These differences reflect differences in project scale, management structure, and the approach to delivering transitional-employment services. It is also likely that program impacts will vary across projects, something that will be investigated when the follow-up data have been collected. Because of these potential differences in the causes and consequences of cross-project cost variations, readers should use caution when making any judgments based on the project-specific cost estimates on Table VI.4.

Given that the projects generally operated at a scale that would have enabled them to enroll and serve 30 persons a year, our average cost estimate suggests that it would cost approximately \$170,000 annually to run an average-size transitional-employment program on an ongoing basis, although annual costs might range from \$56,000 to almost \$250,000, depending on the specific characteristics of the projects. Our analysis further suggests that it could cost as much as 55 percent more than these figures during the first year of operations in order to establish the program. In either case, it is essential to note that we are considering here only the costs of the time-limited transitional-employment services. Longer-term job-retention services, to the extent that they are necessary, would have to be budgeted separately.

The costs of job-retention and follow-up services for transitional-employment programs, as well as the extent to which these services are necessary, are not well documented to date. However, it is necessary to estimate these costs so as to include them in a comprehensive cost assessment of transitional employment. These costs can be estimated on the basis of the average salaries paid to job coaches and the average number of persons that could be served by a single coach. In the demonstration, the salaries of job coaches averaged approximately \$13,500 per year in the eight demonstration projects. The costs of fringe benefits and program management must be added to this average salary figure to estimate the total cost of a job-coach position. Based on the data collected during the demonstration, it appears that these costs are approximately equal to the job coach's direct salary, making the total cost of the position approximately \$27,000 per year.

To derive an estimate of the average cost of follow-up services per client, we divided the cost of the job-coach position by an estimate of the number of clients to whom a job coach could reasonably provide follow-up services in a year. Because the demonstration did not cover long-term job-retention services, we had to obtain this information from other sources. Paul Wehman reports that at the program at Virginia Commonwealth University the average job coach serves 13 follow-up clients.¹ James Moss reports that the client-to-staff ratio for follow-up at the transitional-employment project at the University of Washington is 20 to 1.² Other transitional-employment programs have accepted funding contracts based on client-to-job-coach ratios that range from 5:1 to 35:1. Consequently, according to these estimates, the cost of follow-up services per client can range from \$771 per year for the program that serves the most clients per staff member to \$5,400 per year for the program that serves the fewest number of clients per staff member. Using the ratio of 13:1 as a middle value, we compute that the average annual cost of job-retention services would be almost \$2,100 per client.

Total project costs, including both initial and job-retention costs, will depend on the mix of persons who are served. For example, in the first year, we have suggested that the cost of serving 30 persons in a transitional-employment program similar to those operated in the demonstration would be approximately \$170,000 (net of any start-up costs). If the program continued through the second year, the costs in the second year would include the costs of providing services to another 30 persons and, in addition, the costs of providing follow-up services to the persons who were successfully placed by the program in the previous year. As time passes, the proportion of clients who are receiving follow-up services would increase relative to the proportion of clients who are receiving the initial services. Thus, over time, follow-up costs would constitute an increasingly greater proportion of total project costs.

¹ Talk given at the conference "A Look Ahead: Economics, Industry, and Disability," June 29, 1987, in Boston, Massachusetts.

² Personal communication with the authors, December 15, 1986.

Another piece of information that would be useful for planning any expansion of transitional-employment services is marginal cost--that, is the extra cost of serving an additional client. Marginal costs in the demonstration are probably best estimated by the average cost estimates made for an ongoing program. Extra clients can generally be assumed to require the same amount of direct service as the average current client. Therefore, the only difference between the costs of the new client and those for the current clients would be due to differences in the ratio of total costs to direct service costs. This ratio will probably fall as projects enroll more clients, since project management will not grow at the same rate as would enrollment. Nevertheless, for projects of the general size of those in the demonstration (20 to 50 clients a year), this ratio is not likely to fall sufficiently to differ substantially from the ratio observed in 1986 for the demonstration.

Projections of costs for projects larger than those in the demonstration require extrapolations beyond the experience of the demonstration and the general experience of other transitional-employment providers. Such estimates would be subject to considerable uncertainty. However, it is likely that transitional-employment services would be expanded by increasing the number of programs that provide the service, rather than by expanding the scale of a fixed number of programs. Consequently, the average cost estimates derived here could appropriately be used to derive the budget for serving larger numbers of persons.

More formal techniques are available for estimating marginal costs. Unfortunately, the available data render them inappropriate for this evaluation. In particular, the assumptions necessary for estimating marginal costs were not met in the demonstration. Formal models of costs require that the projects fully know the service technology, and that they act to minimize their costs or maximize their profits. Under these conditions, a statistical cost function can be estimated and used to derive marginal cost. The demonstration projects were following an innovative, emerging training technology, and were not asked to minimize costs, but rather to serve a wide range of clients as well as possible. Under these conditions, a formal cost-function analysis is unwarranted.

4. Why Do Costs Vary?

The cost estimates contained in Table VI.4 indicate that costs varied substantially across projects. We examined this variation and its causes in an effort to

understand the factors that determine costs. These factors are important for assessing the effectiveness of the demonstration and for budgeting any replication efforts. In particular, actual and ongoing costs for the demonstration reflect the specific characteristics of the clients served, the program models adopted, and other factors which may be specific to the demonstration and which varied from project to project. If future transitional-employment programs make different choices about these factors, then it will be essential to know the consequences of those alternative choices.

Some of these factors are participant characteristics, client-to-staff ratios, the duration and intensity of services provided, staff salaries, the policies for providing support services, and the settings in which the programs take place. These differences reflect choices about appropriate screening criteria for applicants and about the various approaches to delivering transitional-employment services. These choices will certainly affect costs, and may possibly affect the impacts produced by the services.

Participant characteristics would be expected to be a major determinant of program costs. However, a review of the characteristics of the clients and the average costs per client at the eight projects shows few correlations between these factors (see Tables IV.4 and VI.4). Projects that served clients who had relatively more severe disabilities or poorer work histories were just as likely to have above-average costs as were projects that served clients who had less severe disabilities and more work experience. Of course, much of the client-level variation in costs is masked in the project averages. It is plausible that an analysis of variations in the costs of specific clients would turn up evidence of relationships between client characteristics and costs.

Our cost analysis is necessarily limited to the variation in the characteristics of the individuals in our demonstration, all of whom were SSI recipients with a diagnosis of mental retardation. These persons came to the projects with specific needs, and placed specific demands on the project. If future programs served different groups of clients (for example, persons with mental illness or with severe physical disabilities), a different intensity and duration of service might be required. These other target groups may require more or less intensive service, and thus would incur different average costs than would those in the demonstration. It should be noted, however, that severity of disability was a poor predictor of the intensity of

services in the demonstration. Rather, service intensity depended on several factors, including apparent motivation and previous work experience.

Different screening practices will also influence costs. To the extent that program administrators can accurately predict which clients are likely to be placed in the program at a low cost and then enroll only these clients, costs will fall. As programs try to open their doors to a wider range of clients, many of whom will require more extensive services, then average program costs per client would surely rise.

As noted with respect to job-retention services, variations in client-to-staff ratios constitute another variable that explains differences in costs among projects. Since labor costs accounted for almost three-quarters of total program costs in the demonstration, variations in the number of persons served per staff member will have a relatively large effect on average program costs per client. The median client-to-staff ratio for the eight projects was 7.4, and projects with lower ratios had higher costs.

The cost implications of variations in client-to-staff ratios may be compounded by differences in the compensation paid to staff. For example, the average wages paid to job coaches by demonstration projects ranged from a low of about \$4 per hour with no fringe benefits (at UWis/Stout) to over \$8.00 per hour plus a full fringe-benefits package (at the Children's Hospital, The CENTER, and UWash/PCC). Given the importance of labor costs in the demonstration, these wage-rate differences are reflected in the average cost estimates.

It is interesting to note that, despite its relatively high job-coach wages and level of service-staff time devoted directly to clients (see Table V.4), the project at Children's Hospital had relatively low average costs per client. This appears to be due to the relatively little amount of time that staff devoted to indirect activities (that is, those activities that did not involve working directly with clients) and to some economies that this project was able to achieve by being part of a major hospital.

Similarly, when considering replication efforts, it is important to note that the relatively low wages paid by the UWis/Stout project reflect its use of students as job coaches. While these students were energetic and effective coaches, they represent a specialized labor pool that is not likely to be generally available to permanent transitional-employment programs. Thus, the model and costs of the

UWis/Stout program may be less widely replicable than those of the other projects who hired job coaches from broader labor markets.

One last factor that will influence costs, and indeed the impacts of the demonstration, is the overall capability of the training organizations that operated the transitional-employment projects. As mentioned in Chapter III, the eight organizations that operated demonstration projects were selected in a highly competitive process. Their success in being selected reflects their managerial ability, their ability to design promising placement and training programs, and their long-term stability and standing in their communities. These qualifications are not achieved without cost, and the costs observed in the demonstration reflect the indirect cost structures and the management skills that have served these organizations over the years. Replication efforts should recognize and expect to pay for the management and administrative expertise necessary for maintaining stable and effective training organizations.

C. CONCLUSIONS

As we noted in the introduction to this chapter, the process of drawing general conclusions about transitional employment from the operational experience of the eight demonstration projects is inherently imprecise. The projects operated in different environments, adopted different approaches to transitional employment, and enrolled clients who exhibited different characteristics. There are probably a hundred dimensions along which these factors influence the performance of projects. In addition, a specific factor (such as the use of training jobs) may affect the performance of projects in different ways. All of these reasons underscore the difficulty both of examining differences in such performance statistics as placement rates and clients' wages and of drawing precise inferences about the specific characteristics that caused those differences.

This process is illustrated in Table VI.5, which lists five basic measures of project performance, along with ten of the numerous project characteristics that might influence those performance measures. (The treatment-control differences in earnings and SSI receipt are better measures of project performance and will be examined in a later report; but the same problems discussed herein affect assessments based on those measures.)

TABLE VI.5

COMPARISONS OF SERVICE DELIVERY AND COSTS WITH POSSIBLE INFLUENCING FACTORS
(Values Are Presented as Percentages of the Median)

| | Performance Measures | | | | Factors Affecting Service Delivery and Costs | | | | | | | | | | |
|---------------------|--------------------------------|--|--|--|--|---------------------------------------|---|---|-------------------|---|--|----------------------|--|---|-----|
| | Percent of Clients | | | | Average Operating Cost per Client (Estimated) ^c | Mandatory Placement on a Training Job | Total Direct Service Time (All Clients) | Percent of Total Service Time in On-the-Job Training ^e | Number of Clients | Direct Service Staff Ratio ^f | Relatively Strong Local Economy ^g | Density ^g | Percent of Sample Rated as Having High Probability of Success ^h | Have Specialized Staff Other than Job Coaches | |
| | Placed on Any Job ^a | Placed on a Permanent Job ^a | Terminated with a Permanent Job ^b | Placed on Permanent Job Who Terminated with a Job ^b | | | | | | | | | | | |
| AHEDD | 0.55 | 0.86 | 0.88 | 1.01 | 0.48 | no | 0.20 | 0.92 | 2.03 | 1.15 | 0.83 | - | 0.78 | no | |
| AHC/MU | 1.29 | 1.95 | 2.07 | 1.04 | 0.94 | no | 1.08 | 1.68 | 0.98 | 0.63 | 1.12 | yes | 0.12 | 1.94 | yes |
| The CENTER | 1.04 | 0.40 | 0.46 | 1.12 | 1.23 | yes | 0.41 | 1.74 | 0.68 | 0.50 | 1.87 | no | 2.03 | 0.73 | yes |
| Children's Hospital | 1.40 | 0.97 | 0.96 | 0.97 | 0.80 | yes | 1.13 | 0.98 | 0.73 | 1.01 | 2.37 | yes | 1.87 | 0.85 | yes |
| ECF | 0.96 | 0.99 | 0.85 | 0.87 | 1.25 | no | 1.47 | 1.58 | 1.93 | 0.78 | 0.58 | no | 1.03 | 0.30 | yes |
| Goodwill | 0.74 | 1.03 | 1.03 | 0.99 | 1.06 | no | 0.60 | 0.55 | 0.90 | 1.22 | 0.88 | no | 1.00 | 1.14 | yes |
| Ukash/PCC | 1.15 | 1.11 | 1.17 | 1.04 | 1.38 | no | 0.96 | 0.79 | 1.13 | 0.99 | 2.30 | no | 0.52 | 1.73 | no |
| Umis/Stout | 0.96 | 1.22 | 1.14 | 0.84 | 0.75 | no | 1.04 | 1.02 | 1.03 | 1.32 | 0.60 | yes | 0.01 | 2.44 | no |
| Median | 71.5 | 46.0 | 32.2 | 71.3 | 5.850 | - | 136.9 | 47.1 | 40 | 7.4 | 26.8 | - | 6,480 | 30.8 | - |

NOTE: For example, AHEDD placed 39.5 percent of its clients on a job, in comparison with the demonstration median (across projects) of 71.5. Hence, 39.5 is 55 percent of 71.5.

^a See Table VI.1.

^b See Table VI.3.

^c See Table VI.3.

^d Estimated average operational expenditure per client for an ongoing program (Table VI.4).

^e See Table V.4.

^f Percent of total service time in on-the-job training for clients with a job placement (Table V.5).

^g Numbers above the median indicate a larger number of clients per staff member (Table V.2).

^h AHEDD is not included here given the variety among AHEDD's field office locations (Table III.1).

ⁱ See Table IV.4.

In order to identify the influence of any single factor, it is usually necessary to view several projects that are alike in all respects except for that one factor. In such a case, differences in the outcomes produced by the projects can be attributed with reasonable certainty to the differences in the factor being examined. An inspection of Table VI.5 indicates that there were no instances in which even two projects were the same in all but one circumstance. For example, consider the relatively straightforward hypothesis that average costs are determined by the amount of direct service time devoted to clients. While this hypothesis seems almost to be true by definition, an inspection of Table VI.5 shows that three of the eight projects are apparently inconsistent with the hypothesis. Children's Hospital and UWis/Stout spent relatively more direct service time per client and had relatively lower costs than the other projects, and The CENTER spent relatively less time than the other projects on direct services but had relatively higher costs. This apparent discrepancy can be explained to a large extent by the differences in indirect costs and staff wages. However, it illustrates the difficulty in this type of analysis: the relationship between any set of project characteristics will be confounded by the relationships between those characteristics and many other features of the projects and their performance.

The fact that we have only eight projects further complicates the analysis. For example, consider the issue of training jobs. This issue encompasses numerous dimensions. We are interested in, for example, whether these types of job placements should be used at all, whether a small number of specific training sites should be used or individual-specific training jobs should be developed, and whether all clients should be required to be trained on these jobs. We are also interested in the effect of decisions about these issues on the placement rates, impacts, and costs of the program. However, while this issue is multifaceted, the eight projects provide only eight possible observations. Only one project (AHEDD) did not use training jobs, but it was also the only project to have offices in several cities. Two projects (Children's Hospital and The CENTER) required that all clients receive some training on one of their specific training jobs, but these two projects differed in terms of the strength of their local economies, the average amount of direct-staff time devoted to clients, and client-to-staff ratios. Consequently, we do not have enough observations to enable us to identify the specific contributions made by the individual characteristics of projects to their relative performance.

Despite these difficulties, the data do support the conclusions that we drew in the course of working with the eight demonstration projects for three years and from our process observations of other transitional-employment programs (including the five projects in the STETS demonstration). The conclusions about operations are necessarily less precise than the impact conclusions that will be based on a much larger number of observations. However, we believe that these conclusions can be supported by the general experience of the demonstration, and form a basis for further research into effective practices.

1. The Basic Program Elements of the Demonstration Were Implemented

As we concluded in Chapter IV, the demonstration projects enrolled a sample that largely satisfied the basic eligibility criteria. Indeed, each project enrolled individuals with diverse characteristics, but who were judged to be likely to benefit from demonstration services.

In addition, Chapter V indicated that, despite different approaches to providing services, each of the projects provided the essential service elements of the demonstration--job development and placement, on-the-job training, and short-term support and follow-up services. In addition, projects provided these services to most clients within a one-year time frame.

Finally, over two-thirds of the treatment-group members were placed on jobs within the service period. Half of the persons who were placed on jobs left the program with potentially permanent jobs. These statistics are similar in magnitude to those for other programs that have served this population.¹ In addition, the demonstration appears to have been successful at equally serving clients who exhibited a wide range of disabilities and personal characteristics.

We must be less conclusive, however, about the extent to which projects arranged for long-term follow-up services to clients who exited the program with a job. We do know that follow-up services were arranged for many clients, and that the types of support arrangements varied among clients. However, in the short-term, we

¹ It should be noted that success rates for programs that enrolled clients at the point of job placement will be more similar to the demonstration rates of termination with permanent jobs for those clients placed on permanent jobs.

cannot assess either the extent to which these service arrangements will persist or their effectiveness. The effectiveness of these arrangements can be assessed only in terms of long-term job retention. Additional data collection and evaluation in this area is planned.

2. Screening Criteria for Applicants Are Difficult To Specify

As indicated in Chapter IV and V, the screening of applicants pervades all aspects of a program's ability to serve each client. Intake staff must consider the following: Can staff find a competitive job for this person given his or her abilities, interests, transportation needs, and support network? Can staff train and stabilize this person on a competitive job? What support services will be necessary for this person? Can all of these services be completed within a one-year time period given the resources available in the program?

Specifying objective criteria whereby projects can assess these questions is difficult. As indicated in Chapter IV, projects considered a variety of applicant characteristics--both objective and subjective--in making enrollment decisions. In addition, for each applicant, staff tended to weigh these attributes in a fairly subjective manner.

These multi-dimensional enrollment decisions are reflected in the results of an analysis of differential service receipt (presented in Appendix D and summarized earlier in this chapter). This analysis found that the ability of the projects to place and train individuals was not well predicted by most demographic characteristics or the preprogram experience of clients. The analysis found little basis for screening individuals according to any single characteristic, including IQ score and the presence of secondary handicaps. One of the few variables that did seem to predict the ability of projects to serve clients (as measured by placement on jobs, both training and permanent) was a subjective assessment by the intake worker of the applicant's probability of success in competitive employment. This variable, however, was likely to have encompassed a number of unmeasurable factors, such as motivation, based on the subjective opinion of the intake worker.

These findings about service delivery indicate the difficulty in developing screening procedures that can be used to identify persons who can be placed successfully by transitional-employment services. As was evident at the start of the

demonstration, success in competitive employment is determined by many factors, and limitations in one area can be offset by strengths in other areas. For example, training can help persons with severe intellectual limitations overcome their disabilities if those persons are motivated to work and are supported in their efforts by parents and other advisors. Thus, effective screening requires that intake workers assess many aspects of an applicant's abilities and interests, as well as aspects of his or her support network. The intake workers' assessments recorded on the demonstration intake forms reflect a subjective weighting of these various factors, but the specific factors and relative weights are not easily discernable from the data. A clear goal for future research will be to identify these factors and weights and the implications of changing screening policies for the impacts and costs of transitional-employment programs.

3. The Training-Job Approach Imposed Constraints on the Provision of Services

While the training-job approach to transitional employment offers some important advantages, the manner in which it was implemented imposed constraints on the provision of services that may have contributed to lower-than-average rates of placement and termination in potentially permanent jobs at The CENTER and, to a lesser extent, Children's Hospital and ECF, as indicated in Table VI.1. The use of fixed training sites reduces the flexibility of projects in meeting the job-placement needs and interests of individual clients. For example, The CENTER and Children's Hospital enrolled only those program applicants who were interested in the industries in which training was provided. This restriction may have contributed to low enrollment rates and relatively low rates of permanent job placement at these projects.

In addition, an emphasis on training-job placements may have made it more difficult for some projects to move clients into and to stabilize them on permanent jobs within a one-year period. In particular, programs that set minimum periods of time in which all clients must have been on training jobs were inherently limited in the amount of time available for developing permanent jobs and stabilizing clients on those jobs. Moreover, clients who spent several months on training jobs then had to change jobs (and become comfortable with new working environments, supervision, etc.) when they were placed on permanent jobs. Indeed, it appears that some clients who were trained in training jobs for several months then required the same amount of training in permanent jobs as did clients who were placed directly on permanent jobs.

At the same time, training jobs did give projects greater flexibility in serving a wide variety of clients. Clients could be placed into a job relatively early in the service period. Furthermore, training jobs enabled those projects which featured them to train and, moreover, to assess clients in a real (yet sometimes more controlled) working environment. Controlling the pace of work and the work environment on a training job gave projects more flexibility in dealing with persons who might have been difficult to train in a more competitive environment. These projects had a chance to resolve problems or at least to develop a plan for resolving them prior to placing the client on permanent jobs.

These features of the training-job model suggest that it can be an important option for a transitional-employment program, particularly since it enables them to enroll persons whose behavior and abilities make placement in competitive jobs difficult. However, to the extent that a time limit is imposed on services, projects must closely monitor the progress of clients placed on training jobs and work to move those clients into permanent jobs as soon as possible.

4. A 12-Month Service Period Is Adequate for Placing Persons on Potentially Permanent Jobs

Although some clients appeared to need demonstration services beyond the 12-month service period, it is clear that the one-year time frame was adequate to meet the short-run demonstration goals for at least two-thirds of the clients who were terminated with potentially permanent jobs. In addition, the average number of enrollment months for all clients terminated with jobs was only 12.5.¹ However, the ability of service operators to provide services within this time frame appears to depend on at least two factors: (1) enrolling individuals who, given the available resources, can be served within the service period, and (2) developing a project system for encouraging a continuous flow of clients through placement and training services.

¹ It is important to note that, even after exiting the program, some of these persons did receive additional services from the host agencies under other funding. These services ranged from continued active on-the-job monitoring to problem resolution on an as-needed basis.

As indicated in Chapter IV, project staff did try to screen out persons whom they felt could not be served by the demonstration within the one-year time frame. Despite these efforts, some clients were terminated from the program due to concerns by the project that their employment limitations could not be overcome within a one-year period. Others were unable to be placed and stabilized on a job during their 12 months in the program. These persons might have been able to be served if a longer time frame had been available within which problems could have been resolved. However, given a time-limited model, screening methods and criteria must focus explicitly on the ability of projects to overcome problems within a specific time frame.

Approaches to transitional employment must also encourage and monitor the flow of clients, focusing throughout the service period primarily on placement and training on permanent jobs. While the demonstration projects found that establishing individualized training plans and periodically reviewing those plans appeared to be useful in moving the client continuously toward a permanent employment arrangement, project staff at all levels must focus their energies on moving clients as soon as possible into permanent, competitive situations.

5. A Variety of Support Services Are Necessary to Respond to the Diverse Needs of Various Clients

As indicated in Chapter IV, the demonstration projects enrolled a sample of clients with diverse backgrounds and service limitations. This diversity among potential clients meant that projects had to be able to provide more than the vocational-training services associated with transitional-employment programs. Projects helped clients prepare for work (for example, through job-seeking skills training and assistance with hygiene), worked with clients on the job to deal with problems not associated with skills training (such as social or communication skills), and supported clients off-the-job in dealing with other areas of their lives that affected or were affected by their employment (by helping clients develop budgetary skills and supporting clients through their residential moves).

Projects could provide these support services in-house or by referring clients to other service providers. The service-provision styles adopted by the projects did not seem to predict the effectiveness of projects. What did seem to be important at all the projects was that each client was assigned at least one staff member who was responsible for identifying and resolving his or her problems and service needs.

6. Arranging Transportation Is a Critical Element in Providing Transitional Employment Services

While many of the support services described above were client-specific and were arranged on an as-needed basis, a critical element of the transitional-employment services for all clients was the attention devoted to transportation needs. Transportation concerns affected several aspects of project operations, and, consequently, some projects decided not to enroll clients who could not travel independently or who were not willing to be travel-trained. For clients who were enrolled, resolving travel barriers was often more difficult than teaching them how to perform their job.

The importance of transportation issues stems from their effect on job development and matching. When finding an appropriate job on which to place and train a participant, projects first had to consider how the participant was going to get to that job. Obviously, the task of finding the best job for a client was easier when the geographic area over which the participant could travel independently was large. When the participant could travel to a fairly large area, the project no longer had to focus primarily on transportation issues. In these cases, the project could focus on other aspects of the job-matching process, including such issues as wages and hours, types of activities, required production and quality levels, the nature of the workplace, the reactions of co-workers, and the level of employer supervision.

When developing transportation arrangements, staff had to consider available modes of transportation given the client's abilities, family or service provider support, and work hours and the time required and ease with which the client could get to work. In addition, the safety of clients in going to and from work was a concern, particularly in urban settings. Projects also addressed transportation needs by teaching clients how to travel to their jobs and by making special arrangements when appropriate and available, such as transportation provided by parents or guardians, local transportation authorities, and sheltered workshops.

7. The Demonstration Was Feasible at a Variety of Scales

This demonstration experience was unique in that we were able to observe eight transitional-employment projects that operated at a variety of scales. The measures of service delivery and costs presented in this chapter indicate that demonstration services were feasible at many scales, ranging from 20 to 50 clients per year.

In addition, it is also clear that programs which might serve a larger number of clients than were served by the projects in the demonstration could be feasible. While no single project served more than 50 persons a year, transitional-employment projects with multiple sites have served more than 50 persons. This has been the case at AHEDD for several years and was the case for the demonstration as a whole (which operated at a scale that could serve 250 persons a year). Thus, transitional employment is a feasible policy option for serving large groups of persons such as SSI recipients with mental retardation.

8. A Variety of Staffing Designs Are Feasible

Chapter V illustrated that projects implemented a variety of staffing configurations. In addition, the staff qualifications seemed to vary considerably across projects. Given that each of the projects did implement the demonstration services, it would appear that each of the staffing designs described in Chapter V is feasible.

In particular, it appears that transitional-employment services can be delivered effectively even if many project staff members have little formal training in rehabilitation and education. The key seems to be the presence of an effective service coordinator who can design the training plans and monitor the job coaches to ensure that the plans are implemented. Thus, the critical staffing need that faces transitional-employment programs will be to find good service coordinators. College programs that train students for work in transitional employment should thus focus on teaching students managerial and organizational skills in addition to the assessment and training skills usually taught. Persons with this mix of training and managerial skills can then go on to guide and coordinate staff who have less formal training. In this way, it will be easier to meet the growing staffing demands of transitional-employment programs.

Overall, the organizational factors that distinguished the projects in the demonstration were largely matters of degree rather than major differences in staffing designs. The organizational factors that affected the success of the projects appeared to be quite subtle, such as the enthusiasm and flexibility of staff, supervisory styles, the attention of staff to detail, and communication and coordination among staff members.

9. Transitional Employment Represents a Substantial Investment

As was known from the start, transitional employment is an intensive intervention. Its costs confirm this fact. In the eight demonstration projects, average expenditures per enrolled client ranged from \$3,800 to almost \$14,000. Furthermore, expenditures for some specific individuals were as high as \$25,000.

A substantial part of these costs was due to the special nature of the demonstration. Both the experimental design which required projects to recruit two persons for every one enrolled and the small scale of operations as projects built up their caseloads contributed to higher-than-normal costs. Moreover, those projects that started new transitional-employment programs as part of the demonstration incurred substantial costs to design their programs and hire and train staff. The experience of these programs suggests that program funders should expect that average costs in the first year of operations can be 55 percent above those that would be observed in an ongoing program.

We estimate that it would cost \$5,600 per client enrolled to operate an ongoing program that was not part of a demonstration. This cost depends on the number of persons who are actually placed on jobs, the amount of staff time devoted to training the clients, the wage rates of the project staff, the overall client-to-staff ratio, and the indirect-cost structure.

Those interested in replicating this program should be cautious when budgeting their costs based on the figures for the demonstration. The demonstration enrolled a sample of SSI clients who were diagnosed as mentally retarded, it was limited to providing services for one year, and it was conducted in thirteen specific cities by eight organizations which adopted different program approaches. The figures we reported are thus an amalgam of all these factors. Program planners should be aware that, to the extent that these factors will be different in their programs, costs will differ from those presented here accordingly.

However, costs for the demonstration projects seem to be consistent with those reported elsewhere; in fact, they appear to be slightly below the average of those reported for other transitional programs. In a review of the costs incurred by nine transitional-employment programs, Kerachsky et al. (1985) reported average costs per client of approximately \$7,500. This figure is essentially the same as was observed for the demonstration (\$7,643) and is well above the costs that we estimate would be incurred in an ongoing transitional-employment program based on the demonstration experience (\$5,600). While this type of comparison is inherently uncertain (given differences in cost definitions and measurement methods and differences in program approaches and target populations), the growing weight of the evidence on costs is that the initial placement and training services can be delivered by an ongoing program for less than \$6,000 per client and possibly for less than \$5,000 for some approaches and types of clients. However, start-up costs can increase these costs substantially.

VII. CONCLUSIONS

The purpose of the Transitional-Employment Training Demonstration was to determine whether transitional employment would be an effective vehicle for enhancing the economic self-sufficiency of SSI recipients with mental retardation. The evaluation of the demonstration addresses this goal in two stages. The first stage, which is the subject of this report, was to determine whether transitional-employment programs could be operated at a policy-relevant scale, and whether SSI recipients with mental retardation would enroll in such a program. Once these issues have been addressed, the second stage of the evaluation will be to assess whether the transitional-employment services led to increases in employment for program participants and whether such increases and any accompanying changes in SSI payments and the use of other programs are sufficiently large to justify the costs of delivering the services. These impact and benefit-cost issues will be the subject of subsequent reports.

A. CONCLUSIONS FROM THE PROCESS ANALYSIS

As noted in the previous chapter, the process information collected on the operations of the demonstration projects indicates that transitional-employment programs can be operated on a policy-relevant scale by a variety of private and university-based agencies. Furthermore, the process information indicates that a wide range of SSI recipients with mental retardation will enroll in this type of program and that many of these persons can be placed, trained, and stabilized on regular jobs.

After reviewing the experiences of the eight organizations which operated demonstration projects and the program experiences of the 375 SSI recipients with mental retardation who were served by these projects, we reached the following conclusions:

- o The basic elements of the demonstration--the enrollment of SSI recipients with mental retardation, job development and placement, on-the-job training, and short-term support and followup--were implemented successfully.
- o Delineating screening criteria for enrolling applicants is difficult; intake workers rely on a range of objective and subjective assessments in making enrollment decisions, and these decisions reflect a subjective weighing and balancing of the various factors.

- o Projects that stress placing clients first in a training-job position constrain their ability to provide time-limited transitional-employment services.
- o The 12-month service period used in the demonstration was generally adequate for placing and training demonstration enrollees on potentially permanent jobs.
- o The diverse needs of the persons who were enrolled required that the demonstration projects be able to provide a wide range of support services, ranging from help with job-seeking, hygiene, and interpersonal skills to budgeting and housing-location assistance.
- o Arranging transportation to and from jobs was a critical element in providing transitional-employment services, and required considerable effort by the projects.
- o Operating the demonstration was feasible at a variety of program capacities.
- o Several alternative staffing patterns were feasible; projects successfully combined different types of staff (whose educational backgrounds and previous experience in working with persons with disabilities varied) and different management/supervision structures in order to provide transitional-employment services.
- o Transitional employment represents a substantial investment, with average costs for the eight projects ranging from \$3,800 to \$14,000 per person enrolled; costs in an ongoing program are likely to be lower than those observed in the demonstration, ranging from \$2,800 to \$8,100.

Taken together, these conclusions indicate that the basic transitional-employment services were delivered successfully; thus, the demonstration operations will provide a solid foundation for the forthcoming impact and benefit-cost analyses. Of course, the overall performance of the demonstration program as measured by the impacts found for the demonstration is likely to differ from the overall performance of future ongoing programs, since such future programs would likely use different screening criteria than those adopted in the demonstration. As screening criteria are improved, it is likely that future programs would make different enrollment decisions and could generate different sets of outcomes and impacts than those that will be estimated for the persons enrolled in the demonstration.

Ideally, as was evident in our process analysis, these future programs would place a large proportion of persons with mental retardation in permanent, competitive

jobs as quickly as possible and at minimal cost. The process information analyzed here suggests that no project achieved all these goals, but that each achieved some dimensions. A key question for the forthcoming impact analysis will be whether particular projects were more successful at increasing the earnings and employment of participants above what would have been observed in the absence of the demonstration.

Without information on the impacts generated by the various projects, it is difficult to make specific recommendations about the desired structure of future transitional-employment programs. Nevertheless, based on our observations of project activities during the demonstration, we espouse a hybrid transitional-employment approach that combines elements from several of the projects (particularly ARC/MU and UWash/PCC). These features are as follows:

- o Direct placement into potentially permanent jobs as soon after enrollment as possible should be emphasized.
- o Training sites should be used only for assessment and problem-solving purposes, and the time spent at these sites should be minimal, individually determined, and closely monitored.
- o Job-development efforts should concentrate on developing full-time jobs for as many clients as possible.
- o A system of monitoring the status of each client in an ongoing manner is essential in moving the client through the stream of services and into a stable job situation as soon as possible for that client.
- o The use of job coaches with graduate degrees is not necessary and is expensive. Instead, job coaches who show the abilities necessary for training others in a work setting (such as business experience, maturity, enthusiasm, patience, and adequate communication skills) should be led by a strong, professionally trained coordinator.
- o Programs must be flexible throughout each aspect of their services in order to meet the individual needs and interests of each client.

To a large extent, it is the ability to be flexible that distinguishes effective transitional-employment programs. The persons served by this type of program cannot be expected to conform to a fixed service model. Instead, they need individualized

attention, including training on the specific job that they are expected to hold in the future. In the demonstration, it appears that the projects which were most successful were those that could most easily tailor their approach to meet the wide range and diverse combinations of needs of the individual clients.

Such attention requires substantial resources--an ongoing transitional-employment program could be expected to spend an average of almost \$6,000 per person enrolled--but the investment generates many returns. We know that, in the short-term, this investment increases the earnings of clients and may also lead to shifts in the support services used by clients. The investment can also help persons with disabilities lead more normal lives. The longer-term picture is less clear, but transitional employment does have the potential of helping many persons with mental retardation. The degree to which this potential is achieved will largely determine the future employment prospects of economically disadvantaged persons with disabilities.

B. EVALUATION PLANS FOR THE DEMONSTRATION

The operational phase of the demonstration ended in 1987 with the program exit of the last of the demonstration enrollees. The evaluation phase will continue into the future as the postprogram activities of the treatment- and control-group members are monitored, and as we assess the impacts and benefits and costs of the transitional-employment services offered in the demonstration.

The first phase of this follow-up evaluation will incorporate information on the activities of sample members for the first 2-3 years after their enrollment in the demonstration. This analysis will examine the impacts of the demonstration programs on employment rates, earnings, SSI receipt, and the use of vocational-service program services (such as sheltered workshops and work activity centers). It will also compare the benefits and costs of the demonstration services from the perspectives of the Social Security Administration, the government as a whole, the SSI recipients who were enrolled, and society in general.

A second phase of the follow-up evaluation will be to track the sample members over a longer time period to assess the long-term impacts of the services on employment, earnings, and SSI receipt. Current plans envision that this long-term follow-up will cover the ten years after enrollment in the demonstration. In the end, the evaluation will provide key empirical evidence about the effectiveness of

transitional employment, evidence that will help shape the future of this promising technique for helping persons with mental retardation enhance their economic and social assimilation into society.

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APPENDIX A
DATA COLLECTION PROCEDURES

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DATA COLLECTION PROCEDURES

This appendix provides an overview of the various data collection approaches developed and used in the Transitional-Employment Training Demonstration, including the collection of detailed individual-level data by case workers on standardized forms, reports from the project operators on program activities and costs, and site visits during which interviews with program staff and observations of operations were conducted. The first section of the appendix outlines the data requirements for the evaluation and the overall data collection strategy. Each of the following sections describe the methodology used in the three major components of the data collection strategy: data collection from applicants at the time of their intake into the program, data collection on clients' activities while they were enrolled in the program, and program data on services and costs.

A. DATA REQUIREMENTS AND DATA COLLECTION STRATEGY

1. Research Objectives

The demonstration was designed to address five policy questions associated with employment services for mentally retarded adults:

1. Do the transitional-employment services improve the labor-market performance of the participants?
2. Do the services lead to reductions in SSI payments?
3. To what extent do the savings from reduced SSI payments offset the costs of operating the programs?
4. In what ways do the characteristics and experience of participants influence the effectiveness of the services?
5. How do the approaches used by the various projects to deliver transitional-employment services differ, and do those differences influence the effectiveness of the program?

These questions focus on the impacts of transitional-employment training on program participants and the operation and context of the demonstration intervention. The following are the specific research objectives:

Impacts on Program Participants

- o To determine whether training increases the employment and earnings of participants (relative to what their earnings would have been in the absence of the demonstration)
- o To determine whether training reduces SSI payments to participants (relative to what they would have received in the absence of the demonstration)
- o To determine whether the benefits to SSA are sufficient to offset all or part of the costs of operating training projects
- o To determine whether certain program and participant characteristics affect the efficiency of the training

Operation and Context of Demonstration

- o To document the characteristics of the intervention actually implemented by each project and to identify project-specific events or environmental features that affected its implementation and impacts on participants
- o To gather information that will be useful to practitioners who are establishing similar programs in other settings
- o To generalize the results of the demonstration to other settings or on a different operational scale

2. Data Requirements

The data requirements for the evaluation can be divided into four groups: baseline characteristics, postenrollment behavior, costs, and program/contextual data.

a. Baseline Characteristics

The experience, abilities, personal characteristics, and attitudes of trainees affect their postenrollment success. Data on the following baseline characteristics were required for the evaluation:

- o Demographic background characteristics: age, sex, race/ethnicity, and health (for example, work-limiting illnesses or handicaps other than mental retardation)
- o Education
- o Previous employment
- o Current social service use
- o IQ score
- o Functional skills
- o Living arrangements

b. Postenrollment Behavior

Data on the postenrollment employment, earnings, SSI receipt, and other related activities of demonstration clients are the primary focus of the impact analysis. They pertain to the activities of participants and control-group members after their assignment into the demonstration, and represent the aspects of participant's lives that transitional employment seeks to affect.

In addition to employment, earnings, and SSI receipt, a variety of other outcomes are of interest. In particular, it would be desirable to determine the extent to which persons who receive transitional-employment services use other programs, both during and after their enrollment in the demonstration. Moreover, we would like to determine the extent to which participants would have used other services in the absence of the demonstration. Finally, the effect of the services on a host of noneconomic outcomes is of considerable interest, including the social integration, well-being, independence, and the quality of the jobs of participants. Data about these outcomes will be collected from SSA records and in followup interviews with sample members as part of the impact analysis.

c. Cost Measures

An important component of the evaluation design was to develop an accounting framework within which the costs and benefits to SSA and to the federal government could be evaluated. This analysis is designed to examine the costs of transitional-employment programs as fielded in the demonstration, the extent and

determinants of variations in costs across time and sites, the costs of implementing transitional-employment programs on a more widespread basis, and the relative magnitudes of program benefits and costs. This benefit-cost analysis facilitates interpreting the demonstration findings and comparing them with the findings from evaluations of other channels that lead to competitive employment for the mentally retarded. It also provides a basis for budgeting future transitional-employment programs.

d. Program and Contextual Data

The process analysis--a systematic, qualitative analysis of program operations--complements the quantitative analysis by enhancing the ability of the researchers to interpret the results. The implementation and operational data pertain to start-up problems, work-site selection, supervision, the provision of ancillary services, and other operational features. The contextual data include local unemployment rates, populations, and service environments.

3. Data Collection Strategy

a. Data Sources

At the outset of the demonstration, the Social Security Administration specified that the research contractor not collect data directly from beneficiaries. In particular, the baseline data on program applicants were to be collected during the application process by demonstration program staff, and follow-up data on employment- and benefit-related outcomes were to be derived from Social Security records. Additional data on the program experience of participants were also provided by the grantees, as were cost data from the demonstration's financial reporting system.

MPR was responsible for designing all forms and procedures related to the evaluation. The data collection forms used in the demonstration are summarized in Table A.1.

b. Training Program Staff

To ensure that data collection and other research procedures (such as random assignment) were implemented properly, MPR distributed detailed procedural manuals and conducted on-site training. The manuals covered the following topics:

TABLE A.1

SUMMARY OF DATA COLLECTION FORMS

| Form | Purpose | Notes |
|-----------------------------|---|--|
| Record of Intake Screening | Provided tally of applicants and reasons for nonacceptance into program. | Also provided updates for mailing list by excluding those who had applied but were inappropriate for demonstration services. |
| Intake Data Collection Form | Provided baseline data on all sample members. | Forms for applicants who were screened out during intake data collection process were retained for review during process analysis visits. Projects were notified about any forms not received within 30 days after randomization. |
| Informed-Consent Form | Provided authorization by sample member and/or parent guardian for use of data for research purposes. | Projects were informed if not received 30 days after randomization. |
| Client Tracking Form | Provided data on services and project statuses of all clients while in the demonstration. | Completed for new clients and for each change in activity and/or status for ongoing clients. Transmitted to MPR once each month. Projects received monthly confirmation reports on the statuses of all clients to date. |

TABLE A.1 (continued)

| Form | Purpose | Notes |
|----------------------------|--|---|
| Client Service Record | Provided hours of staff time per activity per client. | For a subsample of clients only. Reviewed during site visits. |
| Monthly Status Report | Provided description of project activities and problems. | Described project developments and plans (including interagency relationships, worksite development, and staffing), problems and resolutions, schedules, and budgets. |
| Monthly Expenditure Report | Provided project expenditures by function. | Included expenditures in three categories: program management, services to clients, and payments to participants. |

- o An overview of procedures
- o The invitation letter (sent to eligible SSI beneficiaries)
- o Outreach and orientation material (used by the project to recruit applicants)
- o Intake screening of applicants and associated recordkeeping
- o Intake data collection
- o Informed-consent procedures
- o Randomization procedures
- o Client tracking
- o Client service recordkeeping
- o Monthly expenditure reports
- o Monthly status reports
- o Document transmittal from the sites to MPR
- o Site visits by MPR staff
- o Waivers of SSI regulations for demonstration participants

Each topic was described in detail, including the reason for the procedure and special instructions on how to use specific forms if any. Copies of any instruments or other documents were appended to the manual, and site-specific documents were included if such instruments varied by project or community (for example, the invitation letter or outreach material). The manual was distributed in ring binders, and changes in forms or procedures were communicated to the projects by sending out replacement pages for each copy of the manual.

The project staff were trained on each of the topics covered in the procedural manual. MPR survey personnel designed a training manual which paralleled the procedural manual. The training manual provided an outline of specific issues to be covered in the training session on each topic, sample materials to be distributed during training, and guidelines for the time requirements and the staff involved in each session.

The staff at each project participated in a two-day training session led by an MPR trainer. Each trainer reported on the session by completing a debriefing form. For each topic, this form provided a list of attendees, notes on their general attitudes toward and perceived understanding of the demonstration procedures, site-specific issues, and any questions about procedures which required further consideration by MPR or the Social Security Administration's project officer. These forms formed the basis for debriefing meetings among the trainers to ensure that consistent explanations were being provided to the sites. They were also used to modify and supplement the procedural and training manuals and the training sessions. The final, revised version of the training materials was provided to the sites, so that they could train replacement staff as necessary.

B. INTAKE PROCEDURES AND FORMS

The intake process involved a complex set of procedures and generated a number of documents essential to the evaluation. This section starts by providing an overview of the intake process. The section continues by covering each step of the process in more detail, focusing first on the development of the procedures and then on their implementation.

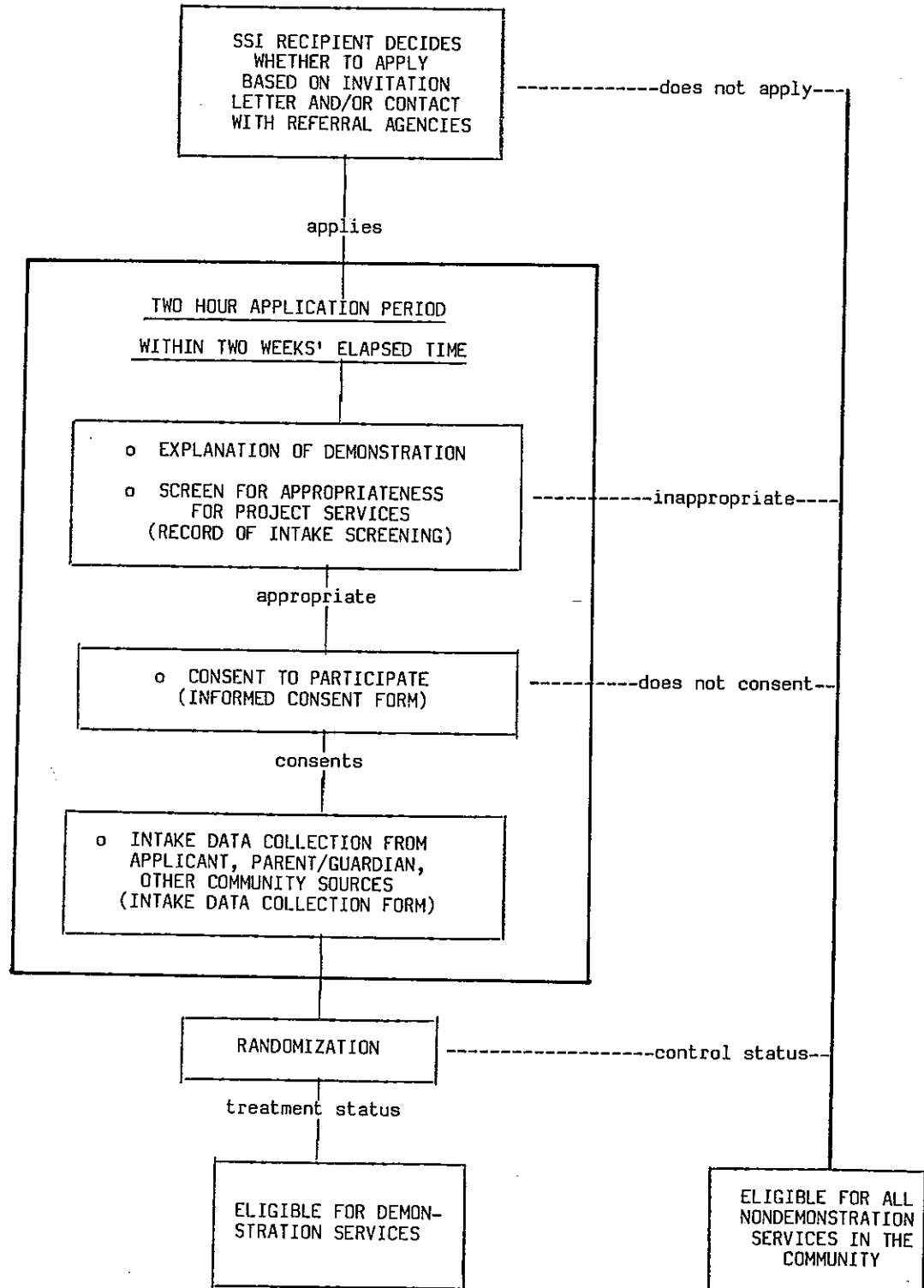
1. Overview of Intake Process

Figure A.1 provides an overview of the Transitional-Employment Training Demonstration intake process. Intake was initiated by sending letters to eligible SSI recipients (those between the ages of 18 and 40, who resided in the catchment areas of the demonstration projects, and who had a primary or secondary diagnosis of mental retardation). Interested recipients contacted the local demonstration projects; those not interested in transitional-employment services continued to receive existing community services. Later, the demonstration site staff were allowed to recruit applicants directly from their referral networks.

Once SSI recipients applied to the demonstration projects, it was important that their contact with project staff be relatively brief, so as to avoid raising unduly high expectations about services among those who were eventually assigned to the control group. Therefore, direct client contact during the application period (prior to applicants' randomization into the research sample) was to be limited to a total of approximately two hours, with the process completed within two weeks' elapsed time, starting with the point of application.

FIGURE A.1

DEMONSTRATION INTAKE PROCESS



During that period, a number of activities took place. Applicants (and their parents, guardians, or representative payees) received information on the demonstration program services and research activities, and projects made decisions about whether applicants were appropriate for the anticipated training and employment opportunities. The intake data collection form was completed by filling in information from applicants, their parents, and other community agencies who may have had contact with the applicant and were able to provide some of the background data required on the form. Applicants and, when appropriate, their parents or other also signed the informed consent form. Uninterested and inappropriate applicants, as well as those who did not consent to the demonstration rules, continued to receive existing community services. No individual data were maintained on these persons; however, the record of intake screening provided aggregate statistics on the results of applicants.

The timing of the four activities which constituted the application process--providing explanations, screening for appropriateness, obtaining informed consent, and collecting intake data--was often simultaneous and overlapping, rather than sequential. But all were completed within the general guidelines of two hours of applicant contact in two weeks' elapsed time.

Applicants whose data collection form was complete and who had signed the consent form to indicate their willingness to participate in the demonstration program and research were eligible to enter the research sample. The designed liaison at each site called MPR to obtain a sample identification number and research status for each such applicant. Those applicants who were assigned to the control group were returned to the existing community service system; those in the treatment group began demonstration services.

The remaining parts of this section describe the development and implementation of each of the following research and data collection activities in the intake process:

- o Sample recruitment
- o Screening
- o Application/base data collection
- o Informed consent
- o Random assignment

2. Sample Recruitment

The demonstration sample was recruited in two ways: via letters sent to eligible SSI recipients identified from a review of case folders, and via referrals of eligible persons by other agencies in the demonstration communities.

a. Invitation Letters

Case folders for SSI recipients in the eligible age range and geographic areas were screened by Social Security Administration staff to determine whether mental retardation was identified as the primary or secondary disability. This determination process took place between December 1984 and June 1986, and over 27,000 folders were reviewed, yielding 13,920 eligible SSI recipients.

Data tapes that contained the names and addresses of all 13,920 eligible SSI recipients (and their representative payee, if one was listed) were sent to MPR, where they were converted into a format suitable for producing letters.

The invitation letter was designed to encourage application and to give applicants a realistic view of the program. Based on MPR's experience with low-income and poorly educated research sample members, we designed the letter to convey the following information in simple language:

- o The purpose and sponsorship of the program, especially its endorsement by SSA
- o The voluntary nature of application and the fact that not all applicants would be accepted
- o The existence of waivers and other safeguards of SSI benefits and eligibility
- o The research component of the program and the data collection required by the research
- o The confidentiality of individual information and rights

Each letter was personalized with the name of the eligible recipient or the representative payee, and included a one-page description of the local demonstration project. The letters included the names, addresses, and telephone numbers of persons at the local project and at the local SSA project office who could provide more

information about the demonstration. Enclosed with each letter was a stamped postcard addressed to the local project, authorizing the project staff to contact the sample member directly. Sample members were also encouraged to contact the program directly. A sample of the letter text is shown in Figure A.2.

A total of 12,174 initial invitation letters were mailed between May 24, 1985, and June 20, 1986. (Not all eligible SSI recipients on the tape were sent letters, because some fell outside the catchment areas of the projects.)

Follow-up letters were sent approximately four months after the initial mailing of the invitation letters to sample members. To ensure an even flow of applicants, the follow-up letters were mailed in batches that ranged from 200 to 1,000 letters over a period of four months. The majority of the follow-up letters were mailed in September and October 1985, followed by smaller mailings in November to December 1985.

While the response to the invitation letter was reasonable--an average of 17 percent of the sample contacted a project in response to the mailings--it was not sufficient to produce enough enrollments for the research. For this reason, a decision was made to allow the projects to receive referrals of eligible SSI recipients from other local agencies.

b. Referrals

Under the letter-recruitment method, projects had been encouraged to contact other local agencies and acquaint them with the demonstration program and associated research. Thus, when the clients of those programs received invitation letters, staff were able to provide them with some information about the demonstration. To assist in this community-education effort, MPR prepared project-specific outreach material that addressed a number of common concerns about the purpose and procedures of the demonstration.

When referrals were added as a method for recruiting the sample, the projects were responsible for arranging with local agencies for such referrals. A referral form was prepared to help verify eligibility (see Figure A.3), and this form was to be completed for all persons who were referred to the projects. This form was used to certify that the applicant met all of the demonstration eligibility criteria. The project could then certify whether an applicant was receiving SSI by checking the

FIGURE A.2

SAMPLE DEMONSTRATION INVITATION LETTER

You are invited to apply to be part of _____, funded by the **Social Security Administration (SSA)**. This new program will help people to learn about working and to get jobs. It is especially for disabled people who are now receiving SSI checks from the Social Security Administration. The program intends to train people, get them jobs in the community, and help them keep their jobs. There is an information sheet with this letter which tells you more about the program. We at the Social Security Administration believe that this program could help SSI beneficiaries. The **Association for Retarded Citizens of the United States (ARC-US)** agrees that the program would be a good opportunity for people who apply and are accepted.

There are some things about _____'s project you should know. First, it is voluntary--it is up to you whether or not you apply. Second, SSA will apply special rules to help preserve your eligibility for SSI while you take part in the program. You will also keep your Medicaid. You can find out more about these special rules by calling _____ at the SSA _____ District Office. The telephone number is _____.

_____ 's project is a small program, and not everyone who applies to it can get in. Also, since it is a demonstration program, it is being studied as part of a research project, which means that the information collected about people when they apply for the program will be used in the study, with their consent. This information will be confidential, and the rights and privacy of every study member will be carefully protected.

If you want someone from _____ to call or visit you to tell you more about their program, you can send them the postcard that comes with this letter. The postcard is already stamped and has a label with your name, address, and telephone number on it. If the label is wrong, please write in the correct information. Then all you have to do is put the postcard in the mail.

If you don't want to send in the postcard but you want to find out more about _____'s project, you can call them at _____ (ask for _____). People at their office can tell you more about the training and jobs. They will also help you apply, if you decide you want to.

Sincerely,

Jane L. Ross, Director
Office of Research Statistics
and International Policy

FIGURE A.3

TRANSITIONAL-EMPLOYMENT TRAINING DEMONSTRATION

OMB APPROVAL #: 0960-0387

REFERRAL RECRUITMENT FORM

EXPIRES: April 1986

MPRI#: 871

TO REFERRAL AGENCY STAFF: This form is to be completed for each person referred to the Transitional-Employment Training Demonstration. If you have questions on how to complete the form, please call the local Transitional-Employment staff.

| PERSONAL IDENTIFICATION | | | | | | | | | |
|--|--|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--------------------------|
| NAME _____ | | | | | | | | | |
| First | | | Middle | | | | Last | | |
| FACILITY/INSTITUTION NAME (IF ANY) _____ | | | | | | | | | <input type="checkbox"/> |
| ADDRESS _____ | | | | | | | | | |
| Street | | | | | | | Apt/Floor | | |
| City | | | | State | | | Zip | | |
| TELEPHONE | | <input type="text"/> | <input type="text"/> | - | <input type="text"/> | <input type="text"/> | - | <input type="text"/> | <input type="text"/> |
| SOCIAL SECURITY NUMBER | | <input type="text"/> | <input type="text"/> | <input type="text"/> | - | <input type="text"/> | <input type="text"/> | - | <input type="text"/> |
| (from question S2) | | | | | | | | | |
| BIRTHDATE | | <input type="text"/> | <input type="text"/> | - | <input type="text"/> | <input type="text"/> | - | <input type="text"/> | <input type="text"/> |
| | | Month | | | Day | | | Year | |
| (from question S4) | | | | | | | | | |
| ----- | | | | | | | | | |
| TE NUMBER | | <input type="text"/> | <input type="text"/> | - | <input type="text"/> | <input type="text"/> | - | <input type="text"/> | <input type="text"/> |
| FOR TE PROGRAM USE | | | | | | | | | |

The Transitional-Employment Training Demonstration is authorized under section 505 of the Social Security Amendments of 1980 (P. L. 96-265) and 20 CFR 416.250. This form was prepared by Mathematica Policy Research for the Social Security Administration under contract No. 600-83-0227.

| | | | | |
|--|--|--|---|--|
| | | | - | |
|--|--|--|---|--|

FOR TE PROGRAM USE

S1. Is APPLICANT currently receiving SSI?

Yes

No.

| |
|----|
| 01 |
| 00 |

→ NOT ELIGIBLE

S2. What is APPLICANT'S Social Security Number? → RECORD ON COVER PAGE.

S2. a. FOR TE PROGRAM USE ONLY: PLEASE
VERIFY THE APPLICANT'S SOCIAL
SECURITY NUMBER AND CONFIRM
RECEIPT OF SSI.

DOCUMENTATION OF SOCIAL SECURITY NUMBER
AND RECEIPT OF SSI:

| | |
|---|----|
| Notice of determination. | 01 |
| Call to SSA district office. | 02 |
| Other (specify) | 03 |

S3. Did APPLICANT ever receive SSI benefits
under a different name that he/she does
not use now, such as a maiden name or
name that was used before he/she was
adopted?

Yes (SPECIFY NAME BELOW)

No.
Unknown

| |
|----|
| 01 |
| 00 |
| -1 |

S4. What was APPLICANT'S age at his/her last
birthday? Please ask to see a birth
certificate or other documentation to
obtain the applicant's age and date
of birth.

AGE

| | |
|--|--|
| | |
|--|--|

years

ONLY APPLICANTS AGED 18-42
(INCLUSIVE) ARE ELIGIBLE

DOCUMENTATION:

| | |
|-----------------------------|----|
| Birth certificate | 01 |
| Other (specify) | 02 |

(RECORD THE APPLICANT'S BIRTH DATE
ON COVER PAGE.)

| | | | | |
|--|--|--|---|--|
| | | | - | |
|--|--|--|---|--|

FOR TE PROGRAM USE

S5. a. What is APPLICANT'S most recent IQ score? (Please report all scores available from most recent test or evaluation.)

| | | | | | |
|-------------|--|--|--|--|-----------------|
| Verbal | <table border="1"><tr><td></td><td></td><td></td></tr></table> | | | | Unknown |
| | | | | | |
| Performance | <table border="1"><tr><td></td><td></td><td></td></tr></table> | | | | Unknown |
| | | | | | |
| Full Score | <table border="1"><tr><td></td><td></td><td></td></tr></table> | | | | Unknown |
| | | | | | |

b. If exact IQ score is not available, please indicate range of retardation.

| | |
|-----------------------------------|----|
| Borderline. (IQ 69-84). | 01 |
| Mild. . . . (IQ 52-68). | 02 |
| Moderate. . (IQ 36-51). | 03 |
| Severe . . . (IQ 20-35). | 04 |
| Profound (IQ 19 or below). . . | 05 |

S6. What is the basis for this score or range of retardation?

| | | |
|--------------------------------------|----|------------------------------|
| IQ test | 01 | → SKIP TO QUESTI S9 |
| Other evaluation. . . . (Specify) | 02 | |
| _____ | | |

S7. Name of most recent IQ test:

| | |
|---------------------------|----|
| WAIS or WAIS-R. | 01 |
| WISC or WISC-R. | 02 |
| Stanford-Binet. | 03 |
| Other (specify) | 04 |
| _____ | |
| Unknown | -1 |

S8. Most recent IQ test date:

| | | | | | |
|--|--|---|---|--|--|
| | | 1 | 9 | | |
|--|--|---|---|--|--|

Month Year

Unknown -1

FOR TE PROGRAM USE

ELIGIBILITY BASED ON IQ:

Applicants meet the intellectual functioning criteria for the demonstration if they have a verbal, performance, or full-scale IQ score of 59 or below on a test administered on or after their 16th birthday. In general, the IQ score must be from a Wechsler (WAIS, WAIS-R, WISC, WISC-R, or WPPSI) or a Revised Stanford-Binet test.

The cases of applicants without this evidence of eligibility may be discussed with the TE program.

- | | | |
|--|---------------|----|
| S9. In your judgement, can APPLICANT understand an explanation of the demonstration program and research and independently sign informed consent papers agreeing to participate? | Yes | 01 |
| | No. | 00 |
| S10. Who, if anyone, should be present during an explanation of the demonstration to assist APPLICANT in making an informed decision regarding participation? | | |

No One 00

Name _____

Relationship _____

Address _____

Telephone _____
Home _____ Work _____

- S11. I certify that this information is accurate to the best of my knowledge.

NAME/TITLE _____

AGENCY/ORGANIZATION _____

TELEPHONE _____ DATE _____ FOR MPR USE ONLY

BE SURE TO COMPLETE THE PERSONAL IDENTIFICATION SECTION ON THE COVER PAGE

list or by checking to determine whether the applicant had received an invitation letter. In cases where the applicant had not received a letter and his or her name was not on the list, the projects could enroll the applicant only if the project obtained evidence that the applicant was receiving SSI and met all other criteria.

3. Screening

Projects were required to screen applicants for both eligibility and appropriateness.

Eligibility was based on age (years 18 to 40 inclusive),¹ current SSI receipt, a diagnosis of mental retardation (as determined in the SSI eligibility determination process), and residence in the project's catchment area. Under the invitation-letter approach, the operational criterion of eligibility was whether an applicant's name and Social Security number appeared on the mailing lists from SSA. Projects could check an applicant's eligibility by calling MPR with the name and Social Security number of the applicant to determine whether he or she appeared on the mailing lists. MPR checked the eligibility of applicants against master lists at the time of randomization.

The eligibility criteria for the referral applicants were age (18 to 42 years), current SSI recipient, residence in the project-designated catchment area, and the degree of mental retardation (based on the applicants' most recent IQ test score). To confirm the eligibility of the referral applicants, the project staff contacted the local SSI district office to confirm their age, current SSI status, and address.

The appropriateness of applicants for the demonstration services as offered by the local project was determined on a case-by-case basis by project staff. Each project was free to use whatever criteria it desired for determining the applicant's appropriateness for transitional employment. MPR encouraged the projects to enroll all eligible applicants who had any reasonable chance of success, given the project's planned services, the level of available resources, and the maximum length of the treatment period.

¹ Because of administrative problems in identifying eligible SSI recipients and sending out the invitation letters, a few persons older than 40 years of age were sent invitation letters and were subsequently enrolled in the demonstration.

Screening for the eligibility and appropriateness of applicants was designed to use a proportionately small share of project resources. It was not to involve intensive or lengthy contact with applicants, which might have had an influence on those applicants who were eventually randomized into the control group.

Intake screening prior to formal intake data collection was conducted largely through relatively brief informal interviews or telephone conversations with potential applicants and their parents, guardians, or representative payees. Screening decisions could also be based on information collected during intake data collection. However, projects were to make a decision about appropriateness prior to randomization, and the results of this decision were to be recorded for every applicant.

The forms used in the applicant-intake screening process provided statistics on the number of applicants who were ineligible or inappropriate for services. They also provided information for updating the master sample lists for follow-up mailings of invitation letters, for assessing the success of outreach via invitation letters (i.e., how many persons responded to the letters), and for calculating screening rates and describing the criteria used for screening by the demonstration projects.

The three-part Record of Intake Screening (see Figure A.4) was designed to accompany the applicant through the application process. One component of the form provided four broad categories of final dispositions (ineligible, inappropriate, appropriate but not randomized, or randomized) and detailed codes to explain the reasons for two applicant statuses: inappropriate, and appropriate but not randomized. Projects could screen out applicants for any or all of the reasons listed on the form or for other reasons, which they were also asked to record. The categories of reasons for not accepting an applicant for randomization were developed in consultation with the projects as those most likely to affect that decision. Projects were not required to use the reasons listed on the form as screening criteria.

Referral applicants followed the same screening and intake procedures. However, at the time of randomization, one additional procedure was implemented. Before randomizing the referred applicant, the project intake person and the MPR randomization clerk reviewed the referral form to verify that the form was completed and that the applicant was eligible for the program.

RECORD OF INTAKE SCREENING
Transitional-Employment Training Demonstration

Name: _____ SSN: _____
Address: _____ Telephone: _____

[illegible]

DATE OF FINAL DISPOSITION |__| - |__| - |__|

MONTH DAY YEAR

Circle One Only

o In person 01
o by phone. 02

| | | | | | |
|--|----|------------------------------------|--|------------------------------|------------------------------------|
| A. DETERMINED TO BE INAPPROPRIATE FOR TRANSITIONAL-EMPLOYMENT SERVICES | | Circle All That <u>Apply</u> | B. DOES NOT MEET ELIGIBILITY CRITERIA | | Circle All That <u>Apply</u> |
| o lack of interest/motivation. . . . | 01 | | o not an SSI recipient. | 01 | |
| o unable to travel to work. | 02 | | o not aged 18-40. | 02 | |
| o unable to self medicate. | 03 | | o does not meet IQ requirement. | 03 | |
| o mobility limitations. | 04 | | o does not live in catchment area | 04 | |
| o equipment/wheelchair needs cannot be met in workplace. | 05 | | o not an MPR list | 05 | |
| o visual or hearing impairments. | 06 | | | | |
| o seizure disorders. | 07 | | C. DETERMINED TO BE APPROPRIATE FOR TRANSITIONAL EMPLOYMENT SERVICES, NOT RANDOMIZED | Circle One <u>Only</u> | |
| o other physical handicaps or medical conditions prohibit suitable employment. | 08 | | o suitable job or training position not available | 01 | |
| o emotional or behavioral problems prohibit employment. | 09 | | o project staff not available. | 02 | |
| o inappropriate social skills or behaviors | 10 | | o refused to sign consent form | 03 | |
| o speech or communication difficulties. | 11 | | o could not/would not provide intake data | 04 | |
| o insufficient family support. | 12 | | o previously assigned to control group | 05 | |
| o insufficient previous experience or training | 13 | | o previously assigned to treatment group | 06 | |
| o presently in another transitional employment program. | 14 | | | | |
| o presently being served by demonstration agency. | 15 | | | | Circle One <u>Only</u> |
| o other reasons (please describe). | 16 | | D. RANDOMIZED INTO RESEARCH SAMPLE | | |
| | | | o treatment. | 01 | |
| | | | o control. | 02 | |

NAME: (please print) _____

SOCIAL SECURITY NUMBER: | | | | - | | | - | | | |

4. Application/Baseline Data Collection

Baseline data were required in the research as control variables to improve the precision of the estimated impacts of the program and to conduct subgroup analyses to identify persons for whom the program was most effective. Program operators also used data collected at the point of application to develop screening criteria and to assess applicants' needs and interests in order to develop treatment plans. The dual purposes--research and operations--served by the initial data collection, and the stipulation that the evaluation contractor not collect data directly from beneficiaries, dictated an approach which imposed a number of constraints on developing the forms and procedures to collect these data. These constraints included the following:

- o The baseline data collection was to be based on a standardized instrument, and the selected measurement techniques were to generate valid and reliable data.
- o Because usual clinical practice involves free-flowing intake discussions rather than structured interviews, the data collection instrument was to be designed as a form, not as a questionnaire--that is, answer categories were to be specified, but question wording and order were not. In addition, because a number of staff persons might be involved in taking applications, the form was to be self-contained--that is, all special instructions and definitions of terms were to be printed on the form itself, rather than in a separate manual.
- o The baseline data collection process was to be designed in a manner whereby it was not a source of contamination for those applicants who would eventually be assigned to the control group.
- o Thus, the baseline data collection was to occur at a particular point in time soon after initial contact with the program and thus could not be based on extensive pre-screening or observational information.
- o Finally, the baseline data collection was to be limited to approximately one to two hours of applicant contact within a two- week period, and thus access to records or information supplied by other programs with which the applicant may have had contact was generally limited.

Meeting these constraints required a lengthy development process. The first step in the process was to identify the information needs for baseline data collection

and to review available instrumentation. Besides basic demographic data, three major domains for baseline measurement were identified: academic and cognitive skills, social adjustment and living skills, and vocational readiness and skills. The academic domain has traditionally consisted of measures of skills associated with reading, mathematical computation, and oral and written communication. The cognitive aspect of this domain includes measures of intelligence, abstract reasoning, critical thinking, and logic. Social adjustment and living skills are commonly assessed in job-training programs for mentally retarded clients and include such specific dimensions as self-care, understanding of time and money concepts, prosocial and maladaptive behavior, living skills (such as telephoning, transportation mobility, shopping, and meal preparation), and independent living arrangements. Vocational readiness and skills cover previous employment-related experience and current vocational interests and abilities, organized under four specific dimensions: job and job training, physical and behavioral barriers to employability, job-related knowledge and attitudes, and on-the-job behavior.

Existing instrumentation in each domain was reviewed. A form for each reviewed scale or instrument was prepared in terms of the scale's previous use with the target population, its use in prevocational or job-training programs, its cost and administration requirements (such as length of time, props, and staff training), and the results of its validity and/or reliability assessments. Summary reports with recommendations for inclusion in the baseline instrument were prepared for each domain and circulated for review to MPR project staff and to several consultants. A design conference was held among these reviewers in December 1983, at which time their comments on the domains and suggestions for priorities among items on the instrument were received.

At the same time that instrumentation in these domains was under review, staff compiled information from several employment-training programs for handicapped persons on their intake process, the data they required for the intake decisions, and the types of forms they used. Information about intake procedures used by other programs were obtained by visiting several nearby programs and by attending conferences. Once the demonstration projects were selected, they were asked to forward copies of their current forms to enable MPR staff to better understand the specific intake procedures used in each program.

Based on the review of instrumentation and the intake processes found in existing programs, drafts of the intake form were prepared and revised, based on internal review. At the first demonstration project directors' conference in December 1984, the revised intake form was presented to the demonstration projects and their comments solicited. Further revisions were made and the form finalized early in 1985.

The final version of the Demonstration Intake Data Collection Form was copied on two sides in booklet fashion and stapled on the left-hand side. Right-hand pages contained the research items with boxed answer categories. Left-hand (back) pages contained question-by-question instructions, definitions, and suggested wording for the corresponding questions on the right-hand page. The form collected the following types of information about the applicant:

- o Personal identification (name, address, telephone number, Social Security number, and birthdate)
- o Living arrangements and household information (marital status, institutionalization experience if any, current living arrangements--type of facility, if applicable--and household composition)
- o Transfer payments (food stamps, AFDC or general assistance, and Medicaid)
- o Health and functioning (physical, mental, or emotional impediments to employability; ability to travel unassisted; medication requirements and ability to self-medicate; and current receipt of psychological or psychiatric treatment)
- o Vocational experience and training (employment history in a variety of settings, type of job--whether competitive or not--most recently held, and wages and hours in most recent job)
- o Educational experience (current participation in school and nonschool job-training programs)
- o Demographic characteristics (gender, race, and primary language)
- o Observations (social behavior and appearance at interview, clarity of oral communication, attitudes toward training and employment, parental support of participation in program, and intake counselor's estimate of applicant's probability of completing training and being successful in competitive employment)

During each project's training session, project staff were instructed on how to complete forms. Each trainer reviewed all items on the form with project staff, explained any skip logic and coding procedures, and emphasized that the data were to be collected in a standardized way for all applicants across all the sites.

The intake data collection form was administered soon after the initial contact was made between the applicant and the program intake data collector. This usually took place within a two-hour period of the initial contact, which could be spread over a two-week period and involve more than one session. This form was completed along with an application to the demonstration program and the informed-consent form. All intake data forms were completed before contacting MPR for random assignment status.

Originals of the forms were mailed to MPR each week, and each site maintained a copy for its files. As these forms were received, they were logged in, referencing the demonstration number assigned at randomization. A quality control clerk then edited the documents, checking the skip logic, checking the consistency of the data, and assigning codes to open-ended questions. The quality control clerk contacted the site to reconcile any missing data or other problems. All unique data problems were reviewed and resolved by MPR staff on a case-by-case basis, and the decisions were documented and distributed to all site staff. This process was very important to ensuring that all data for all sites were standardized.

The intake data forms were then ready to be data processed. All intake forms were processed within a month after they were received from the site. A data-entry program was written to flag out-of-range data, missing data, and data which were inconsistent with the program's specification. The forms were then reviewed by MPR quality control staff, who corrected the data.

A total of 745 intake data collection forms were received from the programs during the intake period, which began in June 1985 and ended in July 1986. The site-by-site information on the period of intake and the number of data collection forms was shown in Table A.1. Applicants attended an average of 1.3 sessions during intake and spent an average of 87.8 minutes with the intake staff. In 83 percent of the cases, someone in addition to the applicant participated in the intake process; this person was generally a parent or representative payee. In 96 percent of the cases where others were present, they helped provide the intake data.

APPENDIX B
STATISTICAL METHODOLOGY

APPENDIX B

STATISTICAL METHODOLOGY

A major goal of the demonstration was to estimate the effect of transitional-employment services on the employment, earnings, SSI receipt, and other activities of the SSI recipients with mental retardation who enrolled. Making these estimates necessitated that the operations of the demonstration be structured in several ways. Of particular importance were the experimental design that assigned applicants randomly to a treatment or a control group and the overall target rates for the number of persons to be enrolled. The experimental design provides a basis for making unbiased estimates of the impacts of the program (compared with what would have happened in the absence of the demonstration), and the sample size determines the precision of those estimates. These two aspects of the demonstration are examined in this Appendix.

A. TESTS OF RANDOM ASSIGNMENT

An important feature of the evaluation of the Transitional-Employment Training Demonstration, and one that distinguishes it from other evaluations of programs that serve individuals with mental retardation, is its random assignment of treatment status. Letters were sent from the Social Security Administration to 12,174 persons to invite them to participate in the demonstration; an additional 342 persons were referred from other agencies and organizations. Of those invited or referred, 1,097, or 9 percent, came in to the transitional-employment projects and were administered intake interviews. Of those 1,097 individuals who expressed initial interest, 745 agreed to enroll and were deemed eligible to participate in the demonstration. These persons were assigned randomly to the treatment or control group. Those assigned to the treatment group were eligible to receive transitional-employment services from the projects; those assigned to the control group were precluded from receiving transitional-employment services from the host agency until April 1988.

The random assignment of sample members to treatment and control status was used to ensure that the two groups would consist of individuals whose observed or unobserved characteristics were, on average, as similar as possible at the time of their

application to the demonstration. A successful randomization process means that the control group will yield reliable estimates of what would have happened to treatment-group members in the absence of the demonstration. Thus, differences in outcomes for the treatment and control groups will serve as reliable estimates of the impacts of the demonstration.

Only two factors could have caused the mean values of the prerandomization characteristics of the treatment and control groups to differ: deviation from the randomization procedures and normal sampling variability--that is, chance. Randomization procedures were strictly adhered to by both project and MPR staff. Therefore, any differences between treatment-group members and control-group members may be assumed to have occurred by chance. However, such differences would be expected to be small and not statistically significant for a sample of this size.

Despite the expected small, chance differences between the two groups, the implications of any large, chance differences for the estimated impacts of the program are potentially so great that it was necessary to verify that the two groups were in fact comparable at enrollment, at least along observable characteristics. This assessment was made by comparing mean values of prerandomization characteristics for treatment and control groups based on standard comparison of means tests (using t-statistics) and, for sets of interrelated variables, chi-square tests which compared distributions for treatments and controls.

The following prerandomization variables were constructed for each sample member from the data in the Intake Data Collection Form, which was administered prior to random assignment. All variables were constructed as binaries:

- o Project: AHEDD, ARC/MU, The CENTER, Children's Hospital, ECF, Goodwill, UWash/PCC, and UWis/Stout
- o Age: whether the sample member was 22 years or older
- o Gender: whether the sample member was male
- o Race: whether the sample member was black
- o Receipt of transfers: whether the sample member received Food Stamps, whether the sample member was on welfare, or whether the sample member was receiving Medicaid benefits

- o Employment during the 12 months prior to intake: whether the sample member had a regular job, was in a mainstream job-training program or had a volunteer job, had a job in a sheltered workshop or enclave, had another type of job (including in an activity center), or had no job¹
- o School: whether the sample member was in school
- o Living arrangement: whether the sample member lived in a supervised or semi-supervised setting (including an institution), lived with his or her parents, or lived independently
- o Transportation: whether the sample member had ever used public transportation on a regular basis
- o Institutionalization: whether the sample member had ever been institutionalized
- o Psychiatric treatment: whether the sample member was receiving psychiatric or psychological treatment at the time of intake
- o Physical problem: whether the sample member exhibited to the intake worker one or more of the following problems that would limit employment ability: severe visual impairment, severe hearing impairment, seizure disorders, cerebral palsy, general physical health problems, arm/head mobility problems, whole body range-of-motion limitations, ambulatory limitations that confine him or her to a wheelchair or require the use of a cane, crutches, or walker, or other physical problem
- o Emotional problem: whether the sample member exhibited to the intake worker one or more of the following problems that would limit employment ability: emotional impairment, mental illness, chemical or drug dependency or abuse, or maladaptive, antisocial, or disruptive behavior
- o Social problem: whether the intake interviewer found the sample member's behavior in one or more of the following areas inadequate for a job interview situation: attention to

¹For the purposes of this preenrollment descriptor, if a sample member reported holding more than one type of job in the year prior to enrollment in the demonstration, he or she was designated as having held the job which reflected the highest degree of assimilation into the competitive job market. Based on this scheme, a regular job took precedence over a mainstream job-training or volunteer job, which in turn took precedence over a job in a sheltered workshop or enclave, which in turn took precedence over "other" types of jobs (that is, activity centers, job training for the handicapped, or work for family members).

interviewer, ability to respond appropriately to questions and conversation, eye contact with interviewer; ability to display appropriate greetings, postures, and gestures, or grooming and attire; or if the interviewer did not consider the sample member's physical appearance and characteristics "normal" or the sample member exhibited unusual behavior or gestures

- o Speech problem: whether the sample member was unable to speak clearly in sentences
- o Likelihood of program completion: whether the intake worker felt that the probability of the sample member's completing the training and being successful in a competitive job was high (as compared with medium or low)

The following variables based on Social Security records were also constructed and tested for possible treatment/control differences:

- o IQ score: had an IQ over 70, had an IQ between 55 and 70, had an IQ between 40 and 54, or had an IQ of 39 or less¹
- o Total SSI received during the year prior to enrollment (dollars)
- o Whether the sample member received both SSI and Social Security in the month prior to enrollment
- o Number of months spent on SSI prior to enrollment
- o Total earned income during the year prior to enrollment (dollars)

In general, the treatment/control differences along these characteristics were quite small and not statistically significant. (See Table IV.4 for the means for treatment- and control-group members and the overall sample.) An exception to this is the difference between the percentage of treatments and controls who were living

¹IQ data were obtained from SSI and Social Security case folders for 88 percent of the sample. These data were compiled by Social Security staff, who reviewed the medical evidence of disability that was contained in the case folders. When these staff reported more than one IQ score, we selected the most recent full-scale IQ score. In those instances where no IQ score was provided by the Social Security Administration (89 cases, or 12 percent of the sample), intake records from the projects were checked, and if an IQ score was recorded it was used. This process applied to 60 of the 89 cases. Project mean values were imputed for the remaining 29 cases.

in supervised or semi-supervised housing: 15.6 percent of the treatment group, compared with 21.2 percent of the control group, had such living arrangements. However, since the living-arrangement categories were mutually exclusive and exhaustive, they were not independent of each other, and the correct statistical test was not a simple difference of individual means but a chi-square test of the difference between treatments and controls in terms of the distribution across the living-arrangement categories. The chi-square test showed no statistically significant difference in the living arrangements of the two groups. Therefore, we concluded that the randomization process was successful in yielding a control group that was comparable to the treatment group along observed dimensions and, in all likelihood, along unobserved dimensions as well.

B. SAMPLE SIZE AND STATISTICAL POWER

Assumptions about the size of the increases in employment and earnings that would have to accrue from program participation if the costs of the demonstration were to be met were a guiding force in determining the appropriate size for the demonstration sample (see Carcagno et al., 1984). The goal of the sample-size decision was to make the probability of two undesirable events quite small: (1) drawing the conclusion that transitional employment had no impact on employment and earnings when in fact it did (that is, committing a Type II error), and (2) drawing the conclusion that transitional employment had an impact when in fact it did not (that is, committing a Type I error). The probability that a statistical test will not lead to a Type II error is called the "power" of the test; the probability that a statistical test will not lead to a Type I error is called the "confidence level" of the test.¹

Given an increase in an outcome (e.g., whether a person is employed) of an expected size and a predetermined sample size, the power and confidence level of statistical tests can be determined if, in addition, the variation of the outcome being tested is known. Conversely, once a desired precision standard (that is, power and confidence level) and sample size have been specified, we can compute the minimum impact estimate that can be detected by the tests, given that the variation in the outcome is known.

¹The statistical significance of a test is one minus its confidence level.

Table B.1 presents "minimum detectable responses" (MDRs) for the sample of 375 treatment-group members and 370 control-group members that will be used in the impact analysis. The standard deviations used in the MDR computations are based on outcomes for the control group during months 1 to 9 after enrollment. The power of the tests was set at 90 percent and the confidence level at 95 percent. One-tailed tests were used to be consistent with the expectation that the impacts of the demonstration would be in one direction only for each outcome--that employment and earnings would increase and, thus, that SSI payments would fall. Table B.1 presents MDRs for monthly impacts on employment, earnings, and SSI receipt. Earnings and SSI impacts can be converted into MDRs for the nine-month period or for a full calendar year by multiplying by 9 or 12, respectively. Because the employment outcome for the impact analysis is defined as the presence of earnings in any of the nine months, the MDR in the table also applies to the full nine-month (or one-year) period.

Given the sample size and variation of outcomes, the statistical tests of the impact analysis will be able to detect true treatment/control differences in the likelihood of employment 10.6 percentage points or more.¹ Given the selected precision standards, if transitional employment increases employment by 10.6 percentage points (or more), there is only a 10 percent chance that such a difference would be called "random" by our statistical tests (consistent with the specification of 90 percent power). Conversely, if transitional employment had no impact, there would be only a 5 percent chance that a treatment/control difference would occur that would be large enough to be called "true."

Similarly, the statistical tests of the impact analysis will be able to detect treatment/control differences in earnings of as small as \$20 per month (or approximately \$180 over nine months) and treatment/control differences in SSI payments of as small as \$35 per month (or approximately \$315 over nine months).²

¹The minimum detectable responses were computed assuming that a simple difference of means test would be used as the statistical methodology. Regression analysis decreases the variation in estimates of treatment/control differences by "explaining" some of the variation of the estimates by the variation of the independent variables in the regression model. Therefore, since regression analysis was used, actual MDRs are somewhat smaller.

²Impact estimates based on subsets of the full analysis sample will have less precision.

TABLE B.1
MINIMUM IMPACT ESTIMATES DETECTABLE BY STATISTICAL
TESTS OF THE IMPACT ANALYSIS, BY OUTCOME

| | Mean ^a | Standard Deviation ^a | Minimum Detectable Response ^b |
|--|-------------------|------------------------------------|--|
| Whether Employed (Percent) | 41.6 | 49.4 | 10.6 |
| Earned Income per Month (Dollars) | 47.71 | 92.53 | 19.87 |
| Total SSI Receipt per Month (Dollars) | 305.20 | 163.93 | 35.20 |
| Sample Size | | | 745 |

^a Means and standard deviations are based on the earnings and SSI receipt of the control group during months 1 to 9 after enrollment.

^b Computations of the minimum detectable impacts are based on a precision standard of 90 percent power and 95 percent confidence, using a one-tailed test; a sample of 375 treatment-group members and 370 control-group members; and the standard deviations of the outcomes in the second columns.

Given the observed costs of the demonstration projects, these MDRs are sufficient for enabling the evaluation to determine whether the transitional-employment services provided in the demonstration generate impacts that are large enough to offset their costs. That is, if the "true" impacts are large enough to justify the costs of the program, then we have a high probability of finding these impacts statistically significant in our analysis. Thus, the number of persons enrolled in the treatment group and the control group is sufficient to meet the statistical needs of the forthcoming impact and benefit-cost analyses.

APPENDIX C
SUPPLEMENTAL TABLES

TABLE C.1

CHARACTERISTICS OF TRAINING JOBS

| Type of Training Job ^a (Percent of Placements) | Children's | | | | | | | | |
|---|-------------------|----------------------|-------------------------|----------------------|----------------------|-------------------------|-------------------------|---------------------------------|-----------------|
| | AHEDD (PA, DE) | ARC/MU (Monmouth) | The Center (Chicago) | Hospital (Boston) | ECF (Los Angeles) | Goodwill (Milwaukee) | UWash/PCC (Portland) | UWis/Stout (Rural Wisconsin) | All Projects |
| Food service occupations | 0.0 | 0.0 | 66.7 | 53.3 | 16.7 | 0.0 | 100.0 | 46.2 | 42.4 |
| Cleaning and custodial occupations | 0.0 | 0.0 | 28.6 | 46.7 | 20.5 | 100.0 | 0.0 | 15.4 | 24.1 |
| Light assembly/sorters/packers | 0.0 | 100.0 | 0.0 | 0.0 | 25.6 | 0.0 | 0.0 | 23.1 | 14.7 |
| Clerical | 0.0 | 0.0 | 4.8 | 0.0 | 18.0 | 0.0 | 0.0 | 7.7 | 9.4 |
| Personal service occupations | 0.0 | 0.0 | 0.0 | 0.0 | 5.1 | 0.0 | 0.0 | 0.0 | 2.4 |
| Landscaping/grounds maintenance | 0.0 | 0.0 | 0.0 | 0.0 | 14.1 | 0.0 | 0.0 | 7.7 | 7.1 |
| Average Expected Hours of Work per Week per Placement | n.a. | 25.0 | 33.6 | 20.0 | 24.8 | 19.7 | 23.9 | 23.8 | 24.7 |
| Average Expected Wage Rate per Hour per Placement | n.a. | 1.75 | 3.75 | 3.46 | 1.71 | 3.35 | 0.00 | 3.35 | 2.32 |
| Percent Subsidized Job Placements | n.a. | 50.0 | 28.6 | 96.7 | 84.6 | 0.0 | 0.0 | 76.9 | 65.9 |
| Percent of Training Placements That Rolled Over into Permanent Jobs | n.a. | 0.0 | 0.0 | 3.3 | 10.3 | 0.0 | 0.0 | 46.2 | 8.8 |
| Total Number of Training Job Placements | 0 | 2 | 21 | 30 | 78 | 3 | 23 | 13 | 170 |

SOURCE: Client Tracking System data.

^a Food service occupations include dishwashers, food preparation, and bus persons. Cleaning and custodial occupations include janitors, housekeepers, car washers, and laundry aides. Light assembly/sorters/packers include carriers, quality control checkers, hand and machine assembly, welder/sealers, sorters, packers, and offset printers. Clerical jobs include office occupations, librarian's aid, and telephone clerk. Personal service occupations include school bus aide, salesperson, childcare, and locker room attendant.

TABLE C.2

CHARACTERISTICS OF POTENTIALLY PERMANENT JOB PLACEMENTS

| Type of Job ^a (Percent of Placements) | Children's | | | | | | | | All Projects |
|---|-------------------|----------------------|-------------------------------------|----------------------|----------------------|-------------------------|-------------------------|---------------------------------|--------------|
| | AHEDD (PA, DE) | ARC/MU (Monmouth) | The Center Hospital (Chicago) | Hospital (Boston) | ECF (Los Angeles) | Goodwill (Milwaukee) | UWash/PCC (Portland) | UWis/Stout (Rural Wisconsin) | |
| Food service occupations | 39.6 | 16.1 | 16.7 | 47.8 | 10.0 | 36.0 | 53.3 | 35.5 | 30.1 |
| Cleaning and custodial occupations | 37.5 | 14.3 | 66.7 | 47.8 | 26.0 | 60.0 | 26.7 | 32.3 | 32.3 |
| Light assembly/sorters/packers | 16.7 | 57.1 | 16.7 | 0.0 | 22.0 | 0.0 | 0.0 | 9.7 | 20.5 |
| Clerical | 0.0 | 3.6 | 0.0 | 0.0 | 38.0 | 0.0 | 3.3 | 6.5 | 8.9 |
| Personal service occupations | 4.2 | 8.9 | 0.0 | 0.0 | 4.0 | 4.0 | 13.3 | 9.7 | 6.3 |
| Landscaping/grounds maintenance | 2.1 | 0.0 | 0.0 | 4.4 | 0.0 | 0.0 | 3.3 | 6.5 | 1.9 |
| Average Expected Hours of Work per Week per Placement | 22.3 | 30.2 | 36.0 | 30.8 | 28.4 | 19.7 | 24.5 | 22.4 | 25.9 |
| Average Expected Wage Rate per Hour per Placement | 3.50 | 3.90 | 4.58 | 4.99 | 3.31 | 3.56 | 3.36 | 3.37 | 3.65 |
| Percent Subsidized Job Placements | 2.1 | 1.8 | 0.0 | 0.0 | 34.0 | 44.0 | 63.3 | 71.0 | 26.4 |
| Total Number of Permanent Job Placements | 48 | 56 | 6 | 23 | 50 | 25 | 30 | 31 | 269 |

SOURCE: Client Tracking System data.

^a Food service occupations include dishwashers, food preparation, and bus persons. Cleaning and custodial occupations include janitors, housekeepers, car washers, and laundry aides. Light assembly/sorters/packers includes carriers, quality control checkers, hand and machine assembly, welder/sealers, sorters, packers, and offset printers. Clerical jobs include office occupations, librarian's aid, and telephone clerk. Personal service occupations include school bus aide, salesperson, childcare, and locker room attendant.

TABLE C.3

CHARACTERISTICS OF ALL JOB PLACEMENTS

| Type of Job ^a (Percent of Placements) | Children's | | | | | | | | |
|---|-------------------|----------------------|-------------------------|----------------------|----------------------|-------------------------|-------------------------|---------------------------------|-----------------|
| | AHEDD (PA, DE) | ARC/MU (Monmouth) | The Center (Chicago) | Hospital (Boston) | ECF (Los Angeles) | Goodwill (Milwaukee) | UWash/PCC (Portland) | UWis/Stout (Rural Wisconsin) | All Projects |
| Food service occupations | 39.6 | 15.5 | 55.6 | 50.9 | 14.1 | 32.1 | 73.6 | 38.6 | 34.9 |
| Cleaning and custodial occupations | 37.5 | 13.8 | 37.0 | 47.2 | 22.7 | 64.3 | 15.1 | 27.3 | 29.2 |
| Light assembly/sorters/packers | 16.7 | 58.6 | 3.7 | 0.0 | 24.2 | 0.0 | 0.0 | 13.6 | 18.2 |
| Clerical | 0.0 | 3.5 | 3.7 | 0.0 | 25.8 | 0.0 | 1.9 | 6.8 | 9.1 |
| Personal service occupations | 4.2 | 8.6 | 0.0 | 0.0 | 4.7 | 3.6 | 7.6 | 6.8 | 4.8 |
| Landscaping/grounds maintenance | 2.1 | 0.0 | 0.0 | 1.9 | 8.6 | 0.0 | 1.9 | 6.8 | 3.9 |
| Average Expected Hours of Work per Week per Placement | 22.3 | 30.3 | 34.4 | 22.8 | 26.2 | 19.6 | 24.0 | 22.9 | 25.4 |
| Average Expected Wage Rate per Hour per Placement | 3.50 | 3.86 | 3.78 | 3.87 | 2.39 | 3.54 | 1.74 | 3.35 | 3.11 |
| Percent Subsidized Job Placements | 2.1 | 3.4 | 22.2 | 54.7 | 64.8 | 39.3 | 35.8 | 72.7 | 41.7 |
| Total Number of Job Placements | 48 | 58 | 27 | 53 | 128 | 28 | 53 | 44 | 439 |

SOURCE: Client Tracking System data.

^a Food service occupations include dishwashers, food preparation, and bus persons. Cleaning and custodial occupations include janitors, housekeepers, car washers, and laundry aides. Light assembly/sorters/packers include carriers, quality control checkers, hand and machine assembly, welder/sealers, sorters, packers, and offset printers. Clerical jobs include office occupations, librarian's aid, and telephone clerk. Personal service occupations include school bus aide, salesperson, childcare, and locker room attendant.

APPENDIX D

ESTIMATING SERVICE DELIVERY/USE BY VARIOUS
SUBGROUPS OF THE SAMPLE

APPENDIX D

ESTIMATING SERVICE DELIVERY/USE BY VARIOUS
SUBGROUPS OF THE SAMPLE

An important feature of the evaluation of transitional employment is to determine whether certain characteristics of the projects or characteristics of the treatment-group members themselves influenced how the intervention was implemented. Information on systematic differences in the receipt of the intervention is useful not only in interpreting the overall results, but also in helping policymakers design and target future transitional-employment programs to those who will benefit most from such services and to those for whom the training will be most cost-effective.

A. DATA USED IN THE ANALYSIS

The factors that potentially influence the effectiveness of the program can be characterized as either personal or environmental:¹

- o Demographics: age, race, gender
- o Level of disability: IQ score, past institutionalization, current psychiatric treatment, physical or emotional problems that limit work ability, social and speech problems
- o Living arrangement²
- o Type of employment in the 12 months prior to enrollment
- o Ability to use public transportation
- o Intake worker's opinion of success in competitive employment

¹ Stratifying variables used to identify personal characteristics are a subset of those described more fully in Appendix B.

² For this analysis the subgroup of treatment-group members who were living with parents was further divided into those whose parents supported their program participation and those whose parents were not supportive. This distinction did not alter the results presented in this appendix.

Different approaches to the transitional-employment model adopted by the projects and the different environmental conditions (for example, unemployment rate and the availability of appropriate jobs) were captured by a series of variables that identified the project in which the treatment-group member was enrolled. Because of the colinearity of project and environmental characteristics, it was not possible to create separate measures of each; thus, they have been combined in binaries that indicate project membership.

The following were the outcome measures for service delivery and use:

- o Number of months enrolled in the demonstration
- o Number of months enrolled in the demonstration with active status
- o For those in the Client Service Record subsample, number of hours of service received per month enrolled
- o Percent of sample with any program job (status change = 3,4,5,8)
- o Percent of sample with permanent job or training on permanent job (status change = 4,5,8)
- o Percent of sample with permanent job (status change = 5,8)
- o Percent of sample terminated with a job (status change = 8)

For those who were terminated with a job:

- o Expected hours per week
- o Expected wage per hour (dollars)
- o Expected earnings per week (dollars)

B. STATISTICAL METHODOLOGY

There are statistical tests that allow us to compare the raw mean values of outcomes across a single dimension, such as project. However, ordinary least square regression (sometimes referred to as OLS or regression analysis) enables us to compare mean values across a particular dimension while controlling for the possible confounding effects of other dimensions.

What this means can best be described with an example. We know that the personal characteristics of individuals vary considerably across projects. Say that we believed that some of these characteristics (such as level of disability or previous work experience) influenced the ability of projects to place participants in jobs. Then, if we observe that Project X had a lower placement rate than Project Y, we might look back at the personal characteristics of the sample members at each project and make the argument that the lower placement rate was due to the fact that the sample at Project X was more impaired and had less previous work experience. Comparing raw mean placement rates for Project X and Project Y is certainly valid, but some information is lost--namely, that Project X was dealing with a sample that was more difficult to serve. Thus, we turn to regression analysis to compare outcomes across projects (or across subgroups defined along other dimensions). Regression analysis enables us to recalculate, for example, the mean placement rates of projects by assuming that sample members at each project have identical characteristics. The "identical characteristics" chosen are the mean values of the characteristics for the entire sample.

A regression model for the analysis of service delivery/use was specified as follows:

$$Y = a_0 + a_c C + a_p P + a_x X + e ,$$

where Y is a service outcome, C is the set of binary variables that represent personal characteristics, P is the set of binary variables that represent project, X is a set of binary variables that represent other factors that could influence service delivery/use, and e is the disturbance term. In the model described above, a_c and a_p measure differences in service delivery/use between subgroups of the sample as defined by personal characteristics and projects, respectively. For example, in a model where Y is the number of months enrolled in the program, the coefficient on the gender binary estimated the difference between males and females in the average number of months enrolled. A statistical test is then performed to test whether the estimated coefficient is statistically different from zero--that is, whether the estimated difference between males and females is likely to have occurred by chance or whether

a systematic difference exists between males and females in the number of months enrolled in the program.¹

In addition, another statistical test was performed to determine whether regression-adjusted project means differed significantly from the overall sample mean. The deviation of Project i from the overall mean was computed as follows:

$$D_i = a_{pi} - \sum_{j=1}^7 \text{prop}_j * a_{pj},$$

where D_i is the deviation of the outcome Y for Project i from the overall sample mean, a_{pi} is the coefficient on Project i from the regression, and prop_j is the proportion of the sample in project j. (Binaries for only seven of the eight projects were included to avoid multicollinearity in estimating the regression coefficients.) The deviation of the omitted project from the overall mean value of Y is:

$$- \sum_{j=1}^7 \text{prop}_j * a_{pj}.$$

Then, the adjusted mean value for each project is the sum of the overall sample mean of Y and the computed deviation for the particular project.

C. RESULTS OF THE ANALYSIS

Regression analysis carried out on the full sample of 375 treatment-group members indicated that subgroups defined by individual personal characteristics did not differ in their receipt and use of transitional-employment services. (See Tables D.1 to D.3, which contain estimated coefficients for the regressions.) In particular, the program was equally successful at serving and placing in jobs those who exhibited a wide range of disabilities. IQ-score level and the existence of physical, emotional, social, or speech problems (as identified by the intake interviewer) had no effect on

¹ Statistical tests were performed at the 95 percent confidence level, using a two-tailed test, since the hypothesis for service use was that use would either increase or decrease depending on the subgroup. This level of confidence implies that there is only a 5 percent chance of calling a random difference in outcomes a "true" or systematic difference. In addition, for characteristics that stratified the sample into three or more groups, a preliminary test was carried out to determine whether the set of coefficients for all the subgroups in the stratification were jointly equal to zero. If the null hypothesis could not be rejected, apparently statistically significant coefficient-level results were judged to be spurious.

TABLE D.1
ESTIMATED REGRESSION COEFFICIENTS FOR MODELS
USED TO EXAMINE SERVICE DELIVERY/USE
(t-statistics in parentheses)

| | Number of Months Enrolled | Number of Months Active | Hours of Service Per Month Enrolled ^a |
|---|---------------------------------|-------------------------------|---|
| Project | # | # | |
| ARC/MU | 1.4* (1.97) | 3.6* (4.06) | 8.9 (1.71) |
| The CENTER | -1.9* (-2.28) | -1.4 (-1.35) | 7.6 (1.41) |
| Children's Hospital | 1.0 (1.27) | 2.8* (2.94) | 10.6* (2.03) |
| ECF | 2.3* (3.37) | 1.5 (1.85) | 12.9* (2.50) |
| Goodwill | 0.2 (0.24) | 3.0* (3.86) | 4.8 (0.97) |
| UWash/PCC | 1.5* (2.07) | -1.6 (-1.83) | 7.2 (1.62) |
| UWis/Stout | 1.5* (1.98) | -0.8 (-0.81) | 2.6 (0.58) |
| Age | | | |
| 22 or older | -1.0 (-1.76) | -0.9 (-1.26) | -1.7 (-0.45) |
| Gender | | | |
| Male | -0.1 (-0.39) | 0.3 (0.61) | -3.2 (-1.28) |
| Race | | | |
| Black | -0.1 (-0.27) | 0.8 (1.47) | 5.9* (1.97) |
| Receipt of Transfers | | | |
| Food Stamps | 0.4 (0.75) | -0.8 (-1.09) | 0.8 (-0.18) |
| Welfare | -0.4 (-0.73) | -0.3 (-0.40) | -2.3 (-0.59) |
| Medicaid | -0.2 (-0.31) | -0.3 (-0.32) | -3.2 (-0.58) |
| Employment History during the Year prior to Enrollment | | | |
| Had a regular job | 0.7 (1.02) | 0.5 (0.60) | -0.0 (-0.00) |
| Had mainstream job training or volunteer job | 0.7 (0.92) | 1.1 (1.28) | 1.4 (0.30) |
| Worked in a sheltered workshop or enclave | 1.5* (2.70) | 1.0 (1.54) | 2.1 (0.55) |
| Had other type of job | 1.0 (1.64) | 1.4 (1.91) | -2.0 (-0.40) |
| School | | | |
| In school | -0.5 (-0.91) | -0.3 (-0.39) | -2.5 (-0.67) |
| Unassisted Use of Public Transportation | | | |
| Has used regularly | -0.4 (-0.89) | 0.1 (0.16) | 7.5* (2.27) |

TABLE D.1 (continued)

| | Number of Months Enrolled | | Number of Months Active | | Hours of Service Per Month Enrolled ^a | |
|---|---------------------------------|---------|-------------------------------|---------|---|---------|
| Living Arrangement | | | | | | |
| In a supervised or semi- supervised setting | 0.8 | (1.22) | 1.6 | (1.93) | 6.5 | (1.16) |
| With parents | 0.5 | (0.93) | 0.4 | (0.65) | 4.3 | (1.19) |
| Physical, Social, and Emotional Disabilities | | | | | | |
| Has been institution- alized | -0.2 | (-0.43) | -0.9 | (-1.28) | 6.2 | (1.59) |
| Is receiving psychi- atric treatment | 0.2 | (0.28) | -0.4 | (-0.45) | 1.3 | (0.28) |
| Has 1 or more physical disabilities that limit employment | 0.3 | (0.84) | 0.9 | (1.83) | 3.0 | (1.26) |
| Has 1 or more emotional problems that limit employment | -1.0 | (-1.90) | -0.4 | (-0.55) | -3.3 | (-0.79) |
| Exhibits social behavior inadequate for job interview situation | -0.5 | (-1.24) | 0.0 | (0.08) | 0.8 | (0.27) |
| Cannot speak clearly in sentences | -0.1 | (0.22) | 0.0 | (0.09) | 1.6 | (0.56) |
| Intake Worker's Opinion of Probability of Success in Competitive Job | | | | | | |
| High | 0.8 | (1.73) | 1.7* | (3.18) | 5.1 | (1.89) |
| Cohort | | | | | | |
| Enrolled Prior to November 1985 | -0.1 | (-0.17) | 1.1* | (2.31) | 2.8 | (1.06) |
| IQ Score | | | | | | |
| 55 to 70 | -0.0 | (-0.03) | -1.2 | (-1.64) | 1.5 | (0.38) |
| 40 to 54 | -0.5 | (-0.73) | -1.8* | (-2.27) | 2.2 | (0.52) |
| Less than 40 | -1.3 | (-1.33) | -1.7 | (-1.40) | 9.4 | (1.25) |
| Number of Months on SSI | 0.0 | (1.75) | 0.0 | (1.45) | 0.0 | (1.02) |
| Total SSI Received During Year Prior to Enrollment (Thousands of Dollars) | -0.1 | (-0.81) | 0.1 | (0.62) | -0.3 | (-0.26) |
| Eligibility for Social Security in the Month Prior to Enrollment Was Eligible | -0.2 | (-0.34) | 0.5 | (0.81) | 1.5 | (0.42) |

TABLE D.1 (continued)

| | Number of Months Enrolled | | Number of Months Active | | Hours of Service Per Month Enrolled ^a |
|--|---------------------------------|--------|-------------------------------|--------|---|
| Total Earned Income During Year Prior to Enrollment (Thousands of Dollars) | 0.2 | (0.64) | 0.2 | (0.71) | -0.1 (-0.07) |
| Mean | 10.5 | | 6.5 | | 9.8 |
| Sample Size | 367 | | 367 | | 109 |

NOTE: These data come from the Client Tracking System and the Client Service Record.

^a

Service intensity is measured as the number of hours that staff spent working directly with a client divided by the number of months that the client was enrolled in the demonstration. The number of hours that staff spent with clients is available only for a randomly selected subset of the treatment group.

The F-statistic for the model (1.53 with 39 and 69 degrees of freedom) did not reject the null hypothesis (namely, that none of the explanatory variables explained a significant amount of the variation of hours of service per month enrolled). Therefore, findings that individual coefficients are statistically significant are likely to be spurious.

*Statistically significant at the 95 percent confidence level in a two-tailed test.

#Average values of the outcome differ statistically across subgroups defined by this variable at the 95 percent confidence level.

TABLE D.2

ESTIMATED REGRESSION COEFFICIENTS FOR MODELS USED TO
EXAMINE DETERMINANTS OF PLACEMENT IN JOBS BY PROGRAM

(t-statistics in parentheses)

| | Percentage with Any Program Jobs | Percentage with Any Permanent Job or Permanent Job Training | Percentage with Any Permanent Job | Percentage Terminated with a Job |
|---|---|--|--|--|
| Project | # | # | # | # |
| ARC/MU | 49.8* (5.43) | 42.3* (4.27) | 29.6* (2.93) | 33.0* (3.34) |
| The Center | 41.6* (3.87) | -24.2* (2.09) | -17.6 (-1.49) | -16.4 (-1.41) |
| Children's Hospital | 61.3* (6.26) | 4.4 (0.42) | 11.9 (1.10) | 0.9 (0.08) |
| ECF | 26.9* (3.11) | 3.5 (0.37) | 1.0 (0.11) | -6.7 (-0.72) |
| Goodwill | 14.8 (1.62) | 6.1 (0.62) | 0.8 (0.08) | 4.4 (0.44) |
| UWash/PCC | 39.7* (4.29) | 8.3 (0.83) | 0.1 (0.01) | -1.3 (-0.13) |
| UWis/Stout | 12.1 (1.25) | 3.0 (0.29) | 0.2 (0.02) | -7.3 (-0.70) |
| Age | | | | |
| 22 or older | -4.2 (-0.60) | -0.6 (-0.08) | 0.4 (0.05) | -2.9 (-0.39) |
| Gender | | | | |
| Male | -0.9 (-0.18) | -1.2 (-0.23) | -4.0 (-0.75) | -7.6 (-1.47) |
| Race | | | | |
| Black | 5.6 (1.00) | 7.2 (1.19) | 7.2 (1.16) | 0.9 (0.14) |
| Receipt of Transfers | | | | |
| Food Stamps | 2.2 (0.28) | 4.4 (0.54) | 2.5 (0.30) | -6.1 (-0.75) |
| Welfare | -2.0 (-0.27) | -8.5 (-1.04) | -7.0 (-0.84) | 2.6 (0.32) |
| Medicaid | 12.4 (1.28) | -9.1 (-0.87) | -19.4 (-1.81) | -17.0 (-1.63) |
| Employment History during the year Prior to Enrollment | | # | | |
| Had a regular job | 11.8 (1.27) | 25.7* (2.54) | 17.9 (1.74) | 7.8 (0.77) |
| Had mainstream job training or volunteer job | 11.4 (1.27) | 16.9 (1.75) | 7.3 (0.74) | 1.9 (0.20) |
| Worked in a sheltered workshop or enclave | 1.7 (0.24) | -2.6 (-0.36) | -7.2 (-0.96) | -7.9 (-1.08) |
| Had other type of job | 13.0 (1.69) | 9.3 (1.13) | 8.5 (1.00) | 5.4 (0.65) |
| School | | | | |
| In school | 2.6 (0.36) | 3.7 (0.46) | 1.8 (0.23) | 3.0 (0.38) |
| Unassisted Use of Public Transportation | | | | |
| Has used regularly | 10.0 (1.62) | 10.0 (1.50) | 11.2 (1.66) | 11.5 (1.74) |

TABLE D.2 (continued)

| | Percentage with Any Program Jobs | Percentage with Any Permanent Job or Permanent Job Training | Percentage with Any Permanent Job | Percentage Terminated with a Job |
|---|---|--|--|--|
| Living Arrangement | # | | | |
| In a supervised or semi- supervised setting | 21.1* (2.40) | 10.7 (1.12) | 6.7 (0.69) | 12.2 (1.28) |
| With parents | 5.3 (0.81) | 4.5 (0.64) | 2.1 (0.29) | 2.6 (0.37) |
| Physical, Social, and Emotional Disabilities | | | | |
| Has been institution- alized | -0.2 (-0.03) | 12.7 (1.69) | 1.4 (0.18) | -8.1 (-1.08) |
| Is receiving psychi- atric treatment | -8.1 (-1.00) | -16.4 (-1.84) | -6.6 (-0.73) | -6.4 (-0.73) |
| Has 1 or more physical disabilities that limit employment | 3.6 (0.73) | 1.8 (0.33) | 4.0 (0.72) | 3.8 (0.72) |
| Has 1 or more emotional problems that limit employment | 8.4 (1.25) | -1.6 (-0.22) | -1.9 (-0.26) | -0.9 (-0.12) |
| Exhibits social behavior inadequate for job interview situation | -7.2 (-1.40) | -4.5 (-0.82) | -3.9 (-0.69) | -6.8 (-1.23) |
| Cannot speak clearly in sentences | 1.9 (0.35) | 3.2 (0.53) | 2.6 (0.43) | -2.3 (-0.39) |
| Intake Worker's Opinion of Probability of Success in Competitive Job | | | | |
| High | 15.9* (2.82) | 22.8* (3.74) | 21.3* (3.41) | 17.2* (2.83) |
| Cohort | | | | |
| Enrolled Prior to November | 11.1* (2.24) | 7.1 (1.33) | 4.5 (0.82) | 2.9 (0.55) |
| IQ Score | | | | |
| 55 to 70 | 1.7 (0.22) | 2.0 (0.24) | 0.5 (0.06) | -1.5 (-0.18) |
| 40 to 54 | -11.7 (-1.43) | -11.1 (-1.26) | -5.5 (-0.62) | -8.4 (-0.95) |
| Less than 40 | -12.9 (-1.06) | -16.8 (-1.27) | -9.8 (-0.73) | -7.2 (-0.55) |
| Number of Months on SSI | 0.0 (0.62) | 0.0 (0.27) | -0.0 (-0.19) | 0.0 (0.73) |
| Total SSI Received During Year Prior to Enrollment (Thousands of Dollars) | 1.2 (0.55) | 3.5 (1.48) | 4.3 (1.79) | 1.5 (0.65) |
| Eligibility for Social Security in the Month Prior to Enrollment | | | | |
| Was Eligible | -0.7 (-0.11) | 2.2 (0.30) | 6.5 (0.88) | 3.7 (0.51) |

TABLE D.2 (continued)

| | Percentage with Any Program Jobs | | Percentage with Any Permanent Job or Permanent Job Training | | Percentage with Any Permanent Job | | Percentage Terminated with a Job | |
|--|---|--------|--|--------|--|--------|--|--------|
| Total Earned Income During Year Prior to Enrollment (Thousands of Dollars) | 2.2 | (0.72) | 1.7 | (0.52) | 4.5 | (1.32) | 3.2 | (0.98) |
| Mean | 67.6 | | 49.0 | | 38.4 | | 33.5 | |
| Sample Size | 367 | | 367 | | 367 | | 367 | |

NOTE: These data come from the Client Tracking System.

*Statistically significant at the 95 percent confidence level in a two-tailed test.

#Average values of the outcome differ statistically across subgroups defined by this variable at the 95 percent confidence level.

TABLE D.3

ESTIMATED REGRESSION COEFFICIENTS FOR MODELS USED TO EXAMINE
DETERMINANTS OF EXPECTED HOURS, WAGES, AND WEEKLY
EARNINGS FOR THOSE TERMINATED WITH A JOB
(t-statistics in parentheses)

| | Expected Hours per Week | Expected Wage per Hour (dollars) | Expected Wages per Week (dollars) |
|---|----------------------------|--|---|
| Project | # | # | # |
| ARC/MU | 7.8* (2.52) | 0.48* (2.75) | 47.21* (2.93) |
| The Center | 11.2* (2.10) | 1.25* (3.35) | 78.57* (2.82) |
| Children's Hospital | 10.4* (2.74) | 1.77* (6.66) | 94.77* (4.75) |
| ECF | 7.5* (2.09) | 1.00* (3.98) | 59.93* (3.20) |
| Goodwill | -2.5 (-0.78) | 0.20 (0.87) | -3.73 (-0.22) |
| UWash/PCC | 2.7 (0.80) | -0.28 (-1.18) | 2.82 (0.16) |
| UWis/Stout | 6.2 (1.69) | -0.04 (-0.16) | 27.78 (1.44) |
| Age | | | |
| 22 or older | -5.6* (-2.26) | -0.25 (-1.40) | -26.26 (-1.95) |
| Gender | | | |
| Male | 2.8 (1.56) | 0.21 (1.75) | 20.77* (2.24) |
| Race | | | |
| Black | 5.8* (2.56) | -0.08 (-0.54) | 21.39 (1.81) |
| Receipt of Transfers | | | |
| Food Stamps | 1.6 (0.52) | -0.20 (-0.94) | -0.03 (-0.00) |
| Welfare | -4.0 (-1.26) | 0.28 (1.28) | -5.39 (-0.33) |
| Medicaid | -0.4 (-0.11) | -0.33 (-1.32) | -13.39 (-0.71) |
| Employment History during the year Prior to Enrollment | | | |
| Had a regular job | 3.3 (0.99) | -0.20 (-0.86) | 4.95 (0.29) |
| Had mainstream job training or volunteer job | -1.6 (-0.42) | 0.03 (0.12) | -11.48 (-0.56) |
| Worked in a sheltered workshop or enclave | -1.1 (-0.35) | -0.13 (-0.62) | -17.20 (-1.07) |
| Had other type of job | -2.1 (-0.78) | 0.05 (0.24) | -8.79 (-0.62) |
| School | | | |
| In school | -1.1 (-0.41) | -0.55* (-2.95) | -19.36 (-1.40) |
| Unassisted Use of Public Transportation | | | |
| Has used regularly | 3.1 (1.07) | 0.09 (0.47) | 11.31 (0.75) |

TABLE D.3 (continued)

| | Expected Hours per Week | Expected Wage per Hour (dollars) | Expected Wages per Week (dollars) |
|---|----------------------------|--|---|
| Living Arrangement | | | |
| In a supervised or semi-supervised setting | -4.0 (-1.18) | -0.09 (-0.37) | -16.35 (-0.93) |
| With parents | -4.8 (-1.89) | -0.25 (-1.38) | -27.97* (-2.09) |
| Physical, Social, and Emotional Disabilities | | | |
| Has been institutionalized | 3.6 (1.28) | 0.20 (1.04) | 20.63 (1.41) |
| Is receiving psychiatric treatment | -5.0 (-1.57) | 0.09 (0.40) | -19.84 (-1.21) |
| Has 1 or more physical disabilities that limit employment | -2.6 (-1.46) | -0.10 (-0.80) | -12.95 (-1.39) |
| Has 1 or more emotional problems that limit employment | 0.9 (0.31) | -0.39* (-2.00) | -5.57 (-0.38) |
| Exhibits social behavior inadequate for job interview situation | -0.3 (0.25) | -0.07 (-0.49) | -3.55 (-0.33) |
| Cannot speak clearly in sentences | -1.2 (-0.51) | 0.05 (0.32) | -4.23 (-0.35) |
| Intake Worker's Opinion of Probability of Success in Competitive Job | | | |
| High | -1.7 (-0.93) | 0.16 (1.24) | -3.31 (-0.34) |
| Cohort | | | |
| Enrolled Prior to November 1985 | 3.9* (2.03) | 0.04 (0.29) | 17.42 (1.74) |
| IQ Score | | | |
| 55 to 70 | 2.3 (0.88) | -0.27 (-1.43) | -1.29 (-0.09) |
| 40 to 54 | 0.5 (0.18) | -0.31 (-1.50) | -8.82 (-0.57) |
| Less 40 | -4.3 (-0.72) | -0.45 (-1.10) | -28.83 (-0.94) |
| Number of Months on SSI | -0.0 (-1.79) | -0.0 (-0.08) | -0.17 (-1.32) |
| Total SSI Received During Year Prior to Enrollment (Thousands of Dollars) | 0.5 (0.69) | -0.07 (-1.21) | -0.32 (-0.08) |
| Eligibility for Social Security in the Month Prior to Enrollment | | | |
| Was Eligible | 1.0 (0.41) | -.33 (-1.89) | -5.95 (-0.46) |

TABLE D.3 (continued)

| | Expected Hours per Week | | Expected Wage per Hour (dollars) | | Expected Wages per Week (dollars) | |
|---|----------------------------|--------|--|--------|---|--------|
| Total Earned Income During Year Prior to Enrollment (Thousands of Dollars) | 1.0 | (1.12) | 0.03 | (0.55) | 4.33 | (0.97) |
| Mean | 27.1 | | 3.95 | | 110.25 | |
| Sample Size | 123 | | 123 | | 123 | |

NOTE: These data come from the Client Tracking System.

*Statistically significant at the 95 percent confidence level in a two-tailed test.

#Average values of the outcome differ statistically across subgroups defined by this variable at the 95 percent confidence level.

number of months spent in the program, the likelihood of being placed in a job, or the expected weekly earnings from a termination job.¹

Neither were there any consistent differences in service receipt by other personal characteristics, such as age, gender, race, living arrangement, previous job history, income level, or month of enrollment. An isolated exception to this included an increased likelihood that those who held a regular job in the year prior to enrollment would be placed in a permanent job or training for a permanent job (see Table D.2). Another exception was that male sample members who had terminated with a job were expected to earn \$21 per week more than their female counterparts (see Table D.3). This statistically significant, but modest, increase in weekly earnings was due to the combined effect of increased hours worked and hourly wage for males, neither of which were statistically significant.

The intake worker's opinion of the likelihood of the sample member's success in competitive employment had an impact on the ability of the projects to place clients (see Table D.2). The intake worker's opinion of success was likely to have been a proxy for a number of unmeasured factors, such as motivation, as determined subjectively by the intake worker. Sample members whom intake workers rated as having a high probability of succeeding in competitive employment were more likely to be placed in all types of jobs than were those who were rated as having a medium or low probability. However, this assessment had no impact on their expected earnings from the termination job.

The only difference in service delivery/use consistent among all outcomes was across projects. (Tables D.4 to D.6 contain regression-adjusted mean values of outcomes by project.) It should be noted that, despite the variations in personal characteristics across projects, regression-adjusted means differ very little from the raw means found in Chapter VI. This is consistent with our finding that there was very little connection between personal characteristics and the use of program services. Nonetheless, the projects exhibited significant differences in service delivery/use for all outcomes except the hours of service received per month enrolled, as reported in the Client Service Record. However, the differences among the projects were not

¹ Note that multi-dimensional subgroups such as those that simultaneously captured a number of handicapping conditions were not included in this analysis.

TABLE D.4

SERVICE DELIVERY/USE BY PROJECT
(Regression-Adjusted Project Means)

| | Children's | | | | | | | |
|--|-------------------|----------------------|-------------------------------------|-------------------------|----------------------|-------------------------|---------------------------------|-----------------|
| | AHEDD (PA, DE) | ARC/MU (Monmouth) | The Center Hospital (Chicago) | Goodwill (Milwaukee) | ECF (Los Angeles) | UWash/PCC (Portland) | UWis/Stout (Rural Wisconsin) | All Projects |
| Average Number of Months Enrolled | 9.6* | 11.1 | 7.7* | 10.6 | 11.9* | 9.8 | 11.1 | 10.5 |
| Average Number of Months Active | 5.7 | 9.3* | 4.3* | 8.5* | 7.2 | 8.7* | 4.1* | 6.5 |
| For the CSR Subsample ^a Average Hours of Service Received per Month Enrolled | 3.5 | 12.4 | 11.1 | 14.1 | 16.4 | 8.4 | 10.7 | 9.8 |
| Sample Sizes | | | | | | | | |
| Full client sample | 80 | 37 | 25 | 29 | 76 | 35 | 44 | 367 |
| CSR subsample | 26 | 11 | 8 | 9 | 20 | 10 | 13 | 109 |

NOTE: These data come from the Client Tracking System and the Client Service Record.

^a The Client Service Record (CSR) subsample consists of 109 randomly selected clients.

*Statistically different from the overall mean at the 95 percent confidence level in a two-tailed test.

TABLE D.5

IN-PROGRAM JOB PLACEMENT RATES BY PROJECT
(Regression-Adjusted Project Means)

| | AHEDD (PA, DE) | ARC/MU (Monmouth) | The Center (Chicago) | Children's Hospital (Boston) | ECF (Los Angeles) | Goodwill (Milwaukee) | UWash/PCC (Portland) | UWis/Stout (Rural Wisconsin) | All Projects |
|---|-------------------|----------------------|-------------------------|------------------------------------|----------------------|-------------------------|-------------------------|---------------------------------|-----------------|
| Percentage with Any Program Job | 41.7* | 91.4* | 83.3 | 100.0* | 68.6 | 56.5 | 81.3 | 53.8 | 67.6 |
| Percentage with Training at Permanent Job or in Permanent Job | 43.4 | 85.7* | 19.2* | 47.9 | 46.9 | 49.5 | 51.8 | 46.4 | 49.0 |
| Percentage with Sta- bilized Permanent Job | 35.4 | 65.0* | 17.7* | 47.2 | 36.4 | 36.2 | 35.5 | 35.6 | 38.4 |
| Percentage Terminated with a Job | 33.1 | 66.1* | 16.8 | 34.0 | 26.4 | 37.5 | 31.8 | 25.8 | 33.5 |
| Sample Size | 80 | 37 | 25 | 29 | 76 | 35 | 44 | 41 | 367 |

NOTE: These data come from the Client Tracking System.

*Statistically different from the overall mean at the 95 percent confidence level in a two-tailed test.

TABLE D.6

EXPECTED EMPLOYMENT EXPERIENCE OF THOSE TERMINATED WITH A JOB, BY PROJECT
(Regression-Adjusted Project Means)

| | AHEDD (PA, DE) | ARC/MU (Monmouth) | The Center (Chicago) | Children's Hospital (Boston) | ECF (Los Angeles) | Goodwill (Milwaukee) | UWash/PCC (Portland) | UWis/Stout (Rural Wisconsin) | All Projects |
|--|-------------------|----------------------|-------------------------|------------------------------------|----------------------|-------------------------|-------------------------|---------------------------------|-----------------|
| Expected Hours per Week for Termination Job | 22.3* | 30.1 | 33.5 | 32.8 | 29.8 | 19.8* | 25.0 | 28.6 | 27.1 |
| Expected Wage Rate per Hour for Termination Job | 3.54* | 4.03 | 4.79* | 5.32* | 4.54* | 3.74 | 3.27* | 3.50* | 3.95 |
| Expected Weekly Wage for Termination Job ^a | 78.22* | 125.43 | 156.79 | 172.98* | 138.15* | 74.48* | 81.03* | 106.00 | 110.25 |
| Sample Size | 22 | 24 | 4 | 9 | 21 | 12 | 16 | 15 | 123 |

NOTE: These data come from the Client Tracking System. Data were cut off for this analysis as of February 28, 1987, before all clients had terminated from the program, and are therefore preliminary.

^a Expected weekly wage is the product of "expected hours per week" and "expected wage rate per hour."

*Statistically different from the overall mean at the 95 percent confidence level in a two-tailed test.

totally consistent in size and direction across measures. Statistical tests were performed to determine whether observed differences among projects reflected the vagaries of sampling or actual differences in the operation and management of projects and project environments.

On average, treatment-group members were enrolled in the demonstration for 10.5 months, of which 6.5 months were spent in an active status (see Table D.4). Clients received an average of 9.8 hours of direct staff service per month enrolled. Significant deviations from these overall means were as follows. Treatment-group members at ECF were enrolled nearly the full 12 months allowed, while those at AHEDD and The CENTER were enrolled 10 and 8 months, respectively. Treatment-group members at ARC/MU, Children's Hospital and Goodwill were enrolled with an active status for approximately 9 months, compared with 4 months at The CENTER and UWash/PCC. Hours of service received varied greatly across (and within) projects. Thus, none of the project means was a significant deviation from the overall mean. Hours of service per month enrolled ranged from 4 at AHEDD to 16 at ECF.¹

For the sample of all clients, 67.6 percent had been placed in some type of program job, 49.0 percent had held a permanent job or were trained in permanent job, 38.4 percent had held a permanent job (all of the above include termination jobs, as well as jobs held in the program,) and 33.5 percent had been terminated with a job (see Table D.5). Significant project variations from these averages were as follows. At Children's Hospital, 100 percent of the sample and, at ARC/MU, 91 percent of the sample had been placed in some type of program job, compared with 42 percent of the sample at AHEDD. Eighty-six percent of the sample at ARC/MU had been placed in a permanent job or trained in a permanent job, compared with 19 percent of the sample at The CENTER. The rate of stabilization on permanent jobs was 65 percent at

¹ The results of the regression run on hours of direct service (and hours of service per month enrolled) were inconclusive. None of the variables examined appear to have had any effect on the hours of service received by a sample member. The lack of clear results is due in part to the enormous variation across individuals for hours of service; some individuals were recorded as having received up to nearly 800 hours of service. (Even when nine observations for which the hours of service exceeded 250 were deleted from the sample, none of the variables included as regressors was found to have had any effect on hours.)

ARC/MU, compared with 18 percent at The CENTER. Finally, 66 percent of the sample at ARC/MU had been terminated with a job.

For that portion of the sample who had been terminated with a job, the expected hours per week for that job was 27.1, the expected hourly wage was \$3.95, and the expected weekly wage was \$110.25 (see Table D.6). Significant deviations from these averages included expected hours per week of 22 at AHEDD and 20 at Goodwill. The expected hourly wage rate at Children's Hospital was \$5.32, at The CENTER was \$4.79 and at ECF was \$4.54, compared with \$3.54, \$3.50 and \$3.27 at AHEDD, UWis/Stout, and UWash/PCC, respectively.¹ Finally, the expected weekly wage at Children's Hospital was \$173, and was \$138 at ECF \$138; in contrast, at UWash/PCC, AHEDD, and Goodwill, it was \$81, \$78, and \$74, respectively.

¹ The actual average wage rate at UWash/PCC was \$3.44 (see Table VI.2), which, unlike the regression-adjusted average, is above the minimum wage.

