It's a Nasty Job But Somebody's Got to Do It: Using Administrative Data to Assess the Impact of Welfare Reform

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The North Carolina General Assembly is currently considering major revisions to the welfare system in the state. As part of these revisions, counties will be given exceptional latitude in how they structure and provide family assistance services at the local level. The dollars from various funding sources counties claimed in the past to reimburse the costs of delivering services will be turned over to them as a block grant. County social service agencies will be able to allocate those dollars according to local needs. Few constraints will determine how these funds are used. Accountability for them will be based on outcomes.

The state's relationship with the counties will change as well. North Carolina will still have a state-supervised, county-administered system, but the nature of the state supervision would change. No longer will the North Carolina Division of Social Services (NCDSS) develop a standard process that is replicated in all 100 counties. No longer, too, will NCDSS evaluate program performance in terms of procedural. Under the new framework, accountability will be maintained by comparing a county's performance with targeted outcomes.

The legislative proposals to revise the welfare system require counties to identify performance goals in a number of areas. The move to incorporate a performance measurement system continues an approach used by NCDSS for several years. The Division has used performance goals for a number of programs. For example, in the Job Opportunities and Basic Skills (JOBS) program, a number of outcome indicators were used to assess program performance. These indicators included the number of participants that graduated from high school, the number of participants that completed their GED, the JOBS participation rate, and the employment rate for individuals leaving the program.

The use of performance measures is a key aspect of the way NCDSS intends to administer the Work First Family Assistance (WFFA) program, North Carolina's version of the federal Temporary Assistance to Needy Families (TANF) program. During State

Fiscal Year (SFY) 96-97, the division contracted with the Jordan Institute for Families to provide technical assistance to the state and counties in the management of the Work First program. One set of tasks involved aiding in the development of performance goals for Work First. A second set of tasks involved developing an information system to support the use of these measures.

As part of the process for developing performance goals, NCDSS created a Work First evaluation advisory committee in early 1997. This committee, composed of county social service directors, NCDSS staff, representatives from the Department of Human Resources (DHR) and other agencies, boards, and organizations, identified ten areas where counties should develop measures of performance. These measures are:

- employment retention
- recidivism
- the affect of the program on reducing poverty
- caseload reduction
- federal participation rates
- intensive employment services
- job readiness
- the impact of benefit diversion
- the average cost per participant, and
- the number of families that enter employment.

The measures identified by the advisory committee correspond to those identified in the NCDSS state plan for the Work First program. The state plan specified six areas where performance goals are needed: caseload reduction, employment of Work First recipients, participation of Work First recipients in employment services and activities, assistance to divert families and individuals from becoming participants, reducing the rate at which former participants return to the program, and child support collections.

Regardless of the final form of the welfare legislation, performance goals for the operation of the Work First program are extremely important because the program is no longer an open-ended entitlement. Only a fixed amount of funds are available for the program. If counties can not meet their targets, they find they do not have sufficient funds for all the services. Directors and managers will need to make informed decisions about the cost-effectiveness of various options in deciding what services will be delivered and how.

Program Costs

While all of the objectives emphasized in the state plan for the Work First program can affect program costs, two in particular have an immediate impact. These involve caseload reduction and the rate at which individuals return to the program. The sooner a family is able to obtain self-sufficiency, the lower their total amount of cash benefits will be. Similarly, the lower the rate at which families return to Work First, the lower too will be the amount of benefits the household receives. If counties are able to reach their targets for caseload reduction and the rate at which families return to the program, the state will have sufficient funds to cover the cost of the cash assistance payments.

Other objectives, such as diversion assistance, employment of Work First participants, and increased child support, will have an impact on caseload reduction and the rate of return to the program. As the diversion program becomes more successful, fewer families will enter Work First. The better-equipped participants are at obtaining and maintaining employment, the less likely they are to return to the program. As the amount of child support increases, the lower the need is for a family to seek cash assistance. As a result of the increased child support, the household may be able to achieve self-sufficiency and leave Work First.

The additional area of performance in the state plan—participation in employment activities—is related to moving participants to employment. The better equipped an individual is in seeking employment, the more likely the person is to find a job and continue an attachment to the labor force.

In order to track their success in meeting the performance targets, counties will need access to information on their program. As part of this project, a database is being developed that contains information on Work First participants at the individual and household levels. This database permits the analysis of household and individual behavior over time. During the first year of this project, the database was used to create benchmarks at the state level. Last year, staff from the Jordan Institute for Families began distributing analyses from that database to counties. Information used to benchmark past performance and to identify caseload behavior, characteristics, and trends was distributed through meetings with individual county DSS staff.

The development of an information system that links files across multiple administrative databases and provides comprehensive performance measures for the Work First program continues. This system allows for the analysis of Work First outcomes at different levels ranging from the individual recipient to the entire county caseload. Program managers and staff will be able to explore outcomes for individuals and households in their county. Workers and supervisors will be able to track the impact of Work First services on their clients. County directors will be able to gauge their performance in the Work First program and compare their county with other counties or the entire state.

Snap Shots and Longitudinal Views

Prior to implementation of this project, most analysis of the Work First caseload was based upon a "snapshot" of the caseload at a point in time. The cross-sectional nature of the data limited the ability of managers to analyze outcomes for individuals and households. The information system that is being developed as part of this project makes it possible to follow individuals and households over time. It allows analysts to identify the short- and long-term impact of policy changes on Work First participants at the state level. At the same time, it permits county Work First staff to track and measure the impact of the employment services they provide on the earnings of participants.

This longitudinal database will allow county staff to track a "cohort" of households who enter the program during a particular period, such as six months or a year. By analyzing and comparing successive cohorts, staff can determine whether the average length of stay is changing over time. In this approach, the average length of stay would be calculated as the number of days or months until half of the households have left the program. By calculating the average length of time in the program through the use of the median, instead of the mean, the estimate is not inflated by the presence of extreme values (i.e., very long lengths of stay for a relatively small percentage of families).

Also, by estimating the average length of stay based upon a succession of cohorts, county staffs are able to identify the impact of policy fairly quickly. This analysis can be done by comparing cohorts of cases participating in the program prior to the changes with those entering the program after the changes are made. The analysis also could be conducted by examining only cohorts participating in the program shortly before the policy changes are enacted to see if there was a change in the rate at which they left the program. These types of analyses are not possible with cross-sectional data.

Using this approach, counties will be able to monitor the rate at which households leave and return to the program. This information will be useful in assessing progress in meeting performance goals involving caseload reduction and reducing the rate at which families return to Work First. Staff will be able to compare information from their county with benchmarks from earlier time periods. They also will be able to compare their performance with counties of similar size or with the entire state.

Current Status of the Longitudinal Database

The longitudinal database that was constructed during the first two years of this project tracks all families and individuals that have participated in the Work First program since January 1, 1995. It contains information on approximately 280,000 families and about 680,000 individuals, indicating whether each family participated in a particular month, the amount of benefits, the size of the family each month, the number of months the family participated, and whether the family left assistance. The database also contains information on all members of the family. It indicates family members' change from one Work First case to another, the age, race, and sex of each individual receiving assistance, losses in the family unit, and subsequent returns to the family. The database also indicates whether members of each family participated in employment or training activities, the types of activities, and the time spent completing each activity. It contains information about family members who received income either while on Work First or after leaving the program, the amount of earnings, the type of business (based on its industry code), and the zip code of the employer.

To construct the database, information from a check history file is merged with monthly extracts from the Eligibility Information System (EIS), and updated on a regular basis. A family who received a check in a particular month is considered to have participated in Work First. If the family did not receive a check, the case information is examined to determine if it is in suspense or is a “zero pay” household. Families are followed once they receive Work First benefits to determine whether they leave the program and, once they leave, whether they return.

The EIS system was implemented a number of years ago under North Carolina’s Aid to Families with Dependent Children (AFDC) program. The primary purpose of the EIS system was to generate checks and Medicaid eligibility cards, not to calculate cash benefits or to track all changes in a household. While it has the ability to collect demographic information, such as race, sex, and educational level, it has no edits to ensure accuracy. Due to these limitations, there are problems with the quality of some of the data in the EIS extracts. For example, EIS has the ability to track household income, but because EIS does not require eligibility workers to enter the amount of gross income a household receives or does not use the amount of income, the amount shown in EIS may or may not be correct. As a result, the information for this field is not reliable since it does not consistently reflect the true state of affairs. In contrast, other EIS are of high quality. For example, information relating to the county of residence, the household’s address, and the frequency of payment—once or twice a month—are accurate because of edits built into the computer software or the fact that the information is subject to audit.

The information from the check history file is broken down by payment month and linked through the family’s case number with the monthly EIS extracts. The files are woven together across months and provide accurate information about the family’s participation in Work First for a given month. With this information, spells of participation, exits, and re-entries to the program over time can be examined.

A separate longitudinal file containing information on individual Work First participants also is maintained. This file contains information on close to 700,000 individuals who are or have been members of Work First households. This file contains information on an array of items including the person's date of birth, race, sex, Social Security number, and a ten digit identification number assigned by EIS. This ten-digit number can be used to link information on individuals across programs.

The information from EIS and the check history file is supplemented with extracts from the Employment Programs Information System (EPIS) that contains information on family members who have received employment program services. EPIS contains information on an individual's level of education and literacy, and what types of activities, such as training, job search, or community work experience an individual has received. The database also contains information on the number of months of remaining eligibility a household has relative to the 24-month and 60-month time limits and the number of times a household has been sanctioned.

Information on individuals who participate in Work First is linked with earnings data provided through the state's Employment Security Commission. The earnings data are collected through the individual's Social Security number. These data can be used to evaluate the effectiveness of various employment program activities, identified through the EPIS extracts, or to assess a family's transition to self sufficiency by linking the individual's earnings to his or her case number.

Planned Enhancements in the Coming Year

Five areas of the longitudinal database have been targeted for enhancement in SFY 98-99. These include food stamps, child welfare, child support, transitional benefits, and new hire information. Data have been collected in several of these areas for some time, but these data have not been fully integrated into the longitudinal file. In addition, Jordan Institute for Families staff have developed longitudinal databases for children entering the foster care system that can be used to address Work First issues.

Extracts from the Food Stamp Information System (FSIS) have been made for some time. In SFY 98-99, these data will be used to create a set of longitudinal files at the household and individual level, merging them into the current longitudinal database using AutoMatch, a probabilistic matching software package. Integrating the food stamp data into the longitudinal database has many benefits. First, we will be able to explore the rate at which families move from food stamps to Work First. We will be able to create baseline indicators and analyze how the rate of transition from food stamps has changed with the implementation of Work First.

A second benefit involves the richness of the data from FSIS. Data from the check history file and EIS do not contain reliable information on family income or expenses. FSIS, on the other hand, requires these data in order to calculate the amount of the food stamp allotment. As a result, the data on income and expenses extracted from FSIS are highly reliable. These data contain information on both earned as well as unearned income. Through these data, we will be able to identify the amount of income available to Work First families after they leave cash assistance.

Another benefit of using the FSIS data is analyzing child-only cases. In most situations, child-only cases are thought to comprise households consisting of an adult that receives Supplemental Security Income (SSI) and one or more children. Information on the adult SSI recipient is not available from EIS. For child-only cases, the food stamp household should include the children as well as the adult SSI recipient. As a result, the FSIS data will contain information on all members of the household.

The FSIS data also will be useful in following the behavior of Work First families after they leave cash assistance. Since many WFFA families continue to receive food stamps after leaving the program, the FSIS data can track their income and expenses. These data will be useful in tracking WFFA families that exhaust their 24-month time clock that North Carolina has implemented for certain households.

Child Welfare Data

A number of files from the child welfare and the Service Information System (SIS) will be integrated into the longitudinal file. The first set of files are based on extracts from the Child Placement and Payment System (CPPS) and the Adoption and Foster Care Analysis and Reporting System (AFCARS). These data are useful in monitoring the relationship between Work First and foster care and developing measures of child well being. A preliminary match between Work First and foster care data indicates that about 9,300 of the 27,008 children who entered placement authority for the first time between January 1, 1995, and September 30, 1997, had a Work First connection.

A second set of files from SIS that will be integrated into the longitudinal database contain data from the DSS-4263, the Worker Daily Report of Services. Information from these files is useful in a number of ways. First, they may be useful in identifying individuals receiving child day care services. It has been difficult to identify the Work First families that receive child day care assistance since only a to the limited amount of information on day care delivery is collected and entered into an automated system. According to a number of county social service staff, day care social workers use the DSS-4263 to record the needs that Work First families discuss with them.

The information from the DSS-4263 day sheets also will be used to identify and track the amount of administrative time spent providing employment services to Work First recipients. This information may be useful in establishing performance goals for moving recipients into employment. These data can be used to estimate the amount of administrative time required to move a person into a job.

Information from the day sheets will be matched with data from the DSS-5027, the Client Entry Form. The DSS-5027 contains personal information, such as name, date of birth, and social security number, that is needed in order to match individuals from SIS with the information in EIS since there is no unique identifier to link information between the two administrative computer systems.

Jordan Institute staff will link information between these files using AutoMatch. Matches will be made by comparing the individual's name, county, date of birth, and social security number. Previous analysis indicates that Social Security number or name does not always uniquely identify individuals. In many instances, there are slight variations in the spelling of a person's name. In other instances, particularly in the case of SIS data, the social security number has not been verified.

Use of the Social Security number alone can result in a number of false positive and false negative matches. A false positive match occurs when two records are presumed to represent the same individual when in fact they do not. A false negative results when the records for the same individual are not matched and are presumed to represent two different people. False positives and false negatives can occur when analysts attempt to match records using a limited number of identifiers. Using of multiple identifiers and prior probabilities of their likelihood of agreement reduces the number of false positives and false negatives.

A third type of data from SIS that Jordan Institute staff will attempt to integrate into the longitudinal database is from the DSS-5104, Child Abuse and Neglect Report. Information from the DSS-5104 will be necessary in order to develop performance measures based on child well being. The data also will be used to assist counties in monitoring and evaluating the impact of Work First on reports of abuse and neglect. The DSS-5104 documents the request for services for children reported to be abused, neglected, or dependent. The information from these reports (whether abuse, neglect, or dependency is being alleged, a SIS identification number of the alleged victim, whether the report is substantiated, the type of abuse or neglect, and possible contributing factors) is compiled into the Central Registry on Abuse and Neglect Reports. Information from the DSS-5104 will be linked to Work First data through the SIS identification number and the data contained on the DSS-5027.

Child Support Data

In addition to information from SIS, efforts are being made to integrate data on child support orders and collections from the Automated Collection and Tracking System (ACTS). Counties need these data to assess their success in meeting goals established in the draft TANF state plan. Jordan Institute staff also is attempting to obtain information from the "new-hire" database. This database stems from federal legislation requiring states to track all individuals who are newly hired. Employers are required to submit information on all persons they employ shortly after they begin working. This information is used to create a database that is designed to assist child support enforcement agencies in establishing collections from absent parents. Information from the new hire database will be useful in identifying Work First recipients that obtain employment or change employment. In addition, the information can track employment patterns of recipients after they leave the program.

Information from the new-hire database will be more current than information obtained from the ESC on earnings, which tends to be at least two quarters—or six months—old when it is received. Because of the delay in receiving it (which is due to the lag employers have in reporting the information) it is less valuable than information that reflects activities in the previous month. Information from the new-hire database, while it may not reflect earnings at least indicates that a person has started a job. The information from the new-hire database should be available within a few weeks after a person starts a job.

Additional Data Sources

The longitudinal database will also integrate transitional benefits including Medicaid, transportation, and childcare. In extracting monthly information from EIS, Jordan Institute staff has been developing files that track certain types of transitional benefits. By and large, the transitional benefits that are currently monitored are given to the Work First family as an intact unit. These benefits are issued or made available to the entire family, such as continued Medicaid coverage.

Additional information is being extracted from state systems that will allow us to track transitional benefits at the individual level. For example, in certain circumstances, Medicaid coverage may be provided to some but not all of the members of a household. Children could receive coverage under Medicaid for Infants and Children (MIC). In a very small number of cases, some Work First mothers may receive benefits under Medicaid for Pregnant Women (MPW). In order to track these types of benefits, Jordan Institute staff is extracting information from EIS on MIC and MPW recipients. Additional information also will be extracted to track children from Work First families that may receive Medicaid benefits through foster care programs.

Other potential enhancements to the database include information on Work First families and individuals that may receive benefits through the new Child Health Insurance Program (CHIP), which was approved by a special session of the North Carolina General Assembly in the spring of 1998.

Confidentiality of Data

A primary concern of NCDSS and staff at the Jordan Institute is that the information in the longitudinal database remains confidential. The extracts from administrative systems contain personal information, such as a person's Social Security number and income. Information that will be added to the database in SFY 98-99 includes paternity, child support receipt or obligations, and issues involving child welfare. The child welfare information involves reports—both substantiated and unsubstantiated—of abuse and neglect. All of this information is extremely sensitive.

To safeguard the privacy and confidentiality of the data, a number of steps are being followed to control access to the data. This involves the way the information is extracted from state systems, the way it is copied onto computer systems at the University of North Carolina at Chapel Hill (UNC-CH), the way the data are stored, who is provided access to the data, and how data are distributed to counties.

Information used to construct the database is extracted from files used by administrative computer systems at the State Information Processing Services (SIPS). Jordan Institute staff extracts the NCDSS files using SAS to read the administrative files and convert the extracted information into transport files. The extract files usually are written in SAS transport format to 3490E tapes. A Jordan Institute staff person takes blank tapes to SIPS, where the files are copied to tape. The staff person then retrieves the tapes and takes them to the UNC-CH campus, where they are copied onto a Unix-based computer system. The original tapes are stored securely at the Jordan Institute for Families. Copies of the files are stored off-line in the University's mass storage facility and maintained under the computer IDs of the project's principal investigator and one of the programmers associated with the project.

Copies of the extracts are moved to on-line disk space accessed by a Unix server used by the project where they are stored for analyses. Access to this server and its disk space is limited to project personnel. The Unix server runs software that enhances security. In addition, AutoMatch, the software package designed to link records across files using probabilistic matching routines, and SAS are available on the server.

Other researchers authorized by NCDSS can obtain analysis files containing unique identifiers for individuals and their. These identifiers may be the EIS individual ID, the EIS case ID for the Work First families, or other Ids created by the Jordan Institute for Families research team. These analysis files will be stored on campus computers and made available to researchers as appropriate. In most instances, the researchers not associated with the development of the longitudinal database will not have access to the names, addresses, or Social Security numbers of Work First recipients. In instances where names are needed, such as when a survey sponsored by NCDSS is being conducted, the information will be provided as needed in order to conduct the research. Names and other identifying information will be provided to counties as necessary. It is unlikely that a recipient's Social Security number will ever be disclosed.

When providing information that contains confidential information to researchers who do not have access to UNC-CH ATN computers, we use secure delivery methods. These include hand delivery by project staff and the use of delivery services that track receipt of packages through signature, such as Federal Express or United Parcel Service. As a rule, less secure delivery methods, such a electronic mail or regular first class mail service, will not be used because of the possibility of disclosure of personal and confidential information.

Summary

As reforms are proposed and enacted in the welfare system, the demand for information is constantly growing. This information is needed to estimate the impact of policy changes and to gauge its impact. The demand for information exceeds the capacity or the resources to collect it.

An important and low-cost source of information is the data collected through the computer systems used to administer the programs. These systems collect a wide range of information on program participants.

Data from these systems have some limitations. First, some of the data may not be reliable. This reliability problem is due to lack of software edits to ensure the data are internally consistent as well as confusing instructions in procedural manuals on what codes to use and how certain situations should be entered.

An additional problem with these data is that the files were not designed for policy analysis. Instead, the files were developed to store information efficiently. With a certain amount of effort, extracts from these administrative systems can be massaged into shape and can be an extremely useful tool in examining the impact of welfare reform.