Executive Summary

Purpose of the Work First Profiling Pilot Project

This report describes the development, implementation, and evaluation of a new assessment and referral system designed to assist staff of local welfare-to-work programs in targeting employment services more effectively to welfare recipients. The motivation for the development of this system is the potential benefit to program participants of addressing their specific needs rather than providing all customers with the same set of services, which has been the approach of most welfare-to-work programs. The assessment and referral system includes administrative tools that provide staff with a quick and efficient means to assess the needs of participants as they enroll in welfare-to-work programs and then to use the assessment to refer participants to service providers that are best suited to meet their needs. The assessment tool is based on a statistical method that uses administrative data to estimate a participant's level of employability. The employability estimate is then used to refer participants to appropriate service providers. The assessment and referral system is designed to be integrated into an existing intake process, to require minimal (if any) additional operations staff, and to comply with the procedures and practices of the various welfare-to-work programs administered by the states.

The Kalamazoo-St. Joseph Workforce Development Board (WDB) piloted the system by incorporating it into the welfare-to-work program, referred to as Work First, that it administers for a two-county area in southwestern Michigan. The W.E. Upjohn Institute for Employment Research developed the system, and the Employment and Training Administration of the U.S. Department of Labor sponsored the project. The pilot took place from January 1998 through March 2000, during which time more than 6,000 welfare recipients participated in the program.

The purpose of the pilot was to develop a statistical assessment and referral system and to determine the efficacy of integrating it into the operations of an existing welfare-to-work program. The Work First program administered by the Kalamazoo-St. Joseph WDB had been in operation for several

years before the pilot was initiated. The major difference in the operation of the Work First program during the pilot from its operation before was the use of the statistical assessment tool and the targeted referral. Before the pilot, all participants were treated the same. They attended the same orientation and were randomly assigned to one of three service providers. Random assignment was used because staff had insufficient information at the time of enrollment to identify the barriers to employment that participant's faced or the type of services that would best meet their needs. During the pilot, participants continued to attend the same orientation as before but were referred to service providers according to an assessment of their employability based on statistical methods and a determination of the comparative advantage of each provider in serving participants with different employment capabilities.   Although each provider offered the same basic set of services as required under Michigan's Work First program, they varied in their approach in providing these services, which were seen as more effective for some participants than for others.

The pilot explored the following issues: 1) can statistical tools provide a reliable initial assessment of a participant's ability to find and retain a job, 2) can this assessment be used to refer participants to appropriate service providers, 3) are some providers actually better at meeting the needs of some participants than others (as predicted prior to the start of the pilot), and 4) can such a system improve outcomes?

Need for an Efficient Assessment and Referral System

Most welfare-to-work programs provide the same initial set of services to all welfare recipients, regardless of their needs and past work history. The skills, aptitudes, and motivations of welfare recipients vary widely, however. Many clients possess job-ready skills and significant work experience and thus need little assistance in obtaining a job. The harder-to-serve customers are confronted with multiple barriers to employment and stand to benefit from more intensive services. Only after clients have tried to find a job, but have failed to do so, do most local offices provide them with more than a

minimal set of services. Yet, studies have shown that work-first type programs are more effective when services are targeted to meet individual needs.

In order to target employment services more effectively, local offices must first assess the needs of clients and determine which services are most appropriate in meeting their needs. Limited program dollars, however, often preclude hiring enough case workers to assess the employment barriers faced by welfare recipients. Thus, there is a need for a low-cost assessment and referral system that can be integrated into existing operating systems of welfare-to-work programs. This pilot is an attempt to fulfill that need.

The Concept of Statistical Assessment and Referral

Central to the statistical assessment and referral system is an administrative tool that relates an individual's attributes to his or her employment outcomes. For instance, research shows that individuals with a post-high school education and prior work experience are more likely to find and retain a job than people who have less-than-a-high-school education and little work experience. Other factors, such as tenure on a previous job, also contribute to the predicted probability of employment, which we refer to as the employability score. Several factors were included in the statistical model. The relative contributions, or weights, of these factors were estimated using the administrative records of participants who recently participated in the local Work First program. Using these weights, an employability score was calculated for each individual who enrolled in the program. A person with attributes similar to past Work First participants who were successful in finding a job was assigned a high employability score, while a person with attributes similar to past Work First participants who were not successful was given a low score.

Since the predicted probability of employment reflects the extent to which an individual faces barriers to employment, the score can be used to determine the level and type of employment services that may help the individual find employment. Those with high employability scores are expected to

need relatively little assistance in finding a job, while those with low scores are expected to require significantly more assistance.

Operation of the Pilot

The Kalamazoo-St. Joseph WDB pilot used the statistical assessment tool to provide an initial appraisal of the needs of welfare recipients as they enrolled in the Work First program. Employability scores were estimated for each enrollee by using administrative data collected by the Work First agency. Local agency staff entered the information onto a laptop computer, which contained a database program and the statistical assessment algorithm. While the enrollees attended an orientation session, staff used the algorithm to compute an employability score for each participant and then used the scores to refer them to one of three service providers.

Prior to conducting the pilot, WDB staff determined which of the three service providers already under contract with the WDB would most benefit participants who have certain employability scores. The determination was based on analysis of past administrative data and the opinions of WDB staff regarding each service organization. Employability scores were separated into three groups. Participants with employability scores in roughly the lowest third of the distribution were assigned to one provider, those in the middle group were assigned to another provider, and those at the high end of the distribution were referred to a third subcontractor.

Evaluation of the Pilot

The pilot was evaluated using a random assignment design. Participants within each of the three groups of employability scores were randomly assigned to a control group and a treatment group. Those within the control groups were randomly assigned to each of the three subcontractors. Those in the treatment group were assigned to the provider that *a priori* was determined to be most beneficial to participants in each of the three groups. The treatment or intervention in the pilot is different from typical demonstrations. Instead of testing the effectiveness of receiving a specific service versus not receiving

the service, this pilot demonstrated the relative effectiveness of referring participants with specific employability scores (and thus specific needs) to various service providers. In order to examine the effectiveness of these different combinations of referrals, participants in the control group were randomly assigned to each of the three subcontractors, which yielded six combinations of service providers and employability groups (more combinations are possible, but we were constrained by the requirement that enrollees would be assigned to each of the three subcontractors). No participant was denied services. Each participant was referred to a provider that offered roughly the same services, albeit delivered in slightly different ways. It was the difference in styles and the focus on certain services over others that constituted the treatment in this pilot.   Therefore, unlike typical evaluations, the purpose of this evaluation is *not* to compare the outcome of the treatment group with that of the control group. Rather, the purpose is to determine whether the different combinations of referrals yield significantly different outcomes. If they do, then the next step is to see whether or not the combination that yielded the highest outcome, in this case the highest job retention rate, is the same combination that was expected to yield the highest outcome (i.e., to best meet the needs of customers in the three groups) before the pilot began. That is, we check to see whether the combination found to yield the greatest outcome in the control group is the same combination as was chosen *a priori* for the treatment group. If so, then the evaluation suggests that targeting makes a difference and that the optimal combination can be determined beforehand.

The evaluation found that referring participants to service providers according to their employability score increased the overall effectiveness of the program. Using a job retention rate of 90 consecutive days as the employment outcome, the results showed that:

- The statistical assessment tool was successful in distinguishing among participants with respect to their likelihood of employment and retention.

- The optimal referral pattern based on the statistical assessment tool yielded retention rates that were 25 percent higher than retention rates of participants who were randomly assigned to providers.

- The difference in retention rates between the best and worst referral combinations was 56 percent.

Average weekly earnings of those who retained their jobs for 90 consecutive days were used to account for the benefits of the pilot system. The net present value of the difference in earnings between the treatment group (generated from the optimal assignment rule) and the control group was used to estimate the net impact of the program. The net present value, assuming that the earnings differentials persisted for 8 quarters, ranged from $471,000 to $841,000. Combining these estimates with the total cost of designing, implementing and operating the program of $145,000 yielded a benefit-to-cost ratio that ranged from 3.25 to 5.8.

Extension to Other Sites and Programs

This pilot expands upon the techniques used in the Worker Profiling and Reemployment Services (WPRS) system in which the likelihood that UI claimants will exhaust benefits are identified through statistical means. Evaluations of WPRS based on two states show that it yields expected benefits. The evaluation of the Work First pilot provides evidence that a statistical assessment and referral system can be integrated into an existing system of delivering employment services and that it can improve the effectiveness of the program.

At the writing of this report, another site has adopted a system similar to the statistical assessment and referral system used in the Kalamazoo-St. Joseph WDB pilot. The Broward County (Florida) Workforce Development Board, in cooperation with the Florida Institute for Career and Employment Training affiliated with Florida Atlantic University, piloted a similar system. They modeled

their approach after the one used in the pilot reported here. They referred customers to different services, not necessarily different providers, based on an employability score. An evaluation of this project has not yet been performed.

Another application using statistical means to identify needs and refer clients to services is being developed for One-Stop Centers. The Upjohn Institute, with funding from the Employment and Training Administration of the U.S. Department of Labor, is also developing a statistical assessment and referral system for the many services provided within a one-stop environment. These administrative tools, referred to as the Frontline Decision Support System (FDSS), are being developed to help front-line staff quickly assess the needs of customers and then to refer them to services that better meet their needs. FDSS includes new tools to 1) help customers conduct a systematic search for jobs that offer the best employment match and to set a realistic wage goal, and 2) assist staff in determining which one-stop center services are likely to be effective in meeting the needs of specific customers in becoming employed.   The FDSS tools are designed to be used within the current data retrieval and display systems implemented by states for their One-Stop Centers.