



Rehabilitation Research and Training Center for Economic Research on Employment Policy for Persons with Disabilities

Review of Data Sources for School to Work Transitions by Youth with Disabilities

David C. Wittenburg

THE URBAN INSTITUTE

David C. Stapleton

CORNELL UNIVERSITY

CORNELL CENTER FOR POLICY RESEARCH

Final Report September 2000

For further information about this paper contact:

David C. Wittenburg, Ph.D., Research Associate The Urban Institute 2100 M Street, N.W. Washington, D.C. 20037

Phone: (202)261-5352; Fax: (202)833-4388; Email: dwittenb@ui.urban.org

This paper is being distributed by the Rehabilitation Research and Training Center for Economic Research on Employment Policy for Persons with Disabilities at Cornell University.

This center is funded to Cornell University, in collaboration with The Lewin Group (Falls Church, VA), and The Urban Institute (Washington, D.C.) by the U.S. Department of Education, National Institute on Disability and Rehabilitation Research (cooperative agreement No. H133B980038).

This research is funded by the U.S. Department of Education, National Institute on Disability and Rehabilitation Research (*cooperative agreement No. H133B980038*). It does not necessarily reflect the view of the National Institute on Disability and Rehabilitation Research.

The Co-Principal Investigators are:

Susanne M. Bruyère - Director, Program on Employment and Disability, School of Industrial and Labor Relations, Extension Division, Cornell University

Richard V. Burkhauser - Sara Gibson Blanding Professor and Chair, Department of Policy Analysis and Management, College of Human Ecology, Cornell University

David C. Stapleton - Director, Cornell Center for Policy Research, Cornell University

Review of Data Sources for School to Work Transitions by Youth with Disabilities

Prepared by:

David C. Wittenburg David C. Stapleton

Final Report

September 2000

For more information on the Cornell RRTC contact: Susanne Bruyère, Ph.D. Project Director

Cornell University 106 ILR Extension Building Ithaca, NY 14853-3901

Tel (607) 255-7727 Fax (607) 255-2763 TDD (607) 255-2891 e-mail smb23@cornell.edu/rrtc Send comments on paper to:

David Wittenburg, Ph.D. Research Associate

The Urban Institute 2100 M Street Washington, DC 20037

Tel (202) 261-5352

e-mail dwittenb@ui.urban.org

Table of Contents

I.	INTRODUCTION	1
Α.	OVERVIEW	1
В.	CRITERIA FOR SELECTING DATA SETS.	
C.	DATA SOURCES REVIEWED	
D.	OTHER DATA SOURCES	4
E.	ORGANIZATION OF THE REPORT	
II.	SUMMARY OF FINDINGS	6
	Or was commercial.	
A.	OVERVIEW	
В. С.	SELECTION CRITERIA	
C. 1		
2		
3		
_	he Vocational Rehabilitation (VR)	
4		
5		
6		
7		
8		
***	I ONCUMENTAL SUBVEYS OF THE SENERAL BORILLATION	11
III.	LONGITUDINAL SURVEYS OF THE GENERAL POPULATION	
A.	OVERVIEW	11
B.	SURVEY OF INCOME AND PROGRAM PARTICIPATION (SIPP)	
	. Data Description	
2	. Advantages and Limitations for Evaluating Transitions by Youth with Disabilities	
C.	SURVEY OF PROGRAM DYNAMICS (SPD)	
_	. Data Description	
_ 2	3	
D.		
1		
2		
E.	MEDICAL EXPENDITURE PANEL SURVEY (MEPS)	
1	~ · · · · · · · · · · · · · · · · · · ·	
2	, o	
IV.	LONGITUDINAL SURVEYS OF YOUTH	16
A.	OVERVIEW	16
В.	NATIONAL LONGITUDINAL STUDY OF ADOLESCENT HEALTH (ADD HEALTH)	
1		
2	·	
C.	NATIONAL EDUCATIONAL LONGITUDINAL STUDY OF 1988 (NELS:88)	
1		
2	·	
D.	HIGH SCHOOL AND BEYOND (HS&B)	
1	. Data Description	20
2	. Advantages and Limitations for Evaluating Transitions by Youth with Disabilities	20
E.	BEGINNING POSTSECONDARY STUDENT LONGITUDINAL STUDY (BPS)	
1		21
2	9 9	
F.	BACCALAUREATE AND BEYOND LONGITUDINAL STUDY (BB: 93)	
1	Data Description	2.1

2.	. Advantages and Limitations for Evaluating Transitions by Youth with Disabilities	22
G.	NATIONAL LONGITUDINAL SURVEY OF YOUTH: 1979 (NLSY79)	22
1.		
2.		22
H.	NATIONAL LONGITUDINAL SURVEY OF YOUTH: MOTHERS AND CHILDREN	
1.		
2.		
I.	NATIONAL LONGITUDINAL SURVEY OF YOUTH: 1997 (NLSY:97)	
1.		
2.	•	
V.	LONGITUDINAL SURVEYS OF YOUTH WITH DISABILTIES	25
A.	OVERVIEW	25
B.	NATIONAL LONGITUDINAL TRANSITION STUDY OF SPECIAL EDUCATION STUDENTS (NLTS)	25
1.	. Data Description	25
2.	. Advantages and Limitations for Evaluating Transitions by Youth with Disabilities	25
C.	NATIONAL LONGITUDINAL TRANSITION STUDY OF SPECIAL EDUCATION STUDENTS-2 (NLT	S-2)27
1.	. Data Description	27
2.		
D.	1986 TO 1992 SCHOOL-TO-WORK TRANSITION SURVEY OF DEAF YOUTH (SWTS)	
1.	. Data Description	27
2.	. Advantages and Limitations for Evaluating Transitions by Youth with Disabilities	28
VI.	ADMINISTRATIVE DATA	29
A.	OVERVIEW	29
B.	REHABILITATION SERVICES ADMINISTRATION (RSA) 911 DATABASE AND LONGITUDINAL S	STUDY
	OF THE VOCATIONAL REHABILITATION (VR) SERVICE PROGRAM	29
1.	. Data Description	29
2.	. Advantages and Limitations for Evaluating Transitions by Youth with Disabilities	30
C.	SELECTED STATE ADMINISTRATIVE DATA SOURCES	
1.		
2.	, , , , , , , , , , , , , , , , , , , ,	
3.		
4	Advantages and Limitations for Evaluating Transitions by Youth with Disabilities	34

I. INTRODUCTION

A. Overview

Numerous survey and administrative data sets provide information on youth with disabilities. Some provide information on a specific sample of youth with disabilities (e.g., special education students), while others include broader samples of the United States population.

Previous studies have reviewed several survey and administrative data sources to study the characteristics and behaviors of youth with disabilities. For example, Conwal, Inc. (1999) recently compiled a review of the most recent available data sets that provide general information on the characteristics (e.g., age, race, and disability) of youth with disabilities. RAND (1998) reviewed several data sets for a planned evaluation of the 1996 changes in the child Supplemental Security Income (SSI) program. Finally, Allen, Rawlings, Schildroth, and Lam (1999) compiled a Research Archive on Disability (RADIUS) that provides links to major data sets for disability research on the Internet.

Unlike these previous data reviews, our objective is to identify data sources for future school-to-work analyses that contain longitudinal information on youth with disabilities. Specifically, we review longitudinal data sources that researchers could use to address the following questions: ¹

- 1. Which factors influence the development of a youth's skills for employment?²
- 2. What determines the level and type of effort devoted to preparing the youth for employment?
- 3. What type of initial employment and program participation transitions do youth with disabilities make after they have completed their secondary schooling?
- 4. What are the employment, income, and program participation outcomes for adults who had childhood disabilities, and how do they vary with individual characteristics and childhood circumstances?
- 5. What effect do current public policies have on the incentives for youth making transitions from school-to-work?

This paper is the first in a series of papers on school-to-work transitions for our Rehabilitation Research and Training Center (RRTC), funded by the National Institute on Disability and Rehabilitation Research (NIDRR). In future work, we will create a

¹ This paper is the first in a series of papers on school-to-work transitions for our Rehabilitation Research and Training Center (RRTC) funded by the National Institute on Disability and Rehabilitation Research (NIDRR). Fishman (1999) provides an overview of the questions that we will address in these papers, as well as in other research projects.

² Researchers refer to this more formally as the process of human capital accumulation.

framework to evaluate school-to-work transitions and review the previous findings from school-to-work transitions by youth with disabilities. We will use this data review, along with our framework and literature review, to design an empirical analysis on school-to-work transitions related to our primary research questions.

Because of the broad scope of the research questions, our review should be of interest to anyone interested in conducting longitudinal research on school-to-work transitions by youth with disabilities. In future work, we will conduct an empirical analysis using a subset of the data sources highlighted in this report.

B. Criteria for Selecting Data Sets

We use four criteria to select data sets for review. First, we require that the data contain multi-period information to follow transitions by youth with disabilities. Consequently, our review focuses on longitudinal survey and administrative data sets. Second, we require that the data contain health and disability information for a large sample of youth with disabilities (age 14 to 22). Because there is no single universally accepted definition of disability, a major part of our review focuses on the content of health and disability information in each data set. Third, we require that the data contain recent information. For example, it is likely that the large number of changes in special education programs and SSI policies in the early nineties had a large effect on transitions by youth with disabilities. Hence, we exclude all data sets that have not collected information since 1990. Finally, we require that the data contain information to address at least one of the five questions above.

C. Data Sources Reviewed

We present detailed reviews for several data sources, which we split into the following categories (*Exhibit 1*):

- Longitudinal Surveys of the General Population;
- Longitudinal Surveys of Youth;
- Longitudinal Surveys of Youth with Disabilities; and
- State Administrative Data:

³ Some cross-sectional data sources contain retrospective history that we could use to generate multi-period information. We did not find, however, a cross-sectional data source with multi-period information that satisfied our other selection criteria.

Exhibit 1: Summary of Data Reviewed

Longitudinal Surveys of the General Population

Survey of Income and Program Participation (SIPP)

Survey of Program Dynamics (SPD)

Panel Survey of Income Dynamics (PSID)

Medical Expenditure Panel Survey (MEPS)

Longitudinal Surveys of Youth

National Longitudinal Study of Adolescent Health (Add Health)

National Educational Longitudinal Study of 1988 (NELS:88)

High School and Beyond (HS&B)

Beginning Postsecondary Student Longitudinal Study (BPS)

Baccalaureate and Beyond Longitudinal Study (BB:93)

National Longitudinal Survey of Youth: 1979 (NLSY79)

National Longitudinal Survey of Youth: Mothers and Children (NLSY: Mothers and Children)

National Survey of Youth: 1997 (NLSY97)

Longitudinal Surveys of Youth with Disabilities

National Longitudinal Transition Study of Special Education Students (NLTS)

National Longitudinal Transition Study of Special Education Students-2 (NLTS-2)

School-to-Work Transition Survey of Deaf Youth (SWTS)

Administrative Data

Rehabilitation Services Administration (RSA) 911 Database and Longitudinal Study of the Vocation Rehabilitation Service Program

Selected State Administrative Data (California Welfare Research Archive, The Florida Education and Training Performance Information Program, and Illinois Integrated Database on Children's Services)

The longitudinal surveys of the general population provide information on a nationally representative sample of the U.S. population. While these surveys do not focus specifically on youth, they contain longitudinal information on a large sample of youth with disabilities. The longitudinal surveys of youth provide information on different cohorts of youth (under the age of 22). These surveys contain information on various youth outcomes (e.g., school achievement) and influences (e.g., parental time) that are generally unavailable in surveys of the general population. Some of these surveys also include information on adult outcomes. The longitudinal surveys of youth with disabilities provide information on different cohorts of youth with disabilities. Unlike the surveys of youth, these surveys focus on specific populations of youth with disabilities. Finally, we summarize two types of administrative data sources that contain information on various state and federal programs. These data contain information on transitions by

⁴ Another major source of administrative data that we do not provide a separate review for is Social Security Administrative records on Supplemental Security Income participation, Disability Insurance participation, and earnings. We do have, however, a detailed discussion on the advantages of using these records in the context of our summary of other data sources that have been linked to SSA data, such as the SIPP.

youth with disabilities into and out of various state and federal programs, such as Vocational Rehabilitation (VR), Temporary Assistance for Needy Families (TANF), and Medicaid.

We assess how each of the data sets in these categories could be used to address economic issues related to one of the five questions above. For each data set, we provide a general overview, summarize important health, demographic, employment and program participation variables, and discuss its advantages and limitations in addressing the five research questions above.

D. Other Data Sources

We excluded a number of data sets used in previous analyses of youth with disabilities because they did not satisfy one of our four criteria. *Exhibit 2* presents a summary of some of the excluded national data sets and the reason for exclusion.

E. Organization of the Report

The remainder of this report includes four sections and an Appendix. **Section II** provides a summary of our findings. In **Sections III-VI**, we provide a general overview and discuss the strengths and limitations of the data in each of our categories. Finally, the **Appendix** contains detailed summary tables for all data sets reviewed in this report. This summary includes information on each data set's sampling frame, sample size, and key variables of interest (e.g., disability, employment, and program participation).

Exhibit 2: Summary of Other Data Sets that Contain Information on Youth with Disabilities

Data Set	Reason for Exclusion				
Current Population	Cross-sectional data with limited retrospective information.				
Survey (CPS)					
Integrated Postsecondary	Cross-sectional data with limited retrospective information.				
Education Data System					
(IPEDS)					
National Health and	Very limited information on school, work and program				
Nutrition Examination	participation outcomes.				
Survey (NHANES)					
National Health Interview	Cross-sectional data with limited retrospective information. ⁵				
Survey on Disability					
(NHIS-D)					
National Household	Cross-sectional data with limited retrospective information.				
Education Survey					
National Study of	No individual information on students with disabilities.				
Postsecondary Faculty					
National Survey of	Cross-sectional data with limited retrospective information.				
American Families					
(NSAF)					
Postsecondary Education	No individual information on students with disabilities ⁶ .				
Quick Information					
System (PEQIS)					
Project Talent	No available information for the 1990's.				
Recent College Graduate	Limited information is available for the 1990's. ⁷				
Survey					
Rehabilitation Services	No available information for the 1990's.				
Administration- Social					
Security Administration					
Data Link, 1980-1988					

⁻

⁵ The NHIS-D is a follow-up to the NHIS. The NHIS, however, only includes one period of information on school and employment outcomes. As will be discussed below, the NHIS-D can be linked to the Medical Expenditure Panel Survey (MEPS).

⁶ While PEQIS contains excellent institutional information on postsecondary education enrollment, it does not contain individual level information to track transitional outcomes of youth with disabilities.

⁷ The Baccalaureate and Beyond (BB:93) Survey (summarized in Section IV) represents a more recent release of this survey.

II. SUMMARY OF FINDINGS

A. Overview

In this section, we summarize our findings of the most promising data sources for school-to-work research on youth with disabilities. Each of the selected data sources contains some information to address at least one of our five major research questions. In the remainder of this section, we summarize our selection criteria and provide an overview of the types of questions that researchers can address using these data sources.

B. Selection Criteria

We use the following six criteria to select the most promising data sources:

- Quality of the health and disability information: All of the selected data sources contain detailed information on health and/or disability program participation that researchers can use to identify youth with disabilities. The quality and timing of the information on disability status is not as reliable in certain of the excluded data sources.
- <u>Sample size</u>: All of the selected data sources contain a large estimated sample of youth with disabilities (at least 500 observations). While all of the data reviewed include a large sample of youth, the sample size of youth with disabilities varies significantly across data sources.
- <u>Sample frame:</u>⁸ All of the selected data sources contain information on a fairly broad population of youth with disabilities. Some of the excluded data sources only followed specific cohorts of youth that might not represent the experiences of the broader population of youth with disabilities.
- <u>Sample period</u>: All of the selected data sources include recent information (compiled since at least 1991) on outcomes for either youth or young adults with disabilities.
- Quality of outcome information: All of the selected data sources contain specific information to address at least one of the five research questions. The other data sources reviewed also include some outcome information. However, in comparison to the selected data sources, this information is limited because of the type and/or timing of the questions.
- <u>Attrition:</u> None of the selected data sources seems to contain heavy "planned" or "unplanned" attrition. ⁹ Unfortunately, we do not have enough information on

⁸ For example, the Beginning Postsecondary Student Longitudinal Study (BPS) only follows students who enroll in post-secondary education. Based on findings from Wagner et al. (1996), this sample only represents a relatively small portion of youth with disabilities in special education programs.

⁹ Planned attrition occurs when only a subsample of the base population from the first interview is included in the follow-up interview. Unplanned attrition occurs when interviewers cannot conduct a follow-up

potential attrition biases by youth with disabilities in each data source to make an adequate assessment.

C. Summary of Selected Data Sources

We conclude that the following data sources are most promising for current and future school-to-work research on youth with disabilities:¹⁰

- Survey of Income and Program Participation (SIPP);¹¹
- National Longitudinal Study of Adolescent Health (Add Health);
- Rehabilitation Services Administration (RSA) 911 Database and RSA's Longitudinal Study of Vocational Rehabilitation (VR);
- State Administrative Data (multiple states). 12
- National Educational Longitudinal Study of 1988 (NELS:88);
- National Longitudinal Transition Study of Special Education Students (NLTS);
- National Longitudinal Transition Study of Special Education Students-2 (NLTS-2); and
- National Survey of Youth: 1997 (NLSY97);

The SIPP, Add Health, RSA 911 Database (and longitudinal study), state administrative data, NELS:88 and the NLTS provide relatively current information on youth with disabilities. Researchers have already used many of these databases, including the NLTS, NELS:88, and state administrative data, to address issues related to our research questions (Wagner, et al, 1996, Horn and Bobbitt, 1999, Goerge, et al., 1996) and the Research Triangle Institute plans to use the RSA data for a study on youth with disabilities in the VR systems. The SIPP and Add Heath data have not been used extensively in the previous literature. Finally, the NLTS-2 and NLSY-97 provide information that will be valuable in the future (the NLTS-2 will not be available until 2001 and the NLSY-97 currently only contains one wave of available data).

7 208284

,

interview with a base sample member. With the exception of the Survey of Program Dynamics, we do not find that any of the reviewed data sources had significant enough attrition biases to deter selection.

¹⁰ We list the data sources in order according to those that will be of most use for current research related to our five research questions.

The SIPP, however, is somewhat limited if researchers can not obtain restricted research files that are matched to SSA earnings and program participation files.

We discuss the advantages and limitations of using administrative data from various states primarily because they are generally similar (see Section VI for more details).

¹³ A review of these studies will be available in our upcoming literature review.

Below, we highlight the types of research questions that researchers could address with each of these data sources. *Exhibit 3* summarizes our findings.

1. SIPP

Researchers could use restricted research files of the SIPP that are matched to Social Security Administrative (SSA) data on earnings and program participation records over several years to address questions related to short term (2 to 3 years) and long-term (5 to 15 years) transitions by youth with disabilities (research questions 3, 4, and 5). The SIPP contains detailed information on demographic and health characteristics of large samples of youth with disabilities and the matched SSA records provide employment and SSA program participation information over a person's lifetime. Researchers could, for example, use these matched data to observe transitions into work (using SSA earnings records) or SSI (using SSA program records) by youth with disabilities (age 14 to 22) over their young adulthood (age 23 to 30). We have performed similar analyses in a recent evaluation of transitions by former AFDC recipients onto SSI (Stapleton et al., 1999, 2000).

If the matched data are not available, then the ability to use the SIPP to address research questions 3, 4, and 5 is limited primarily because of the short SIPP panel (approximately 32 months). One potential alternative is to match the 1992 and 1993 SIPP panels with the Survey of Program Dynamics (SPD), which continues those SIPP panels. This match would provide information over a ten-year period. Unfortunately, Huggins and King (1998) found that the SPD has significant attrition bias. Further, sample size issues might limit the SPD's usefulness to evaluate specific issues related to school-to-work transitions.

2. Add Health

Researchers could use Add Health data to address questions related to the early schooling and training experience of youth with disabilities (research questions 1 and 2). Add Health contains extensive information on family, school, and community characteristics for a large nationally representative sample of youth with and without disabilities in grades 7 through 12 in 1995, collected from students, parents, and/or administrators. Unlike most data sources, the Add Health includes very specific information on the types of parental investments (e.g., parental time, expectations) that the youth receives during high school. Researchers could use these data to examine issues related to the child's human capital development. For example, researchers could examine whether the level and type of investments provided by parents vary depending on the child's disability status.

The major limitation of these data is that only one follow-up interview exists. Hence, these data only provide very limited information on the outcomes of school-to-work transitions.

Exhibit 3: Summary of the Most Promising Data Sets to Address Questions Related to Youth with Disabilities								
	SIPP	Add	RSA 911	State	NELS:88	NLTS	NLTS-2	NLSY-97
		Health	and	Admin.				
			Longitudinal	Data ¹⁴				
			Survey					
Question 1: Which factors influence the		X	X		X	X	X	X
youth's preparedness for employment?								
Question 2: What determines the level and		X			X	X	X	X
type of effort devoted to preparing the								
youth for employment?								
Question 3: What type of employment and	X		X	X	X	X	X	X
program participation transitions do youth								
with disabilities make after they have								
completed their formal schooling?								
Question 4: What are the employment,	X^{15}			X				X
income, program participation, and								
independent living outcomes for adults								
who had childhood disabilities, and how								
do they vary with individual characteristics								
and childhood circumstances?								
Question 5: What effect do current public	X		X	X				X
policies have on the incentives for youth								
making transitions from school-to-work?								

We discuss the advantages and limitations of using administrative data from various states (see Section V for more details).
 Researchers can use matched records from the SIPP and Social Security Administration records on earnings and program participation to address this issue.

3. Rehabilitation Services Administration (RSA) 911 Database and RSA's Longitudinal Study of the Vocational Rehabilitation (VR)

Researchers could use the RSA 911 longitudinal study to address questions related to initial post-secondary outcomes and factors that influence those outcomes (including factors related to policy changes) (research questions 1, 3, and 5). ¹⁶ These data include detailed descriptive information on individuals who received VR services, which includes a significant portion of youth with disabilities. Because of the large samples included in the RSA databases, researchers can also use these data to make cross-state comparisons of employment and program participation outcomes.

The major limitation of these data is that they only provide a relatively limited period to observe transitions. Hence, while these data might provide excellent information on initial post-school outcomes, they will not provide information on long-term adult outcomes (e.g., over 10 years after the youth leaves secondary school).

The RSA data could be further enhanced if they were matched to SSA records on earnings and program participation. While there are no plans to match the RSA data to SSA records at this time, it is technically feasible to do so; the RSA data include SSNs. ¹⁷ Similar to the matched SIPP/SSA data, the major advantage of a matched file of RSA/SSA data is that they would contain information to examine long-term transitions by youth with disabilities.

4. State Administrative Data

Several state administrative databases (California, Florida, Illinois) could be used to address questions related to short- and long-term transitions by youth from various programs (e.g., AFDC, SSI) into work or other programs (research questions 3, 4 and 5). The major advantage of state administrative data is that they provide information on the experiences of youth who participate in a program or multiple programs (e.g., Medicaid, Temporary Assistance for Needy Families, Special Education) in a particular state.

Unlike survey data, one major obstacle in using state administrative data is accessibility. Many states place confidentiality restrictions on the use of data. Hence, these data might be more costly to obtain than the public data sets mentioned above. Further, some states may not release their data for various other reasons (e.g., expense, political sensitivity of the research).

The RSA 911 Database (without the Longitudinal Study) could also be used to address some of these research questions, though the information in the Longitudinal Study significantly enhances the 911 Database.

¹⁷ Previous matches exist of RSA/SSA data in the early eighties.

5. NELS:88

Similar to Add Health, the NELS:88 data are most promising to address questions related to the early schooling and training experience of youth with disabilities (research questions 1 and 2), as well as initial transitions from school-to-work (research question 3). NELS:88 provides extensive information on a cohort of eighth graders as they transition through high school. Researchers can use these data to observe how changes in multi-period factors (schooling, environment, home) influence the youth's preparedness for employment and school outcomes. A follow-up interview is conducted two years after the youth is scheduled to finish high school; this could be used to analyze immediate high school-to-work (or other school) transitions.

There are two major limitations of the NELS:88. First, it excludes a large number of youth with severe disabilities, including those from special education schools for the handicapped, area vocational school, those in "ungraded" classrooms, and those deemed by local staff to be unable to participate because of physical disability, mental illness, or language. Hence, these data do not provide representative information on large samples of youth with specific limitations. Second, NELS:88 only provides information on youth up to age 20. Hence, these data do not provide long-term information on youth as they age.

6. *NLTS*

Researchers could use the NLTS to address questions related to the schooling experience (research questions 1 and 2) and initial transitions from school made by youth from special education programs (research question 3). Because the NLTS only samples youth in special education programs, all of the NLTS respondents could be considered as having some type of disability. Researchers could use these data to evaluate the youth's experience while in school, such as the type of investments received (e.g., teacher time), as well as their experiences as they finish their secondary education, using responses from the three NLTS follow-up interviews.

A major drawback of the NLTS is that it only contains information on a 1987 student cohort. The experiences of the NLTS cohort of special education students might not necessarily represent the more recent experiences of youth with disabilities. To address this limitation, the Department of Education is funding a new NLTS survey (NLTS-2).

7. *NLTS-2*

Researchers could use the NLTS-2 data in the future to address the same types of questions as the NTLS, except for a more recent cohort of special education students (fall

9 208284

¹⁸ Several researchers have already used the NLTS to evaluate postschool transitions (SRI International, 1993; Blackorby and Wagner, 1996; Wagner and Blackorby, 1996).

¹⁹ Further disability assessments could be made based on survey information provided by students, parents, teachers, and school administrators (e.g., specific health conditions, difficulties with certain activities).

2000). The strengths and limitations of the NLTS-2 are similar to the original NLTS because it includes the same target sample (special education students), though the NLTS-2 will follow this sample for a much longer period than the original NLTS (approximately ten years vs. four years).

8. NLSY-97

The NLSY:97 could be a valuable data source for evaluating transitions by youth with disabilities in the future to address issues related to all of our research questions. These data include a relatively large sample of youth with disabilities from a recent cohort that will be followed for several years. In addition, unlike the surveys mentioned above, researchers can use the NLSY:97 to compare the experiences of youth with disabilities to those without disabilities.

Because the initial interview sample only includes individuals age 12 to 16 in 1997, researchers will not be able to observe school-to-work transitions in the NLSY:97 for most of the sample until approximately 2004, when the youngest person in this sample reaches 18. Consequently, the NLSY:97 provides promise for future research, but is very limited in its current form.

III. LONGITUDINAL SURVEYS OF THE GENERAL POPULATION

A. Overview

We identified the following longitudinal surveys of the general population that met our selection criteria for review:

- Survey of Income and Program Participation (SIPP);
- Survey of Program Dynamics (SPD);
- Panel Survey of Income Dynamics (PSID); and
- Medical Expenditure Panel Survey (MEPS).

The SIPP is a nationally representative survey administered by the Census Bureau that gathers detailed information on demographic, health, employment, and program participation patterns from households, families and individuals. The SPD is also a nationally representative survey administered by the Census Bureau that includes a subsample of households from previous SIPP panels. The PSID is a nationally representative survey administered by the University of Michigan's Institute for Social Research that tracks changes in the living situations of families and individuals over approximately a 30-year period. Finally, the MEPS is a periodic nationally representative survey administered by the National Center for Health Statistics of households that collects information on medical expenditure patterns over a 2.5-year period, and that can be linked to its sampling frame, the National Health Interview Survey, to extend the observation period for some variables.

B. Survey of Income and Program Participation (SIPP)

1. Data Description

The SIPP is a nationally representative data set that provides detailed longitudinal information on households, families, and individuals over approximately a 32-month period. SIPP panels are available in each year from 1984 through 1993 and then again in 1996.

The sample for each SIPP panel includes individuals in the non-institutionalized resident population of the United States. In general, the sample sizes of the 1985-1989 SIPP panels were relatively small (approximately 32,000 observations) compared to other SIPP panels. Since 1990, the number of original SIPP sample members has varied from 40,800 (1991) to 61,900 (1990). ²¹

The 1992 and 1993 SIPP panels include longitudinal information over a 40 and 36 month period, respectively. The 1996 panel includes a 60-month interview period.

Using multiple SIPP panels can further increase the samples from each individual SIPP panel. The SIPP is designed to produce nationally representative results from overlapping panels by making a weight adjustment to each panel (see U.S. Department of Commerce, 1994 for more details).

During each SIPP interview ("wave"), adults age 15 and older answer questions about monthly demographic, program participation, and employment characteristics ("core" questions). The SIPP also provides information on children through the responses of parents.

In addition to the core questions, the SIPP also includes information on special subjects during each interview, such as disability, past program participation, and child schooling ("topical modules"). The subject covered in each Topical Module varies by interview wave.

The SIPP topical module on disability and functional limitations includes several health related questions. The SIPP includes information on work limitations, housework limitations, Activities of Daily Living (ADLs), Instrumental Activities of Daily Living (IADLs), and functional limitations for those over age 16. Detailed functional limitation and disability questions for children (age 3 to 15) are also available in each panel, based on the parents' responses.

The Census Bureau and SSA have created restricted research files that match multiple SIPP panels to SSA administrative data on earnings and program participation. ²² They linked the records using Social Security Numbers (SSN's) that were both available on SSA files and collected during SIPP interviews. ²³ The "matched SIPP/SSA" data have been used in several research projects funded by SSA, including a project that we recently completed (Stapleton et al., 1999, 2000).

2. Advantages and Limitations for Evaluating Transitions by Youth with Disabilities

There are several advantages of the SIPP. First, each SIPP panel contains a large nationally representative sample of youth with disabilities. Based on previous work (Stapleton et al., 1999, 2000), we estimate that there are approximately 650 persons age 14 to 30 with an identified limitation in at least one wave of each panel from 1990 to 1993.²⁴ Second, the SIPP contains detailed functional limitation and disability information for respondents age 16 and older.²⁵ Finally, the SIPP contains monthly

12 208284

__

SSA and the Census created restricted research files in which they matched multiple years of SSA administrative records to the 1984, 1990, 1991, 1992, and 1993 SIPP panels. SSA also plans to link administrative records to the 1996 SIPP panel when it becomes available.

The Census collects information on SSNs during the SIPP interviews. As part of the ongoing SIPP program, the Bureau of the Census and SSA validate SSNs for SIPP sample members in the course of normal survey operations. An attempt is also made to locate SSNs for persons for whom an SSN is not reported in the survey (except for persons refusing to provide their SSN). According to Lahiri, Vaughan, and Wixon (1997), in the 1990 panel this process resulted in a "validated" SSN for approximately 90 percent of original sample members age 18 or older and for about 80 percent of persons under the age of 18.

The sample size in the 1991 SIPP panel is smaller because of the smaller initial sample. We could generate a sample size of approximately 2,300 observations if we pool data from the 1990-93 SIPP panels.
 For those under age 16, parents answer questions on the functional limitations and disabilities for their

children. Stapleton, et al. (1999) noted that these responses likely underreport the total number of children with disabilities in the general population.

information on several outcomes of interest for youth, including employment and program participation.

There are four limitations of these data. First, the SIPP (without the SSA match) only contains information over approximately a 32-month period; a period too short to capture long-term transitions by youth as they move into young adulthood. Second, the SIPP does not include any information on youth living in institutions, which might exclude a significant portion of youth with disabilities. Third, it only contains limited information on factors that would influence a child's human capital development, such as school quality and time spent with parents. Finally, we found some evidence of attrition bias in later SIPP interviews for SSI recipients (Stapleton et al., 1999, 2000),. This bias can be limited somewhat by using the SIPP panel weights, but additional research is necessary to assess such biases.

The restricted SIPP/SSA files would greatly enhance the amount of information available from each SIPP panel. Researchers could use the matched data to observe program participation and employment spells of SIPP respondents before, during, and after their SIPP interviews. For example, in Stapleton, et al. (1999, 2000), we pooled matched data from the 1990-1993 SIPP panels to provide information on transitions into SSI by young women and children from 1974 to 1998. We might use these data in an upcoming project to evaluate adult employment and program participation outcomes for youth with disabilities. For example, we could estimate what proportion of youth with disabilities in, say, the 1990 SIPP panel were employed or participating in SSI by 1998. We might also compare the characteristics of youth who transitioned into employment to those who made other types of transitions (e.g., enrolled in SSI).

An important limitation of the matched data is that detailed characteristics from SIPP interviews are only available over the relatively short life of the panel. For example, attempts to characterize 1996 SSI participants using information from, say, the 1990 panel, are problematic because some characteristics, such as health, income, and family status are likely to change as a person ages.

C. Survey of Program Dynamics (SPD)

1. Data Description

The SPD includes an overlapping sample from the 1992 and 1993 SIPP panels as the base population and follows it for six years, from 1996 to 2001. Hence, researchers can link the SPD with the 1992 and 1993 SIPP panels to create a ten-year panel data set of employment and program participation, from 1992 to 2001.

²⁶ For example, we could not use these data to determine what impact participating in SSI at, say, age 15 has on employment and program participation decisions at, say, age 30.

²⁷ Hence, researchers could not use these data to address research questions 1 and 2.

²⁸ Individuals who completed both the first and last wave of the 1992 and 1993 SIPP panels are included in the SPD target sample.

²⁹ The first sample in the 1992 SIPP panel was interviewed in February of 1992.

The SPD survey has three phases. In the first phase, which started in 1997 with the SPD Bridge Survey, sample persons from the 1992 and 1993 SIPP panels were contacted and asked retrospective questions about their activity in the past year. The second phase started in 1998 with the full implementation of the core SPD questionnaire. This questionnaire includes additional questions that focus on children in the household. Specifically, it includes information on the child's school status, activities at home, child care, health care, and child support. Unlike the SIPP, the SPD will include specific questions about these activities for youth age 12 to 17. The final phase of the SPD will start in 1999 and include retrospective residence history questions regarding the child's well-being.

2. Advantages and Limitations for Evaluating Transitions by Youth with Disabilities

There are three advantages of combining the SPD data with the SIPP. First, SSA administrative records are available for the SPD panel members because SSA and the Census have already created matches for the 1992 and 1993 SIPP panels. Second, because the SPD data provide a ten-year panel of survey data, researchers can observe changes in youth background characteristics, such as health and functional limitations that might influence adult outcomes. Finally, the additional questions on child circumstances provide information on factors that influence the child's human capital development, such as time spent with parent and social activities. These final two advantages address two limitations of the matched SIPP data.

There are three drawbacks, however, that potentially outweigh the advantages of using these data. First and most importantly, early studies of attrition in the SPD suggest that attrition bias could be a major problem. Huggins and King (1998) found that sample attrition for the 1998 SPD was 50 percent of the target sample. Second, because of the attrition, the overall SPD sample size is limited. Based on past experience, we estimate that the SPD will include only about 175 observations on people age 14 to 30 with disabilities. Finally, the SPD is gathering detailed child information in later (1997-1999) interviews. While these data might be important for evaluating school-to-work transitions, adult outcomes for these children will not be available for many years.

D. Panel Study of Income Dynamics (PSID)

1. Data Description

The PSID includes annual information on individuals living in PSID households from 1968 to 1997. During the interviews, one adult in the household (the "head") answers all of the questions for the rest of the household. In general, the PSID sample includes information each year from approximately 5,000 households that were part of the original sample interviewed in 1968. ³¹

³⁰ The annual questions in the Bridge Survey are modeled after those in the Current Population Survey.

³¹ The PSID has periodically added "refresher samples" to increase sample size.

The PSID contains limited disability information. Information regarding work limitations is collected in every PSID for the "head" and spouse (which the PSID refers to as a "wife"). The PSID added a special disability supplement for "heads" and "wives" in 1989 that included information on ADLs, IADLs, and functional limitations. Unfortunately, the PSID does not include annual disability information for other household members.

In 1997, the PSID added a special Child Development Supplement to collect longitudinal information on human capital formation of children 0 to 12, including information on schooling and parent variables (e.g., parental time). The purpose of this supplement was to study the dynamic process of early human capital formation. This supplement included several questions to assess the cognitive, behavioral, and health status of youth. ³²

2. Advantages and Limitations for Evaluating Transitions by Youth with Disabilities

There are two advantages of the PSID. First, it provides a long history of individual program participation from 1968 to 1997. Second, the child development supplement provides important information on the formation of human capital for a large sample of youth. For example, researchers could use this information to determine what affect certain human capital "inputs" have on later earnings and program participation.

Several limitations of the PSID likely outweigh the advantages of using it for future analyses, however. First, the PSID has a relatively small sample of youth with disabilities in comparison to other data, such as the SIPP. More importantly, the PSID contains only limited annual information on youth until they become heads of their households. Even if a youth eventually becomes a "head" in the PSID, the amount of information available regarding their childhood is small.³³ We estimate that approximately 50 PSID respondents age 14 to 30 have a disability in each year. Second, similar to the SIPP, the PSID does not include information on youth living in institutions. Finally, while the child supplement in 1997 provides an excellent source for potential future research, it will be several years before these data can be used in an analysis of transitions by youth with disabilities because the sampling frame only includes those age 0 to 12.

E. Medical Expenditure Panel Survey (MEPS)

1. Overview

MEPS includes a nationally representative subsample of households included in the previous year's National Health Interview Survey (NHIS), a nationally representative

15 208284

-

³²Specifically, it includes the following information: "(i) reliable, age graded assessments of the cognitive, behavioral, and health status of 3,563 children obtained from the mother, a second caregiver, an absent parent, the teacher, the school administrator, and the child; (ii) a comprehensive accounting of parental and caregiver time inputs to children as well as other aspects of the way children and adolescents spend their time; (iii) teacher-reported time use in elementary and preschool programs; and (iv) other-than-time use measures of other resources for example, the learning environment in the home, teacher and administrator reports of school resources, and decennial-census-based measurement of neighborhood resources" (Hall and Finkelstein, 1999).

³³ For example, there are no health status indicators for youth.

sample of the civilian non-institutionalized population of the United States. The 1996 MEPS includes a sample size of 10,500 households. The 1997 MEPS includes 6,300 households. Unlike the 1996 MEPS, the 1997 MEPS includes an oversample of children with limitations. Data for both panels are collected from each household over a two and one-half year period during several follow-up interviews. The MEPS panels are currently only available for 1996 and 1997.

The MEPS provides data on various health care issues, including healthcare use, expenditure, and insurance coverage. The survey components include in-person interviews, telephone interviews, and mail surveys. It gathers data on demographic characteristics, health status of household members, family type, employment, health insurance, and veteran status.

The MEPS includes extensive information on health and disability status. There are several questions on disabilities for each household member. In addition, researchers can link MEPS to the 1995 NHIS, which contains extensive information on health and disability status.

2. Advantages and Limitations for Evaluating Transitions by Youth with Disabilities

The major advantage of the MEPS is the amount of detailed information that it provides on health and disability status. Of all the general population data sets, the MEPS contains the most detailed information on the disability status of youth.

Unfortunately, MEPS contains very limited employment and program participation information relative to the SIPP. Given that the MEPS only follows individuals over approximately the same period as the SIPP (32 months), the SIPP (particular when matched to SSA records) provides better opportunities to evaluate transitions by youth with disabilities for our purposes. Further, we estimate that the sample of youth with disabilities age 14 to 30 in the MEPS includes approximately 170 cases, only about one-fourth as many as the number in each SIPP panel. ³⁴

IV. LONGITUDINAL SURVEYS OF YOUTH

A. Overview

We identified the following longitudinal surveys of youth that met our selection criteria for review:

- National Longitudinal Study of Adolescent Health (Add Health);
- National Educational Longitudinal Study of 1988 (NELS:88);

16 208284

³⁴This difference becomes even larger if multiple SIPP panels are "pooled."

- High School and Beyond (HS&B);
- Beginning Postsecondary Student Longitudinal Study (BPS);
- Baccalaureate and Beyond Longitudinal Study (BB:93);
- National Longitudinal Surveys of Youth (NLSY 1979)
- National Longitudinal Survey of Youth: Mothers and Children (NLSY: Mothers and Children);
- National Survey of Youth: 1997 (NLSY97);

Add Health is a nationally representative survey of adolescents in grades 7 through 12 administered by the University of North Carolina (UNC) that collects information on the health status and social issues facing adolescents. The NELS:88, HS&B, BPS, and BB:93 are surveys administered by the Department of Education (DoED) (and organized under the National Center for Education Statistics (NCES)). The NELS:88 and HS&B are longitudinal surveys that follow students through different stages of their education (middle school, high school, and postsecondary school). The BPS and BB:93 follow students through various stages of post-secondary education. Finally, the NLSY surveys (NLSY79, NLSY: Mothers and Children, and NLSY97) are nationally representative surveys of various youth cohorts administered by the Bureau of Labor Statistics.

B. National Longitudinal Study of Adolescent Health (Add Health)

1. Data Description

The Add Health survey provides detailed information on the health-related behaviors of adolescents in grades 7-12, collected from 134 nationally representative junior high and high schools in 1995 and 1996. The survey attempts to identify factors that influence the causes of certain health-related behaviors. It includes rich information on the adolescent's families, friends, schools, and communities that influence these behaviors. Initial school interviews with students, teachers and administrators started in 1995 for a sample of approximately 90,000 students, and follow-up in-home interviews were conducted with parents and children on a subsample in 1995 and 1996. Add Health conducted interviews with parents, students, teachers and administrators. The sample of questionnaires and in-

17 208284

NCES organizes these surveys under its longitudinal program to provide on-going descriptive information on educational performance, functional abilities, background, and employment outcomes. This program requires periodic examination of educational and occupational attainment, aspirations, attitudes, and motivations during the pivotal years before, during, and after elementary school, middle-junior high school, high school, and postsecondary education.

The NCES organizes these surveys under its postsecondary education level program to provide statistical information on a multitude of issues (e.g., financial aid, postsecondary characteristics). The base sample for both of these data sets is the National Postsecondary Aid Study (NPSAS), a comprehensive nationwide study of students enrolled in less than 2-year institutions, community and junior colleges, 4-year colleges, and major universities located in the United States and Puerto Rico. Undergraduate, graduate, and first-professional students who receive financial aid, as well as those who do not receive aid, participate in NPSAS. The NCES conducts the NPSAS every three years on a new cohort of students.

home responses vary, but, in general, include a large sample of youth (at least 10,000) in both interview waves.³⁷

Several questions in the in-home interview gather information on the youth's disability status. These questions provide information on limb disabilities, mental retardation, learning disabilities, and sensory disabilities. The data also includes Peabody Vocabulary test scores, a measure of cognitive ability.³⁸ A number of child and parent questions provide information on the emotional health of the child (e.g., how the child is feeling about him/herself).

2. Advantages and Limitations for Evaluating Transitions by Youth with Disabilities

There are three advantages of the Add Health survey. First, it provides recent information on the experiences of a large sample of youth, including those with disabilities, from a representative sample of schools. Unlike NLTS and NELS (see below), the sampling frame does not exclude certain types of schools. Second, because it includes information on those with and without disabilities, researchers can compare the experiences of these two groups. For example, researchers can assess whether the level and type of investments provided by parents vary depending on the child's disability status. Add Health contains a large sample of youth (10,000), and based on this sample size, we estimate that it contains a sufficient sample of youth with disabilities (approximately 1,000 cases) for empirical analysis of many issues. Third, similar to NLTS and NELS, Add Health includes detailed information on the youth's family, school, and community characteristics that might influence their school and work choices. Hence, researchers can use these data to analyze factors that influence the youth's preparedness for employment, such as school achievement and job training.

The major limitation of these data is that there is only one planned follow-up interview. Hence, researchers cannot use these data to observe post-school outcomes, such as transitions into work or program participation. Further, researchers cannot observe how multi-period changes, such as changes in the youth's health status, influence early youth school outcomes and investments.

18 208284

For Wave 1, 90,118 students completed the Adolescent In-School Questionnaires from October 1994 through April 1995. Between April and December 1995, 20,745 students completed the Wave I Adolescent In-Home Interviews. The Parent In-Home Questionnaires were administered to parents while their children were taking the Wave I Adolescent In-Home Interviews. In most cases, the mother of the student filled out the parent questionnaire. The Wave I School Administrator Questionnaires were completed between August 1994 and June 1995.

The Wave II Adolescent In-Home Interviews were administered from April through August 1996 to 14,738 students who had completed the Wave I Adolescent In-Home Interviews. The Wave II School Administrator Questionnaires were administered by telephone interview in June 1996.

There is some concern that these tests are misleading for children who speak English as a second language.

Assumes that approximately 10% of the 10,000 original sample members will have a disability. This is likely an upper bound on the number of youth with disabilities. Nonetheless, the sample size is sufficiently large.

C. National Educational Longitudinal Study of 1988 (NELS:88)

1. Data Description

The purpose of NELS:88 is to provide information on postsecondary school outcomes for a 1988 cohort of eighth grade students. The NELS:88 sample includes a representative sample of all U.S. public and private schools containing eighth grades, but excludes certain students with health problems. In total, the baseline sample includes 24,000 students. The excluded groups are those from separate special education schools, area vocational school, those in "ungraded" classrooms, and those deemed by local staff to be unable to participate because of physical disability, mental illness, or language. According to the National Opinion Research Center (1996), of those who were excluded, 20 percent were ineligible because their English language proficiency was deemed to be insufficient for survey participation; 66 percent were classified as ineligible because of mental disabilities; 6 percent were excluded due to physical disability; and 8 percent were classified as "disability unknown."

NELS:88 includes information on school policies, teacher practices, family involvement, student expectations, and four cognitive tests. Follow-up interviews were conducted every two years with the same cohort until 1994. Interviewers collected data from a variety of sources, including school administrators, teachers, parents, and students. The survey has information on students' background, resources, and secondary and post-secondary educational choices.

NELS:88 includes some disability information from parents, teachers, and cognitive tests. Interviewers ask parents and teachers if the child ever had problems because of health. They also asked parents if the child received any type of special services. The cognitive tests provide information on the youth's cognitive abilities that might be related to a specific limitation.

2. Advantages and Limitations for Evaluating Transitions by Youth with Disabilities

The major advantage of NELS:88 is that it provides information on high school achievement levels (and factors that influence achievement) for a large sample of youth, including some youth with disabilities. It contains rich information on school quality, special services, and child-parent-teacher interactions that are generally not available in national databases. This information could be valuable in assessing how certain factors not included in national surveys, such as parental and teacher attention, influence the youth's human capital formation. Despite the sample selection that excludes special education schools, NELS:88 does include a relatively large sample of students with disabilities. For example, Rossi, et al. (1997) found that 2,500 had some type of limitation, based on the parent's responses.

There are several major drawbacks of NELS:88. First, the NELS:88 sampling frame excludes several groups of youth with disabilities. Rossi et. al. (1997) estimated that as many as one half of the students that are served by the Individuals with Disabilities Education Act (IDEA) are excluded by the sample selection. Second, several researchers

have raised concerns about the accuracy of the disability information for those who are included in the sample.⁴⁰ Finally, NELS:88 does not include a long enough panel to observe long-term transitions from school-to-work because it only followed a cohort of students until age 18. A large share of students only make their first transition into full time (i.e., full-year) employment at this age or later.

D. High School and Beyond (HS&B)

1. Data Description

The purpose of the High School and Beyond Longitudinal Survey (HS&B) is to study the educational, professional, and personal development of youth as they become adults. The HS&B includes a nationally representative sample of over 30,000 sophomores and 28,000 seniors from over 1,000 high schools in the United States. Follow-up surveys are available for 1982, 1984, 1986, and 1992. Similar to NELS:88, HS&B also excludes certain students with health problems.

The HS&B includes information from a number of sources including postsecondary transcripts, questionnaires sent to students, school officials, teachers, and parents, and follow-up interviews with students. The survey contains information on the students' educational performance, functional abilities, background, and employment outcomes. School administrators, teachers, and students provided information on the youth's functional limitations and disability characteristics. School administrators answered questions relating to the student's participation in special education programs. Teachers provided information on whether the student had a physical or emotional handicap that affected their schoolwork. Students provided information on whether they had a physical condition that limited work or education, and/or participated in any programs for disabled students. ⁴² In addition, a series of standardized test scores are available.

2. Advantages and Limitations for Evaluating Transitions by Youth with Disabilities

While these data provide important information on a large representative sample of students leaving high school, including a large sample of youth with disabilities (approximately 5,000 observations), data that are more recent are desirable to evaluate school-to-work transitions.⁴³ Further, similar to NELS:88, another limitation of the

⁴⁰ Rossi, et al. noted that teachers are more likely to classify students as disabled when the disability affects the student's schoolwork. Geenen (1995) hypothesized that parents were less likely to identify their child as "disabled" if s/he had a learning or emotional disability, but more likely to identify their child as "disabled" if s/he had a physical impairment. Rojewski (1996) noted that school officials also operate under set legal definitions for including a student in a special education program.

⁴¹ In 1982, the sample size was 30,000 base-year sophomores and 12,000 base-year seniors. In 1984, the sample size was 15,000 base-year sophomores and 12,000 base-year seniors. In 1986, the sample size remained largely unchanged from 1984. In 1992, the sample size included only 4,000 of the base-year sophomores.

⁴² These disability questions are not included in the follow-up interviews, however.

⁴³ Our estimate of disability incidence among youth is based on findings from Rossi et al. (1997) using NELS:88. They find that approximately 10% of students sampled by NELS:88 have a limitation.

HS&B is that it excludes a large sample of youth with disabilities because of its sampling frame. Hence, the HS&B data are limited for our purposes.

E. Beginning Postsecondary Student Longitudinal Study (BPS)

1. Data Description

The BPS includes information on students who begin postsecondary education just after high school, as well as on those who delay the start of their education. The BPS follows first-time, beginning students over 2-year intervals for 6 years. The first round of interviews started in 1992, following approximately 7,000 students from the 1990 National Postsecondary Aid Study (NPSAS). The NPSAS is a comprehensive nationwide study of students enrolled in less than 2-year institutions, community and junior colleges, 4-year colleges, and major universities located in the United States and Puerto Rico. The second BPS (BPS:90/94) was conducted in the spring of 1994. The next BPS cohort is based on NPSAS:96 with the first BPS follow-up in 1998.

One of the main objectives of the BPS study is to compare the experiences of those who attend school immediately to those who delay entry. It gathers information from students, some parents, postsecondary transcripts, and financial aid records. The survey contains information about the students' background, postsecondary educational experiences, and work entry experiences.

The BPS contains some limited disability information collected from interviews with students (including information from the NPSAS). The 1990 and 1994 surveys include information on whether the student had some specific type of health condition (e.g., visual impairment, learning disability).

2. Advantages and Limitations for Evaluating Transitions by Youth with Disabilities

While the BPS provides information on the experiences of youth who are transitioning from school, its sample only includes those who enter a postsecondary institution. Based on findings from Wagner et al. (1996), this sample only represents a relatively small portion of youth with disabilities in special education programs. Hence, these data can only provide a limited picture of the experiences of youth with disabilities who actually enter post-secondary education. Another major limitation is the outcome information included in these data is very limited, particularly in relation to employment and earnings.

F. Baccalaureate and Beyond Longitudinal Study (BB: 93)

1. Data Description

BB:93 includes information on people one year after they have completed a bachelor's degree. BB:93 includes a sample of approximately 11,000 students from the 1993 NPSAS. Follow-up interviews will eventually be available every year from 1993 to 2005. The first follow-up survey took place in 1994 (BB:93/94) and included student interviews

and undergraduate transcripts. The second follow-up survey (BB:93/97) included student interview questions and financial aid records. The next scheduled BB cohort will be associated with the NPSAS:2000 as its base.

This survey collects information on undergraduate educational experience, graduate school entry, and earnings shortly after college. The information is gathered from student record abstracts, student interviews, a parental survey, financial aid records, and undergraduate transcripts.

The disability information in the BB:93 is similar to that in the BPS. It includes self-reported information on specific types of limiting health conditions.

2. Advantages and Limitations for Evaluating Transitions by Youth with Disabilities

The advantages and limitations of the BB:93 are the same as those of the BPS. While the BB:93 provides information on the experiences of youth who are transitioning from school, its sample only includes those who enter a postsecondary institution.

G. National Longitudinal Survey of Youth: 1979 (NLSY79)

1. Data Description

The NLSY79 includes data from a nationally representative sample of 12,686 young people who were between the ages of 14 and 22 in 1979. 44 While the sampling frame is nationally representative, it includes a large subsample of low-income and minority families. In-person interviews were conducted each year until 1994 when the surveys were cut back to a biennial basis. Seventeen years of survey data are currently available from 1979 to 1996 on the respondents' demographic and family background, educational status and attainment, high school experiences, labor market activity and transitions, detailed work histories, income, assets, and health.

The NLSY79 includes annual information on functional limitations that limit work or school activities, and the expected duration of the limitations. In addition, several supplements to the NLSY79 in the eighties and early nineties include detailed disability information on specific health conditions (e.g., mental retardation).

2. Advantages and Limitations for Evaluating Transitions by Youth with Disabilities

The NLSY79 is an excellent database to analyze school-to-work transitions by a 1979 cohort of young adults. It provides detailed information on transitions for a large sample of young adults age 14 to 22 over a seventeen-year period. In addition, these data contain annual information on disability. We estimate that the survey includes approximately

⁴⁴ Researchers have found that the NLSY79 has been able to maintain an excellent retention rate throughout the survey (see Pergamit, 1995 for more details).

1,200 youth with disabilities.⁴⁵ Several researchers have used these data in previous school-to-work analyses (Gardecki and Neumark, 1998; Monks, 1997; and Keane and Wolpin, 1997).

The major limitation of the NLSY79, however, is that it does not provide information on transitions from school by a recent cohort of youth.

H. National Longitudinal Survey of Youth: Mothers and Children

1. Data Description

Starting in 1986, a supplement was added to the NLSY79 on young women in the original survey who had children (NLSY79: Mothers and Children). Since 1988, information has been collected on a variety of factors for children age 10 and older, including child-parent interaction, attitudes toward schooling, dating and friendship patterns, religious attendance, health, substance use, and home responsibilities (Yates, 1999). Biennially (since 1994), children age 15 and older complete a lengthy child interview modeled on the NLSY79 questionnaire. Information is collected on their schooling, training, work experiences and expectations, health, dating, fertility and marital histories, and household composition. A special supplement also includes information on parent-child conflict, participation in delinquent or criminal activities, use of controlled and uncontrolled substances, and the child's future expectations. The NLSY79: Mothers and Children disability information is the same as that collected in the NLSY:79.

2. Advantages and Limitations for Evaluating Transitions by Youth with Disabilities

The major limitation of the NLSY: Mothers and Children in a school-to-work analysis is that the sample size is very limited for youth with disabilities. According to RAND (1998), this survey only included 2,084 children age 10 to 14. As an upper bound, we estimate that approximately 200 of these children have a limitation. We believe this sample size would be too small for an empirical analysis of school-to-work transitions.

I. National Longitudinal Survey of Youth: 1997 (NLSY:97)

1. Data Description

In 1997, a new NLSY (NLSY97) was started for a nationally representative sample of approximately 9,000 youth who were 12 to 16 years old as of December 31, 1996. Similar to the NLSY79, the NLSY97 will collect extensive information about the youth's labor market behavior and educational experiences over time. Unlike the NLSY79, however, the NLSY97 includes a parent questionnaire that contains information about the youth's family background and history. Information in the parent questionnaire includes:

⁴⁵ Assumes that approximately 10% of the 12,686 original sample members have a disability. This is likely an upper bound on the number of youth with disabilities. Nonetheless, the sample size is sufficiently large.

parents' marital and employment histories, relationship with spouse or partner, ethnic and religious background, health (parent and child), household income and assets, participation in government assistance programs, youth's early child-care arrangements, custody arrangements, and parent expectations about the youth (Bureau of Labor Statistics, 1999).

The disability information included in these data are generally the same as in the NLSY:79, though more specific information is also available on some health conditions of the child (e.g., learning disability). In addition, the NLSY:97 will have a larger sample of youth with disabilities than the earlier NLSYs (we estimate that the 900 of those interviewed in 1997 had a limitation).

2. Advantages and Limitations for Evaluating Transitions by Youth with Disabilities

The NLSY:97 could become be an excellent data source for evaluating transitions by youth with disabilities for several reasons. First, it includes a relatively large sample of youth with disabilities from a recent cohort. Second, it plans to follow this cohort until they become adults. Finally, the experiences of youth with disabilities could be compared to those of contemporaries without disabilities.

The major limitation of the NLSY:97, however, is that there is not enough current information in the panel to conduct an empirical analysis on school-to-work transitions. Because the initial interview sample only includes individuals age 12 to 16 in 1997, researchers will not be able to observe school-to-work transitions for most of the sample until approximately 2004, when the youngest person in this sample reaches 18.

V. LONGITUDINAL SURVEYS OF YOUTH WITH DISABILTIES

A. Overview

The following longitudinal surveys of youth with disabilities that met our selection criteria for review:

- National Longitudinal Transition Study of Special Education Students (NLTS);
- National Longitudinal Transition Study of Special Education Students-2 (NLTS-2);
- School-to-Work Transition Survey of Deaf Youth (SWTS).

The NLTS and NLTS-2 are nationally representative surveys of students age 15 to 21 in special education programs, administered by the Department of Education. The NLTS started in 1987 and the NLTS-2 is scheduled to start in 2000. SWTS is a six-year survey of a nationally representative sample of hearing-impaired youth who were age 16-22 in 1986, when the survey began, administered by Gallaudet University.

B. National Longitudinal Transition Study of Special Education Students (NLTS)

1. Data Description

The NLTS was designed to collect information on school-to-work transitions of youth with disabilities. The NLTS is a nationally representative sample of students age 15 to 21 enrolled in special education programs between 1985 and 1986. The original sample is comprised of approximately 8,000 youth from special education programs in over 300 school districts. The original survey started in 1987, and a follow-up interview is available for 1990-91.

The NLTS provides information on the educational progress and occupational, educational and independent living outcomes of youth in special education programs. The NLTS uses a number of sources, including interviews with parents and/or the students, secondary school transcripts or school program content forms, and a "student school program survey" of teachers. It includes information on the youth's education experiences, functional abilities, family background, and post-school outcomes (e.g. employment).

There are several sources of disability information within the NLTS. The most promising are from school administrative records that contain detailed disability information on specific health conditions of the youth (e.g. mental retardation, learning disability). In addition, the NLTS also contains information on IQ scores. Finally, the NLTS includes parental and youth response questions about health status that can be used as a proxy for the severity of disability (e.g., does the youth need any special assistance).

2. Advantages and Limitations for Evaluating Transitions by Youth with Disabilities

Because of the detailed disability, school, and longitudinal outcome information on a large sample of youth with disabilities, several researchers have used the NLTS to

evaluate school-to-work transitions. 46 According to SRI International (1999), the NLTS can address the following disability related topics: 47

- The characteristics of students, including their disability categories and functional abilities, ethnic backgrounds, and socioeconomic characteristics;
- School programs, including enrollment in academic and vocational courses, the
 extent to which students had regular education placements, and the kinds of
 services and supports provided by schools;
- School performance, including absenteeism, grades, behavioral assessments, and school completion status;
- Post-school outcomes, including participation in postsecondary education and the labor market, residential independence, and aspects of youths' social lives; 48
- Factors that are related to variations in school performance and post-school outcomes; and
- Adult services needed by, and provided to, young people with disabilities in their early years after high school.

The NLTS also includes information on program participation, such as SSI, that might influence post-school outcomes.

One major limitation of these data is that the sample only includes youth with disabilities enrolled in special education programs. A significant portion of youth with disabilities might not be enrolled in these programs. Further, because the sample does not include those outside of special education programs, it is difficult to compare the findings for students with disabilities to those without disabilities. Comparisons with the general population of youth are sometimes included in NLTS reports through secondary analyses of the NLSY, but such comparisons are limited by survey differences.

A second major limitation is that data from the NLTS are only available through 1991. Given the large number of economic and policy changes in the nineties, the experiences of this cohort might not represent the experiences of recent cohorts. To address this limitation, the Department of Education is funding the NLTS-2 to survey a more recent cohort of special education students.

26 208284

⁴⁶ SRI International (1993) used these data to identify the effects of certain factors, such as disability status and time elapsed since leaving school, on post-school outcomes, such as employment and independent living. Blackorby and Wagner (1996) used the NLTS to examine how some of these post-school outcomes changed over time. Wagner and Blackorby (1996) used the NLTS to examine transitions by special education students from high school-to-work or college. Researchers could use the results from these studies as a benchmark for other school-to-work evaluations for youth with disabilities.

For more information, see SRI (1999) *The National Longitudinal Transition Study: A Summary of Findings*. http://www.sri.com/policy/cehs/nlts/nltssum.html.

C. National Longitudinal Transition Study of Special Education Students-2 (NLTS-2)

1. Data Description

The NLTS-2 will revisit many of the topics addressed in the NLTS to evaluate progress since the implementation of the Individuals with Disabilities Education Act (IDEA), as well as examine new issues for secondary-aged youth in transition. Similar to the NLTS, the purpose of the NLTS-2 is to collect information on school-to-work transitions of youth with disabilities. The NLTS-2 will follow a large, nationally representative sample of students in special education who are ages 13 through 17 and in at least 7th grade when the sample is selected (fall 2000). The oldest youth will be 25 at the final data collection point. Students will be selected randomly from rosters of students receiving special education. Local education agencies (LEAs) and state-operated schools for students with disabilities will provide rosters that are selected for the study. SRI International has designed a sample plan for the study. For more details on the sample design of the NLTS-2, see SRI International (2000).

2. Advantages and Limitations

The advantages and limitations of the NLTS-2 are similar to the NLTS, except that it will provide information on a more recent (year 2000) cohort of special education students and it will follow this cohort for a longer period (ten years vs. four years).

D. 1986 to 1992 School-to-Work Transition Survey of Deaf Youth (SWTS)

1. Data Description

The purpose of the School-to-Work Transition Survey of Deaf Youth (SWTS) is to study the factors that affect deaf youth as they make the transition from high school to the labor market. Students, parents, and high school counselors provide survey responses on the youth's demographic, audiological, and educational characteristics. The SWTS includes a nationally representative sample of youth age 16-22 who have a hearing threshold greater than 70dB and participated in special education programs in 1986. The sample includes about 6,500 youth. In addition to the base year, there were three follow-ups between 1988 and 1992.

The Survey contains detailed information about the students' hearing disabilities. The SWTS also includes some information regarding other physical limitations, and test scores from the 1983 Stanford Achievement Test.

⁴⁹ The design task order for NLTS-2 is in effect from October 1999 through March 2001 and accomplishes several major formative activities related to this study: 1) the development of a conceptual framework; 2) the sample plan; 3) the drawing and solicitation of the local education agency (LEA) sample; 4) the drawing of the student sample; 5) the data collection plan; 6) instrument development; 7) OMB clearance; and 8) the analysis plan

2. Advantages and Limitations for Evaluating Transitions by Youth with Disabilities

While the SWTS provides important information on a subpopulation of youth with disabilities, its narrow focus on deaf youth makes it limited for evaluating transitions by larger populations of youth with disabilities. Further, for similar reasons mentioned above, the recent experiences of deaf youth might be different from that of the population included in the base 1986 SWTS sample.

VI. ADMINISTRATIVE DATA

A. Overview

In this section, we review administrative data sources from the Rehabilitation Services Administration (RSA), as well as from various states. The RSA data tracks employment outcomes, as well as demographic information, for individuals who participate in VR programs. For the state administrative data sources, we summarize our findings from a previous review of selected data sources (Stapleton et al., 1999).

B. Rehabilitation Services Administration (RSA) 911 Database and Longitudinal Study of the Vocational Rehabilitation (VR) Service Program

1. Data Description

The RSA 911 database contains information for all persons exiting the VR program during each fiscal year. It contains disability information (e.g., specific health conditions), VR eligibility status, types of services provided, employment, and public benefit outcomes. In 1996, this database included information on over 156,000 persons age 16 to 24 who received VR services, including 31,000 SSI recipients. ⁵⁰

The RSA Longitudinal Study of the VR program supplements the 911 database by providing detailed survey information on VR participants. The study follows 8,500 cases for three years through surveys of a sample of VR office personnel and through longitudinal data collection from and about VR applicants and consumers during and after their participation in VR. The baseline population includes VR participants who applied for VR services between November 1994 and December 1996.

The survey is collecting detailed demographic, disability, work history, and other information on a sample of VR participants. The Research Triangle Institute is using these data for a special study on the characteristics of transition-aged youth (age 16 to 24) who applying for and entering VR. Specifically, the study is examining their entry patterns, movements from high-school special education programs into VR, and access to the VR system through other programs. The final report of the study is due in 2000, but the study respondents will continue to be followed for an additional two years.

The RSA data could be further enhanced if they were matched to SSA records on earnings and program participation. While there are no plans to for such a match at this time, the RSA data does include SSNs.⁵¹ As with the matched SIPP/SSA data, the major advantage of a matched file of RSA/SSA is that it would contain information to examine long-term transitions by youth with disabilities.

 $^{^{50}}$ Hugh Berry provided this estimate during an informal communication.

⁵¹ Previous matches exist of RSA/SSA data in the early eighties.

2. Advantages and Limitations for Evaluating Transitions by Youth with Disabilities

The major advantage of the RSA 911 Database is that it provides information on the VR experiences of large samples of youth and young adults who are transitioning from VR to work. For example, researchers can use these data to examine transitions by SSI recipients into various types of employment.⁵²

The Longitudinal Study of the VR Service Program significantly enhances the usefulness of the RSA data. Similar to the 911 Database, these data include a large sample of youth with disabilities from a recent cohort. The Longitudinal Survey also provides longitudinal information that researchers can use to examine longer-term transitions by various groups of youth with disabilities. In addition, these data include significantly more information on background characteristics, health status (and changes in health status), employment outcomes and factors that influence employment outcomes than the 911 Database.

There are two limitations of Longitudinal Survey of the VR Service Program (and RSA 911 Database). First, these data only provide information on youth with disabilities who are VR recipients. Second, these data only provide a relatively limited time frame to observe transitions because they only track information up to the point that a person exits the program, which is typically after two years. Hence, while these data might provide excellent information on initial post-school outcomes, they will not provide information on long-term adult outcomes (e.g., over 10 years after the youth leaves secondary school).

C. Selected State Administrative Data Sources

In Stapleton, et al. (1999), we reviewed several on-going state welfare reform evaluations that used administrative data. For many states and some large localities, substantial effort was being made to develop administrative databases to assist in these evaluations. In addition, some evaluations were gathering survey information from the welfare population to obtain additional information on characteristics of the state's welfare population, such as disability status.

We highlight the following most promising administrative databases summarized in Stapleton, et al. (1999):⁵⁴

- California Welfare Research Archive (CWR);
- The Florida Education and Training Performance Information Program (FETPIP); and
- Illinois Integrated Database on Children's Services (IDB).

30 208284

_

⁵² The Department of Education is currently examining this issue. For more details, see Berry, et al. (2000).

This might not be a major drawback, because many youth with disabilities (e.g., those in the SSI and Special education programs) receive these services.

While we have selected these databases for review, there are several other potential state administrative databases in other states, such as Arizona, New York, and Connecticut, that could be used in a school-towork analysis. Geenen, et al. (1995) also reviewed administrative data sets in Connecticut, Louisiana, and New York that collected information on students with disabilities.

1. California Welfare Research Archive (CWR)

The University of California Data Archive and Technical Assistance (UC DATA) program at the University of California – Berkeley, in collaboration with the California Department of Social Services Research Branch, has developed and continues to maintain a welfare research archive. The data archive was initially developed to help evaluate the California Work-Pays Demonstration Project and to document the dynamics of family poverty and welfare use in California.

As illustrated in **Exhibit 4**, the foundation of the data archive is the longitudinal database (LDB) person file from the Medi-Cal Eligibility Data System (MEDS). The MEDS is a state-level data system used and maintained by the California Department of Health Services to administer the Medi-Cal program – California's Medicaid program. It includes data on all Medi-Cal recipients, including demographic characteristics and program participation codes denoting over 80 Medi-Cal eligibility categories (e.g., Aid to Families with Dependent Children (AFDC)/TANF, foster care, SSI/SSP, In-Home Supportive Services, medically needy cases, etc.). Each file contains monthly eligibility information. The LDB person file enables researchers to track individual eligibility status and program transitions .

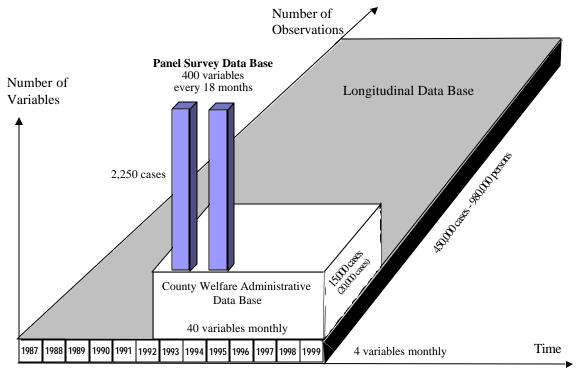
Since 1987, the Department of Health Services has maintained person and case LDB files, each containing a ten percent sample from the MEDS of their respective universes. ⁵⁵ UC DATA's version of the LDB person file presently contains slightly more than 1 million observations. ⁵⁶

UC DATA has matched their version of the LDB file to the County Welfare Administrative Database (CWAD), a file containing monthly eligibility and payment data on a sample of AFDC/TANF cases from the administrative files of four counties: Alameda, Los Angeles, San Bernardino, and San Joaquin. Initially, the CWAD contained 15,000 cases, but within the past year, UC DATA expanded the sample to include 20,000 cases.

⁵⁵ The 10 percent person and 10 percent case samples are separate, non-overlapping samples.

⁵⁶ The somewhat smaller figures in the diagram are out of date.

Exhibit 4
California Welfare Research Archive



Source: UC DATA.

Every 18 months, UC DATA also matches the LDB-CWAD matched file to the Panel Survey Database. The Panel Survey Database contains survey responses by approximately 2,000 AFDC/TANF recipients in the four counties per wave. The survey includes questions about disabilities, household composition, education, access to health care, use of social services, and labor market activities. UC DATA also has the ability to match quarterly earnings from the Employment Development Department (EDD) Base Wage File to its Welfare Research Archive; however, these data are somewhat more difficult to obtain than the data from the Welfare Research Archive. 57

2. The Florida Education and Training Performance Information Program (FETPIP)

The Florida Education and Training Performance Information Program (FETPIP) is an interagency data collection system maintained by the State's Department of Education that collects "outcomes" data on Florida high school graduates and dropouts as well as those who exit from a variety of other state programs and institutions, including:

⁵⁷ The EDD Base Wage File contains employer-reported quarterly taxable wage payments of California Unemployment Insurance and Disability Insurance covered employment.

- vocational centers:
- adult education and GED programs;
- community colleges;
- public 4-year colleges and universities;
- Job Training Partnership Act programs;
- Project Independence(JOBS)/WAGES program; and
- state prisons.

The FETPIP annual cycle collects outcome data for student or program participants who exited a program or institution during the most recent fiscal year. For example, the 1998 cycle includes participants/students who graduated or left programs between July 1, 1996 and June 30, 1997. The outcome data collected for the 1998 cycle includes information on employment and earnings, military enlistment, incarceration, receipt of AFDC/WAGES and/or food stamps, and continuing education that occurred between October and December 1997. Each individual's record in the annual database contains an individual's Social Security Number as well as demographic and socio-economic data on the individual. Over the last few years, each annual data file has contained approximately 2.5 million records.

One limitation of the FETPIP relative to some other administrative databases (e.g., California) is that it does not generally follow individuals beyond the first year after they exit a program because of the legal and political obstacles to tracking individuals over time. The FETPIP has, however, conducted a series of longitudinal studies of specific groups, including: 1990-91, 1993-94, and 1995-96 high school graduates and dropouts and several cohorts of JTPA and Project Independence (JOBS) exiters. Furthermore, the FETPIP does have the capability to incorporate ad hoc research requests.

3. Illinois Integrated Database on Children's Services (IDB)

The IDB in Illinois contains longitudinal records on any child that was in contact with any of the following state services: foster care, child abuse, special education, mental health, juvenile justice, Medicaid, Food Stamps, and AFDC.

According to Goerge, et al. (1996), these data include program participation information on youth with disabilities.⁵⁸ They identify children with disabilities based on program participation in special education, AABD, mental health services, or Medicaid (for those who received reimbursed service for preventative, well-child care, and more serious

33 208284

_

⁵⁸ In their report, Goerge, et al. did not have access to records on SSI receipt. As a proxy for SSI receipt, they use records for individuals who received Assistance for the Aged, Blind and Disability programs (AABD) from 1990 to 1994. They find that AABD is an excellent proxy for SSI receipt based on administrative records.

inpatient rehabilitative services). They used these data to identify service utilization and the characteristics of children with disabilities in Illinois from 1990 to 1994. Based on their tabulations in 1994 alone, there were 277.689 children with disabilities in the IDB.

4. Advantages and Limitations for Evaluating Transitions by Youth with Disabilities

There are three advantages of state administrative data. First, these data provide information on the experiences of large samples of youth with disabilities in a particular state. Hence, they potentially offer the opportunity to study school-to-work transitions in these states, including the opportunity to evaluate innovative programs and policies. Second, these data provide detailed information on monthly program transitions over several periods. Some state databases include information on work (through Unemployment Insurance records), special education, AFDC/TANF participation, SSI, and job training. Third, some states, like California, are collecting survey information on characteristics like disability that enhances the amount of information available in the administrative data.

There are five limitations, however. First, unlike the surveys mentioned in the previous sections that are available at little or no cost, most states enforce strict data restrictions that can make obtaining the data costly. Second, data are unavailable on people who move outside the state. Hence, in some databases it will be impossible to determine if a person transitioned out of a particular program because they started working or moved out of the state. Third, in many databases it is difficult to identify the background characteristics of the youth's family. For example, data might be unavailable on family characteristics (e.g., education of parent) if this information is not relevant to program eligibility. Fourth, because these data are collected for administrative purposes, the data quality (e.g., missing values, missing observations) might be limited for research. For example, some administrative data might not contain individual characteristics (e.g., race, age, sex) because they are not necessarily important for administrative purposes. Finally, unless survey data are available, researchers can only identify youth with disabilities based on their program participation in certain programs such as special education or SSI.

⁵⁹ For example, in Stapleton, et al. (1999) we found that several states recently implemented state welfare reform policies that had eligibility and training provisions that directly targeted people with disabilities.

Appendix Exhibit 1: Survey of Income and Program Participation (SIPP)	
Agency	The Census Bureau
Sampling Frame	Representative sample of the non-institutionalized population.
	Monthly data (approximately 32 months of information available in each panel).
	• Limited data on children under 15 years in 1990 and 1996.
Sample Size	Since 1990, the number of original SIPP sample members has varied from 40,800 (1991) to 61,900 (1990).
Program Participation	Detailed program participation information is available for all adults in the family. Includes information on SSI, Medicaid, TANF, Special Ed, Food Stamps, OASDI, child care, foster care, WIC, school meals.
Employment	Monthly information is available on employment and earnings for those age 15 and older.
Disability Information	Detailed functional limitation and disability questions for children, such as limitation to do school work, are available for those under age 16 based on the responses of parents.
	• Work limitation questions are available for those age 16 to 67.
	Adult (age 16 to 67) disability questions include information on work limitations, housework limitations, Activities of Daily Living (ADLs), Instrumental Activities of Daily Living (IADLs) and functional limitations.
	Respondents who have a limitation are asked follow-up questions about any specific health conditions (e.g., Cerebral Palsy, learning disability).
	Limited information regarding Special Education.
	Matched SSA data are necessary to identify child SSI participation.
Match to SSA Administrative	Restricted availability of matched data for 1984, 1990- 1993 SIPP Panels.
Records	lifetime SSI and DI participation for youth.
	lifetime earnings records.

Appendix Exhibit 2:	
Survey of Program Dynamics (SPD)	
Agency	The Census Bureau
Sampling Frame	Sample of households participating in 1992-93 SIPP panels.
	Oversampling of certain household groups based on income level and children in household.
	• Potentially 10 years of data available from 1992 to 2002 after merging with the 1992-93 SIPP panels.
	• Limited data on children under 15 years in 1990 and 1996.
Sample Size	In 1997, there were approximately 75,000 sample members from 30,000 households. In 1998, the sample was reduced to 17,500 households.
Program Participation	Detailed program participation information is available for all adults in the family. Includes information on SSI, Medicaid, TANF, Special Ed, Food Stamps, OASDI, child care, foster care, WIC, and school meals.
Employment	Monthly information is available on employment and earnings for those age 15 and older.
Disability Information	Work limitation questions are included in the 1997 Bridge Survey.
	The SPD will also include topical module information on disability similar to that in the SIPP.
Match to SSA	Availability restricted.
Administrative Records	lifetime SSI and DI participation for youth.
	lifetime earnings records.

Appendix Exhibit 3: Panel Study of Income Dynamics	
Agency	Institute for Social Research, University of Michigan
Sampling Frame	Nationally representative sample of the non-institutionalized population. Description:
	Data collected on an annual basis since 1969. Child Book and an annual basis since 1969.
	Child Development Supplement in 1997.
	• Special Functional Limitations and Disability Supplement available in 1989.
Sample Size	Approximately 5,000 households each year.
Program Participation	Detailed program information available for the family. Includes information on SSI, Medicaid, TANF, Special Ed, Public health insurance, Head Start, child care, Food Stamps, WIC, foster care, school meals, and LI HEAP.
Employment	Annual information on employment and earnings is available only for the "head" and "wife."
Disability Information	 Questions about work limitations are available annually for "heads" and "wives." Detailed functional limitation and disability questions are
	only available for "heads" and "wives" in the PSID household in 1989. 60
	• Detailed information on child disability status is available in the child supplement in 1997 for those under age 12.
Match to SSA Administrative Records	No

⁶⁰ Since 1980, the annual PSID has included basic work limitation questions for "heads" and "wives." The 1989 PSID contains a special disability supplement that provides information on detailed functional limitations and disability characteristics (e.g., difficulties with Activities of Daily Living) for "heads" and "wives."

Appendix Exhibit 4: Medical Expenditure Panel Survey (MEPS)	
Agency	Agency for Health Care Policy and Research; National Center for Health Statistics
Sampling Frame	Nationally representative sample of U.S. civilian non- institutionalized population.
	• Five rounds of data collection over a 2.5-year period, started in 1996. 1996 and 1997 MEPS Panels are available.
	• 1997 MEPS includes an oversample of Children and adults with ADL limitations.
	Ability to link 1996 MEPS Household Component to 1995 National Health Interview Survey (NHIS).
Sample Size	1996 Panel: 10,597 households.
	1997 Panel: 6,300 households.
Program Participation	Information on participation in Medicaid, TANF, special education programs, early intervention programs, and SSI.
Employment	There is detailed household employment status information available, including industry, wage level, weekly number of hours, and current employment status.
Disability Information	The MEPS provides detailed health status information for all household members.
	• Linkage with the NHIS provides additional means of identifying disability information.
	• Youth questions include information about limitations at school, functional limitations, and ADLs.
	Special Education and special service information is available.
Match to SSA Administrative Records	No

Appendix Exhibit 5: National Longitudinal Study of Adolescent Health (Add Health)	
Agency	Carolina Population Center at the University of North Carolina at Chapel Hill
Sampling Frame	Sample of students in grades 7 through 12 within 132 representative samples of junior high schools and high schools.
	Includes information from students, parents, and school administrators.
	• In-school survey in 1995, in-home interview in 1995, and follow up In-home interview in 1996.
	• Sample for in home interviews includes an oversample of students with limb disabilities (only for 1995), certain minority (high education Blacks, Cubans, Puerto Ricans, and Chinese), and genetic groups (twins, full-siblings, half-siblings or adoptees, etc).
Sample Size	• 90,118 students for in-school survey in 1995.
	• 20,745 students for in-home interview in 1995.
	• 14,738 students for in-home interview in 1996.
Program Participation	Social Security or Railroad Retirement, SSI, AFDC, food stamps, unemployment or worker's compensations, a housing subsidy or public housing, Medicaid, and Medicare.
Employment	Information about employment and earnings.
Disability Information	There are three disability information sources: students, parents, and administrative records.
	Student questions included information on:
	Difficulties using their limb, have specific equipment, use brace or artificial hand, arm or foot because of permanent physical condition (limb disability).
	Follow-up questions included information on the types of difficulties in performing certain activities.

Appendix Exhibit 5: National Longitudinal Study of Adolescent Health (Add Health)	
	Emotional and health feelings;
	Parents' questions include information on their child's:
	Difficulties using hands, arms, feet, or legs (limb disabilities).
	Mental retardation or have learning disabilities.
	Administrative records include information on Peabody Vocabulary Test Scores, an intelligence test.
Other	Expectation of students for their college education.
	Students' school grades.
	Expectation of parents for their children's college education. Parental time expenditures for children's school work.
	Community characteristics (average income, poverty, health care facilities, etc.).
Match to SSA Administrative Records	No

Appendix Exhibit 6:	
National Educational Longitudinal Study of 1988 (NELS:88)	
Agency	Department of Education, National Center for Education Statistics
Sampling Frame	• Sample of eighth grade students from private and public schools.
	• Exclusion of students in special education school and in "ungraded" classrooms.
	• 6 years of data available from 1988 to 1994.
Sample Size	Approximately 24,000 students were first sampled in 1988. ⁶¹
Program Participation	Limited information on parental income sources (e.g., is family receiving welfare). Does not include SSI participation as an outcome for the child.
Employment	Follow-up interviews contain questions on work and earnings.
Disability Information	There are four disability sources. Interviewers asked:
	• Teachers if the students' work had been affected by health and if the student had a disability;
	Parents if the student had a disability and if the child received special services;
	Students about any special services; and
	School administrators about special services.
Other ⁶²	Student Questionnaire:
	• Family background items; interaction with parents regarding in- and out-of-school activities; educational and occupational goals; perceptions about self and school; participation in classes and activities; and self-reported grades. Four cognitive tests: reading, math, science, and history/government.
	Parent Questionnaire:
	Socio-demographic characteristics; participation in student course selection; long-range educational planning; in- and out- of-school activities; establishing home discipline and

The original sample size was 26,432; however, this size varies in each wave due to dropouts, transfers, and ineligible subjects.

Information is available from the U.S. Department of Education's internet address at:

http://www.ed.gov/pubs/ncesprograms/longitudinal/surveys/nels -88.html.

Appendix Exhibit 6: National Educational Longitudinal Study of 1988 (NELS:88) interaction with the school; family educational expenses; and sources of income for children's education. School Administrator Ouestionnaire: • School characteristics: grade span; school type; enrollment and major program orientation; policies and practices; admission procedures and tuition; grading; testing and minimum course credits; gifted and talented programs; activities: and school climate. Student characteristics: average daily attendance; migration; race/ethnicity; single parent households; limited English proficiency classes; and special student services such as remedial classes and job- training. Teaching staff characteristics: size; race/ethnicity; salary; degree; and percentage of language assistance classes. Teacher Questionnaire: Student information: personal characteristics; behavior; academic performance; attitudes; problems and handicaps. Class information: homework assigned; use of instructional materials: choice of textbook/workbook: curriculum; and topical coverage. Teacher information: sex; race/ethnicity; age; experience; certification; degree; foreign language proficiency; in-service education; classroom preparation; parent contact; perception of school climate; and experience teaching gifted and talented children. Match to SSA No Administrative Records

Appendix Exhibit 7: High School and Beyond (HS&B)	
Agency	Department of Education, National Center for Education Statistics (NCES)
Sampling Frame	 Nationally representative sample of secondary school sophomores and seniors. 12 years of data available from 1980 to 1992. Addition and deletions made to cohort in follow-up surveys.
Sample Size	Base year: 30,000 sophomores and 28,000 seniors.
Program Participation	Some detailed program participation information is available for the individual. Includes information on special education services.
Employment	Annual employment and earnings.
Disability Information	 Teachers responded on whether the students' work was affected by health and if the student had a disability. Students responded whether they had a disability and if they had received any special services. School administrators provided information on special services. Results from cognitive tests are available.
Match to SSA Administrative Records	No

Appendix Exhibit 8: Beginning Postsecondary Student Longitudinal Study (BPS)	
Agency	Department of Education, National Center for Education Statistics
Sampling Frame	Nationally representative sample of students in post- secondary education.
	• Data from 1990 through 1994.
Employment	Some information about jobs while enrolled in school and job placement services experiences. Information on work experiences shortly after completing postsecondary education.
Sample Size	Approximately 7,000 respondents from the National Postsecondary Student Aid Study of 1993.
Program Participation	Job placement services and financial aid services for the participant.
Family Variables	Some family background information is available for all members of the BPS.
Disability Information	Self-reported disability information on impairments (e.g., visual, hearing, speech).
Match to SSA Administrative Records	No

Appendix Exhibit 9: Baccalaureate and Beyond Longitudinal Study (BB)	
Agency	Department of Education, National Center for Education Statistics
Sampling Frame	Nationally representative sample of graduates from postsecondary education.
	• Potentially 12 years of data. (currently available: 1993-1997).
Work Experience	Annual earnings and employment history for the participant.
Sample Size	Approximately 11,000 people from the National Postsecondary Student Aid Study of 1993.
Program Participation	Job placement services and financial aid services for the participant.
Family Variables	Some family background information is available for 8,000 members of the BPS.
Disability Information	Some self-reported disability information is available on specific impairments (e.g., hearing difficulties).
Match to SSA Administrative Records	No

Appendix Exhibit 10: National Longitudinal Survey of Youth (NLSY79)	
Agency	Department of Labor, Bureau of Labor Statistics
Sampling Frame	• Nationally representative sample of the non-institutionalized population.
	• 15 years of data available.
	Blacks, Hispanics, and the economically disadvantaged (non-Black, non-Hispanic) were over-sampled.
Work Experience	Detailed labor market information including pay rates, hours worked, length of employment periods, and earnings information for the participant.
Sample Size	• 12,686 people were in the original sample
Program Participation	Limited information on income sources. Includes information on payments received because of disability.
Disability Information	• During each survey, participants are asked whether they had a health condition that limited labor market activity.
	• Information on specific conditions (e.g., learning disability) is available in the NLSY: Mothers and Children and NLSY97.
Other	• The survey includes detailed questions on educational attainment, training investments, income and assets, health conditions, workplace injuries, insurance coverage, alcohol and substance abuse, sexual activity, and marital and fertility histories.
	• NLSY79 includes an aptitude measure administered to the youth, a school survey, and high school transcript information.
	School achievement information is available.
Match to SSA Administrative Records	No

Appendix Exhibit 11: National Longitudinal Survey of Youth: Mothers and Children (NLSY: Mothers and Children)	
Agency	Department of Labor, Bureau of Labor Statistics
Sampling Frame	Children who were born to NLSY Young Women.
Work Experience	Detailed labor market information including pay rates, hours worked, length of employment periods, and earnings information for the participant.
Sample Size	• Approximately 6,000 children age 0 to 14 born to NLSY79 mothers.
Program Participation	Limited information on income sources. Includes information on payments received because of disability.
Disability Information	• During each survey, participants are asked whether they had a health condition that limited labor market activity.
	• Information on specific conditions (e.g., learning disability) is available in the NLSY: Mothers and Children and NLSY97.
Other	• For children age 10 and older, information has been collected from the children biennially since 1988 on a variety of factors including child-parent interaction, attitudes toward schooling, dating and friendship patterns, religious attendance, health, substance use, and home responsibilities. Includes information about schooling, training, work experiences and expectations, health, dating, fertility and marital histories, and household composition.
	A confidential supplement records their self-reports on such topics as parent-child conflict, participation in delinquent or criminal activities, use of controlled and uncontrolled substances, and their expectations for the future.
Match to SSA Administrative Records	No

Appendix Exhibit 12: National Longitudinal Survey of Youth:1997 (NLSY97)					
Agency	Department of Labor, Bureau of Labor Statistics				
Sampling Frame	• Nationally representative sample of youth who were 12 to 16 years old as of December 31, 1996.				
	Oversamples of Blacks and Hispanics.				
Work Experience	Detailed labor market information including pay rates, hours worked, length of employment periods, and earnings information for the participant.				
Sample Size	Approximately 8,700 children born between 1980 and 1984.				
Program Participation	Limited information on income sources. Includes information on payments received because of disability.				
Disability Information	During each survey, participants are asked whether they had a health condition that limited labor market activity.				
	• Information on specific conditions (e.g., learning disability) is available in the NLSY: Mothers and Children and NLSY97.				
Other	Information from the parent is obtained about the youth' family background and history, including parents' marital and employment histories, relationship with spouse or partner, ethnic and religious background, health (parents and child), household income and assets, participation in government assistance programs, youth' early child-care arrangements, custody arrangement for youth, and parent expectations about the youth.				
Match to SSA Administrative Records	No				

Appendix Exhibit 13: National Longitudinal Transition Study (NLTS)					
Agency	Department of Education, Office of Special Programs				
Sampling Frame	• Nationally representative sample of youth age 15 to 21 in special education programs from over 300 school districts.				
	• Includes information from students, teachers, parents, and school administrative records.				
	• Original interview started in 1987, with a follow-up interview in 1990.				
	Includes an oversample of certain minority, low income, and low parental education groups.				
Sample Size	Approximately 8,000 youths.				
Program Participation	Detailed income sources available for the family (AFDC, SSI payments, earnings). Follow-up information is available for whether the child received income from various sources, including SSI. Information is also available on special education and vocational assistance services.				
Employment	Youth employment and earnings information.				
Family Variables	Some family background information (e.g., education of parents, number of siblings) is available for all of the members of the NLTS.				
Disability Information	There are four disability sources. Students, teachers, parents, school administrators each provide subjective information on the severity of the students' disability. School records provide information on specific conditions (e.g., learning disabled, deaf). Data is also available on IQ scores.				
Other	 Special school indicators - youth school progress (teacher reports, grades) and absenteeism. Teenage pregnancy. Information on special education programs and life skill classes. Training/shelter workshop participation. Parent's expectations. 				
Match to SSA Administrative Records	No				

Appendix Exhibit 14: National Longitudinal Transition Study- 2 (NLTS-2)					
Agency	Department of Education, Office of Special Education Programs (OSEP)				
Sampling Frame	• Nationally representative sample students receiving special education who are ages 13 through 17 and in at least 7 th grade in Fall 2000.				
	• A ten-year effort that involves three main collection components: Parent/Youth telephone interviews; Direct assessments and in-person interviews; and school data collection.				
Sample Size	Approximately 13,000 students are selected from 500 LEAs and state-operated schools that represent variation in geographic region, district size, and district wealth.				
Program Participation	Detailed income sources available for the family (AFDC, SSI payments, earnings). Follow-up information is available for whether the child received income from various sources, including SSI. Information is also available on special education and vocational assistance services, as well as adult program participation once the student leaves school.				
Employment	Post-school employment outcomes.				
Disability Information	Age when disability was first identified.				
	Disability category assigned by LEA and changes over time.				
Other	• Special school indicators - youth school progress (teacher reports, grades) and absenteeism.				
	Teenage pregnancy.				
	• Information on special education programs and life skill classes.				
	Training/shelter workshop participation.				
Match to SSA Administrative Records	No				

Appendix Exhibit 15: School-to-Work Transition Study of Deaf Youth				
Agency	Gallaudet University, Center Assessment and Demographic Studies			
Sampling Frame	• Nationally representative sample of deaf youth (age 16 to 22) who participated in special education programs.			
Sample Size	Approximately 6500 youth (age 16 to 22).			
Program Participation	Includes information about special education program participation.			
Employment	Some employment and earnings information is available in follow-up interviews.			
Disability Information	Detailed information on the students' hearing disability. The survey includes some information about physical limitations.			
Match to SSA Administrative Records	No			

Appendix Exhibit 16: University of California Data Archive and Technical Assistance (UC DATA) - County Welfare Administrative Database (CWAD)			
Agency	University of California - Berkeley; California Department of Social Services Research Branch		
Sampling Frame	 Sample of AFDC/TANF cases from four counties: Alameda, Los Angeles, San Bernardino, and San Joaquin. Data since 1992. Monthly eligibility and payment information. Additional match to Panel Survey Database with over 400 questions answered by around 2,000 AFDC/TANF recipients. 		
Sample Size	20,000 cases since 1998 (sample size varies by year).		
Program Participation	Detailed program participation information for individual and household. Includes information on AFDC/TANF, foster care, SSI/SSP, in-home support services, etc.		
Employment	Panel Survey Database has labor market activity questions. Match available to Employment Development Department Base Wage File which includes quarterly wage payments.		
Disability Information	Panel Survey Database includes disability information. In addition, longitudinal database has information on eligibility for social service programs for disabled.		
Match to SSA Administrative Records	Data contains Social Security Numbers. SSA has not attempted to match these records to their administrative records.		

Appendix Exhibit 17: Florida Education and Training Performance Information Program (FETPIP)			
Agency	Florida Department of Education		
Sampling Frame	• 3 cohorts (90-91, 93-94, and 95-96) of high school graduates and several cohorts of JTPA and Project Independence (JOBS) exiters.		
Sample Size	Contains 2.5 million records.		
Program Participation	Includes information about AFDC/WAGES, food stamps, and job training programs.		
Employment	Employment and earnings information is collected.		
Disability Information	Monthly files include information on whether the program participant reported a disability.		
Match to SSA Administrative Records	Data contains Social Security Numbers. SSA has not attempted to match these records to their administrative records.		

Appendix Exhibit 18:			
Rehabilitation Services Administration (RSA) 911 Database and Longitudinal Study of the Vocational Rehabilitation			
A	Rehabilitation Services Administration		
Agency			
Sampling Frame	911 Database:		
	Contains information for all persons exiting the VR program during each fiscal year.		
	RSA Longitudinal Study of VR:		
	• Follows 8,500 cases for three years through surveys of a sample of VR office personnel, and through longitudinal data collection from and about CR applicants and consumers during and after their participation in VR.		
Sample Size	911 Database:		
-	• 31,000 SSI recipients aged 16 to 24 (1996).		
	RSA Longitudinal Study of VR:		
	• 8,500 VR participants who applied for VR services between 11/1994 and 12/1996.		
Program Participation	SSI, Vocation Rehabilitation.		
Employment	Work history information, employment outcomes.		
Disability Information	Specific health conditions.		
Match to SSA Administrative Records	Yes		

Bibliography

- Allen, T., Rawlings, B., Schildroth, A., and Lam, K. (1999). "School to Work Transition Survey of Deaf Youth, 1986-1992." *The Research Archive on Disability in the U.S. (RADIUS)*, 1999 Edition. http://www.socio.com/srch/summary/radius/rad14.htm.
- Berry, H., Price-Ellingstad, D., Halloran, W., & Finch, T. (2000). "Supplemental Security Income and vocational rehabilitation: Early work experiences among transitionage individuals with disabilities." *Journal of Disability Policy Studies*, 10, 2, pp. 150-165.
- Blackorby, J., and Wagner, M. (1996). "Longitudinal Post-school Outcomes of Youth with Disabilities: Findings from the National Longitudinal Transition Study." *Exceptional Children*, 62(5), 399-413.
- Burkhauser, R. and Wittenburg, D. (1996). "How Current Disability Transfer Policies Discourage Work: Analysis from the 1990 SIPP," *Journal of Vocational Rehabilitation*, 7, pp. 9-27.
- Conwal, Inc (1999). Summary of Data on Young People with Disabilities in the United States. Report submitted to the National Institute on Disability and Rehabilitation Research and Social Security Administration.
- Fishman, M. and V. Allen (1999). Rehabilitation Research and Training Center for Economic Research on Employment Policy for People with Disabilities: Framing the Research Issues. Draft Report.
- Gardecki, R and Neumark, D. (1998). "Order from Chaos? The Effects of Early Labor Market Experiences on Adult Labor Market Outcomes," *Industrial and Labor Relations Review*, 51(2), pp. 299-322.
- Geenen, K., Thurlow, M., and Ysseldyke, J. (1995). *A Disability Perspective on Five Years of Education Reform.* NCEO Synthesis Report 22. http://www.coled.umn.edu/nceo/onlinepubs/synthesis22.html.
- Goerge, R., Mackey-Bilaver, L., Joo Lee, B., Koepke, D., and Harris, A. (1996). Service Utilization and the Individual, Family and Neighborhood Characteristics of Children with Disabilities in Illinois. Final Report to the Office of the Assistant Secretary for Planning and Evaluation, September 30, 1996.
- Hall, P. and Finkelstein, J. (1999). "What is the Child Development Supplement." The Child Development Supplement to the Panel Study of Income Dynamics. http://www.isr.umich.edu/src/child-development/home.html.
- Horn, L. and Bobbitt, L. (1999). *Students with Disabilities in Postsecondary Education:*A Profile of Preparation, Participation, and Outcomes/ Statistical Analysis Report for the National Center for Education Statistics.
- Huggins, V. and King, K. (1998). "The Survey of Program Dynamics: Sample Design, Weighting and Attrition Issues." 1998 ASA Proceedings Section on Survey Research Methods.

- Keane, M. and Wolpin, K. (1997). "The Career Decisions of Young Men," *Journal of Political Economy*, 105(3), pp. 473-522.
- Kruse, D. (1997). Employment and Disability: Characteristics of Employed and Non-Employed People with Disabilities. Report to the U.S. Department of Labor.
- Monks, J. (1997). "The Impact of College Timing on Earnings," *Economics of Education Review*, 16(4), pp. 419-23.
- National Opinion Research Center (1996). Sample Exclusion in NELS:88: Characteristics of Base Year Ineligible Students. Technical Report submitted to U.S. Department of Education.
- Pergamit, M. (1995). "Assessing school-to-work transitions in the United States," *Statistical Journal of the United Nations*, 12(3-4), pp. 271-288.
- RAND (1998). Data Sources to Evaluate the Effect of the Welfare Reform Legislation on Disabled Children. Report submitted to the Social Security Administration.
- Rojewski, J. (1996). "Educational and Occupational Aspirations of High School Seniors with Learning Disabilities." *Exceptional Children*, 62(5), pp. 463-477.
- Rossi, R., Herting, J., and Wolman, J. (1997). Profiles of Students with Disabilities as Identified in NELS:88. *NELS Statistical Analysis Report*, June 1997.
- SRI International (2000). *The National Longitudinal Transition Study-2*, http://www.sri.com/NLTS-2.
- SRI International (1999). *The National Longitudinal Transition Study: A Summary of Findings*. http://www.sri.com/policy/cehs/nlts/nltssum.html.
- SRI International (1993). What Makes a Difference? Influence on Post-school Outcomes of Youth with Disabilities, Report for the Office of Special Education Programs, December.
- Stapleton, D., M. Fishman, G. Livermore, D. Wittenburg, A. Tucker, and S. Scrivner (1999). *Policy Evaluation of the Overall Effects of Welfare Reform on SSA Programs*. Report submitted to Social Security Administration.
- Stapleton, D., D. Wittenburg, M. Fishman, and G. Livermore (2000). "Transitions from AFDC to SSI Prior to Welfare Reform," working paper.
- U.S. Department of Commerce (1994). Source and Accuracy Statement for the 1993 Public Use Files from the Survey of Income and Program Participation, Memorandum for Marshal L. Turner from Preston Jay Waite.
- Wagner, M. and Blackorby, J., (1996). "Transition from High School to Work or College: How Special Education Students Fare." *Special Education for Students With Disabilities*, 6(1), pp.103-120.
- Yates, J. (1999). "NLSY79 Children." http://stats.bls.gov/nlsy79ch.htm
- Zagorsky, J. L. (1999). "Health and the Working Poor," *Eastern Economic Journal*, 25, 169-189.

For more information about the Cornell RRTC contact:

Susanne M. Bruyère, Ph.D.

Project Director Cornell University 106 ILR Extension Building Ithaca, NY 14853-3901

tel (607) 255-7727 fax (607) 255-2763 tty (607) 255-2891

email smb23@cornell.edu
web www.ilr.cornell.edu/rrtc