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Cornell University

Evaluation of the Ticket to Work Program

*Assessment of Post-Rollout
Implementation and Early
Impacts*

Technical Appendices

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APPENDIX A

TICKET TO WORK TIMELINE AND ROLLOUT PHASE

Table A.1. Ticket To Work Program Implementation and Evaluation Timeline

Time Period	Implementation Activity or Milestone
1999	
December 17	Ticket Act enacted, establishing Ticket to Work Program
2000	
Throughout Year	SSA Office of Employment Support Programs (OESP) begins to develop principal policies and rules in consultation with SSA deputy commissioners
August to December	Draft Notice of Proposed Rule Making (NPRM) negotiated with the Office of Management and Budget
September 29	The Program Manager contract was signed with MAXIMUS, Inc.
November 13	Selection of 13 Phase 1 states announced
December 28	NPRM published, starting the 60-day public comment period
2001	
Throughout Year	Recommendations for resolving major issues raised by public comment on the NPRM were considered by deputy commissioners
February 26	NPRM public comment period ended. SSA received comments from over 400 interested parties, including federal, state, and local agencies; employers; organizations and advocates for people with disabilities, rehabilitation service providers, disability beneficiaries; and others.
April 13	Request for Proposals on EN contracts were published
October to December	Draft final Ticket to Work regulations published
2002	
February	Selection of Phase 2 and 3 state announced
February 5	Phase 1 begins. Tickets were released to 10 percent of the eligible beneficiaries in Phase 1 states
April	Tickets were released to an additional 20 percent of the eligible beneficiaries in the Phase 1 states

Table A.1 (continued)

Time Period	Implementation Activity or Milestone
May	Tickets were released to an additional 30 percent of the eligible beneficiaries in the Phase 1 states
June	Tickets were released to the final 40 percent of the eligible beneficiaries in the Phase 1 states
November	Phase 2 begins. Tickets were distributed gradually. Ten percent of the Tickets were mailed each month from November 2002 through September 2003 (no tickets were mailed in December).
2003	
May 29	Contract was awarded to Mathematica and Cornell for the Evaluation of the Ticket to Work Program, Part A
May 29	Contract was awarded to Mathematica and Cornell for the Evaluation of the Ticket to Work Program, Part B, Survey Data Collection
June	National Beneficiary Survey sample was drawn for Round 1
October	Participant sample was drawn for Round 1
November	Phase 3 begins. Tickets were distributed gradually. Ten percent of the Tickets were mailed each month from November 2003 through September 2004 (no tickets were mailed in December).
2004	
February 24	National Beneficiary Survey, Round 1 data collection began
June	National Beneficiary Survey sample was drawn for Round 2
September 30	National Beneficiary Survey, Round 1 data collection ended
2005	
February 7	National Beneficiary Survey, Round 2 data collection began
June	National Beneficiary Survey sample was drawn for Round 3
September 30	National Beneficiary Survey, Round 2 data collection ended

Source: SSA documents and MPR interview with SSA staff

Table A.2. States and Territories Included in Each Phase of TTW Implementation

Phase 1: 13 States		
Arizona	Iowa	Oregon
Colorado	Massachusetts	South Carolina
Delaware	New York	Vermont
Florida	Oklahoma	Wisconsin
Illinois		
Phase 2: 20 States + the District of Columbia		
Alaska	Kentucky	New Hampshire
Arkansas	Louisiana	New Jersey
Connecticut	Michigan	New Mexico
District of Columbia	Mississippi	North Dakota
Georgia	Missouri	South Dakota
Indiana	Montana	Tennessee
Kansas	Nevada	Virginia
Phase 3: 17 States + the U.S. Territories		
Alabama	Ohio	American Samoa
California	Pennsylvania	Guam
Hawaii	Rhode Island	Northern Mariana Islands
Idaho	Texas	Puerto Rico
Maine	Utah	Virgin Islands
Maryland	Washington	
Minnesota	West Virginia	
Nebraska	Wyoming	
North Carolina		

Source: www.ssa.gov/work/ticket_states_announcement.html, accessed August 19, 2003.

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APPENDIX B

NATIONAL BENEFICIARY SURVEY DATA TABLES AND ANALYSES

This appendix provides more detailed information and data that support the National Beneficiary Survey (NBS) findings presented in the body of the report. This information is organized into four sections:

- Section A presents the weighted and unweighted sample sizes for a variety of analytical subgroups for which statistics are presented in the report
- Section B provides supporting descriptive statistics for the charts and tables in the report
- Section C includes the variable definitions and detailed findings of the logistic regression (logit) models estimated for a variety of outcomes and briefly discussed in the body of the report
- Section D describes the purpose of the survey, the sample design, the content and design of the survey questionnaire, the data collection process and procedures, and the final case dispositions and response rates

A. SUBGROUP SAMPLE SIZES

Statistics presented in the body of the report and in this appendix are reported for all beneficiaries and for a number of subgroups. The weighted and unweighted sample sizes for the full sample and numerous subgroups for which survey data statistics are reported throughout the report are shown in Table B.1. Much of the report focuses on TTW participants and all Phase 1 beneficiaries. The Phase 1 participant subgroup is comprised of respondents who were active Ticket users between January 1, 2003 and September 28, 2003 when the sample frame database was created. These participants resided in a Phase 1 state at the time of Ticket assignment, but may not have resided in a Phase 1 state at the time of the sample selection or at the time of the survey. These respondents are combined with those in the beneficiary sample for purposes of computing the statistics for all groups except TTW participants. A combined sample weight was used when pooling the TTW participant and beneficiary samples. Phase 1 beneficiaries are identified based on their state of residence as of June 2003 when the data file used to construct the sampling frame was extracted.

Table B.1. Subgroup Sample Sizes

	Number (Unweighted)	Number (Weighted)	Percent of All Beneficiaries in Relevant Phase(s) (Weighted)	Percent of All Phase 1 TTW Participants (Weighted)
All Beneficiaries/All Phases	7,603	8,786,823	100.0	NA
Phase 1 All (Phase 1 Participants and Beneficiaries residing in Phase 1 states at the time of the survey) ^a	2,932	2,585,045	100.0	NA
Phase 2 All (Beneficiaries residing in Phase 2 states at the time of the survey) ^a	2,085	2,755,515	100.0	NA
Phase 3 All (Beneficiaries residing in Phase 3 states at the time of the survey) ^a	2,586	3,449,928	100.0	NA
TTW Participants and Nonparticipants (Phase 1 only)				
Phase 1 TTW Participants	1,105	21,107	0.82	100.0
Phase 1 TTW Participants Assigned to ENs	626	2,734	0.11	13.0
Phase 1 TTW Participants Assigned to SVRAs	479	18,373	0.71	87.0
Phase 1 TTW Participants under Milestone-Outcome Payment	344	2,636	0.10	12.5
Phase 1 TTW Participants under Outcome-only Payment	378	488	0.02	2.3
Phase 1 TTW Participants under Traditional Payment	383	17,983	0.70	85.2
Phase 1 TTW Participants Aware of TTW Status at Interview	480	6,534	0.25	31.0
Phase 1 TTW Participants Aware of TTW Status at Interview and Assigned Ticket in 2003	216	3,053	0.12	14.5
Phase 1 Nonparticipants	1,827	2,565,453	99.2	NA
Phase 1 Nonparticipants Aware of TTW	524	674,237	26.1	NA
Phase 1 Nonparticipants Aware of TTW and Future Plans to Participate ^b	241	256,165	9.9	NA
Phase 1 Nonparticipants Aware of TTW and No Future Plans to Participate ^b	269	399,931	15.5	NA
Phase 1 Nonparticipants Not Aware of TTW	1,303	1,891,216	73.2	NA
Employed Beneficiaries				
All Beneficiaries Employed at Interview/All Phases	1155	768,452	8.7	NA
Phase 1 All Beneficiaries Employed at Interview	593	252,764	9.8	NA
Phase 1 TTW Participants Employed at Interview	347	6,839	0.26	32.4
Phase 1 TTW Participants Assigned to ENs and Employed at Interview	185	836	0.03	4.0
Phase 1 TTW Participants Assigned to SVRAs and Employed at Interview	162	6,002	0.23	28.4

Table B.1 (continued)

	Number (Unweighted)	Number (Weighted)	Percent of All Beneficiaries in Relevant Phase(s) (Weighted)	Percent of All Phase 1 TTW Participants (Weighted)
Employment Service Users in 2003				
All Employment Service Users in 2003/All Phases	2,775	2,678,051	30.5	NA
Phase 1 Employment Service Users in 2003	1,254	866,650	33.5	NA
Phase 1 TTW Participants Using Services in 2003	609	12,075	0.47	57.2
Adequacy of Incentives (AOI) Groups				
Phase 1 AOI All Groups	2,168	2,036,112	78.8	NA
Phase 1 AOI Group 1	1,767	1,709,226	66.1	NA
Phase 1 AOI Group 2	1,486	1,541,786	59.6	NA
Phase 1 AOI Group 3	71	56,103	2.2	NA
Phase 1 AOI Group 4	163	65,319	2.5	NA

^aPhases 1, 2, and 3 weighted numbers do not sum to the All Phases number because of the use of different weighting schemes. Beneficiaries who were Phase 1 participants resided in a Phase 1 state at the time of Ticket assignment, but may not reside in a Phase 1 state at the time of the sample selection or the survey.

^b14 respondents were not asked about their future participation plans because they self-reported that they were TTW participants when in fact they were not participants.

Although the beneficiary may have been residing in a different state when the Phase 1 Tickets were actually assigned, we expect relatively few beneficiaries moved between the time of Ticket assignment in a Phase 1 state and the time of the survey.

B. DATA SUPPORTING EXHIBITS IN THE REPORT BODY

Detailed data supporting the exhibits and discussions that were based on the 2004 NBS data are provided in the tables below. The specific exhibits to which the data correspond are noted in parentheses in the title of each table.

Table B.2. Program Characteristics of 2004 NBS Respondents at Interview (Exhibit II.1)

	All Beneficiaries	All Phase 1 Beneficiaries ^a	Phase 1 TTW Participants
Unweighted Number	7,603	2,932	1,105
Number	8,786,823	2,585,045	21,107
Percent of all Beneficiaries	100.0	29.4	0.82
Title at Interview(%)			
SSDI-only	53.3	52.6	50.0
Concurrent	16.2	15.8	22.1
SSI-only	30.5	31.6	27.9
Mean Monthly Social Security Benefits (\$)	796.24	782.61	701.92
Monthly Social Security Benefits (%)			
< \$500	12.3	13.6	16.7
\$500 - \$1000	62.9	63.3	66.8
> \$1000	24.7	23.1	16.5
Monthly Non-SSA Cash and Near Cash Benefits			
\$0	65.2	64.9	63.1
\$1 - \$199	17.9	18.3	25.8
\$200 - \$500	7.3	7.2	6.5
> \$500	9.7	9.6	4.7
Months Since Initial Disability Award (%)			
< 24	3.8	3.5	0.7
24 - 59	19.8	18.1	18.0
60 - 119	23.2	24.6	28.8
120 +	53.3	53.8	52.5
Mean Months Since Initial Disability Award	148.8	157.5	149.9

Source: Ticket Research File data about disability benefit eligibility and amounts matched to the 2004 National Beneficiary Survey data about receipt of other benefits.

^aPhase 1 beneficiaries included Phase 1 participants who resided in a Phase 1 state at the time of Ticket assignment, and beneficiaries who resided in a Phase 1 state at the time of the sample selection.

Table B.3. Sociodemographic Characteristics of Beneficiaries (Exhibit II.2)

	All Beneficiaries	All Phase 1 Beneficiaries	Phase 1 TTW Participants
Unweighted Number	7,603	2,932	1,105
Number	8,786,823	2,585,045	21,107
Percent of all Beneficiaries	100.0	29.4	0.82
Age in Years (%)			
18 - 24	4.9	4.8	9.5
25 - 39	17.2	17.2	34.6
40 - 54	38.7	38.3	42.5
55 +	39.2	39.7	13.5
Mean Age (Years)	48.7	48.6	41.0
Sex (%)			
Male	49.7	49.0	51.5
Female	50.3	51.0	48.5
Race and Ethnicity (%)			
White	71.3	69.7	61.2
Black or African-American	22.4	23.8	33.4
Other Race	6.3	6.6	5.4
Hispanic or Latino	10.6	15.2	9.4
Education (%)			
Less than HS diploma	41.9	39.2	22.4
HS diploma	35.3	37.1	36.0
More than HS	22.8	23.7	41.6
Parental Education > HS (%)	16.8	17.5	28.2
Marital Status (%)			
Never Married	33.3	37.3	55.0
Divorced/Widowed/Separated	33.9	33.9	28.9
Married	32.8	28.8	16.1
Living Arrangement (%)			
Lives Alone or with Unrelated Others	35.7	39.6	44.1
Lives with Spouse or Other Relatives, No Kids	49.4	46.5	42.7
Lives with Spouse and Own Children	8.4	6.9	6.0
Unmarried Lives with Own Children	6.5	7.0	7.2
Income as a Percent of Federal Poverty Level (%)			
<100	48.8	50.9	50.1
100 - 299	38.3	36.4	39.0
300 +	12.8	12.7	11.0

Source: 2004 National Beneficiary Survey.

Table B.4. Health Characteristics of Beneficiaries (Exhibits II.3, II.5, II.6, and II.7)

	All Beneficiaries	All Phase 1 Beneficiaries	Phase 1 TTW Participants
Unweighted Number	7,603	2,932	1,105
Number	8,786,823	2,585,045	21,107
Percent of all Beneficiaries	100.0	29.4	0.82
General Health			
Excellent/Very Good	10.0	10.1	23.1
Good/Fair	46.9	50.5	58.4
Poor/Very Poor	43.1	39.4	18.5
Current Health Compared to Last Year (%)			
Much or Somewhat Better	16.1	18.3	31.8
About the Same	43.2	43.4	44.1
Much or Somewhat Worse	40.7	38.3	24.1
Age at Disability Onset (%)			
<18	22.8	25.2	36.8
18 - 24	10.7	10.9	16.5
25 - 39	25.0	27.1	27.3
40 - 54	32.0	27.8	17.6
55 +	9.6	9.0	1.8
Self-Reported Reason(s) for Limitation (%)			
Musculoskeletal	36.1	31.0	24.2
Mental Illness	31.0	34.5	35.7
Diseases of the Circulatory System	23.7	23.4	13.6
Endocrine/Nutrition Disorders	15.7	15.2	9.1
Diseases of the Nervous System	15.1	15.7	15.5
Injury or Poisoning	10.0	9.0	8.3
Diseases of the Respiratory System	9.6	10.1	4.5
Sensory Disorders	9.0	10.1	12.6
Mental Retardation	7.2	8.2	6.0
Other	32.9	34.4	27.0
No conditions limiting activities	4.6	4.9	11.9
Number of Health Conditions Causing Limitation (%)			
None	4.6	4.9	11.9
One	33.3	32.1	39.7
Two	35.6	36.2	30.1
Three	17.7	17.2	12.8
Four or More	8.9	9.6	5.5
Number of ADL and IADL Limitations (%)			
None	27.5	26.0	49.7
One	17.5	18.5	17.7
Two	15.7	16.6	11.8
Three	12.2	11.0	8.4
Four or More	27.1	27.9	12.5

Table B.4 (continued)

	All Beneficiaries	All Phase 1 Beneficiaries	Phase 1 TTW Participants
Health Characteristics , continued			
Walking 3 blocks, climbing 10 steps, standing for 1 hr., and/or crouching	84.4	83.1	67.0
Grasping, reaching, and/or lifting 10 pounds	67.5	66.2	47.0
Speaking, hearing, and/or seeing	65.3	64.2	52.8
Coping with stress	58.7	59.2	50.3
Concentrating	55.1	58.6	42.3
Getting around outside of the home	46.6	48.0	28.0
Preparing meals	38.0	39.0	23.6
Getting into or out of bed	37.2	35.9	21.3
Shopping for personal items	37.1	38.0	18.1
Bathing or dressing	28.7	29.4	14.8
Getting along with others	26.4	27.6	26.9
Getting around inside the house	22.8	22.8	11.8
Eating	15.4	17.0	9.9
Obese (%)	41.7	39.6	38.4
Substance Abuse (%)	6.7	6.3	7.0

Source: 2004 National Beneficiary Survey.

Table B.5. Work and Employment Expectations (Exhibits II.8 and II.10)

	All Beneficiaries	All Phase 1 Beneficiaries	Phase 1 TTW Participants
Unweighted Number	7,603	2,932	1,105
Number	8,786,823	2,585,045	21,107
Percent of all Beneficiaries	100.0	29.4	0.82
Ever Worked for Pay (%)	87.0	85.7	94.3
Working at Interview (%)	8.7	9.8	32.4
Looked for Work During Previous 4 Weeks (%)	5.7	6.9	21.8
Worked During Previous Year - 2003 (%)	12.6	13.6	47.7
Goals include work/career advancement (%)	30.2	32.2	80.4
Sees Self Working for Pay (%)	0.0	0.0	0.0
In the Next Year	20.1	23.6	68.5
In the Next Five Years	25.7	29.6	79.9
Sees Self Working and Earning Enough to Stop Receiving Disability Benefits (%)			
In the Next Year	7.4	8.8	27.5
In the Next Five Years	14.9	17.4	53.4

Source: 2004 National Beneficiary Survey.

Table B.6. Service Use in 2003 (Exhibits II.11, II.12, V.9, V.10, and V.11)

	All Beneficiaries	All Phase 1 Beneficiaries	Phase 1 TTW Participants	Phase 2 Beneficiaries	Phase 3 Beneficiaries
Used Services in 2003	30.5	33.5	57.2	28.5	29.7
Reason(s) for Using Services in 2003 Among Users					
To improve health	69.8	69.2	44.5	71.0	69.3
To improve ability to do daily activities	24.6	28.7	22.8	24.3	21.3
To find a job or get a better job	9.1	7.9	54.5	9.1	10.1
Wanted to access specific services	5.7	5.7	7.2	5.1	6.2
Someone pressured respondent to participate	3.9	3.7	3.1	3.7	4.2
To be more independent	0.8	1.1	2.8	0.9	0.5
To increase income	1.4	0.9	6.3	1.8	1.5
To avoid a continuing disability review	0.7	0.4	1.3	0.4	1.1
Other	11.1	11.4	11.5	9.8	11.8
Don't know	0.9	0.7	1.1	0.9	0.7
Types of Services Used Among Users (%)					
Personal Counseling/Group Therapy	69.2	72.5	67.1	65.2	69.6
OT/PT/Speech Therapy	38.5	36.7	37.8	36.8	41.3
Special Equipment or Devices	23.3	25.1	16.9	22.5	22.5
Medical Procedure	29.0	24.7	21.0	30.4	31.7
Training/job modification advice/on-the-job training	22.2	24.3	67.2	18.8	22.9
Work assessment/help to find a job	20.1	21.8	62.5	17.6	20.6
Other	4.5	4.4	6.2	4.7	4.3

Source: 2004 National Beneficiary Survey.

Table B.7. TTW Ratings Among Those Who Self-Identified as TTW Participants (Exhibits IV.1, IV.2, IV.3, IV.10, IV.12, and IV.13)

Unweighted Phase 1 TTW Participants Aware of TTW Status at Interview	480
Weighted Phase 1 TTW Participants Aware of TTW Status at Interview	6,534
% of All Phase 1 TTW Participants	31.0
Reported Success in Reaching Work Goals Since Start of Participation in TTW (%)	
Very Successful	17.7
Somewhat Successful	35.6
Not Very Successful	14.9
Not At All Successful	31.1
Don't Know	0.9
Overall Satisfaction with TTW (%) ^a	
Very Satisfied	30.0
Somewhat Satisfied	37.2
Not Very Satisfied	14.1
Not At All Satisfied	18.4
Don't Know	0.2
Working in 2003 (%)	53.8
Among those working in 2003, Assessment of Services to Help Get or Keep Employment (%)	
Helped a Lot	29.1
Helped Somewhat	20.9
Helped Very Little	5.3
Didn't Help at All	44.3
Don't Know	0.4
New Participants in 2003 (%)	46.7
Among 2003 Cohort, Knowledge of TTW before Participation (%) ^a	
A lot	13.7
Some	18.4
A Little	18.0
Nothing	49.8
Don't Know	0.1
Among 2003 Cohort, Ease of Getting Info (%)	
Very Easy	40.3
Somewhat Easy	28.3
Not Very Easy	19.4
Not At All Easy	8.8
Don't Know	3.3
Among 2003 Cohort, Obtained Information (%)	36.2
Among those in 2003 cohort and who obtained information, Usefulness of Information (%)	
Very Useful	19.5
Somewhat Useful	40.4
Not Very Useful	20.4
Not At All Useful	19.8

Source: 2004 National Beneficiary Survey.

^aQuestion not asked of proxy respondents.

Table B.8. Service Use Among TTW Participants in 2003 (Exhibits V.1, V.2, and V.3)

	TTW Participants						
	All Phase 1 Beneficiaries	All TTW Participants	Milestone-outcome ^a	Outcome-only ^a	Cost Reimbursement ^a	Assigned to EN ^a	Assigned to SVRA ^a
Unweighted Number Using Services	1,251	609	161	225	223	320	289
Number Using Services	866,650	12,075	1,273	300	10,502	1,300	10,776
Column % Using Services	33.5	57.2	48.3	61.4	58.4	47.5	58.6
Reason for Using Services^b							
To improve health	69.2	44.5	42.6	46.8	44.7	44.9	44.5
To improve ability to do daily activities	28.7	22.8	13.5	16.1	24.1	16.4	23.6
To find a job or get a better job	7.9	54.5	53.2	44.8	54.9	46.9	55.4
Wanted to access specific services	5.7	7.2	4.9	1.9	7.6	5.3	7.4
Someone pressured respondent to participate	3.7	3.1	4.1	1.3	3.0	4.2	2.9
To be more independent	1.1	2.8	0.0	3.7	3.1	0.5	3.1
To increase income	0.9	6.3	6.5	6.1	6.3	7.2	6.2
To avoid a continuing disability review	0.4	1.3	2.2	0.8	1.2	2.4	1.2
Other	11.4	11.5	7.5	19.1	11.8	10.5	11.7
Don't know	0.4	0.6	0.0	0.8	0.5	0.2	0.5
Types of Services Used^b							
Personal Counseling/Group Therapy	72.5	67.1	63.5	60.8	67.8	63.0	67.6
OT/PT/speech therapy	36.7	37.8	30.9	34.1	38.7	30.7	38.6
Special equipment or devices	25.1	16.9	12.0	17.7	17.4	14.7	17.1
Medical procedure	24.7	21.0	13.5	22.5	21.9	14.9	21.8
Training/on-the-job training/job modification advice	24.3	67.2	54.6	57.8	69.0	50.3	69.3
Work assessment/help to find a job	21.8	62.5	60.6	55.8	62.9	55.8	63.3
Other	4.4	6.2	2.2	5.4	6.7	3.0	6.6

Source: 2004 National Beneficiary Survey.

^aBased on provider to which Ticket was assigned the longest in 2003.

^bPercentages do not sum to 100 because more than one response possible.

Table B.9. School Enrollment Status at Interview Among Phase 1 Beneficiaries (Exhibit V.6 and V.7)

	All Phase 1 Beneficiaries	TTW Participants		
		All TTW Participants	Assigned to EN ^a	Assigned to SVRA ^a
Total	2,585,045	21,107	2,734	18,373
Number of Phase 1 Beneficiaries Currently Enrolled in School	68,773	3,188	195	2,993
% of Phase 1 Beneficiaries Currently Enrolled in School	2.7	15.1	7.1	16.3
Working toward degree or other (%)				
Working toward degree	50.6	66.3	56.5	67.0
Working toward certificate or license	22.0	22.5	35.8	21.6
Only taking classes	27.3	11.2	7.7	11.4
Don't Know	0.0	0.0	0.0	0.0
Degree Types Among Those Working Towards a Degree (%)				
GED or High School equivalent	18.5	3.1	4.9	2.9
Vocational program	12.5	15.2	8.8	15.6
Associate Degree or Undergraduate Degree	50.8	62.3	53.0	63.0
Graduate Degree	10.7	6.3	1.8	6.6
Other	7.3	10.1	19.0	9.5
Don't Know	0.2	3.1	12.5	2.4

Source: 2004 National Beneficiary Survey.

^aBased on provider to which Ticket was assigned the longest in 2003.

Table B.10. Employment Rates for Selected Beneficiary Subgroups (Exhibit VI.1)

	All Beneficiaries	All Phase 1 Beneficiaries	TTW Participants			Non-TTW Employment Service Users in 2003
			All TTW Participants	EN Assignment ^a	SVRA Assignment ^a	
Number Working at Interview (Unweighted)	1155	593	347	185	162	99
Number Working at Interview (Weighted)	768,452	252,764	6,839	836	6,002	97,763
Column % Working at Interview (Weighted)	8.7	9.8	32.4	30.6	32.7	11.4

Source: 2004 National Beneficiary Survey.

^aBased on provider to which Ticket was assigned the longest in 2003.

Table B.11. Job Type and Tenure (Exhibits VI.6 and VI.7)

	All Phases	All Phase 1 Beneficiaries	Phase 1 TTW Participants		
			All TTW Participants	EN Assignment ^a	SVRA Assignment ^a
Unweighted Number Working at Interview	1155	593	347	185	162
Number Working at Interview	768,452	52,764	6,839	836	6,002
Column % working at Interview	8.7	9.8	32.4	30.6	32.7
Job Type and Tenure					
Occupation (%)					
53-0000 Transportation and Material Moving Occupations	21.1	22.4	11.3	10.4	11.5
51-0000 Production Occupations	8.4	7.4	3.6	2.4	3.8
43-0000 Office and Administrative Support Occupations	13.2	16.3	20.9	15.5	21.7
41-0000 Sales and Related Occupations	8.1	5.9	14.7	10.1	15.3
39-0000 Personal Care and Service Occupations	7.0	5.2	4.8	11.7	3.9
37-0000 Building and Grounds Cleaning and Maintenance	14.8	13.5	16.8	14.2	17.2
35-0000 Food Preparation and Serving Related Occupations	8.3	9.0	11.2	10.9	11.3
Other Occupation	18.5	20.0	15.6	23.6	14.5
Unknown	0.7	0.4	1.0	1.3	1.0
Industry (%)					
81 Other Services (except Public Administration)	4.7	4.6	2.6	3.9	2.4
72 Accommodation and Food Services	8.8	9.5	15.7	10.1	16.5
62 Health Care and Social Assistance	35.1	34.8	23.3	19.6	23.8
61 Educational Services	7.2	6.2	8.2	7.2	8.3
56 Administrative and Support and Waste Management and Remediation Services	5.9	5.1	7.7	5.4	8.1
44-45 Retail Trade	15.2	13.9	15.5	12.0	16.0
Other Industry	21.5	24.8	24.8	39.6	22.7
Unknown	1.6	1.0	2.1	2.2	2.1
Self-Employed (%)	13.1	14.7	11.0	8.1	11.4
Sheltered Employment (%)	36.9	39.3	37.0	23.2	39.0
Average Months at Job	50.7	52.2	26.5	17.3	27.8

Source: 2004 National Beneficiary Survey.

^aBased on provider to which Ticket was assigned the longest in 2003.

Table B.12. Job Tenure Relative to Ticket Assignment Tenure Among Employed TTW Participants (Exhibit VI.5)

	Phase 1 TTW Participants		
	All TTW Participants	EN Assignment ^a	SVRA Assignment ^a
Number Working at Interview (Unweighted)	347	185	162
Number Working at Interview (Weighted)	6839	836	6002
Column % Working at Interview (Weighted)	32.4	30.6	32.7
Job Tenure Longer Than Ticket Assignment Tenure (%)⁺	33.3	17.7	35.5
Months at Job Prior to Ticket Assignment Among Those with Job Tenure Longer Than Ticket Assignment Tenure (%) ^a			
< 3 Months Before Ticket Assignment	14.1	2.2	14.9
3 - 6 Months Before Ticket Assignment	20.8	8.7	21.7
7 - 12 Months Before Ticket Assignment	17.7	28.1	17.0
> 12 Months Before Ticket Assignment	47.4	60.9	46.4
Job Tenure Shorter Than Ticket Assignment Tenure (%)	61.3	79.2	58.9
Months After Ticket Assignment Until Job Start Among Those with Job Tenure Shorter Than Ticket Assignment Tenure (%) ^a			
< 3 Months After Ticket Assignment	15.3	15.7	15.2
3 - 6 Months After Ticket Assignment	18.1	21.2	17.6
7 - 12 Months After Ticket Assignment	15.8	14.9	15.9
> 12 Months After Ticket Assignment	50.8	48.2	51.3
Job Tenure Unknown	5.3	3.1	5.6

Source: 2004 National Beneficiary Survey.

^aBased on provider to which Ticket was assigned the longest in 2003.

Table B.13. Hours, Wages, Monthly Earnings, and Job-Related Benefits of Working Beneficiaries (Exhibits VI.2 and VI.3)

	All Beneficiaries	All Phase 1 Beneficiaries	Phase 1 TTW Participants		
			All TTW Participants	EN Assignment ^a	SVRA Assignment ^a
Unweighted Number Working at Interview	1155	593	347	185	162
Number Working at Interview	768,452	252,764	6,839	836	6,002
Column % working at Interview	8.7	9.8	32.4	30.6	32.7
Wages, Hours, and Benefits					
Usual hours per week (%)					
1 - 10	25.3	27.3	17.1	10.2	18.0
11 - 20	30.6	25.2	35.2	25.9	36.5
21 - 34	23.0	27.0	25.0	20.7	25.6
35 +	21.2	20.6	22.8	43.3	20.0
Average Hours Per Week	22.3	21.5	23.4	28.4	22.7
Hourly Wage (%)					
< \$5.15	35.6	34.4	19.4	7.6	21.1
\$5.16 - \$7.99	33.4	29.4	48.2	31.0	50.6
\$8.00 +	30.9	36.3	32.4	61.4	28.3
Average Hourly Wage (\$)	\$7.00	\$6.92	\$7.42	\$9.76	\$7.09
Average Monthly Pay (\$)	\$650.83	\$640.04	\$778.85	\$1,257.35	\$712.19
Percent with monthly earnings above SGA (>\$810)	23.3	25.4	31.2	60.6	27.1
Employer-sponsored benefits (%) ^b					
Paid vacation	30.7	30.1	41.3	58.1	38.9
Sick days with pay	22.4	22.5	31.0	56.9	27.2
Health insurance	21.3	24.7	26.8	41.2	24.8
Pension or retirement benefits	17.7	17.5	11.0	12.9	10.8
Dental insurance	16.4	18.1	22.2	43.7	19.1
Transportation allowance or discounts	14.9	18.2	24.2	40.0	21.9
Long-term disability benefits	10.1	12.3	9.9	19.1	8.6
Flex health/dependent care spending acct	4.9	6.5	6.2	11.2	5.5
Free or low-cost child care	1.8	2.3	1.4	4.4	1.1

Source: 2004 National Beneficiary Survey.

^aBased on provider to which Ticket was assigned the longest in 2003.^bBenefit questions not asked to self-employed respondents.

Table B.14. Use of Special Equipment or Assistance at Work and Employer-Provided Accommodations (Exhibits VI.8 – VI.10)

	All Beneficiaries	All Phase 1 Beneficiaries	All TTW Participants
Unweighted number working at interview	1155	593	347
Number working at interview	768,452	252,764	6,839
Column % working at interview	8.7	9.8	32.4
Uses special equipment at work (%)			
Yes	23.9	26.4	20.2
No	76.0	73.4	79.8
Unknown	0.1	0.2	0.0
Types of Equipment Among Users (%)^a			
Cane/brace/wheelchair/walker	75.6	70.2	73.1
Modified computer hardware/software	14.0	22.8	25.2
Other equipment	29.4	28.1	34.5
Uses personal assistance at work (%)			
Yes	21.3	23.9	24.0
No	78.1	75.4	76.0
Unknown	0.6	0.6	0.0
Types of personal assistance among users (%)^b			
Job coach	78.8	78.0	77.1
Sign language interpreter or reader for blind	7.7	12.9	13.1
Personal care assistance	16.1	7.2	17.0
Other	8.6	9.4	6.0
Employer Accommodations^a			
Employer made at least one accommodation (%)	58.3	58.3	53.9
Types of accommodations among those who received them (%)^b			
Provided special equipment	15.1	11.5	12.3
Changes to work schedule	46.0	44.6	47.8
Changes to work tasks	44.1	46.4	36.0
Changes to the physical work environment	42.8	37.2	34.6
Arranged for co-worker/others to assist	74.5	75.4	72.6
Other			
Changes to workplace are needed (%)			
Yes	6.2	8.3	4.7
No	92.9	90.7	95.3
Unknown	0.9	1.0	0.0
Among those requiring changes, changes were requested of employer (%)			
Yes	52.8	55.8	62.5
No	44.4	44.2	37.5
Unknown	2.9	0.0	0.0

Source: 2004 National Beneficiary Survey.

^aQuestions not asked of those who were self-employed.

^bPercentages do not sum to 100 because multiple responses possible.

Table B.15. Job Satisfaction Among Those Working at Interview (Exhibit VI.11)

	All Beneficiaries	All Phase 1 Beneficiaries	Phase 1 TTW Participants		
			All TTW Participants	EN Assignment ^a	SVRA Assignment ^a
Unweighted number non-proxy working at interview	796	469	306	177	129
Number non-proxy working at interview	510,903	176,266	5,507	781	4,725
Column % non-proxy working at interview	5.8	6.8	26.1	28.6	25.7
Overall satisfaction with job					
Very or somewhat satisfied	80.4	83.0	79.0	72.6	80.0
Not very or not at all satisfied	16.6	14.1	19.7	24.2	19.0
Unknown	3.0	2.9	1.3	3.2	1.0
Satisfaction with specific aspects of job					
Pay is good					
Agree/agree strongly	57.2	55.7	52.6	50.2	53.0
Disagree/disagree strongly	39.6	40.1	46.1	47.0	45.9
Unknown	3.2	4.2	1.3	2.8	1.0
Benefits are good					
Agree/agree strongly	31.9	31.6	37.0	44.8	35.6
Disagree/disagree strongly	44.1	43.0	54.0	45.0	55.5
Unknown	23.9	25.4	9.1	10.2	8.9
Job security is good/work is steady					
Agree/agree strongly	63.7	70.1	69.6	55.6	71.9
Disagree/disagree strongly	30.5	19.8	27.8	40.5	25.7
Unknown	5.8	10.1	2.6	3.9	2.3
There are chances for promotion ^b					
Agree/agree strongly	30.9	32.4	38.6	41.2	38.2
Disagree/disagree strongly	56.6	54.6	58.0	50.6	59.3
Unknown	12.5	13.0	3.4	8.2	2.5
There are chances to develop abilities					
Agree/agree strongly	59.5	69.7	66.3	63.6	66.8
Disagree/disagree strongly	35.2	24.4	30.7	34.0	30.2
Unknown	5.4	5.9	2.9	2.4	3.0
Receives recognition/respect from others					
Agree/agree strongly	87.3	91.0	88.2	81.2	89.3
Disagree/disagree strongly	9.5	4.4	10.4	14.6	9.6
Unknown	3.2	4.7	1.5	4.2	1.0

Table B.15 (continued)

	All Beneficiaries	All Phase 1 Beneficiaries	Phase 1 TTW Participants		
			All TTW Participants	EN Assignment ^a	SVRA Assignment ^a
Can work on own if desired					
Agree/agree strongly	77.2	77.5	86.2	78.5	87.5
Disagree/disagree strongly	18.4	17.3	12.4	18.0	11.5
Unknown	4.4	5.2	1.4	3.5	1.0
Can work with others/team if desired					
Agree/agree strongly	74.9	76.2	79.5	76.3	80.0
Disagree/disagree strongly	20.9	18.0	17.9	14.8	18.4
Unknown	4.2	5.8	2.7	8.9	1.6
Work is interesting/enjoyable					
Agree/agree strongly	82.3	87.5	83.6	82.8	83.7
Disagree/disagree strongly	15.7	9.2	14.0	14.7	13.8
Unknown	1.9	3.3	2.4	2.5	2.4
Work gives feeling of accomplishment					
Agree/agree strongly	86.3	89.9	86.6	79.0	87.8
Disagree/disagree strongly	10.4	5.8	11.4	18.6	10.2
Unknown	3.3	4.3	2.0	2.4	2.0
Supervisor is supportive ^b					
Agree/agree strongly	86.1	88.5	85.6	81.3	86.3
Disagree/disagree strongly	9.7	6.0	12.8	15.0	12.5
Unknown	4.2	5.4	1.6	3.7	1.2
Co-workers are friendly and supportive					
Agree/agree strongly	83.9	83.4	89.0	88.3	89.2
Disagree/disagree strongly	5.2	4.6	4.5	5.8	4.3
Unknown	10.9	12.1	6.4	5.9	6.5

Source: 2004 National Beneficiary Survey

Note: Questions refer to the respondent's main job if respondent has multiple jobs at interview; 359 sample members working at interview were not asked job satisfaction questions because the interview was completed by a proxy respondent.

^a Based on provider to whom Ticket was assigned the longest in 2003.

^b Questions were not asked of those who were self-employed.

Table B.16. Selected Characteristics of TTW Participants and Involuntary Nonparticipants (Chapter VII)

	TTW Participants	Involuntary Nonparticipants
Unweighted Number	1,105	61
Number	21,107	69,149
Percent of all Phase 1 Beneficiaries	0.82	2.67
Title at Interview(%)		
SSDI-only	50.0	50.3
Concurrent	22.1	17.3
SSI-only	27.9	32.5
Monthly Benefit (%)		
< \$500	15.1	12.9
\$500 - \$1000	67.6	68.9
> \$1000	17.3	18.1
Monthly SSA Benefit (\$)	736.4	778.3
Mean Monthly Non-SSA Benefits (\$)	85.3	134.2
Mean Months Since Initial Award	149.9	134.2
Childhood Disability Onset (%)	36.8	17.8
Age in Years (%)		
18 - 24	9.5	4.4
25 - 39	34.6	27.5
40 - 54	42.5	37.1
55 +	13.5	31.0
Sex (%)		
Male	51.5	60.4
Female	48.5	39.6
Race and Ethnicity (%) ^a		
White	61.2	54.0
Black or African-American	33.4	43.5
Other Race	5.4	2.5
Hispanic or Latino	9.4	9.1
Education (%)		
Less than HS diploma	22.4	30.4
HS diploma	36.0	40.3
More than HS	41.6	29.4
Marital Status		
Never Married	55.0	40.1
Divorced/Separated/Widowed	28.9	30.2
Married	16.1	29.7
Income as a Percent of Federal Poverty Level (%)		
<100	50.1	59.1
100 - 299	39.0	21.6
300 +	11.0	19.3
General Health		
Excellent/Very Good	23.1	13.0
Good/Fair	58.4	54.5
Poor/Very Poor	18.5	32.5

Table B.16 (continued)

	TTW Participants	Involuntary Nonparticipants
Current Health Compared to Last Year		
Much or Somewhat Better	31.8	16.0
About the Same	44.1	49.1
Much or Somewhat Worse	24.1	34.9
Number of ADL/IADL Difficulties		
None	49.7	31.8
One	17.7	18.0
Two	11.8	20.6
Three	8.4	14.0
Four or More	12.5	15.6
Difficulty Performing Specific Activities		
Eating	9.9	12.8
Getting around inside the house	11.8	25.2
Getting along with others	26.9	22.5
Bathing or dressing	14.8	25.3
Shopping for personal items	18.1	19.2
Getting into or out of bed	21.3	31.9
Preparing meals	23.6	32.7
Getting around outside the home	28.0	43.0
Concentrating	42.3	54.7
Coping with stress	50.3	60.9
Speaking, hearing, and/or seeing	52.8	59.2
Grasping, reaching, and/or lifting 10 pounds	47.0	57.1
Walking 3 blocks, climbing steps, standing for 1 hr., and/or crouching	67.0	88.4
Ever Worked for Pay	94.3	91.6
Looked for Work During Previous 4 Weeks	21.8	36.0
Worked in 2003 (%)	47.7	26.5
Working at interview (%)	32.4	15.9
Among those not working, Reason(s) for Not Working		
Physical or mental condition prevents work	76.5	91.3
Discouraged by previous work attempts	50.1	59.0
Workplaces are not accessible	34.2	30.1
Cannot find a job he/she is qualified for	54.0	54.4
Others do not think he/she can work	28.4	39.5
Employers will not give her/him a chance	41.7	50.6
Lacks reliable transportation to/from work	28.9	32.7
Cannot find a job he/she wants	37.6	33.0
Does not want to lose cash or health insurance benefits	18.4	9.4
Is caring for someone else	8.5	9.4
Waiting to finish school/training program	22.8	8.4
Other	3.3	1.6
Don't Know/ Missing	48.1	0.0
Goals include work/career advancement (%)	80.4	73.3

Table B.16 (continued)

	TTW Participants	Involuntary Nonparticipants
Sees Self Working for Pay (%)		
In the Next Year	68.5	61.7
In the Next Five Years	79.9	73.5
Sees Self Working and Earning Enough to Stop Receiving Disability Benefits		
In the Next Year	27.5	30.2
In the Next Five Years	53.4	48.2

Source: 2004 National Beneficiary Survey.

Table B.17 Selected Characteristics of Phase 1 Nonparticipants by Expectation of Participating in TTW in the Future (Chapter VII)

	Plans to Try to Participate in TTW in the Future	No Plans to Participate in TTW in the Future
Number (unweighted)	241	269
Number (weighted)	256165	399931
Percent of Phase 1 Non-participants	10.0	15.6
Percent of Phase 1 Non-participants Aware of TTW	38.0	59.3
Title (%)		
SSDI-only	46.9	54.8
Concurrent	21.5	11.9
SSI-only	31.6	33.3
Monthly Benefit (\$)	780.92	824.31
Months Since Initial Award (%)		
<24	3.0	2.0
24 - 59	24.3	18.6
60 - 119	23.1	26.7
120+	49.6	52.7
Mean Months Since Initial Award	137.6	164.8
Childhood Disability Onset (%)	25.2	23.0
Age in Years (%)		
18 - 24	6.1	3.7
25 - 39	30.1	13.8
40 - 54	47.0	43.8
55 +	16.8	38.6
Mean Age (Years)	43.3	49.2
Sex (%)		
Male	51.7	49.6
Female	48.3	50.4
Race and Ethnicity (%)		
White	55.1	70.1
Black or African-American	39.4	22.9
Other Race	5.5	7.1
Hispanic or Latino	12.5	8.9
Education (%)		
Less than HS diploma	31.8	31.6
HS diploma	39.9	39.4
More than HS	28.3	29.1
Parental Education > HS (%)	22.1	15.8
Marital Status and Living Arrangement (%)		
Lives Alone or with Unrelated Others	31.9	38.9
Lives with Spouse or Other Relatives, No Children	38.7	48.7
Lives with Spouse and Own Children	15.0	6.6
Unmarried Lives with Own Children	14.4	5.8

Table B.17 (continued)

	Plans to Try to Participate in TTW in the Future	No Plans to Participate in TTW in the Future
Income as a Percent of Federal Poverty Level (%)		
<100	54.3	46.5
100 - 299	35.2	37.4
300 +	10.5	16.1
Self-Reported Reason(s) for Limitation (%)		
Mental Illness	39.9	30.6
Mental Retardation	4.6	8.9
Musculoskeletal	26.7	33.6
Sensory Disorders	4.7	10.8
Other Diseases of the Nervous System	11.9	16.0
Other	55.2	56.0
No conditions limiting activities	8.3	3.6
Missing	1.9	2.0
Obese	43.5	43.3
Substance Abuse	12.0	4.0
General Health		
Excellent/Very Good	10.0	10.3
Good/Fair	57.6	47.2
Poor/Very Poor	32.4	42.5
Worked in 2003 (%)	20.2	15.9
Working at Interview (%)	10.8	14.3
Goals include work/career advancement (%)	70.2	22.9
Sees Self Working for Pay (%)		
In the Next Year	48.2	22.8
In the Next Five Years	71.7	25.7
Sees Self Working and Earning Enough to Stop Receiving Disability Benefits (%)		
In the Next Year	21.7	6.8
In the Next Five Years	47.4	12.5

Source: 2004 National Beneficiary Survey.

Table B.18 Reasons for Not Participating in TTW among Phase 1 Nonparticipants Aware of the Program (Chapter VII)

Number (unweighted)	524
Number (weighted)	674237
Percent of All Phase 1 Beneficiaries (weighted)	26.3
Main Reason(s) for Not Participating in TTW in 2003	Percent (weighted)
Health Reasons	51.1
Did Not Know About the Program	9.7
Had a Job or Was in School	8.7
No Desire to Participate	8.5
Cannot work or cannot work enough	6.4
Other Reason	11.7
Don't Know	3.8

Source: 2004 National Beneficiary Survey.

C. LOGISTIC REGRESSION MODELS: VARIABLE DEFINITIONS AND ESTIMATES

Throughout the report, we discuss the findings from multivariate analyses using logistical regression (logit) models that were conducted to assess the determinants of a number of outcomes related to: employment; service use; awareness of TTW; and TTW participation. In the tables that follow, we define the variables that were used in these analyses (Table B.19) and present the regression model estimates (Tables B.20 – B.32).

For most of the models estimated, a standard set of approximately 50 explanatory variables were included. In some instances, additional explanatory variables were included to test specific relationships, and in other instances, fewer variables were used because of sample size limitations or because the analysis was based primarily on administrative, rather than survey, data. Unless otherwise noted in Table B.19, all variables used in the regression models were based on data from the 2004 NBS. Variables noted as being derived from administrative data were created using data from the Ticket Research File.

Because of the large number of variables included in the standard models, and because a few of the explanatory variables might be highly correlated with one another, we computed the variance inflation factors (VIFs) to assess the degree to which multicollinearity might be an issue. The VIF measures the impact of collinearity among the explanatory variables in a regression model on the precision of estimates. Typically, a VIF value greater than 10 is of concern. Among the explanatory variables included in most of the regression analyses, only one set was identified as being potentially problematic – the variables representing age at disability onset, particularly those representing the two youngest age groupings. This might be expected because of its relationship to age, another set of explanatory variables. Young beneficiaries will necessarily have experienced disability onset at a young age. It might also be highly correlated with variables representing certain conditions. In particular, we would expect that the variable representing mental retardation would be perfectly correlated with the variable representing disability onset prior to age 18, if self reports of age at disability onset and conditions causing disability were accurate. Based on the fact that the age at disability onset variables were statistically significant in several of our models, we do not believe that multicollinearity is an important issue in our analyses, despite the elevated VIFs for associated with one or two of the age at disability onset variables in most models.¹

¹ The VIF values for the age at disability onset variables ranged from about 7 to 15 across the various subgroups for which regression models were estimated. Higher VIF values were associated with the younger age categories and with models estimated using smaller subgroups of the beneficiary sample.

Table B.19. Definitions and Full Sample Means of Variables Used in Logit Models

Variable Name	Description	Variable Mean (All Beneficiaries)
Concurrent	=1 if concurrent beneficiary at interview (or at sample date if not on the rolls at interview); 0 otherwise. Based on administrative data.	0.16
SSDI-only	=1 if SSDI-only beneficiary at interview (or at sample date if not on the rolls at interview); 0 otherwise. Based on administrative data.	0.53
Omitted = SSI-only	SSI-only recipient at interview (or at sample date if not on the rolls at interview). Based on administrative data.	0.31
PIA >1200	=1 if Primary Insurance Amount (PIA) is greater than 1200; 0 otherwise. Based on administrative data. Proxy measure for high lifetime earnings.	0.15
SS Benefits 500-1000	=1 if total monthly Social Security disability benefits in the absence of earnings are \$500 - \$1000; 0 otherwise. Calculated based on benefit amounts due and countable earnings information obtained from administrative data. Includes all state, federal, and dependent benefits associated with SSI and SSDI.	0.64
SS Benefits > 1000	=1 if total monthly Social Security disability benefits in the absence of earnings are greater than \$1000; 0 otherwise. Calculated based on benefit amounts due and countable earnings information obtained from administrative data. Includes all state, federal, and dependent benefits associated with SSI and SSDI.	0.24
Omitted = SS Benefits <500	Total monthly Social Security disability benefits in the absence of earnings are less than \$500. Calculated based on benefit amounts due and countable earnings information obtained from administrative data. Includes all state, federal, and dependent benefits associated with SSI and SSDI.	0.12
Other Benefits 1-199	=1 if total monthly dollar value of non-Social Security cash and in-kind benefits is \$1 - \$199; 0 otherwise. Includes only the following other benefits that could potentially be affected by earnings: food stamps; energy, housing, or other in-kind assistance; public assistance; workers' compensation; Veterans' benefits; private disability insurance; unemployment insurance; and pension income among those under age 59.	0.18
Other Benefits 200-500	=1 if total monthly dollar value of non-Social Security cash and in-kind benefits is \$200 - \$500; 0 otherwise. Includes only the following other benefits that could potentially be affected by earnings: food stamps; energy, housing, or other in-kind assistance; public assistance; workers' compensation; Veterans' benefits; private disability insurance; unemployment insurance; and pension income among those under age 59.	0.07

Table B.19 (continued)

Variable Name	Description	Variable Mean (All Beneficiaries)
Other Benefits >500	=1 if total monthly dollar value of non-Social Security cash and in-kind benefits is >\$500; 0 otherwise. Includes only the following other benefits that could potentially be affected by earnings: food stamps; energy, housing, or other in-kind assistance; public assistance; workers' compensation; Veterans' benefits; private disability insurance; unemployment insurance; and pension income among those under age 59.	0.10
Omitted = Other Benefits=0	Total value of other non-SSA benefits is equal to zero.	0.65
0-12 Months on rolls	=1 if start of most recent period of entitlement is less than 12 months ago; 0 otherwise. Based on administrative data. Time calculated as of date of interview for models estimating outcomes as of interview, and calculated as of 12/31/03 for models estimating outcomes during 2003.	0.03
13-24 Months on rolls	=1 if start of most recent period of entitlement is less than 13-24 months; 0 otherwise. Based on administrative data. Time calculated as of date of interview for models estimating outcomes as of interview, and calculated as of 12/31/03 for models estimating outcomes during 2003.	0.07
25-60 Months on rolls	=1 if start of most recent period of entitlement is less than 13-24 months ago; 0 otherwise. Based on administrative data. Time calculated as of date of interview for models estimating outcomes as of interview, and calculated as of 12/31/03 for models estimating outcomes during 2003.	0.25
61-120 Months on rolls	=1 if start of most recent period of entitlement is less than 13-24 months ago; 0 otherwise. Based on administrative data. Time calculated as of date of interview for models estimating outcomes as of interview, and calculated as of 12/31/03 for models estimating outcomes during 2003.	0.26
Omitted = 121+ Months on rolls	Start of most recent period of entitlement is more than 120 months ago. Based on administrative data. Time calculated as of date of interview for models estimating outcomes as of interview, and calculated as of 12/31/03 for models estimating outcomes during 2003.	0.39
Medicare 24-Month Waiting	=1 if SSDI beneficiary and months since most recent period of entitlement is less than 25 months ago. Based on administrative data. Time calculated as of date of interview for models estimating outcomes as of interview, and calculated as of 12/31/03 for models estimating outcomes during 2003. Proxy for being in the 24-month waiting period for Medicare eligibility.	0.08
Age 18-24	=1 if age at interview is 18 - 24 years; 0 otherwise. Based on administrative data.	0.05

Table B.19 (continued)

Variable Name	Description	Variable Mean (All Beneficiaries)
Age 25-39	=1 if age at interview is 25 - 39 years; 0 otherwise. Based on administrative data.	0.17
Age 40-54	=1 if age at interview is 40 - 54 years; 0 otherwise. Based on administrative data.	0.39
Omitted = Age 55 +	Age 55 or older at interview. Based on administrative data.	0.39
Disability onset < age 18	=1 if self-reported age at onset of condition(s) causing disability is < 18; 0 otherwise.	0.23
Disability onset age 18-24	=1 if self-reported age at onset of condition(s) causing disability is 18 - 24; 0 otherwise.	0.11
Disability onset age 25-39	=1 if self-reported age at onset of condition(s) causing disability is 25 - 39; 0 otherwise.	0.25
Disability onset age 40-54	=1 if self-reported age at onset of condition(s) causing disability is 40 - 54; 0 otherwise.	0.32
Omitted = onset age 55+	Self-reported age at onset of condition(s) causing disability is 55 or older.	0.09
Male	=1 if male; 0 otherwise. Based on administrative data.	0.50
Black or African American	=1 if self-reported race is black or African American; 0 otherwise.	0.22
Other race	=1 if self-reported race is other than white, black or African American; 0 otherwise.	0.06
Omitted = white	Self-reported race is white.	0.72
Hispanic/Latino	= 1 if self-reported ethnicity is Hispanic or Latino; 0 otherwise.	0.11
Education =high school	= 1 if self-reported highest level of education is equal to high school diploma or GED; 0 otherwise.	0.35
Education beyond high school	=1 if self-reported highest level of education is beyond a high school diploma or GED; 0 otherwise.	0.23
Omitted = Education< high school	Highest level of education is less than a high school diploma or GED.	0.42
Parental education beyond high school	= 1 if mother or father has highest level of education that is beyond a high school diploma or GED; 0 otherwise.	0.17
Lives with spouse or relatives, no kids	=1 if lives with spouse, partner, or other relatives, but has no children living with him or her; 0 otherwise.	0.49
Married with kids	= 1 if married and living with spouse or partner in marriage-like relationship, and lives with own children; 0 otherwise.	0.08
Unmarried with kids	= 1 with unmarried and living with own children; 0 otherwise.	0.07

Table B.19 (continued)

Variable Name	Description	Variable Mean (All Beneficiaries)
Omitted = lives alone or with unrelated others	Lives alone or with unrelated others and has no own children living with him or her.	0.36
Lives with kids < age 6	= 1 if has own children under the age of 6 living with him or her; 0 otherwise.	0.03
Mental illness	= 1 if a mental health condition is reported as a main reason for activity limitation; 0 otherwise.	0.31
Mental retardation	= 1 if mental retardation is reported as a main reason for activity limitation; 0 otherwise.	0.07
Musculoskeletal	= 1 if a musculoskeletal condition is reported as a main reason for activity limitation; 0 otherwise.	0.36
Sensory	= 1 if a sensory disorder is reported as a main reason for activity limitation; 0 otherwise.	0.09
Other disorders of the nervous system	=1 if a condition of the nervous system other than a sensory disorder is reported as a main reason for activity limitation; 0 otherwise.	0.15
Other condition causing limitation	=1 if a condition other than those listed above is reported as a main reason for activity limitation; 0 otherwise.	0.63
No condition causing limitation	= 1 if reports that no condition(s) limit activities.	0.05
Primary dx=Mental illness	= 1 if the primary disabling condition is a mental health condition; 0 otherwise. Based on administrative data.	0.28
Primary dx=Mental retardation	= 1 if the primary disabling condition is a mental retardation; 0 otherwise. Based on administrative data.	0.14
Primary dx=Musculoskeletal	= 1 if the primary disabling condition is a musculoskeletal condition; 0 otherwise. Based on administrative data.	0.17
Primary dx=Sensory	= 1 if the primary disabling condition is a sensory disorder; 0 otherwise. Based on administrative data.	0.04
Primary dx=Other disorders of the nervous system	= 1 if the primary disabling condition is a disorder of the nervous system (not sensory); 0 otherwise. Based on administrative data.	0.05
Primary dx=Other condition	= 1 if the primary disabling condition is a condition other than those listed above; 0 otherwise. Based on administrative data.	0.30

Table B.19 (continued)

Variable Name	Description	Variable Mean (All Beneficiaries)
MCS = 44-51	= 1 if the SF-8 Mental Component Summary (MCS) health measure is 44-51; 0 otherwise. The MCS is a mental health status measure where higher scores are associated with better mental health. A score of 44 - 51 corresponds approximately to the 25th to 50th percentiles for the general U.S. adult population.	0.18
MCS > 51	= 1 if the SF-8 Mental Component Summary (MCS) health measure is > 51; 0 otherwise. The MCS is a mental health status measure where higher scores are associated with better mental health. A score of > 51 corresponds approximately to above the 50th percentile for the general U.S. adult population.	0.42
Omitted = MCS < 44	SF-8 Mental Component Summary (MCS) health measure is < 44. The MCS is a mental health status measure where higher scores are associated with better mental health. A score of < 44 corresponds approximately the lowest 25th percentile for the general U.S. adult population.	0.40
PCS = 44-51	= 1 if the SF-8 Physical Component Summary (PCS) health measure is 44-51; 0 otherwise. The PCS is a physical health status measure where higher scores are associated with better physical health. A score of 44 - 51 corresponds approximately to the 25th to 50th percentiles for the general U.S. adult population.	0.18
PCS > 51	= 1 if the SF-8 Physical Component Summary (PCS) health measure is > 51; 0 otherwise. The PCS is a physical health status measure where higher scores are associated with better physical health. A score of > 51 corresponds approximately to above the 50th percentile for the general U.S. adult population.	0.29
Omitted = PCS < 44	SF-8 Physical Component Summary (PCS) health measure is < 44. The PCS is a physical health status measure where higher scores are associated with better physical health. A score of < 44 corresponds approximately the lowest 25th percentile for the general U.S. adult population.	0.53
PCS51 * MCS51	Interaction of PCS >51 and MCS > 51. Indicator of higher than the U.S. population average for both physical and mental health status.	0.14
No ADL, IADL, or functional limitations	= 1 if no reported Activities of Daily Living (ADL), Instrumental Activities of Daily Living (IADL), or functional limitations; 0 otherwise.	0.02
At least one ADL or IADL requiring assistance	= 1 if reported having at least one ADL or IADL difficulty for which assistance was required; 0 otherwise. ADLs include: bathing or dressing; getting around the house; getting into or out of bed; and eating. IADLs include: getting around outside of the home, shopping for personal items, and preparing meals.	0.53

Table B.19 (continued)

Variable Name	Description	Variable Mean (All Beneficiaries)
At least one severe physical limitation	= 1 if reported at least one severe physical limitation; 0 otherwise. A severe physical limitation is defined as the inability to: walk, climb steps, lift 10 lbs., grasp, reach, stand, and/or crouch.	0.59
Obese	= 1 if Body Mass Index (BMI) is 30 or greater; 0 otherwise. Calculated based on self-reported weight and height.	0.42
Substance abuse	= 1 if reported symptoms of substance abuse; 0 otherwise. Symptoms of substance abuse include: a CAGE alcohol score of 2 or greater; being advised to stop using alcohol or drugs by a health professional in past 12 months; receiving treatment for alcohol or drug use in past 12 months; and/or indicating drug use in past 12 months AND the need for larger amounts to get an effect, or having emotional or physical problems from using drugs.	0.07
FPL >300	= 1 if household income is greater than 300% of the Federal Poverty Level for a family of the given household's size; 0 otherwise.	0.13
Worked while on the rolls during 2003	= 1 if self-reported working for pay for more than one month during 2003 and was on the disability rolls for more than 12 months as of the date of interview.	0.12
Phase 1	=1 if beneficiary resided in a Phase 1 state at the time of sampling; 0 otherwise.	0.29
Phase 2	=1 if beneficiary resided in a Phase 2 state at the time of sampling; 0 otherwise	0.31
Omitted = Phase 3	Beneficiary resided in a Phase 3 state at the time of sampling.	0.40
AOI 1 and not in AOI 2 [#]	= 1 if a member of adequacy of incentives (AOI) group 1 (needs ongoing supports) and not a member of AOI group 2; 0 otherwise.	0.36
AOI 2 and not in AOI 1 [#]	= 1 if a member of AOI group 2 (needs high-cost accommodations) and not a member of AOI group 1; 0 otherwise.	0.09
Both AOI 1 and AOI 2 [#]	= 1 if a member of both AOI groups 1 and 2; 0 otherwise.	0.27
AOI 3 [#]	= 1 if a member of AOI group 3 (works and earns a subminimum wage); 0 otherwise.	0.03
AOI 4 [#]	= 1 if a member of AOI group 4 (works and receives partial benefits); 0 otherwise.	0.02
Omitted = Not AOI [#]	Not a member of any of the four AOI groups.	0.28

Table B.19 (continued)

Variable Name	Description	Variable Mean (All Beneficiaries)
Ticket Assigned to EN*	= 1 if Ticket was assigned to a non-SVRA Employment Network; 0 otherwise. Based on administrative data and corresponds to the provider to which the Ticket was assigned the longest during 2003.	0.13
Ticket Assigned under Outcome-only*	= 1 if Ticket was assigned to a provider operating under the Outcome-only payment system; 0 otherwise. Based on administrative data and corresponds to the provider to which the Ticket was assigned the longest during 2003.	0.02
Ticket Assigned under Milestone-outcome*	= 1 if Ticket was assigned to a provider operating under the Milestone-outcome payment system; 0 otherwise. Based on administrative data and corresponds to the provider to which the Ticket was assigned the longest during 2003.	0.12
Omitted = Ticket Assigned under Traditional payment system*	Ticket was assigned to a provider operating under the Traditional payment system. Based on administrative data and corresponds to the provider to which the Ticket was assigned the longest during 2003.	0.86
Services useful+	=1 if the "average usefulness rating" is greater than 3.5; 0 otherwise. The rating is computed as the average of the rating for each provider where very useful = 4, somewhat useful =3, not very useful = 2, not at all useful = 1.	0.61
Used services for health reasons+	=1 if reasons for using services in 2003 included "to improve health," and did not include "to find or get a better job" or "to increase income"; 0 otherwise.	0.25
Used services for job reasons+	=1 if reasons for using services in 2003 included "to find or get a better job" or "to increase income" but did not include "to improve health"; 0 otherwise.	0.37
Used services for both health and job reasons+	=1 if both job and health reasons were cited as reasons for using services; 0 otherwise.	0.19
Omitted=Used services for reasons other than job or health+	Neither job nor health reasons were cited as reasons for using services in 2003.	0.19
More than one provider used in 2003+	=1 if more than one service provider was used in 2003; =0 if only one service provider was used in 2003.	0.54

Mean presented is for the sample of Phase 1 beneficiaries.

*Mean presented is for the TTW participant sample.

+Mean presented is for subset of beneficiaries who used services in 2003.

Table B.20. Logit Model Estimates of the Likelihood of Employment at Interview (Chapter II)

	Coefficient	Std. Error	Odds Ratio	P > t	Variable Mean
Sample: All Beneficiaries (N=7603)					
Dependent Variable = Employed at Interview					0.09
Constant	-4.13	0.43		0.00	
Concurrent	0.62	0.16	1.87	0.00	0.16
SSDI-only	0.96	0.15	2.61	0.00	0.53
PIA >1200	-0.32	0.18	0.73	0.08	0.15
SS Benefits 500-1000	-0.60	0.14	0.55	0.00	0.64
SS Benefits > 1000	-0.45	0.22	0.64	0.04	0.24
Other Benefits 1-199	-1.00	0.16	0.37	0.00	0.18
Other Benefits 200-499	-1.07	0.24	0.34	0.00	0.07
Other Benefits 500+	-0.46	0.27	0.63	0.09	0.10
0-12 Months on rolls	0.04	0.46	1.04	0.94	0.03
13-24 Months on rolls	-0.41	0.34	0.66	0.22	0.07
25-60 Months on rolls	0.04	0.16	1.04	0.82	0.25
61-120 Months on rolls	0.02	0.16	1.02	0.89	0.26
Medicare 24-Month Waiting	0.17	0.42	1.18	0.69	0.08
Age 18-24	0.50	0.31	1.65	0.10	0.05
Age 25-39	0.68	0.27	1.98	0.01	0.17
Age 40-54	0.48	0.25	1.62	0.06	0.39
Disability onset < age 18	1.18	0.36	3.25	0.00	0.23
Disability onset age 18-24	0.54	0.40	1.71	0.18	0.11
Disability onset age 25-39	0.44	0.36	1.55	0.23	0.25
Disability onset age 40-54	0.04	0.35	1.04	0.91	0.32
Male	0.22	0.11	1.24	0.04	0.50
African American	-0.15	0.16	0.86	0.36	0.22
Other race	-0.50	0.21	0.61	0.02	0.06
Hispanic/Latino	-0.25	0.18	0.78	0.16	0.11
Education =high school	0.16	0.16	1.17	0.32	0.35
Education beyond high school	0.68	0.20	1.98	0.00	0.23
Parental education beyond high school	0.16	0.13	1.17	0.23	0.17
Lives with spouse or other relatives, no kids	-0.32	0.14	0.73	0.02	0.49
Married with kids	-0.18	0.24	0.83	0.43	0.08
Unmarried with kids	-0.42	0.27	0.66	0.12	0.07
Lives with kids < age 6	-0.17	0.23	0.84	0.46	0.03
Mental illness	-0.03	0.16	0.97	0.84	0.31
Mental retardation	0.34	0.19	1.40	0.07	0.07
Musculoskeletal	0.07	0.17	1.07	0.69	0.36
Sensory	-0.06	0.19	0.95	0.77	0.09
Other disorders of the nervous system	-0.43	0.19	0.65	0.03	0.15
Other condition causing limitation	-0.04	0.11	0.97	0.76	0.63
No condition causing limitation	0.33	0.22	1.39	0.13	0.05
MCS 44-51	0.46	0.17	1.59	0.01	0.18
MCS > 51	0.72	0.19	2.05	0.00	0.42
PCS 44-51	0.55	0.18	1.73	0.00	0.18
PCS > 51	1.00	0.17	2.73	0.00	0.29
MCS > 51 and PCS > 51	0.11	0.23	1.12	0.62	0.14
No ADL, IADL, or functional limitations	-0.06	0.20	0.94	0.77	0.02
At least one ADL or IADL requiring assistance	-0.37	0.13	0.69	0.01	0.53
At least one severe physical limitation	-0.36	0.14	0.70	0.01	0.59
Obese	0.29	0.11	1.33	0.01	0.42
Substance abuse	-0.48	0.21	0.62	0.02	0.07
FPL >300	0.41	0.17	1.51	0.02	0.13

Source: 2004 National Beneficiary Survey matched to the Ticket Research File.

Note: Variable definitions are presented in Table B.19.

Table B.21. Logit Model Estimates of the Likelihood of Service Use in 2003 (Chapter II)

	Coefficient	Std. Error	Odds Ratio	P > t	Variable Mean
Sample: All Beneficiaries (N=7603)					
Dependent Variable = Used Services in 2003					0.30
Constant	-2.64	0.30		0.00	
Concurrent	0.19	0.12	1.21	0.12	0.16
SSDI-only	0.14	0.11	1.15	0.20	0.53
PIA >1200	-0.17	0.15	0.84	0.24	0.15
SS Benefits 500-1000	0.09	0.13	1.10	0.46	0.62
SS Benefits > 1000	0.27	0.17	1.31	0.11	0.24
Other Benefits 1-199	0.32	0.12	1.38	0.01	0.18
Other Benefits 200-499	0.48	0.15	1.62	0.00	0.07
Other Benefits 500+	0.16	0.15	1.17	0.30	0.10
0-12 Months on rolls	-0.25	0.29	0.78	0.39	0.03
13-24 Months on rolls	0.11	0.23	1.12	0.63	0.09
25-60 Months on rolls	0.24	0.11	1.27	0.03	0.25
61-120 Months on rolls	0.13	0.11	1.14	0.24	0.25
Medicare 24-Month Waiting	0.12	0.26	1.13	0.64	0.09
Age 18-24	0.50	0.17	1.64	0.01	0.05
Age 25-39	0.29	0.15	1.34	0.05	0.17
Age 40-54	0.23	0.11	1.26	0.03	0.39
Disability onset < age 18	0.37	0.26	1.45	0.16	0.23
Disability onset age 18-24	0.50	0.24	1.65	0.04	0.11
Disability onset age 25-39	0.68	0.25	1.98	0.01	0.25
Disability onset age 40-54	0.40	0.23	1.49	0.08	0.32
Male	-0.03	0.08	0.97	0.68	0.50
Black or African American	-0.25	0.07	0.78	0.00	0.22
Other race	-0.03	0.15	0.97	0.84	0.06
Hispanic/Latino	0.12	0.15	1.12	0.45	0.11
Education =high school	0.28	0.09	1.32	0.00	0.35
Education beyond high school	0.78	0.12	2.18	0.00	0.23
Parental education beyond high school	0.13	0.10	1.14	0.20	0.17
Lives with spouse or other relatives, no kids	-0.26	0.09	0.77	0.00	0.49
Married with kids	-0.40	0.15	0.67	0.01	0.08
Unmarried with kids	-0.22	0.16	0.80	0.15	0.07
Lives with kids < age 6	0.15	0.14	1.16	0.29	0.03
Mental illness	1.16	0.09	3.19	0.00	0.31
Mental retardation	0.48	0.16	1.62	0.00	0.07
Musculoskeletal	0.23	0.09	1.26	0.01	0.36
Sensory	-0.10	0.15	0.91	0.53	0.09
Other disorders of the nervous system	-0.11	0.11	0.90	0.31	0.15
Other condition causing limitation	0.08	0.09	1.08	0.42	0.63
No condition causing limitation	0.22	0.19	1.25	0.24	0.05
MCS 44-51	-0.10	0.12	0.90	0.40	0.18
MCS > 51	0.03	0.10	1.03	0.79	0.42
PCS 44-51	-0.05	0.12	0.96	0.71	0.18
PCS > 51	0.33	0.11	1.39	0.00	0.29
MCS > 51 and PCS > 51	-0.33	0.15	0.72	0.03	0.14
No ADL, IADL, or functional limitations	-0.04	0.21	0.96	0.85	0.02
At least one ADL or IADL requiring assistance	0.22	0.09	1.24	0.01	0.53
At least one severe physical limitation	-0.01	0.11	0.99	0.93	0.59
Obese	-0.02	0.07	0.98	0.75	0.42
Substance abuse	0.02	0.15	1.02	0.87	0.07
FPL >300	-0.10	0.12	0.90	0.42	0.13

Source: 2004 National Beneficiary Survey matched to the Ticket Research File.

Note: Variable definitions are presented in Table B.19.

Table B.22. Logit Model Estimates of the Likelihood of TTW Participation (Chapter III)

	Coefficient	Std. Error	Odds Ratio	P > t	Variable Mean
Sample: Phase 1 Beneficiaries (N=2932)					
Dependent Variable = TTW Participation					0.008
Constant	-7.56	0.62		0.00	
Concurrent	0.39	0.18	1.47	0.03	0.16
SSDI-only	0.40	0.17	1.49	0.02	0.53
PIA >1200	-0.67	0.23	0.51	0.00	0.15
SS Benefits 500-1000	-0.11	0.23	0.89	0.62	0.63
SS Benefits > 1000	-0.04	0.30	0.96	0.89	0.23
Other Benefits 1-199	0.49	0.18	1.63	0.01	0.18
Other Benefits 200-499	0.28	0.32	1.33	0.38	0.07
Other Benefits 500+	-0.56	0.36	0.57	0.13	0.10
0-12 Months on rolls	-0.37	0.50	0.69	0.46	0.02
13-24 Months on rolls	-0.12	0.34	0.89	0.74	0.08
25-60 Months on rolls	0.24	0.23	1.28	0.28	0.23
61-120 Months on rolls	0.60	0.20	1.83	0.00	0.28
Medicare 24-Month Waiting	0.34	0.44	1.40	0.45	0.07
Age 18-24	1.76	0.37	5.83	0.00	0.05
Age 25-39	1.39	0.20	4.00	0.00	0.17
Age 40-54	0.96	0.18	2.62	0.00	0.38
Disability onset < age 18	1.04	0.49	2.83	0.03	0.25
Disability onset age 18-24	0.99	0.59	2.68	0.10	0.11
Disability onset age 25-39	0.66	0.53	1.93	0.22	0.27
Disability onset age 40-54	0.56	0.47	1.75	0.23	0.28
Male	-0.02	0.15	0.98	0.87	0.49
Black or African American	0.60	0.26	1.82	0.02	0.24
Other race	0.10	0.39	1.11	0.79	0.07
Hispanic/Latino	-0.11	0.22	0.90	0.63	0.15
Education =high school	0.62	0.17	1.85	0.00	0.37
Education beyond high school	1.41	0.18	4.11	0.00	0.24
Parental education beyond high school	0.12	0.13	1.13	0.36	0.18
Lives with spouse or other relatives, no kids	-0.26	0.12	0.77	0.04	0.47
Married with kids	-0.23	0.33	0.79	0.49	0.07
Unmarried with kids	-0.28	0.29	0.76	0.33	0.07
Lives with kids < age 6	-1.06	0.25	0.35	0.00	0.03
Mental illness	-0.07	0.20	0.93	0.73	0.34
Mental retardation	-0.11	0.32	0.90	0.73	0.08
Musculoskeletal	0.03	0.15	1.03	0.87	0.31
Sensory	0.60	0.20	1.81	0.00	0.10
Other disorders of the nervous system	0.08	0.16	1.09	0.60	0.15
Other condition causing limitation	-0.14	0.21	0.87	0.51	0.62
No condition causing limitation	-0.02	0.21	0.98	0.94	0.05
MCS 44-51	-0.05	0.16	0.95	0.76	0.18
MCS > 51	0.27	0.21	1.32	0.19	0.42
PCS 44-51	0.06	0.19	1.06	0.74	0.19
PCS > 51	0.23	0.23	1.26	0.33	0.31
MCS > 51 and PCS > 51	0.11	0.20	1.11	0.59	0.16
No ADL, IADL, or functional limitations	0.45	0.33	1.57	0.17	0.02
At least one ADL or IADL requiring assistance	-0.66	0.19	0.52	0.00	0.55
At least one severe physical limitation	-0.17	0.19	0.85	0.38	0.61
Obese	0.12	0.09	1.13	0.20	0.40
Substance abuse	-0.18	0.31	0.83	0.56	0.06
FPL >300	-0.01	0.18	0.99	0.93	0.13

Source: 2004 National Beneficiary Survey matched to the Ticket Research File.

Note: Variable definitions are presented in Table B.19.

Table B.23a. Logit Model Estimates of the Likelihood of Assigning a Ticket to an EN, Conditional on TTW Participation (Chapter III)

	Coefficient	Std. Error	Odds Ratio	P > t	Variable Mean
Sample: TTW Participants (N=1105)					
Dependent Variable = Ticket Assigned to EN					0.13
Constant	-1.99	0.83		0.02	
Concurrent	-0.60	0.33	0.55	0.07	0.22
SSDI-only	-0.61	0.23	0.55	0.01	0.50
PIA >1200	-0.16	0.56	0.86	0.78	0.08
SS Benefits 500-1000	0.38	0.38	1.47	0.31	0.68
SS Benefits > 1000	0.52	0.48	1.68	0.29	0.18
Other Benefits 1-199	-0.33	0.32	0.72	0.30	0.26
Other Benefits 200-499	0.44	0.37	1.55	0.23	0.06
Other Benefits 500+	0.60	0.39	1.82	0.13	0.05
0-12 Months on rolls	-0.81	1.25	0.44	0.52	0.02
13-24 Months on rolls	-1.34	1.12	0.26	0.23	0.07
25-60 Months on rolls	0.23	0.25	1.26	0.37	0.25
61-120 Months on rolls	0.02	0.22	1.02	0.92	0.35
Medicare 24-Month Waiting	1.48	1.10	4.40	0.18	0.07
Age 18-24	-1.74	0.73	0.17	0.02	0.09
Age 25-39	-0.54	0.43	0.58	0.20	0.35
Age 40-54	-0.48	0.30	0.62	0.12	0.42
Disability onset < age 18	0.07	0.76	1.07	0.93	0.37
Disability onset age 18-24	0.74	0.83	2.10	0.37	0.17
Disability onset age 25-39	0.81	0.76	2.24	0.29	0.27
Disability onset age 40-54	0.63	0.74	1.88	0.40	0.18
Male	0.31	0.20	1.36	0.13	0.52
Black or African American	0.06	0.28	1.07	0.82	0.33
Other race	0.39	0.46	1.47	0.40	0.05
Hispanic/Latino	0.72	0.30	2.05	0.02	0.09
Education =high school	-0.75	0.21	0.47	0.00	0.36
Education beyond high school	-0.42	0.23	0.66	0.07	0.42
Parental education beyond high school	-0.07	0.26	0.93	0.79	0.28
Lives with spouse or other relatives, no ki	0.27	0.25	1.31	0.28	0.43
Married with kids	0.16	0.47	1.18	0.73	0.06
Unmarried with kids	0.59	0.30	1.81	0.05	0.07
Lives with kids < age 6	1.37	0.63	3.92	0.03	0.03
Mental illness	-0.21	0.28	0.81	0.46	0.36
Mental retardation	-0.84	0.65	0.43	0.20	0.06
Musculoskeletal	0.15	0.19	1.16	0.42	0.24
Sensory	-0.22	0.41	0.81	0.59	0.13
Other disorders of the nervous system	-0.78	0.36	0.46	0.03	0.15
Other condition causing limitation	0.30	0.19	1.34	0.12	0.47
No condition causing limitation	0.43	0.42	1.54	0.30	0.12
MCS 44-51	-0.34	0.35	0.71	0.33	0.15
MCS > 51	0.36	0.28	1.43	0.20	0.54
PCS 44-51	-0.41	0.26	0.66	0.12	0.17
PCS > 51	0.65	0.30	1.92	0.03	0.54
MCS > 51 and PCS > 51	-1.16	0.41	0.31	0.01	0.33
No ADL, IADL, or functional limitations	-0.01	0.36	0.99	0.98	0.08
At least one ADL or IADL requiring assist:	-0.12	0.19	0.88	0.51	0.33
At least one severe physical limitation	-0.11	0.31	0.90	0.72	0.37
Obese	-0.26	0.21	0.77	0.21	0.38
Substance abuse	0.46	0.32	1.58	0.16	0.07
FPL >300	0.70	0.27	2.02	0.01	0.11

Source: 2004 National Beneficiary Survey matched to the Ticket Research File.

Note: Variable definitions are presented in Table B.19.

Table B.23b. Logit Model Estimates of the Likelihood of Ticket Assignment under the Outcome-only Payment System, Conditional on Assignment Under the non-Traditional (MO or OO) Payment System (Chapter III)

	Coefficient	Std. Error	Odds Ratio	P > t	Variable Mean
Sample: TTW Participants Under Alternative Payment Systems (N=722)					
Dependent Variable = Ticket Assigned Under Outcome-only Payment System					0.16
Constant	-0.41	0.81		0.61	
Concurrent	-0.39	0.29	0.68	0.18	0.17
SSDI-only	0.33	0.28	1.39	0.24	0.52
PIA >1200	0.15	0.61	1.16	0.81	0.08
SS Benefits 500-1000	0.02	0.30	1.02	0.95	0.67
SS Benefits > 1000	-0.05	0.33	0.95	0.87	0.21
Other Benefits 1-199	0.29	0.31	1.33	0.36	0.20
Other Benefits 200-499	0.22	0.28	1.24	0.44	0.07
Other Benefits 500+	-0.44	0.38	0.64	0.25	0.07
0-12 Months on rolls	0.04	0.82	1.04	0.96	0.02
13-24 Months on rolls	0.15	0.59	1.16	0.80	0.05
25-60 Months on rolls	-0.15	0.24	0.86	0.53	0.26
61-120 Months on rolls	-0.11	0.25	0.89	0.65	0.36
Medicare 24-Month Waiting	-0.80	0.62	0.45	0.20	0.05
Age 18-24	0.90	0.59	2.45	0.13	0.05
Age 25-39	0.81	0.39	2.24	0.04	0.33
Age 40-54	0.71	0.27	2.04	0.01	0.44
Disability onset < age 18	-1.18	0.58	0.31	0.04	0.24
Disability onset age 18-24	-1.34	0.57	0.26	0.02	0.18
Disability onset age 25-39	-1.14	0.53	0.32	0.03	0.34
Disability onset age 40-54	-0.75	0.51	0.47	0.14	0.22
Male	-0.16	0.19	0.86	0.41	0.52
Black or African American	-1.24	0.33	0.29	0.00	0.34
Other race	-0.65	0.59	0.52	0.27	0.08
Hispanic/Latino	-0.61	0.35	0.54	0.08	0.12
Education =high school	0.63	0.27	1.88	0.02	0.26
Education beyond high school	0.55	0.26	1.74	0.03	0.45
Parental education beyond high school	0.15	0.17	1.16	0.37	0.27
Lives with spouse or other relatives, no ki	-0.22	0.24	0.80	0.34	0.44
Married with kids	0.43	0.50	1.54	0.39	0.07
Unmarried with kids	-0.17	0.30	0.84	0.57	0.09
Lives with kids < age 6	-0.76	0.53	0.47	0.16	0.04
Mental illness	-0.36	0.32	0.70	0.26	0.37
Mental retardation	-0.68	0.62	0.50	0.27	0.04
Musculoskeletal	-0.51	0.28	0.60	0.07	0.31
Sensory	-0.68	0.45	0.51	0.14	0.08
Other disorders of the nervous system	-0.14	0.32	0.87	0.66	0.11
Other condition causing limitation	-0.56	0.19	0.57	0.00	0.52
No condition causing limitation	-0.80	0.46	0.45	0.08	0.14
MCS 44-51	0.00	0.33	1.00	1.00	0.15
MCS > 51	-0.51	0.32	0.60	0.11	0.51
PCS 44-51	0.43	0.31	1.53	0.17	0.14
PCS > 51	-0.76	0.33	0.47	0.02	0.53
MCS > 51 and PCS > 51	0.98	0.36	2.67	0.01	0.28
No ADL, IADL, or functional limitations	0.18	0.33	1.20	0.59	0.09
At least one ADL or IADL requiring assist:	0.55	0.35	1.74	0.12	0.27
At least one severe physical limitation	-0.18	0.28	0.84	0.53	0.35
Obese	0.43	0.21	1.54	0.04	0.36
Substance abuse	0.15	0.32	1.16	0.65	0.10
FPL >300	-0.12	0.31	0.88	0.69	0.15

Source: 2004 National Beneficiary Survey matched to the Ticket Research File.

Note: Variable definitions are presented in Table B.19.

Table B.24. Logit Model Estimates of the Likelihood of Awareness of TTW Status (Chapter IV)

	Coefficient	Std. Error	Odds Ratio	P > t	Variable Mean
Sample: TTW Beneficiaries (N=1105)					
Dependent Variable = Aware 2003 TTW Participant					0.31
Constant	-1.45	1.00		0.15	
SVRA	-0.93	0.25	0.40	0.00	0.87
Concurrent	0.61	0.35	1.84	0.08	0.22
SSDI-only	0.72	0.44	2.06	0.10	0.50
PIA >1200	-0.23	0.57	0.80	0.69	0.08
Benefits 500-1000	-0.20	0.50	0.82	0.68	0.68
Benefits > 1000	0.11	0.39	1.12	0.78	0.18
Other Benefits 1-199	0.02	0.33	1.02	0.96	0.26
Other Benefits 200-499	0.35	0.55	1.42	0.52	0.06
Other Benefits > 500	0.69	0.46	2.00	0.14	0.05
0-12 Months on rolls	0.01	0.85	1.01	0.99	0.02
13-24 Months on rolls	-0.30	0.94	0.74	0.75	0.07
25-60 Months on rolls	0.06	0.20	1.06	0.76	0.25
61-120 Months on rolls	-0.05	0.25	0.95	0.84	0.35
Medicare 24-Month Waiting	0.80	0.96	2.22	0.41	0.07
Age 18-24	0.01	0.58	1.02	0.98	0.09
Age 25-39	0.35	0.42	1.42	0.40	0.35
Age 40-54	0.38	0.39	1.47	0.32	0.42
Disability onset < age 18	0.46	1.02	1.59	0.65	0.37
Disability onset age 18-24	0.44	0.99	1.55	0.66	0.17
Disability onset age 25-39	1.26	1.05	3.53	0.23	0.27
Disability onset age 40-54	1.07	0.88	2.91	0.22	0.18
Male	-0.19	0.22	0.82	0.37	0.52
African American	-0.18	0.14	0.83	0.19	0.33
Other race	0.00	0.39	1.00	1.00	0.05
Hispanic/Latino	0.08	0.41	1.09	0.84	0.09
Education =high school	-0.37	0.24	0.69	0.12	0.36
Education beyond high school	0.24	0.20	1.27	0.24	0.42
Parental education beyond high school	-0.20	0.23	0.82	0.39	0.28
Lives with spouse or other relatives, no kids	-0.03	0.27	0.97	0.92	0.43
Married with kids	-0.14	0.45	0.87	0.75	0.06
Unmarried with kids	0.25	0.59	1.28	0.67	0.07
Lives with kids < age 6	-0.12	0.80	0.88	0.88	0.03
Mental illness	-0.18	0.31	0.84	0.58	0.36
Mental retardation	-0.69	0.61	0.50	0.26	0.06
Musculoskeletal	0.07	0.34	1.07	0.84	0.24
Sensory	-1.04	0.27	0.35	0.00	0.13
Other disorders of the nervous system	0.39	0.28	1.48	0.17	0.15
Other condition causing limitation	-0.22	0.29	0.80	0.45	0.47
No condition causing limitation	-0.87	0.45	0.42	0.06	0.12
MCS 44-51	0.23	0.36	1.25	0.53	0.15
MCS > 51	0.45	0.32	1.56	0.16	0.54
PCS 44-51	0.12	0.34	1.13	0.73	0.17
PCS > 51	0.40	0.37	1.50	0.28	0.54
MCS > 51 and PCS > 51	0.06	0.48	1.06	0.91	0.33
No ADL, IADL, or functional limitations	-0.58	0.46	0.56	0.21	0.08
At least one ADL or IADL requiring assistance	-0.03	0.26	0.97	0.89	0.33
At least one severe physical limitation	-0.09	0.28	0.92	0.76	0.37
Obese	-0.10	0.24	0.90	0.67	0.38
Substance abuse	0.22	0.31	1.25	0.47	0.07
FPL >300	-0.07	0.43	0.94	0.88	0.11

Source: 2004 National Beneficiary Survey matched to the Ticket Research File.

Note: Variable definitions are presented in Table B.19.

Table B.25. Logit Model Estimates of the Likelihood of Having Difficulty Obtaining Information about TTW (Chapter IV)

	Coefficient	Std. Error	Odds Ratio	P > t	Variable Mean
Sample: TTW Participants Aware of Participation Status (N=216)					
Dependent Variable = Difficult to Get TTW Information					0.28
Constant	-4.65	2.47		0.06	
Concurrent	-1.24	0.88	0.29	0.16	0.34
SSDI-only	-0.89	0.91	0.41	0.33	0.51
Benefits > 1000	0.13	0.73	1.14	0.86	0.27
0-12 Months on rolls	3.09	1.45	21.98	0.03	0.04
Age 18-24	-2.01	2.56	0.13	0.43	0.07
Age 25-39	2.35	2.12	10.51	0.27	0.29
Age 40-54	1.73	1.90	5.63	0.37	0.55
Disability onset < age 18	0.00	0.87	1.00	1.00	0.24
Male	-0.63	0.70	0.53	0.37	0.49
Black or African American	0.69	0.92	1.99	0.45	0.26
Other race	0.21	1.26	1.23	0.87	0.07
Hispanic/Latino	-0.44	0.76	0.64	0.56	0.09
Education =high school	1.00	0.82	2.72	0.22	0.24
Education beyond high school	-0.01	1.13	0.99	0.99	0.55
Mental illness	1.80	0.75	6.06	0.02	0.36
Mental retardation	0.02	1.25	1.02	0.99	0.03
Musculoskeletal	-0.62	0.70	0.54	0.38	0.29
Sensory	2.60	1.08	13.40	0.02	0.08
MCS > 51	1.99	1.11	7.33	0.07	0.48
PCS > 51	1.86	0.92	6.39	0.04	0.44
MCS > 51 and PCS > 51	-3.93	1.07	0.02	0.00	0.27
At least one ADL or IADL requiring assistance	1.24	0.81	3.45	0.13	0.34
At least one severe physical limitation	0.24	0.74	1.28	0.74	0.42
Substance abuse	0.68	0.94	1.97	0.47	0.07
FPL >300	2.13	1.29	8.45	0.10	0.13

Source: 2004 National Beneficiary Survey matched to the Ticket Research File.

Note: Variable definitions are presented in Table B.19.

Table B.26. Logit Model Estimates of the Likelihood of Using Services in 2003 Among TTW Participants, Model with Provider Type Indicator (Chapter V)

	Coefficient	Std. Error	Odds Ratio	P > t	Variable Mean
Sample: TTW Participants (N=1105)					
Dependent Variable = Used Services in 2003					0.57
Constant	-1.57	1.15		0.17	
Concurrent	0.32	0.40	1.38	0.42	0.22
SSDI-only	0.17	0.45	1.19	0.70	0.50
PIA >1200	0.44	0.39	1.55	0.26	0.08
SS Benefits 500-1000	0.03	0.26	1.03	0.91	0.68
SS Benefits > 1000	0.16	0.34	1.17	0.64	0.18
Other Benefits 1-199	0.75	0.26	2.12	0.00	0.26
Other Benefits 200-499	0.01	0.53	1.01	0.99	0.06
Other Benefits 500+	0.30	0.44	1.34	0.50	0.05
0-12 Months on rolls	1.69	0.82	5.40	0.04	0.02
13-24 Months on rolls	0.69	0.70	2.00	0.33	0.07
25-60 Months on rolls	0.42	0.34	1.52	0.22	0.25
61-120 Months on rolls	0.30	0.33	1.36	0.36	0.35
Medicare 24-Month Waiting	-1.08	0.56	0.34	0.05	0.07
Age 18-24	1.11	0.72	3.02	0.12	0.09
Age 25-39	0.70	0.37	2.02	0.06	0.35
Age 40-54	0.76	0.23	2.15	0.00	0.42
Disability onset < age 18	-0.22	0.84	0.80	0.79	0.37
Disability onset age 18-24	0.14	0.81	1.15	0.86	0.17
Disability onset age 25-39	0.62	0.87	1.85	0.48	0.27
Disability onset age 40-54	-0.58	0.72	0.56	0.42	0.18
Male	0.15	0.21	1.16	0.48	0.52
Black or African American	-0.55	0.29	0.58	0.06	0.33
Other race	-0.27	0.49	0.76	0.57	0.05
Hispanic/Latino	-0.79	0.40	0.45	0.05	0.09
Education =high school	0.02	0.28	1.02	0.94	0.36
Education beyond high school	0.60	0.25	1.82	0.02	0.42
Parental education beyond high school	0.12	0.26	1.12	0.65	0.28
Lives with spouse or other relatives, no kids	-0.13	0.16	0.87	0.41	0.43
Married with kids	-0.75	0.34	0.47	0.03	0.06
Unmarried with kids	-0.29	0.53	0.75	0.59	0.07
Lives with kids < age 6	-0.50	0.85	0.61	0.56	0.03
Mental illness	1.23	0.28	3.42	0.00	0.36
Mental retardation	-0.28	0.47	0.76	0.55	0.06
Musculoskeletal	0.00	0.41	1.00	0.99	0.24
Sensory	0.06	0.36	1.06	0.88	0.13
Other disorders of the nervous system	-0.11	0.27	0.90	0.69	0.15
Other condition causing limitation	0.10	0.32	1.10	0.75	0.47
No condition causing limitation	-0.26	0.60	0.77	0.66	0.12
MCS 44-51	0.53	0.31	1.70	0.09	0.15
MCS > 51	0.32	0.30	1.38	0.29	0.54
PCS 44-51	0.42	0.37	1.52	0.25	0.17
PCS > 51	0.21	0.41	1.23	0.61	0.54
MCS > 51 and PCS > 51	-0.23	0.50	0.79	0.64	0.33
No ADL, IADL, or functional limitations	-0.92	0.35	0.40	0.01	0.08
At least one ADL or IADL requiring assistance	-0.04	0.31	0.96	0.90	0.33
At least one severe physical limitation	0.03	0.24	1.04	0.89	0.37
Obese	0.17	0.29	1.18	0.56	0.38
Substance abuse	0.01	0.33	1.01	0.97	0.07
FPL >300	-0.71	0.43	0.49	0.10	0.11
Ticket Assigned to EN	-0.45	0.19	0.64	0.02	0.13

Source: 2004 National Beneficiary Survey matched to the Ticket Research File.

Note: Variable definitions are presented in Table B.19.

Table B.27. Logit Model Estimates of the Likelihood of Using Services in 2003 Among TTW Participants, Model with Provider Payment Type Indicators (Chapter V)

	Coefficient	Std. Error	Odds Ratio	P > t	Variable Mean
Sample: TTW Participants (N=1105)					
Dependent Variable = Used Services in 2003					0.57
Constant	-1.58	1.15		0.17	
Concurrent	0.33	0.40	1.39	0.41	0.22
SSDI-only	0.18	0.45	1.19	0.69	0.50
PIA >1200	0.44	0.39	1.55	0.26	0.08
SS Benefits 500-1000	0.03	0.26	1.03	0.92	0.68
SS Benefits > 1000	0.15	0.34	1.16	0.66	0.18
Other Benefits 1-199	0.75	0.26	2.11	0.01	0.26
Other Benefits 200-499	0.00	0.53	1.00	0.99	0.06
Other Benefits 500+	0.28	0.44	1.32	0.52	0.05
0-12 Months on rolls	1.68	0.82	5.39	0.04	0.02
13-24 Months on rolls	0.70	0.70	2.01	0.32	0.07
25-60 Months on rolls	0.42	0.34	1.52	0.22	0.25
61-120 Months on rolls	0.31	0.33	1.36	0.35	0.35
Medicare 24-Month Waiting	-1.08	0.54	0.34	0.05	0.07
Age 18-24	1.12	0.71	3.07	0.12	0.09
Age 25-39	0.70	0.37	2.02	0.06	0.35
Age 40-54	0.77	0.23	2.15	0.00	0.42
Disability onset < age 18	-0.23	0.85	0.79	0.79	0.37
Disability onset age 18-24	0.13	0.81	1.13	0.88	0.17
Disability onset age 25-39	0.60	0.88	1.82	0.50	0.27
Disability onset age 40-54	-0.60	0.72	0.55	0.41	0.18
Male	0.14	0.21	1.15	0.51	0.52
Black or African American	-0.55	0.30	0.58	0.07	0.33
Other race	-0.25	0.50	0.78	0.61	0.05
Hispanic/Latino	-0.80	0.40	0.45	0.05	0.09
Education =high school	0.03	0.28	1.03	0.93	0.36
Education beyond high school	0.60	0.25	1.81	0.02	0.42
Parental education beyond high school	0.12	0.25	1.12	0.65	0.28
Lives with spouse or other relatives, no kids	-0.14	0.16	0.87	0.41	0.43
Married with kids	-0.76	0.34	0.47	0.03	0.06
Unmarried with kids	-0.30	0.54	0.74	0.58	0.07
Lives with kids < age 6	-0.52	0.84	0.60	0.54	0.03
Mental illness	1.23	0.28	3.43	0.00	0.36
Mental retardation	-0.26	0.47	0.77	0.58	0.06
Musculoskeletal	0.00	0.41	1.00	1.00	0.24
Sensory	0.06	0.36	1.06	0.87	0.13
Other disorders of the nervous system	-0.09	0.28	0.91	0.74	0.15
Other condition causing limitation	0.10	0.32	1.11	0.75	0.47
No condition causing limitation	-0.26	0.60	0.77	0.67	0.12
MCS 44-51	0.53	0.31	1.71	0.08	0.15
MCS > 51	0.32	0.30	1.38	0.28	0.54
PCS 44-51	0.42	0.37	1.52	0.25	0.17
PCS > 51	0.20	0.40	1.22	0.62	0.54
MCS > 51 and PCS > 51	-0.22	0.50	0.80	0.65	0.33
No ADL, IADL, or functional limitations	-0.91	0.35	0.40	0.01	0.08
At least one ADL or IADL requiring assistance	-0.04	0.31	0.96	0.90	0.33
At least one severe physical limitation	0.03	0.24	1.03	0.90	0.37
Obese	0.17	0.29	1.19	0.55	0.38
Substance abuse	0.01	0.33	1.01	0.98	0.07
FPL >300	-0.72	0.43	0.49	0.09	0.11
Ticket Assigned under Outcome-only	0.02	0.28	1.02	0.94	0.02
Ticket Assigned under Milestone-outcome	-0.34	0.23	0.71	0.14	0.12

Source: 2004 National Beneficiary Survey matched to the Ticket Research File.

Note: Variable definitions are presented in Table B.19.

Table B.28. Logit Model Estimates of the Likelihood of Rating Services as Useful Among TTW Participants (Chapter V)

	Coefficient	Std. Error	Odds Ratio	P > t	Variable Mean
Sample: TTW Participants Using Services in 2003 (N=609)					
Dependent Variable = Rated Services as Useful					0.61
Constant	0.94	2.43		0.70	
Concurrent	-0.59	0.38	0.55	0.12	0.25
SSDI-only	-0.50	0.43	0.61	0.25	0.51
PIA >1200	-0.01	0.70	0.99	0.99	0.09
Benefits 500-1000	0.59	0.65	1.81	0.36	0.69
Benefits > 1000	1.08	0.65	2.94	0.10	0.19
Other Benefits 1-199	0.17	0.36	1.19	0.63	0.30
Other Benefits 200-499	-0.55	0.62	0.58	0.38	0.06
Other Benefits > 500	-0.23	0.59	0.80	0.70	0.05
0-12 Months on rolls	-1.05	1.45	0.35	0.47	0.02
13-24 Months on rolls	1.46	1.30	4.30	0.26	0.07
25-60 Months on rolls	0.55	0.31	1.74	0.08	0.27
61-120 Months on rolls	-0.43	0.38	0.65	0.26	0.35
Medicare 24-Month Waiting	-0.77	1.16	0.46	0.51	0.06
Age 18-24	-2.13	0.82	0.12	0.01	0.08
Age 25-39	-0.29	0.58	0.75	0.61	0.34
Age 40-54	-0.44	0.64	0.65	0.50	0.48
Disability onset < age 18	-2.49	2.58	0.08	0.34	0.31
Disability onset age 18-24	-1.99	2.41	0.14	0.41	0.18
Disability onset age 25-39	-2.32	2.34	0.10	0.32	0.35
Disability onset age 40-54	-2.04	2.36	0.13	0.39	0.14
Male	-0.11	0.42	0.90	0.80	0.52
Black or African American	0.44	0.31	1.55	0.16	0.27
Other race	1.00	0.69	2.72	0.15	0.06
Hispanic/Latino	-0.02	0.34	0.98	0.96	0.07
Education =high school	0.83	0.32	2.29	0.01	0.34
Education beyond high school	1.21	0.42	3.34	0.01	0.47
Parental education beyond high school	-0.67	0.24	0.51	0.01	0.31
Lives with spouse or other relatives, no kids	0.00	0.30	1.00	0.99	0.39
Married with kids	0.85	0.62	2.33	0.18	0.04
Unmarried with kids	-0.36	0.50	0.70	0.47	0.07
Lives with kids < age 6	1.85	1.13	6.36	0.10	0.01
Mental illness	-0.27	0.22	0.77	0.22	0.48
Mental retardation	0.72	1.08	2.05	0.50	0.04
Musculoskeletal	0.17	0.36	1.18	0.64	0.24
Sensory	0.44	0.63	1.56	0.49	0.12
Other disorders of the nervous system	-0.15	0.44	0.86	0.74	0.14
Other condition causing limitation	-0.33	0.41	0.72	0.42	0.48
No condition causing limitation	-0.55	0.53	0.58	0.30	0.08
MCS 44-51	-0.50	0.31	0.61	0.12	0.18
MCS > 51	0.14	0.43	1.15	0.75	0.48
PCS 44-51	1.03	0.44	2.80	0.02	0.19
PCS > 51	0.97	0.38	2.64	0.01	0.51
MCS > 51 and PCS > 51	1.21	0.45	3.35	0.01	0.27
No ADL, IADL, or functional limitations	-0.52	0.64	0.59	0.41	0.06
At least one ADL or IADL requiring assistance	0.25	0.50	1.28	0.62	0.33
At least one severe physical limitation	0.49	0.23	1.64	0.04	0.38
Obese	-0.12	0.36	0.88	0.73	0.41
Substance abuse	0.13	0.60	1.14	0.83	0.07
FPL >300	0.14	0.49	1.15	0.77	0.10
Ticket Assigned to EN	-0.59	0.30	0.56	0.05	0.11
Reasons services used - health only	0.57	0.59	1.77	0.34	0.25
Reasons services used - job only	0.02	0.47	1.02	0.97	0.37
Reasons services used - both health and job	-0.22	0.48	0.80	0.64	0.19
More than one provider used in 2003	0.51	0.25	1.66	0.05	0.54

Source: 2004 National Beneficiary Survey matched to the Ticket Research File.

Note: Variable definitions are presented in Table B.19.

Table B.29 Logit Model Estimates of the Likelihood of Using Services in 2003, Model with Phase Indicators (Chapter V)

	Coefficient	Std. Error	P > t	Variable Mean
Sample: All Beneficiaries (N=7603)				
Dependent Variable = Used Any Service in 2003				0.30
Constant	-2.66	0.30	0	
Concurrent	0.19	0.12	0.12	0.16
SSDI-only	0.13	0.11	0.21	0.53
PIA >1200	-0.18	0.15	0.23	0.15
SS Benefits 500-1000	0.10	0.13	0.44	0.62
SS Benefits > 1000	0.27	0.17	0.10	0.24
Other Benefits 1-199	0.32	0.12	0.01	0.18
Other Benefits 200-499	0.48	0.15	0.00	0.07
Other Benefits 500+	0.15	0.15	0.31	0.10
0-12 Months on rolls	-0.25	0.29	0.40	0.03
13-24 Months on rolls	0.11	0.23	0.63	0.09
25-60 Months on rolls	0.24	0.11	0.03	0.25
61-120 Months on rolls	0.12	0.11	0.27	0.25
Medicare 24-Month Waiting	0.13	0.26	0.63	0.09
Age 18-24	0.51	0.17	0.00	0.05
Age 25-39	0.30	0.14	0.04	0.17
Age 40-54	0.24	0.11	0.03	0.39
Disability onset < age 18	0.35	0.26	0.18	0.23
Disability onset age 18-24	0.49	0.24	0.04	0.11
Disability onset age 25-39	0.67	0.25	0.01	0.25
Disability onset age 40-54	0.40	0.23	0.08	0.32
Male	-0.03	0.08	0.68	0.50
African American	-0.26	0.08	0.00	0.22
Other race	-0.03	0.15	0.84	0.06
Hispanic/Latino	0.10	0.15	0.52	0.11
Education =high school	0.27	0.09	0.00	0.35
Education beyond high school	0.77	0.12	0.00	0.23
Parental education beyond high school	0.13	0.10	0.20	0.17
Lives with relatives, no kids	-0.26	0.09	0.00	0.49
Married with kids	-0.39	0.16	0.01	0.08
Unmarried with kids	-0.22	0.16	0.15	0.07
Lives with kids < age 6	0.15	0.14	0.30	0.03
Mental illness	1.15	0.09	0.00	0.31
Mental retardation	0.48	0.16	0.00	0.07
Musculoskeletal	0.24	0.09	0.01	0.36
Sensory	-0.10	0.15	0.51	0.09
Other disorders of the nervous system	-0.11	0.11	0.31	0.15
Other condition causing limitation	0.07	0.10	0.43	0.63
No condition causing limitation	0.22	0.19	0.25	0.05
MCS 44-51	-0.10	0.12	0.39	0.18
MCS > 51	0.03	0.10	0.79	0.42
PCS 44-51	-0.06	0.12	0.65	0.18
PCS > 51	0.32	0.11	0.01	0.29
MCS > 51 and PCS > 51	-0.34	0.15	0.03	0.14
No ADL, IADL, or functional limitations	-0.04	0.21	0.86	0.02
At least one ADL or IADL requiring assistance	0.21	0.09	0.01	0.53
At least one severe physical limitation	-0.02	0.11	0.86	0.59
Obese	-0.02	0.07	0.78	0.42
Substance abuse	0.03	0.15	0.87	0.07
FPL >300	-0.10	0.12	0.41	0.13
Phase 1	0.14	0.09	0.15	0.29
Phase 2	0.01	0.09	0.90	0.31

Source: 2004 National Beneficiary Survey matched to the Ticket Research File.

Note: Variable definitions are presented in Table B.19.

Table B.30. Logit Model Estimates of the Likelihood of Using Services to Improve Ability to Do Daily Activities , Model with Phase Indicators (Chapter V)

	Coefficient	Std. Error	P > t	Variable Mean
Sample: All Service Users (N=2775)				
Dependent Variable = Used Services to increase ability to do daily activities				0.25
Constant	-1.45	0.69	0.04	
Concurrent	-0.14	0.17	0.43	0.18
SSDI-only	-0.16	0.24	0.50	0.52
PIA >1200	-0.16	0.26	0.55	0.13
SS Benefits 500-1000	-0.05	0.23	0.84	0.64
SS Benefits > 1000	0.40	0.28	0.16	0.24
Other Benefits 1-199	0.19	0.21	0.36	0.21
Other Benefits 200-499	0.40	0.24	0.09	0.09
Other Benefits 500+	0.38	0.27	0.15	0.11
0-12 Months on rolls	-0.30	0.50	0.55	0.02
13-24 Months on rolls	-0.17	0.40	0.68	0.09
25-60 Months on rolls	-0.25	0.20	0.21	0.26
61-120 Months on rolls	-0.22	0.19	0.25	0.27
Medicare 24-Month Waiting	-0.08	0.46	0.86	0.08
Age 18-24	0.53	0.32	0.10	0.05
Age 25-39	-0.14	0.25	0.56	0.20
Age 40-54	0.10	0.21	0.62	0.45
Disability onset < age 18	0.15	0.61	0.81	0.22
Disability onset age 18-24	0.30	0.62	0.62	0.13
Disability onset age 25-39	0.45	0.58	0.44	0.31
Disability onset age 40-54	0.33	0.57	0.56	0.29
Male	-0.27	0.15	0.07	0.47
African American	-0.34	0.20	0.08	0.19
Other race	-0.09	0.28	0.76	0.06
Hispanic/Latino	-0.55	0.27	0.04	0.11
Education =high school	-0.25	0.17	0.16	0.34
Education beyond high school	-0.21	0.20	0.31	0.31
Parental education beyond high school	0.02	0.19	0.93	0.21
Lives with relatives, no kids	-0.04	0.17	0.83	0.42
Married with kids	-0.09	0.26	0.75	0.08
Unmarried with kids	0.15	0.25	0.57	0.08
Lives with kids < age 6	-0.05	0.30	0.87	0.04
Mental illness	-0.03	0.15	0.86	0.51
Mental retardation	-0.33	0.24	0.17	0.07
Musculoskeletal	-0.02	0.17	0.93	0.37
Sensory	0.25	0.25	0.33	0.07
Other disorders of the nervous system	0.20	0.20	0.32	0.14
Other condition causing limitation	-0.20	0.17	0.24	0.59
No condition causing limitation	0.25	0.39	0.52	0.03
MCS 44-51	0.52	0.18	0.00	0.17
MCS > 51	0.34	0.19	0.07	0.34
PCS 44-51	0.19	0.19	0.33	0.16
PCS > 51	0.26	0.24	0.28	0.32
MCS > 51 and PCS > 51	0.04	0.24	0.86	0.12
No ADL, IADL, or functional limitations	-0.29	0.43	0.50	0.02
At least one ADL or IADL requiring a	0.26	0.15	0.09	0.55
At least one severe physical limitation	0.09	0.19	0.64	0.55
Obese	-0.25	0.14	0.07	0.42
Substance abuse	-0.13	0.21	0.54	0.07
FPL >300	-0.18	0.25	0.47	0.12
Phase 1	0.41	0.20	0.05	0.32
Phase 2	0.09	0.20	0.65	0.29

Source: 2004 National Beneficiary Survey matched to the Ticket Research File.

Note: Variable definitions are presented in Table B.19.

Table B.31. Logit Model Estimates of the Likelihood of Using Medical Procedures , Model with Phase Indicators (Chapter V)

	Coefficient	Std. Error	P > t	Variable Mean
Sample: All Service Users (N=2775)				
Dependent Variable = Used medical procedure				0.29
Constant	-0.45	0.60	0.445	
Concurrent	-0.35	0.23	0.13	0.18
SSDI-only	0.33	0.20	0.10	0.52
PIA >1200	-0.01	0.25	0.96	0.13
SS Benefits 500-1000	-0.08	0.23	0.73	0.64
SS Benefits > 1000	-0.18	0.26	0.49	0.24
Other Benefits 1-199	0.27	0.17	0.11	0.21
Other Benefits 200-499	-0.28	0.26	0.29	0.09
Other Benefits 500+	0.37	0.24	0.12	0.11
0-12 Months on rolls	-0.40	0.60	0.51	0.02
13-24 Months on rolls	0.04	0.33	0.90	0.09
25-60 Months on rolls	0.36	0.21	0.09	0.26
61-120 Months on rolls	0.27	0.20	0.18	0.27
Medicare 24-Month Waiting	0.60	0.38	0.11	0.08
Age 18-24	0.83	0.34	0.01	0.05
Age 25-39	0.34	0.24	0.16	0.20
Age 40-54	0.35	0.21	0.09	0.45
Disability onset < age 18	-0.84	0.45	0.06	0.22
Disability onset age 18-24	-0.33	0.39	0.40	0.13
Disability onset age 25-39	-0.24	0.37	0.53	0.31
Disability onset age 40-54	-0.27	0.36	0.46	0.29
Male	0.23	0.15	0.13	0.47
African American	-0.16	0.19	0.41	0.19
Other race	0.03	0.27	0.92	0.06
Hispanic/Latino	0.06	0.25	0.80	0.11
Education =high school	-0.03	0.18	0.87	0.34
Education beyond high school	0.09	0.20	0.67	0.31
Parental education beyond high school	0.22	0.14	0.12	0.21
Lives with relatives, no kids	-0.31	0.16	0.06	0.42
Married with kids	0.14	0.26	0.60	0.08
Unmarried with kids	0.03	0.27	0.90	0.08
Lives with kids < age 6	-0.50	0.32	0.12	0.04
Mental illness	-0.59	0.14	0.00	0.51
Mental retardation	-0.19	0.31	0.55	0.07
Musculoskeletal	0.31	0.19	0.11	0.37
Sensory	-0.17	0.28	0.55	0.07
Other disorders of the nervous system	-0.21	0.21	0.31	0.14
Other condition causing limitation	0.20	0.14	0.15	0.59
No condition causing limitation	-0.19	0.36	0.59	0.03
MCS 44-51	-0.15	0.18	0.41	0.17
MCS > 51	-0.16	0.22	0.46	0.34
PCS 44-51	-0.05	0.23	0.83	0.16
PCS > 51	-0.77	0.24	0.00	0.32
MCS > 51 and PCS > 51	0.02	0.25	0.94	0.12
No ADL, IADL, or functional limitations	-0.36	0.43	0.40	0.02
At least one ADL or IADL requiring a	-0.32	0.15	0.03	0.55
At least one severe physical limitation	0.18	0.18	0.31	0.55
Obese	-0.13	0.15	0.39	0.42
Substance abuse	-0.52	0.24	0.03	0.07
FPL >300	0.20	0.25	0.42	0.12
Phase 1	-0.37	0.17	0.03	0.32
Phase 2	-0.21	0.18	0.23	0.29

Source: 2004 National Beneficiary Survey matched to the Ticket Research File.

Note: Variable definitions are presented in Table B.19.

Table B.32. Logit Model Estimates of the Likelihood of Being Aware of TTW (Chapter VII)

	Coefficient	Std. Error	P > t	Variable Mean
Sample: All Phase 1 Nonparticipants (N=1827)				
Dependent Variable = Aware of TTW				0.26
Constant	-1.91	0.41	0.00	
Concurrent	-0.12	0.20	0.56	0.16
SSDI-only	-0.26	0.22	0.24	0.53
PIA >1200	-0.23	0.28	0.41	0.15
SS Benefits 500-1000	0.25	0.21	0.24	0.63
SS Benefits > 1000	0.61	0.29	0.04	0.23
Other Benefits 1-199	-0.13	0.15	0.36	0.18
Other Benefits 200-499	0.21	0.35	0.54	0.07
Other Benefits 500+	-0.56	0.27	0.04	0.10
0-12 Months on rolls	0.20	0.52	0.70	0.02
13-24 Months on rolls	0.03	0.49	0.95	0.06
25-60 Months on rolls	0.18	0.21	0.41	0.24
61-120 Months on rolls	0.23	0.19	0.23	0.27
Medicare 24-Month Waiting	0.25	0.49	0.62	0.06
Age 18-24	0.36	0.36	0.31	0.05
Age 25-39	0.41	0.32	0.21	0.17
Age 40-54	0.48	0.25	0.06	0.38
Disability onset < age 18	0.15	0.42	0.73	0.25
Disability onset age 18-24	0.42	0.55	0.44	0.11
Disability onset age 25-39	0.34	0.41	0.41	0.27
Disability onset age 40-54	-0.07	0.37	0.84	0.28
Male	0.10	0.17	0.55	0.49
African American	0.40	0.18	0.03	0.24
Other race	0.07	0.22	0.76	0.07
Hispanic/Latino	-0.44	0.20	0.03	0.15
Education =high school	0.43	0.16	0.01	0.37
Education beyond high school	0.73	0.23	0.00	0.24
Parental education beyond high school	-0.13	0.16	0.43	0.17
Lives with relatives, no kids	0.12	0.15	0.44	0.47
Married with kids	0.58	0.38	0.13	0.07
Unmarried with kids	0.42	0.25	0.10	0.07
Lives with kids < age 6	-0.40	0.35	0.25	0.03
Mental illness	-0.22	0.20	0.27	0.34
Mental retardation	0.06	0.34	0.86	0.08
Musculoskeletal	-0.10	0.27	0.70	0.31
Sensory	-0.14	0.25	0.58	0.10
Other disorders of the nervous system	-0.30	0.22	0.17	0.15
Other condition causing limitation	-0.41	0.15	0.01	0.62
No condition causing limitation	-0.28	0.34	0.42	0.05
MCS 44-51	0.13	0.18	0.45	0.18
MCS > 51	-0.01	0.20	0.96	0.41
PCS 44-51	0.10	0.22	0.65	0.19
PCS > 51	-0.12	0.20	0.54	0.31
MCS > 51 and PCS > 51	0.01	0.28	0.98	0.15
No ADL, IADL, or functional limitations	-0.20	0.33	0.55	0.02
At least one ADL or IADL requiring ass	-0.11	0.16	0.48	0.55
At least one severe physical limitation	0.12	0.20	0.55	0.62
Obese	0.23	0.14	0.10	0.40
Substance abuse	0.13	0.23	0.57	0.06
FPL >300	0.12	0.20	0.56	0.13

Source: 2004 National Beneficiary Survey matched to the Ticket Research File.

Note: Variable definitions are presented in Table B.19.

Table B.33. Logit Model Estimates of the Likelihood of Indicating Interest in Participating in TTW in the Future (Chapter VII)

	Coefficient	Std. Error	P > t	Variable Mean
Sample: Phase 1 Nonparticipants Aware of TTW (N=524)				
Dependent Variable= Interest in Future TTW Participation				0.38
Constant	-3.39	1.03	0.00	
Concurrent	0.41	0.26	0.12	0.16
SSDI-only	0.33	0.31	0.29	0.52
PIA >1200	-0.35	0.49	0.48	0.14
SS Benefits 500-1000	0.35	0.38	0.36	0.63
SS Benefits > 1000	0.02	0.49	0.96	0.26
Other Benefits 1-199	0.78	0.26	0.00	0.17
Other Benefits 200-499	1.15	0.45	0.01	0.08
Other Benefits 500+	0.11	0.59	0.86	0.08
0-12 Months on rolls	-0.54	1.35	0.69	0.02
13-24 Months on rolls	-2.06	0.99	0.04	0.06
25-60 Months on rolls	-0.08	0.35	0.82	0.25
61-120 Months on rolls	-0.34	0.34	0.33	0.29
Medicare 24-Month Waiting	2.51	1.16	0.03	0.07
Age 18-24	1.59	0.70	0.03	0.05
Age 25-39	1.70	0.53	0.00	0.20
Age 40-54	0.86	0.55	0.12	0.45
Disability onset < age 18	0.01	0.76	0.99	0.24
Disability onset age 18-24	-0.05	0.82	0.96	0.14
Disability onset age 25-39	0.95	0.79	0.23	0.32
Disability onset age 40-54	0.70	0.60	0.25	0.23
Male	0.41	0.22	0.06	0.50
African American	0.81	0.29	0.01	0.30
Other race	-0.10	0.56	0.86	0.06
Hispanic/Latino	0.53	0.42	0.21	0.11
Education = high school	-0.12	0.28	0.67	0.40
Education beyond high school	0.05	0.31	0.89	0.29
Parental education beyond high school	0.49	0.43	0.25	0.19
Lives with relatives, no kids	0.43	0.29	0.14	0.44
Married with kids	1.35	0.57	0.02	0.10
Unmarried with kids	0.93	0.42	0.03	0.09
Lives with kids < age 6	-0.15	0.50	0.77	0.04
Mental illness	0.24	0.29	0.40	0.35
Mental retardation	-0.57	0.47	0.23	0.07
Musculoskeletal	-0.20	0.35	0.58	0.31
Sensory	-1.20	0.39	0.00	0.09
Other disorders of the nervous system	-0.43	0.38	0.26	0.14
Other condition causing limitation	0.15	0.28	0.59	0.56
No condition causing limitation	0.12	0.58	0.84	0.05
MCS 44-51	-0.30	0.40	0.46	0.20
MCS > 51	0.17	0.42	0.69	0.40
PCS 44-51	-0.15	0.37	0.68	0.22
PCS > 51	0.40	0.54	0.46	0.31
MCS > 51 and PCS > 51	0.09	0.57	0.88	0.15
No ADL, IADL, or functional limitations	0.75	0.78	0.34	0.02
At least one ADL or IADL requiring assistance	-0.41	0.25	0.10	0.52
At least one severe physical limitation	0.11	0.28	0.70	0.59
Obese	0.13	0.23	0.59	0.43
Substance abuse	0.24	0.32	0.47	0.08
FPL >300	0.04	0.49	0.93	0.14

Source: 2004 National Beneficiary Survey matched to the Ticket Research File.

Note: Variable definitions are presented in Table B.19.

Table B.34. Logit Model Estimates of the Likelihood of Having Employment Goals or Expectations Using Variables Available in Administrative Data (Chapter VII)

	Coefficient	Std. Error	P > t	Variable Mean
Sample: All Beneficiaries (N=7603)				
Dependent Variable = Has Work Goals or Expectations				0.37
Constant	-2.53	0.32	0.00	
Concurrent	-0.12	0.12	0.32	0.16
SSDI-only	-0.11	0.11	0.33	0.53
PIA >1200	-0.31	0.13	0.02	0.15
Benefits 500-1000	0.16	0.13	0.24	0.64
Benefits > 1000	0.02	0.17	0.90	0.24
0-12 Months on rolls	0.23	0.34	0.50	0.03
13-24 Months on rolls	0.67	0.26	0.01	0.07
25-60 Months on rolls	0.40	0.11	0.00	0.25
61-120 Months on rolls	0.13	0.10	0.18	0.26
Medicare 24-Month Waiting Period	0.11	0.29	0.71	0.08
Age 18-24	2.20	0.16	0.00	0.05
Age 25-39	1.47	0.13	0.00	0.17
Age 40-54	0.91	0.12	0.00	0.39
Disability onset < age 18	0.32	0.26	0.22	0.23
Disability onset age 18-24	0.38	0.25	0.13	0.11
Disability onset age 25-39	0.29	0.23	0.21	0.25
Disability onset age 40-54	0.04	0.22	0.86	0.32
Male	0.05	0.08	0.50	0.50
Black or African American	0.51	0.09	0.00	0.22
Other race	0.09	0.17	0.60	0.06
Hispanic/Latino	0.32	0.15	0.03	0.11
Education =high school	0.37	0.09	0.00	0.35
Education beyond high school	0.83	0.12	0.00	0.23
Primary dx=Mental illness	0.19	0.17	0.27	0.28
Primary dx=Mental retardation	0.02	0.18	0.91	0.14
Primary dx=Musculoskeletal	-0.10	0.21	0.62	0.17
Primary dx=Sensory	0.26	0.23	0.25	0.04
Primary dx=Other disorders of the nervous system	-0.23	0.20	0.24	0.05
Primary dx=Other condition	0.05	0.16	0.75	0.30
Worked while on the rolls during 2003	2.37	0.14	0.00	0.12

Source: 2004 National Beneficiary Survey matched to the Ticket Research File.

Note: Variable definitions are presented in Table B.19.

Table B.35. Logit Model Estimates of the Likelihood of TTW Participation, with AOI Group Indicators (Chapter XV)

	Coefficient	Std. Error	Odds Ratio	P > t	Variable Mean
Sample: Phase 1 Beneficiaries (N=2932)					
Dependent Variable = TTW Participation					0.008
Constant	-7.70	0.52		0.00	
Concurrent	0.34	0.17	1.41	0.04	0.16
SSDI-only	0.52	0.16	1.68	0.00	0.53
PIA >1200	-0.49	0.23	0.61	0.03	0.15
Benefits 500-1000	-0.18	0.23	0.83	0.42	0.63
Benefits > 1000	-0.18	0.28	0.84	0.52	0.23
Other Benefits 1-199	0.43	0.18	1.54	0.02	0.18
Other Benefits 200-499	0.29	0.32	1.33	0.37	0.07
Other Benefits > 500	-0.69	0.36	0.50	0.06	0.10
0-12 Months on rolls	-0.12	0.45	0.89	0.79	0.02
13-24 Months on rolls	-0.27	0.29	0.77	0.35	0.08
25-60 Months on rolls	0.22	0.20	1.24	0.28	0.23
61-120 Months on rolls	0.59	0.18	1.80	0.00	0.28
Medicare 24-Month Waiting	0.44	0.45	1.56	0.32	0.07
Age 18-24	1.87	0.31	6.47	0.00	0.05
Age 25-39	1.52	0.23	4.57	0.00	0.17
Age 40-54	0.95	0.18	2.59	0.00	0.38
Disability onset < age 18	1.23	0.41	3.42	0.00	0.25
Disability onset age 18-24	1.14	0.51	3.12	0.03	0.11
Disability onset age 25-39	0.73	0.47	2.07	0.12	0.27
Disability onset age 40-54	0.55	0.42	1.73	0.19	0.28
Male	0.07	0.15	1.07	0.64	0.49
Black or African American	0.64	0.24	1.90	0.01	0.24
Other race	0.06	0.32	1.06	0.86	0.07
Hispanic/Latino	-0.08	0.19	0.92	0.68	0.15
Education =high school	0.69	0.16	2.00	0.00	0.37
Education beyond high school	1.48	0.16	4.41	0.00	0.24
Parental education beyond high school	0.08	0.12	1.09	0.49	0.18
Lives with spouse or other relatives, no kids	-0.28	0.13	0.76	0.03	0.47
Married with kids	-0.22	0.34	0.80	0.52	0.07
Unmarried with kids	-0.33	0.27	0.72	0.23	0.07
Lives with kids < age 6	-0.96	0.24	0.38	0.00	0.03
FPL >300	0.11	0.17	1.12	0.51	0.13
AOI 1 and not in AOI 2	-0.37	0.19	0.69	0.05	0.36
AOI 2 and not in AOI 1	-0.10	0.18	0.90	0.56	0.09
both AOI 1 and AOI 2	-0.35	0.18	0.70	0.06	0.27
AOI 3	0.06	0.34	1.06	0.86	0.03
AOI 4	1.08	0.21	2.95	0.00	0.02

Source: 2004 National Beneficiary Survey matched to the Ticket Research File.

Note: Variable definitions are presented in Table B.19.

D. DESCRIPTION OF THE NATIONAL BENEFICIARY SURVEY

1. Purpose of the Survey

As part of an evaluation of the Ticket to Work program, Mathematica Policy Research (MPR) conducted the first round of the National Beneficiary Survey (NBS). The survey, sponsored by the Social Security Administration collects cross-sectional data from a national sample of DI and SSI beneficiaries (hereinafter referred to as the Representative Beneficiary Sample) and a sample of Ticket to Work (TTW) participants (hereinafter referred to as the Ticket Participant Sample). In addition, cohorts of Ticket participants will be followed longitudinally. In all, four rounds of interviews are planned to be conducted beginning in 2004.

The survey has five key objectives:

- To provide critical data on the work-related activities of SSI and DI beneficiaries, particularly as they relate to the implementation of TTW
- To describe the characteristics and program experiences of beneficiaries who use their Tickets
- To gather information about beneficiaries who do not use their Tickets and the reasons they do not
- To evaluate the employment outcomes of Ticket users and other SSI and DI beneficiaries
- To collect data on service utilization, barriers to work, and perceptions about TTW and other SSA programs designed to help SSA beneficiaries with disabilities find and keep jobs

The survey data are combined with SSA administrative data to provide critical information on access to jobs and employment outcomes for disability beneficiaries, including those who participate in the TTW program and those who do not. In addition to use in the TTW evaluation, the survey data may be used by SSA for other policy making and program planning efforts, and by external researchers interested in disability and employment issues.

2. Data Collection Overview

This survey was designed as a computer-assisted telephone interviewing (CATI) survey with computer-assisted personal interviewing (CAPI) follow-up for beneficiaries who did not respond to the CATI interview or who requested an in-person interview to facilitate their participation in the survey. The survey instrument was identical in each mode and sample members in both the Representative Beneficiary Sample and the Ticket Participant Sample received the same survey instrument. Whenever possible, the interview was

attempted with the sample person. If the sample person was unable to complete either a telephone or in-person interview due to their disability, a proxy respondent was sought.

The final sample size was 9,064 for the Representative Beneficiary Sample and 1,466 for the Ticket Participant Sample (10,530 total). Interviews were completed with 6,520 individuals in the Representative Beneficiary Sample and 1,083 individuals in the Ticket Participant Sample for a total of 7,603 interviews completed in both samples. An additional 458 beneficiaries and 73 Ticket participants were determined to be ineligible to participate in the survey.² Across both samples, 6,302 cases were completed by telephone and 1,301 were completed by CAPI. Proxy interviews were completed for 1,997 sample members. The weighted response rate for the Representative Beneficiary Sample was 77.5 percent³. The weighted response rate for the Ticket Participant Sample was 80.9 percent.

3. Sampling Design

SSA implemented the Ticket to Work program in three phases spanning three years with each phase corresponding to about a third of the states. The initial study design for the National Beneficiary Survey included four national cross-sectional surveys of Ticket-eligible SSA disability beneficiaries—one each in 2004, 2005, 2006, and 2007—and two cross-sectional surveys of Ticket participants in each of three groups of states (Phase 1, 2, and 3) chosen to represent implementations of TTW. Moreover, the first TTW participant cohort in each group of Ticket roll-out states was to be followed longitudinally until 2007. Thus, two surveys were fielded in Round 1 (2004): the first national survey of all beneficiaries (the Representative Beneficiary Sample) and the first cross-sectional survey of Ticket participants who resided in a Phase 1 state at the time of Ticket assignment (the Ticket Participant Sample).

² Ineligible sample members include those who were deceased, no longer living in the continental United States, incarcerated, in active military service, or who were denied benefits since sample selection or had never received benefits.

³ This response rate is the weighted count of sample members for whom a completed interview was obtained or who were determined to be ineligible divided by the weighted sample count of all sample members (# of completes + # partial completes + # of ineligibles) / # of cases in the sample). It can be determined by taking the product of the weighted location rate and the weighted cooperation rate, also known as the weighted completion rate among located sample members. This response rate is basically equivalent to the AAPOR standard response rate calculation: $RR_{AAPOR} = \# \text{ of completes} / (\# \text{ of cases in the sample} - \text{estimated } \# \text{ of ineligible cases})$. Ineligible cases are included in the numerator for two reasons: 1) the cases classified as ineligible are part of the original sampling frame (and hence the study population). We obtained complete information to fully classify these cases (i.e., their responses to the eligibility questions in the questionnaire are complete) and therefore classify them as respondents; 2) incorporating the ineligibles in the numerator and denominator of the response rate is essentially equivalent to the definition of a response rate with these cases excluded if the persons with an additional estimation of the number of eligible cases among those with eligibility unknown. By including the ineligible cases in the numerator and denominator, we avoid using this estimation stage and the response rate computation is more clearly explicated. For Round 1, the weighted response rates for the unclustered sample include sample members who could not be located by central office tracing as ineligible cases.

For Round 1, Primary Sampling Units (PSUs) were formed in every state based on counts of the number of beneficiaries in each county provided by The Social Security Administration (SSA). A three-stage sample design was used to select the Representative Beneficiary Sample:

- In the first stage, the number of PSUs to be selected from each of the Phase 1, 2, and 3 states was identified. The total number of PSUs to be selected was 80.
- In the second stage, PSUs were selected with probability proportional to the size of the beneficiary population in the PSUs. Because one PSU was selected twice given the large number of beneficiaries in the included county, the final number of PSUs selected was 79. In the two largest PSUs (which were selected with certainty), second-stage sampling units were formed within the PSUs based on zip code; two secondary units were selected in one of these PSUs and four secondary units were selected in the other PSU.
- In the third stage, the beneficiary sample was selected in four age-specific strata. The final sample size for the Representative Beneficiary Sample was 9,064.

The Ticket Participant Sample comprised both a clustered and an unclustered sample. The clustered Ticket Participant Sample was selected in the same manner as the Representative Beneficiary Sample using the same PSUs, but due to the small number of Ticket participants, the secondary sampling units were not used and the sample was drawn from all participants in the PSUs. Participants were stratified by Employment Network payment type (traditional, milestone-outcome, and outcome-only) rather than by age. As described further below, an unclustered sample of participants was selected to supplement the clustered participant sample for participants who had assigned their Ticket to an EN using the outcome-only payment system. All of the participants in the PSUs in this payment type were selected and the majority of those participants not in the PSUs were selected for the unclustered sample. The final sample size for the Ticket Participant Sample was 1,466 (see Table B.36 for sample size by strata). The Survey Sample Design Report includes more detailed information regarding the selection of PSUs and the overall NBS sample design (Bethel & Stapleton, 2002).

a. Target Population

The target population for both the Representative Beneficiary Sample and the Ticket Participant Sample consisted of SSI and DI beneficiaries between the ages of 18 and 64. For the Representative Beneficiary Sample, the target population included beneficiaries in all 50 states and the District of Columbia⁴ who were in active pay status as of June 2003. While the focus of the survey was on working age beneficiaries who are Ticket eligible (not including Medical Improvement Expected (MIE) and former youth beneficiaries without a

⁴ Beneficiaries in the Trust Territories and Puerto Rico were excluded from the survey target population.

CDR allowance), a small sample of all Ticket-ineligible beneficiaries was included so that the survey results would represent the entire working age population. There were two subpopulations of beneficiaries who are not eligible for Ticket participation but were included in the survey samples to give complete coverage of the national beneficiary population:

Table B.36. Round 1 Sample Sizes and Target Completes Per Sampling Strata

Sampling Strata	Sample Size	Target Completes	Actual Completes
Representative Beneficiary Sample	9,064	7,200	6,520
18 to 29 Years Old	2,514	2,000	1,818
30 to 39 Years Old	2,516	2,000	1,788
40 to 49 Years Old	2,516	2,000	1,816
50 to 64 Years Old	1,518	1,200	1,098
Ticket Participant Sample	1,466	1,000	1,083
Traditional Payment Type	441	333	351
Milestone-Outcome Payment Type	455	333	344
Outcome-Only Payment Type (Unclustered) ^a	447	333	304
Outcome-Only Payment Type (Clustered)	123		84
Total Sample Size	10,530	8,200	8,200

Source: MPR calculations based on SSA administrative data extracts.

^aIncludes 123 participants in the PSUs and 324 of the 445 participants not in the PSUs.

- Beneficiaries who were designated as Medical Improvement Expected (MIE) at the time they received their allowances and who have not yet completed a first Continuing Disability Review (CDR)
- Young SSI recipients who were receiving benefits because of their eligibility as a child, and were in the process of completing a re-determination under the adult eligibility criteria.

The beneficiary target population included approximately 9.4 million persons, and approximately 1.9 million beneficiaries were in the sampled PSUs.

For the Ticket Participant Sample, the target population included beneficiaries who had used the ticket at least once between January 1, 2003 and September 29, 2003. For the Ticket participants, the study population was constrained by the Ticket to Work roll-out schedule. The target population for the first survey round included beneficiaries who were participants

in SSA's Ticket to Work program in the Phase 1 roll-out states. Participants were assigned to a phase for this study on the basis of their address at the time of program rollout regardless of their current address. Thus, a Phase 1 participant (early state rollout) might reside in any state at the time of the survey. The survey population for the Phase 1 participant sample included 21,477 beneficiaries.

MPR processed a beneficiary universe file from SSA of approximately 9.4 million records and a participant universe file of 21,477 records.

b. Strata Definitions and Sample Sizes

The sample is designed to be statistically and operationally efficient and to provide adequate sample sizes for the planned analyses. In order to ensure a sufficient number of persons seeking work, the Representative Beneficiary Sample was classified into sampling strata based on age, with persons in the younger age categories selected at higher rates than persons in the oldest age category. The sampling strata for the Ticket Participant samples were defined by the payment system.

The Representative Beneficiary Sample was divided into the following age groups, 18-24, 25-39, 40-54, and 55-64, which were used as the sampling strata. The target number of completed interviews for Round 1 was 2,000 beneficiaries in each of the three younger age groups (18-24, 25-39, and 40-54). For the 50-64 age cohort, the target number of completed interview was 1,200 beneficiaries.

For Ticket participants, services received from Employment Networks can be provided under three program payment systems: (1) outcome-only; (2) milestone-outcome, or (3) under the traditional VR reimbursement system. Because the prevalence of the outcome-only payment type was low among Phase 1 participants, both a clustered and unclustered sample of participants was selected for this payment type. The samples of participants using the milestone-outcome and traditional payment types were limited to the clustered sample.⁵ The target number of completed interviews for participants at Round 1 was 1,000 overall, with a target of approximately 333 in each payment type stratum.

For participants in the outcome-only payment system, sample members in both the clustered and unclustered samples underwent the same level of locating activities to identify a telephone number so that a telephone interview could be attempted. For the unclustered sample, beneficiaries who could not be located or who required an in-person interview were "closed out" and classified as ineligible for purposes of sampling weight computation. For the clustered sample, beneficiaries who could not be located or who required an in-person interview were eligible for a field follow-up and were assigned to field locators/interviewers.

In general, the samples selected for the survey included 2.5 to 3 times as many cases as we needed to ensure an adequate pool of completed interviews. These samples were

⁵For the Round 2 survey, unclustered samples are required for both the outcomes only and the milestones plus outcomes payment types.

randomly partitioned into subsamples (called “waves”). During the data collection period, we monitored the sample results and determined whether, and in what strata and PSUs, additional cases were needed.

4. Questionnaire

The National Beneficiary Survey collects data on a wide range of topics including employment, disability, experience with a variety of SSA programs, employment services used in the past year, health and functional status, health insurance, income and other assistance, and sociodemographic information. The survey items were developed and initially pre-tested as part of a separated contract held by Westat. Revisions were made by MPR to prepare the instrument for CATI/CAPI programming and the programmed instrument was pre-tested prior to fielding. To promote response among Hispanic populations, the questionnaire was translated into Spanish. Interpreters were used to conduct interviews in languages other than Spanish.

The questionnaire is divided into 18 sections, labeled A through M, which serve the following purposes:

Section A - Screener. This section confirms that the correct sample person has been contacted and verifies that the sample person is still eligible for the survey. The respondent is also administered a cognitive assessment in this section to ensure that they are capable of completing the interview. If the sample person does not pass the cognitive assessment, he/she is asked if there is someone else who can answer questions about his/her health, daily activities, and any jobs he/she might have (such as a friend, parent, caseworker, or payee). An interview is then pursued with the proxy respondent. To minimize bias in proxy reporting, proxy respondents were not asked all questions the sample person was eligible to receive. Proxies were not asked to provide subjective assessments on behalf of the sample person; for example, regarding satisfaction with jobs or programs.

Section B - Disability and Current Work Status. This section collects information on the beneficiary’s limiting physical or mental condition(s) and current employment status. If the beneficiary is not currently employed, the section explores reasons for not working. This section also includes questions designed to determine the job characteristics that are important to beneficiaries, and collects information about work-related goals and expectations.

Section C - Current Employment. Questions in this section collect detailed information about the beneficiary’s current job(s). Respondents are asked about the type of work performed, type of employer, hours worked, benefits offered, and wages earned. The section also asks about work-related accommodations, those received, as well as those needed but not received. Other questions solicit information about job satisfaction.

Section D - Jobs/Other Jobs During 2003. This section collects information about employment during the 2003 calendar year, including: type(s) of employer(s), hours worked, wages earned, and reasons for leaving employment, if applicable. Other questions ask if beneficiaries worked or earned less than they could have (and if so, the reasons why), and

collect information about experiences related to Social Security benefit adjustments due to work.

Section E - Awareness of SSA Work Incentive Programs and Ticket to Work.

This section includes questions designed to assess whether the beneficiary is aware of, or is participating in, specific SSA work incentive programs and services. For the TTW program, information is collected on how beneficiaries learned about the program, the names of providers they signed up with, and the dates they signed up with their service providers.

Section F - Ticket Non-Participants in 2003. This section is administered to beneficiaries not participating in the TTW program and collects reasons for non-participation. It asks whether the beneficiary has attempted to learn about employment opportunities (including TTW), problems the beneficiary may have had with Employment Networks or other employment agencies, and how those problems were handled or resolved.

Section G - Employment-Related Services and Supports Used in 2003. Questions in this section ask beneficiaries about their use of employment-related services in calendar year 2003, including: the types of services received, the types of providers used, how long they received services, how the services were paid for, and reasons for and satisfaction with service utilization. Other questions ask about sources of information about services and the nature of any services that were needed but not received.

Section H - Ticket Participants in 2003. This section asks respondents who indicate earlier in the interview that they participated in TTW in 2003 about their experiences with the program, including information related to: how they decided to participate in the Ticket program; the kinds of information they used to pick their current service providers; development of the individual work plan (IWP); and any problems experienced with services provided by an Employment Network. The section also includes a series of questions about how problems with Employment Networks were resolved and overall satisfaction with the TTW program.

Section I - Health and Functional Status. This section includes questions about the beneficiary's health status and everyday functioning, including the need for special equipment or assistive devices. Information is solicited regarding: general health status (via the SF-8^{TM6}); difficulties with Activities of Daily Living (ADLs) and Instrumental Activities of Daily Living (IADLs); a variety of functional limitations; substance abuse/dependence; and treatment for mental health conditions.

Section J - Health Insurance. Questions in this section collect information about sources of health insurance coverage, both at interview and during calendar year 2003.

⁶ SF-8TM is a trademark of QualityMetric, Inc..

Section K - Income and Other Assistance. Questions in this section ask about sources of income, including income received from earnings, Social Security, workers' compensation, and other government programs and sources.

Section L - Sociodemographic Information. This section collects basic demographic information about the beneficiary, such as race, ethnicity, education, parental education, marital status, living arrangements, and household income.

Section M - Closing Information and Observations. In this section, address information is collected for the sample person. Telephone information for up to two contact people is collected for participants who may be selected for future survey rounds. The interviewer also records reasons a proxy or assistance was required if appropriate, and documents special circumstances.

See table B.37 for a summary description of the main questionnaire pathing. The complete survey instrument is available from MPR upon request.

Table B.37. Overview of the National Beneficiary Survey Questionnaire

Section	Title Of Section	Respondents Receiving the Section
A	Screener	All respondents
B	Disability/Current Work Status	All respondents
C	Current Employment	Respondents who answer (B24 = YES) Question B24: Are you currently working at a job or business for pay or profit?
D	Jobs/Other Jobs During 2003	Respondents who answer (B30 = YES) Question B30: Did you work at a job or business for pay or profit anytime in 2004?
E	Awareness of SSA Work Incentive Programs and Ticket to Work	All respondents
F	Ticket Non-Participants in 2003	Respondents who answer (E35 = NO, DON'T KNOW, OR REFUSED) Question E35: Did you ever try to get a Ticket from Social Security or anywhere else? OR Respondents who answer (E36 = NO, DON'T KNOW, OR REFUSED) Question E36: Have you ever used your Ticket to sign up with an Employment Network? OR Respondents who answer (E37 = NO, DON'T KNOW, OR REFUSED) Question E37: Were you signed up with any Employment Network or a State Vocational Rehabilitation Agency at any time in 2003?
G	Employment-Related Services and Supports Used in 2003	All respondents
H	Ticket Participants in 2003	Respondents who answer (E37 = YES) Question E37: Were you signed up with any Employment Network or a State Vocational Rehabilitation Agency at any time in 2003?
I	Health and Functional Status	All respondents
J	Health Insurance	All respondents
K	Income and Other Assistance	All respondents
L	Sociodemographic Information	All respondents
M	Closing Information and Observations	All respondents

Because the NBS survey population represents a wide range of disabilities with varying degrees of severity, several features were incorporated into the instrument design to overcome possible cognitive or stamina challenges. Structured probes were included in the survey instrument which allowed questions to be rephrased and concepts defined in a standard manner in the event that respondents required clarification or additional information. To minimize item nonresponse, the survey instrument included follow-up questions for continuous variables. For example, if a respondent could not provide an exact amount, the “Don’t know” response was followed with a modified version of the question that offered response categories (the upper and lower bounds of each category were based on ranges analysts specified). In general, we attempted to word survey questions simply, clearly, and briefly as well as in an unbiased manner so that respondents could readily understand key terms and concepts. Given the intent of the questions, response categories were appropriate, mutually exclusive, and reasonably exhaustive.

Additionally, interviewers were instructed to use neutral, nondirected probing methods (repeating the question, repeating the response categories, asking for more information, stressing generality, stressing subjectivity, and zeroing in) when necessary and to use active listening skills and patience. They provided neutral feedback and encouragement throughout the survey and were trained to help keep the respondent free of distractions, to say the respondent’s name often, and to avoid using an exaggerated inflection or tone of voice. To overcome stamina challenges, interviewers were trained to be aware of behaviors that might indicate that a respondent was too fatigued to continue. If a respondent seemed tired, agitated, or distracted, for example, interviewers were encouraged to ask whether the respondent needed to take a break and schedule another time to continue and to set appointments for times when the respondent was most alert.

5. Data Collection

CATI data collection began in February 2004⁷. CAPI interviewing of telephone nonrespondents and beneficiaries who requested an in-person interview began in May 2004 and continued, concurrent with CATI interviewing, through October 2004. In total 7,603 cases were completed (including 23 partial completes)—6,520 from the Representative Beneficiary Sample and 1,083 from the Ticket Participant Sample⁸.

a. Pretest

A CATI pretest was conducted in December 2003 to test the programmed instrument prior to fielding. The pretest sample was selected from beneficiaries and TTW participants who were not living in the sampled PSUs. Cases selected for the pretest were not included in the main survey sample. Given their rarity, outcome-only cases were excluded from the pretest. Hearing-impaired respondents were oversampled so that we could test procedures

⁷ Note that interviewing began approximately 8 months after the sample was selected.

⁸ Partial interviews were considered as completes if responses were provided through section H of the interview (or if the respondent was not eligible to receive section H, through section G of the interview).

for interviewing via TTY (teletypewriter). Ticket participants were also oversampled to ensure an adequate test of the participant query paths.

Overall, 74 pretest interviews were completed. Thirty-two interviews were completed with TTW participants and 42 with nonparticipants. Of these, eight cases were completed with proxy respondents. As a result of the pretest, minor instrument changes were identified and programming problems corrected for full-scale CATI interviewing.

b. Advance Contacts

In an effort to increase respondent trust and rapport, all sample members for whom MPR had a valid address were sent an advance letter and a list of frequently asked questions and answers before the start of data collection. The advance letter, printed on SSA letterhead and signed by an SSA official, identified SSA as the sponsor of the survey and MPR as the survey contractor, explained the purpose of the survey, offered assurances of confidentiality, described the voluntary nature of participation, and included a toll-free number, a TTY number, and an e-mail address for respondents to use to contact MPR with questions or to complete the interview at their convenience. To encourage participation and show appreciation for response, a post-paid incentive payment of \$10 was offered to respondents who completed the survey. The advance letters also indicated that the interview could be conducted in-person if he or she was unable to respond by telephone because of a limiting condition.

In an additional effort to help establish legitimacy, SSA posted information about the survey on the agency Web site and circulated information describing the survey to SSA field offices. Field offices were also sent the names of telephone and in-person interviewers involved in the NBS so that these individuals could be identified as legitimate contacts.

c. Locating

Sample member contact information was provided by SSA from administrative records. Prior to the mailing of the advance materials, all addresses were verified or updated using a commercially available database. Over the course of the Round 1 data collection, 44 percent of telephone numbers initially provided were identified as invalid and were sent to central office locating. MPR used a variety of techniques for locating updated information, including database searches, calling relatives and friends, receiving updated contact information from SSA, and making in-person visits for field locating. Due to these efforts, approximately 92 percent of the sample was eventually located for interviewing. Of the located sample, 79 percent completed the interview.

d. CATI and CAPI Interviews

In total, 6,302 cases were completed by telephone. Eighty-two percent of the Representative Beneficiary Sample completes (n=5,342) and 89 percent of the Ticket Participant Sample completes (n=960) were completed via CATI. Approximately 50 percent of the total completes were obtained before the start of CAPI data collection (May 2004).

The NBS took, on average, 50 minutes to administer. The interview length ranged from 15 to 180 minutes (excluding TTY, Relay, and instant messaging interviews).

To overcome communication challenges, the interview was conducted via TTY, Telecommunications Relay Service (TRS), or instant messaging for persons with severe hearing or speech impairments. To minimize respondent burden, standard abbreviations were used for TTY and instant messaging interviews (e.g. eliminating capitalization, some punctuation, and programming instructions and using common abbreviations such as “ga” (go ahead), “nu” (number), “oic” (oh, I see), while maintaining question wording). In addition, in-person interviewers obtained the services of sign language translators and made a range of other accommodations when interviewing persons with hearing impairments in their home to maximize survey participation.

In all, 3,109 cases, or approximately 30 percent of the total sample, were sent to field interviewers for in-person interviewing. Of these, 394 (13 percent) were eventually completed via CATI, and 1,301 (42 percent) were completed by field interviewers. Field interviewers were trained to encourage sample persons to call in and complete the survey by telephone once they were located to save on data collection costs. Eighteen percent of the Representative Beneficiary Sample completes (n=1,178) and 11 percent of Ticket Participant completes (n=123) were obtained via CAPI.

Most cases that were sent to the field (63 percent) were sent because they could not be located or did not have a telephone. Another 20 percent were sent to the field because the sample person initially refused a CATI interview. An additional 16 percent were sent to the field because they were difficult to contact via telephone or had evaded contact efforts. The remaining one percent of cases were sent to the field because they requested an in-person interview.

e. Assisted and Proxy Interviews

To increase opportunities for self-response, “assisted” interviews were permitted. These interviews were different from proxy interviews because beneficiaries answered most questions themselves. The assistant, typically a family member, provided encouragement, interpretation, and verified answers when needed. In the NBS, we allowed assisted interviews in order to minimize item nonresponse, improve the accuracy of responses, and overcome less limiting conditions (such as difficulty hearing) and language barriers. In all, 275 assisted interviews were conducted (less than 1 percent of all completes) during Round 1.

As a last resort, proxy respondents were used to complete the survey on behalf of respondents who could not complete the survey themselves (even with assistance) either by telephone or in-person. This included sample persons with severe communication impairments, those with severe physical disabilities that precluded participation (in any mode), and those with mental impairments that might have compromised data quality. Using the beneficiary instead of a proxy when possible was strongly favored because sample members generally provide more complete and more accurate information than proxy respondents. However, allowing the use of proxies when necessary minimized the risk of

nonresponse bias that would have resulted from the exclusion of individuals with severe physical or cognitive impairments.

In the NBS, we used an innovative “mini-cognitive test” designed expressly for the survey to identify when proxy respondents were needed.⁹ The screener provided interviewers with a tool for evaluating when to seek a proxy and minimized the need to leave this decision to interviewer discretion or to gatekeeper advice. The test combined the ability to understand the survey topics with elements of informed consent.

In some situations, a knowledgeable informant expressed that a proxy would be necessary. In these cases several guidelines were used to determine whether a proxy would be appropriate. These guidelines included using proxies only when the sample member’s physical or mental condition precluded self-response, selecting the most knowledgeable proxy, and ensuring that the proxy answered on behalf of the sampled respondent rather than offering his or her own opinions. Interviewers were trained to overcome gatekeepers’ objections, and to give sample members the opportunity to speak for themselves whenever possible.

At Round 1, proxy interviews were completed for 1,997 sample persons (26 percent of all completes). In most cases (approximately 77 percent), a proxy was necessary because the sample person failed the cognitive assessment or was otherwise determined to be unable to respond due to a cognitive or mental impairment. Interviews were completed by proxy for 1,901 sample persons in the Representative Beneficiary Sample (29 percent of completes) and 96 sample persons in the Ticket Participant Sample (9 percent of completes).

f. Characteristics of CATI, CAPI, and Proxy Respondents

An analysis of selected respondent characteristics indicates a few differences between CATI and CAPI respondents, and between respondents requiring a proxy interview and all interviews (Table B.38). Relative to CATI respondents, CAPI respondents were more likely to be: SSI-only recipients; black; younger; to have achieved lower levels of education; and to have experienced childhood onset of disability. Relative to all respondents, those requiring a proxy interview were much more likely to be sample members with mental retardation and who experienced childhood onset of disability, and were somewhat more likely to be: male; SSI-only recipients; younger; of Hispanic or Latino ethnicity; and employed at interview.

g. Case Disposition Summary and Response Rates

Table B.39 provides a summary of final case dispositions for all released cases in the sample. Table B.40 provides a breakdown of response rates by sample type and sampling strata.

Table B.38. Characteristics of CATI, CAPI, and Proxy Respondents

⁹ Westat designed the test as part of the design of the Ticket to Work evaluation; MPR modified it after pretesting.

	All Interviews	CATI	CAPI	Proxy
Number	7,580	6,279	1,301	1,997
Unweighted % of All Interviews	100.0	82.8	17.2	26.3
		Unweighted Percent		
Social Security Program				
SSI-only	39.1	38.0	44.7	52.3
DI-only	39.8	40.9	34.2	24.1
Concurrent	20.8	20.7	21.0	23.5
Missing	0.3	0.4	0.1	0.0
Sex				
Male	50.3	50.1	51.4	61.2
Female	49.7	49.9	48.6	38.8
Age in Years				
18-24	12.5	11.9	15.4	24.2
25-39	37.7	37.4	39.2	43.4
40-54	36.5	37.5	31.6	25.2
55+	13.1	13.2	12.7	7.1
Missing	0.2	0.0	1.2	0.2
Race^a				
White	68.1	68.5	66.0	67.6
Black	24.5	23.4	29.9	24.3
Other	6.4	6.7	4.9	6.2
Missing	3.5	4.1	1.1	3.9
Ethnicity				
Hispanic or Latino	10.6	10.1	12.8	13.4
Not Hispanic or Latino	88.0	88.2	86.9	85.2
Missing	1.5	1.7	0.2	1.4
Education				
Did not complete HS or GED	35.8	34.7	41.4	51.3
High School Diploma or GED	35.1	34.5	38.0	28.1
High School Certificate	4.1	4.0	4.8	10.0
More than High School	23.0	24.7	15.2	4.9
Missing	1.8	2.1	0.7	5.8
Condition(s) Causing Limitation^a				
Mental Illness	35.3	35.6	34.0	33.7
Mental Retardation	10.3	10.8	7.8	33.3
Muscular/Skeletal	26.5	27.0	24.4	11.3
Sensory Disorders	8.7	8.6	9.3	13.1
Other Nervous System Diseases	16.1	16.4	14.3	19.7
Other	53.4	53.8	51.0	49.3
No conditions limit activities	7.3	6.9	9.2	3.5
Missing	0.9	0.9	1.1	0.7
Age at Onset of Limiting Condition(s)				
Childhood onset (<age 18)	37.2	36.0	42.7	71.5
Adult onset (age 18+)	59.7	60.6	55.2	24.7
Missing	3.1	3.4	2.1	3.8

	All Interviews	CATI	CAPI	Proxy
Employment Status at Interview				
Employed at Interview	15.2	15.5	13.9	18.0
Not Employed at Interview	84.6	84.3	86.1	81.6
Missing	0.1	0.2	0.0	0.4

Note: Does not include 23 partially completed cases.

^aMultiple responses possible.

Table B.39. Summary Case Disposition by Sample Type and Sampling Strata

	Complete				Ineligible				Refused				Unlocated		Non-Respondents	
	Total Sample	Count	Unweighted Percent	Weighted Percent	Count	Unweighted Percent	Weighted Percent	Count	Unweighted Percent	Weighted Percent	Count	Unweighted Percent	Weighted Percent	Count	Unweighted Percent	Weighted Percent
Beneficiary Sample	9,064	6,520	71.9	72.5	458	5.1	5.1	774	8.5	9.5	795	8.8	7.5	517	5.7	5.4
Age 18 - 29	2,514	1,818	72.3	72.6	132	5.3	5.2	170	6.8	6.7	236	9.4	9.3	158	6.3	6.3
Age 30 - 39	2,516	1,788	71.1	71.3	112	4.5	4.4	215	8.5	8.4	258	10.3	10.2	143	5.7	5.7
Age 40 - 49	2,516	1,816	72.2	72.5	134	5.3	5.2	222	8.8	8.8	207	8.2	8.1	137	5.4	5.4
Age 50 - 64	1,518	1,098	72.3	72.7	80	5.3	5.2	167	11.0	10.7	94	6.2	6.1	79	5.2	5.2
Participant Sample	1,466	1,083	73.9	79.4	73	5.0	1.5	156	10.6	10.0	75	5.1	3.3	79	5.4	5.8
Traditional Payment	441	351	79.6	80.0	4	.9	.9	45	10.2	10.0	13	2.9	2.8	28	6.3	6.2
Milestone and Outcome	455	344	75.6	79.0	16	3.5	3.0	49	10.8	10.1	32	7.0	5.4	14	3.1	2.5
Outcome Only Clustered	123	84	68.3	73.3	3	12.4	1.6	14	11.4	7.9	12	9.8	8.5	10	8.1	8.8
Outcome Only Unclustered	447	304	68.0	68.6	50 ^a	11.2	11.3	48	10.7	10.7	18	4.0	3.6	27	6.0	5.8
Total Sample	10,530	7,603	72.2	72.5	531	5.0	5.1	930	8.8	9.5	870	8.3	7.5	596	5.7	5.4

Note: The number of completed cases includes 23 partial completes: 4 in the participant sample and 19 in the beneficiary sample.

^aMost of the 50 participants enumerated in this cell were classified as ineligible for purposes of sampling weight computation.

Table B.40. Weighted Response Rates by Sample Type and Sampling Strata

Sample	Weighted Percent
Representative Beneficiary Sample	77.5
18 to 29 Years Old	77.8
30 to 39 Years Old	75.7
40 to 49 Years Old	77.7
50 to 64 Years Old	77.9
Ticket Participant Sample	80.9
Traditional Payment Type	81.0
Milestone and Outcome	82.0
Outcome Only ^a	74.9

Note: The weighted rates are used because (1) the sampling rates (therefore the sampling weights) vary substantially across the sampling strata and (2) the weighted rates better reflect the potential for nonresponse bias. The weighted rates represent the percentage of the full survey population for which we were able to obtain information sufficient either to use in the data analysis or to determine as ineligible for the analysis.

^aBecause of the use of the paired samples (the clustered and unclustered samples), the weighted response rate for the clustered sample is given in this table because it reflects the response rate expected if all sampled cases were eligible for field follow-up efforts.

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APPENDIX C

BENEFICIARY PARTICIPATION STATISTICS

This appendix presents statistics on beneficiary participation in the TTW program, supplementing the information in Chapter III. The statistics are based on administrative data. Statistics on the analysis of survey data reported in Chapter III appear in Appendix B (Tables B.22 and B.23). Section A describes how administrative data were used to construct or define key variables. Section B presents statistics on beneficiary participation during the rollout period. Section C presents findings from an analysis of the relationship between TTW participation and beneficiary characteristics, based on data from the National Beneficiary Survey (NBS). Chapter III also presents a summary of findings from an earlier analysis of participation, based on administrative data. Details of that analysis appear in Appendix B of Thornton et al. (2006).

A. ADMINISTRATIVE DATA

The statistics in this appendix were developed from analytic administrative data files developed by MPR for the purpose of conducting the TTW evaluation. These files contain extensive information on the more than 17 million individuals who received DI or SSI benefits in any month from January 1996 through, at the time of this report, December 2004. Because these statistics are based on 100 percent of the relevant population, they are population statistics, rather than estimates. To construct the files, MPR extracted and merged information from several SSA administrative files:

- Master Beneficiary File (MBR), which contains information on the DI program
- Supplemental Security Income Longitudinal File (SSI-LF), which extracts information from the Supplemental Security Record about SSI beneficiaries
- Disability Control File (DCF), which contains detailed information on participation in TTW and about beneficiaries' work efforts
- 831/832/833 files, which contain records of disability determinations and continuing disability reviews
- Revised Management Information Counts System (REMICS) files, which contain snapshots of the Supplemental Security Record for each month

- SORD files, which contain monthly snapshots from the Supplemental Security Record (these files replaced the earlier REMICS files)
- ZIP extracts, which contain quarterly snapshots from the Master Beneficiary Record file

Table C.1 details how we used various data sources to define the key variables in our analyses.

Table C.1. Definitions

Variable	Definition	Notes	Source File
All Eligible Beneficiaries	Beneficiaries were classified as eligible if they: 1. had begun participating in SSI or DI by August 2003 AND 2. were eligible to participate in the Ticket program as of December 2004 AND 3. had been mailed a Ticket by December 2004 (TKTMAILDDT)	As of December 2004. Beneficiaries became ineligible as they aged out, died, or were terminated from the Ticket program (perhaps due to a medical improvement)	Combination of MBR, SSI-LF, and Disability Control File.
Eligibility Status on Initial Selection Date	Used Ticket Selection Date (TKTSLTDDT1). New beneficiaries: any selection date other than one of the mass selection dates Existing beneficiaries: selected to receive Ticket as part of mass selection operation (dates: 1/12/2002, 10/26/2002, or 10/18/2003)	Ticket Selection Date	Disability Control File
Title	Classifications were used directly from SSA data (CURTKTTITLE). DI Only: 1 SSI Only: 3 Concurrent: 2 Records with values other than 1, 2, or 3 were excluded	As of December 2004	Disability Control File
Sex	Classifications based on the SSA variable SEX. Male = "M" Female = "F"	August 2003	Combination of MBR and SSI-LF files.
Age (also used for "Age in Years – Broad Ranges")	Calculated as of most recent Ticket mail date (TKTMAILDDT), with Date of Birth (TKTDOB). Age = (Most Recent Ticket Mail Date – Date of Birth) / 365	Ticket Mail Date	Disability Control File
Months Since Ticket Mailed	The number of months between the most recent Ticket mail month (TKTMAILDDT) and December 2004.	As of December 2004	Disability Control File

Table C.1 (continued)

Variable	Definition	Notes	Source File
Months on Disability Rolls	<p>For DI-only beneficiaries: the number of months between Most Recent Mail Date (TKTMAILDDT) and Date of Initial Entitlement (DOEI).</p> <p>For SSI-only beneficiaries: the number of months between Most Recent Mail Date (TKTMAILDDT) and First Eligibility Date (MINELGRD).</p> <p>For concurrent beneficiaries: the number of months between Most Recent Mail Date and the earlier of First Eligibility Date (from SSI-LF) or Date of Initial Entitlement (from MBR).^a</p>	As of December 2004	Combination of MBR, SSI-LF, and Disability Control File.
Language for Communication with SSA	<p>Note: this item has large numbers of missing values as these data are often collected only when the beneficiary's primary language is not English (T2LANG and T16LANG). SSA offers written communications in English or Spanish. Beneficiaries classified as "other" typically need assistance in communication, most often because of communication impairments</p> <p>English: E or 01, Spanish: S or 02 Other: any other value Missing: blank</p>	As of December 2004	MBR and SSI-LF
Race/Ethnicity	<p>Classifications are from SSA's RACE variable:</p> <p>Asian/Pacific Islander: A Black (not Hispanic): B or N Hispanic: H Native American/Alaskan: I White: W Coded as Other: O Missing: blank, missing, or any other value</p>	As of December 2004	MBR and SSI-LF
Years of Education	<p>Based on the SSA variable ED. The value is missing for a large number of cases. Recoded as:</p> <p>0–8: '00', 'ZZ', '99', '01' thru '08', '1' thru '8' 9–11: '09' thru '11', '9' thru '11' 12: '12' 13–15: '13' thru '15' 16+: '16' and onwards Missing: blank or any other character value</p>	Ticket Mail Date or August 2003, whichever was earlier.	831/832/833

Table C.1 (continued)

Variable	Definition	Notes	Source File
Primary Disabling Condition	<p>Codes from SSA data (PRMYDIAG) were grouped as follows:</p> <ol style="list-style-type: none"> 1. Major affective disorders: 2960-2969, 3110-3119 2. Schizophrenia and Psychoses: 2950-2959, 2980-2989 3. Anxiety and neurotic disorders: 3000-3019, 3080-3099 4. Other mental disorders: 2900-2949, 2990-2999, 3030-3079, 3100-3109, 3120-3129, 3138-3169, 3195 only Note: exclude 3110 5. Mental Retardation: 3170-3194, 3196-3199 6. Back Disorders: 7221-7249 7. Musculoskeletal system: 7100-7200, 7250-7399 8. Infectious & parasitic diseases: 0110-0119, 0450-0459, 0930-1359, 1380-1389 9. HIV/AIDS: 0070-0079, 0201-0449, 0540-0559, 0780-0789, 1360-1369 10. Neoplasms: 1400-2399 11. Endocrine/ nutritional: 2400-2479, 2500-2559, 2630-2799 12. Blood/ blood-forming diseases: 2800-2899 13. Severe visual impairment: 3610-3699, 3780-3789 14. Severe hearing impairment: 3890-3899 15. Severe speech impairment: 7840-7849 16. Nervous system: 3200-3419, 3430-3599, 3860-3889 17. Circulatory system: 3420-3429, 3750-3759, 3900-4599 18. Respiratory system: 4600-4869, 4910-5199, 7690-7699 19. Digestive system: 5200-5799 20. Genitourinary system: 5800-6299 21. Skin/ subcutaneous tissue: 6900-7099 22. Congenital anomalies: 7400-7599 23. Injuries: 8000-9599 24. Other: 0000-0069, 0680-0689, 2480-2499, 2580-2589, 3130 only, 4880-4889, 6300-6889, 7600-7689, 7740-7839, 7850-7959, 9840-9849 25. Missing, Any other code 	As of December 2004	Disability Control File

Table C.1 (continued)

Variable	Definition	Notes	Source File
Benefit Amount	<p>Monthly benefit amounts for SSDI and SSI were summed, regardless of whether the beneficiary was classified as DI-only, SSI-only, or concurrent.</p> <p>Monthly benefit amounts were obtained as follows: DI: Monthly Benefit Credited (MBC) SSI: the sum of Federal Money Paid Amount (FEDPMT) and State Supplementation Amount (STATPMT)</p> <p>The resulting amounts were grouped as follows: \$0 (benefit amount data were entered as \$0) > \$0 and <= \$250 > \$250 and <= \$500 > \$500 and <= \$750 > \$750 and <= \$1000 > \$1000 Missing (no benefit amount was entered)</p>	Ticket Mail Date or August 2003, whichever was earlier.	MBR or SSI-LF
Adjudicative Level of Allowance	Based on SSA's adjudicative level variable (AL). Initial Determination: 1 Reconsideration: 2, 3 Higher level of appeal: 4, 5, 6	Ticket Mail Date or August 2003, whichever was earlier.	831/832/833

Table C.1 (continued)

Variable	Definition	Notes	Source File
Extended Period of Eligibility	<p>The EPE flag is an annual flag and was calculated only for DI and concurrent beneficiaries, using LAF codes and earnings data from SER, as follows:</p> <ol style="list-style-type: none"> 1. Count the number of months in 2002 with LAF (payment code)= S7; call it MTHS_S7. 2. Determine monthly SGA level for beneficiary in 2002, taking into account whether the beneficiary is blind. 3. Calculate Adjusted SGA (ASGA) by multiplying SGA amount by MTHS_S7. 4. For beneficiaries with ASGA > 0, retrieve FY2002 annual earnings from SER. 5. If FY2002 annual earnings > ASGA_{yy}, set EPE_flag to 1, else set EPE_flag to 0. <p>Categories in table: SSI only: not applicable DI and not in EPE: EPE_flag = 0 DI and in EPE: EPE_flag = 1 DI and EPE status unknown: EPE_flag not = 1 or 0</p>	Ticket Mail Date	MBR, SSI-LF
Section 1619	<p>Section 1619 is only applicable to SSI beneficiaries. 1619(a) information is derived from STCONCATM (SSI-LF) and 1619(b) information is derived from MEDC (REMICS and SORD)</p> <p>Categories in table: DI only – Section 1619 not applicable SSI and 1619(a): STCONCATM = 'D', 'E', 'F', 'G', 'H', 'J', 'K', 'L', 'M', 'N', 'O', 'P', 'Q', 'R', 'S', 'W', 'X', 'Y', or 'Z' SSI and 1619(b): MEDC = 'C' SSI – not in 1619: not in 1619(a) OR not in 1619(b) SSI and 1619 status unknown: residual category</p>	Ticket Mail Date or August 2003, whichever was earlier.	SSI-LF, REMICS, SORD

Table C.1 (continued)

Variable	Definition	Notes	Source File
State of Residence	<p>Based on zip codes.</p> <p>Historical zip codes were extracted from the ZIP files for DI-only beneficiaries and from the REMICS and SORD files for SSI and concurrent beneficiaries. The zip codes were transformed into state codes using a built-in SAS function.</p> <p>Sometimes the zip code could not be resolved to a state.</p> <p>If a state code was not available for the designated month, the code from a previous or later month was used in its place.</p>	Ticket Mail Date or 2004, depending on availability.	ZIP files, REMICS, SORD

^a“Months on the disability rolls” is a negative value in a few instances. This occurs if the benefit eligibility date is after the most recent Ticket mail date. For instance, a DI-only beneficiary receives a Ticket, and then becomes ineligible for DI. The beneficiary had become eligible for SSI later than DI and MINELGRD is filled in with a date that is more recent than the Ticket mail date, and it looks as though the beneficiary was on the rolls for a negative number of months.

B. INFORMATION ON PARTICIPATION DURING ROLLOUT

The figures in Chapter III, Section A, are based on tables in this section.

Table C.2. Ticket Mailings by Month and Phase (Supports Figure III.1)

	Phase 1	Phase 2	Phase 3
Feb-02	235,716	1,069	1,040
Mar-02	949	5	8
Apr-02	362,280	2,509	3,014
May-02	607,201	4,628	5,156
Jun-02	736,868	6,564	7,745
Jul-02	149,697	1,382	1,182
Aug-02	149,404	1,558	1,461
Sep-02	154,460	959	927
Oct-02	152,973	255,287	2,025
Nov-02	40,600	1,244	1,428
Dec-02	21,273	777	329
Jan-03	14,700	264,660	5,411
Feb-03	20,198	265,403	3,122
Mar-03	21,240	268,106	2,362
Apr-03	23,150	272,773	2,656
May-03	23,093	276,445	2,980
Jun-03	23,331	279,916	2,064
Jul-03	22,579	283,520	2,557
Aug-03	21,898	285,911	3,388
Sep-03	22,417	289,826	1,525
Oct-03	22,464	24,776	655
Nov-03	36,612	39,630	341,005
Dec-03	17,917	19,187	2,558
Jan-04	20,325	21,786	351,860
Feb-04	20,170	21,471	351,787
Mar-04	21,249	22,990	359,310
Apr-04	25,583	27,604	366,269
May-04	24,291	25,665	370,686
Jun-04	22,433	23,840	375,617
Jul-04	27,340	29,458	384,174
Aug-04	26,089	28,527	390,672
Sep-04	26,893	30,006	397,594
Oct-04	23,417	26,054	37,622
Nov-04	24,130	25,544	39,831
Dec-04	24,598	26,407	37,460

Source: July 2005 extract from SSA's Disability Control File.

Note: The July 2005 extract was used to ensure that delays in the reporting of assignments would not impact the statistics.

Table C.3. Participation Rate by Months Since Rollout Start, Provider Type, Payment Type, and Phase (Supports Figures III.2, III.3, III.5 and III.6)

Months Since Rollout	Month, Year	Total	Provider Type			Payment Type		
			SVRA	EN	% SVRA	Tra- ditional	Milestone- Outcomes	Outcomes Only
Phase 1								
0	Feb-02	0.06%	0.050%	0.010%	69.5%	0.042%	0.015%	0.003%
1	Mar-02	0.35	0.307	0.043	82.6	0.289	0.046	0.014
2	Apr-02	0.24	0.202	0.040	78.2	0.190	0.042	0.011
3	May-02	0.21	0.174	0.038	76.8	0.163	0.040	0.009
4	Jun-02	0.23	0.190	0.040	77.6	0.180	0.043	0.009
5	Jul-02	0.30	0.250	0.053	77.4	0.236	0.058	0.011
6	Aug-02	0.38	0.313	0.062	78.5	0.296	0.069	0.012
7	Sep-02	0.41	0.346	0.064	79.3	0.329	0.073	0.013
8	Oct-02	0.47	0.400	0.066	80.8	0.382	0.077	0.014
9	Nov-02	0.49	0.427	0.068	80.9	0.408	0.082	0.015
10	Dec-02	0.52	0.454	0.068	81.0	0.434	0.086	0.016
11	Jan-03	0.58	0.505	0.070	81.4	0.482	0.093	0.017
12	Feb-03	0.60	0.532	0.071	81.4	0.509	0.097	0.018
13	Mar-03	0.63	0.562	0.069	81.7	0.538	0.101	0.019
14	Apr-03	0.68	0.612	0.068	82.4	0.587	0.104	0.021
15	May-03	0.74	0.668	0.068	83.3	0.643	0.107	0.022
16	Jun-03	0.78	0.714	0.067	83.9	0.689	0.110	0.023
17	Jul-03	0.83	0.767	0.067	84.4	0.741	0.113	0.023
18	Aug-03	0.88	0.814	0.069	84.8	0.789	0.116	0.025
19	Sep-03	0.93	0.858	0.070	85.1	0.833	0.119	0.026
20	Oct-03	0.97	0.896	0.072	85.3	0.871	0.122	0.027
21	Nov-03	0.99	0.917	0.072	85.5	0.894	0.123	0.028
22	Dec-03	1.03	0.954	0.073	85.7	0.931	0.126	0.029
23	Jan-04	1.07	0.994	0.074	85.9	0.971	0.129	0.031
24	Feb-04	1.10	1.023	0.077	85.8	1.001	0.134	0.032
25	Mar-04	1.14	1.060	0.079	85.9	1.038	0.137	0.034
26	Apr-04	1.17	1.089	0.079	86.0	1.068	0.139	0.035
27	May-04	1.19	1.114	0.079	86.0	1.094	0.142	0.036
28	Jun-04	1.23	1.145	0.080	86.1	1.125	0.144	0.037
29	Jul-04	1.26	1.175	0.080	86.2	1.156	0.146	0.038
30	Aug-04	1.29	1.207	0.080	86.4	1.188	0.149	0.039
31	Sep-04	1.31	1.227	0.081	86.3	1.209	0.151	0.040
32	Oct-04	1.33	1.251	0.083	86.4	1.235	0.153	0.041
33	Nov-04	1.36	1.273	0.084	86.4	1.259	0.156	0.042
34	Dec-04	1.38	1.296	0.080	86.4	1.283	0.158	0.043
Phase 2								
0	Nov-02	0.04	0.035	0.008	76.1	0.032	0.008	0.002
1	Dec-02	0.10	0.073	0.028	68.0	0.070	0.024	0.009
2	Jan-03	0.11	0.081	0.026	69.5	0.075	0.025	0.008
3	Feb-03	0.13	0.100	0.033	68.0	0.092	0.035	0.008
4	Mar-03	0.18	0.138	0.039	69.9	0.125	0.043	0.011
5	Apr-03	0.21	0.169	0.044	70.8	0.153	0.050	0.013
6	May-03	0.25	0.201	0.046	72.6	0.182	0.053	0.015
7	Jun-03	0.28	0.232	0.047	74.3	0.210	0.057	0.016
8	Jul-03	0.31	0.266	0.049	75.3	0.241	0.062	0.017

Table C.3 (continued)

Months Since Rollout	Month, Year	Total	Provider Type			Payment Type		
			SVRA	EN	% SVRA	Tra- ditional	Milestone- Outcomes	Outcomes Only
9	Aug-03	0.34	0.294	0.050	76.1	0.266	0.065	0.018
10	Sep-03	0.37	0.316	0.052	76.5	0.286	0.067	0.021
11	Oct-03	0.42	0.366	0.056	77.0	0.331	0.076	0.023
12	Nov-03	0.46	0.398	0.059	77.5	0.362	0.080	0.025
13	Dec-03	0.50	0.435	0.061	77.8	0.396	0.086	0.027
14	Jan-04	0.54	0.473	0.063	78.1	0.430	0.092	0.028
15	Feb-04	0.57	0.505	0.064	78.5	0.460	0.097	0.029
16	Mar-04	0.61	0.549	0.065	78.9	0.499	0.103	0.030
17	Apr-04	0.65	0.588	0.066	79.4	0.535	0.108	0.031
18	May-04	0.69	0.621	0.067	79.7	0.567	0.112	0.032
19	Jun-04	0.72	0.656	0.068	79.9	0.599	0.117	0.033
20	Jul-04	0.75	0.685	0.068	80.2	0.627	0.120	0.034
21	Aug-04	0.79	0.719	0.068	80.5	0.659	0.125	0.035
22	Sep-04	0.81	0.745	0.069	80.8	0.684	0.128	0.035
23	Oct-04	0.84	0.772	0.069	81.0	0.711	0.131	0.036
24	Nov-04	0.87	0.796	0.070	81.1	0.738	0.134	0.038
25	Dec-04	0.90	0.827	0.070	81.2	0.766	0.139	0.038
Phase 3								
0	Nov-03	0.27	0.255	0.015	88.3	0.243	0.027	0.005
1	Dec-03	0.64	0.606	0.031	90.4	0.581	0.055	0.007
2	Jan-04	0.46	0.428	0.032	88.2	0.409	0.049	0.006
3	Feb-04	0.42	0.384	0.037	85.9	0.365	0.054	0.006
4	Mar-04	0.44	0.392	0.045	84.1	0.371	0.063	0.008
5	Apr-04	0.45	0.402	0.051	83.1	0.379	0.069	0.008
6	May-04	0.45	0.397	0.054	82.0	0.374	0.073	0.009
7	Jun-04	0.46	0.400	0.057	81.5	0.377	0.076	0.010
8	Jul-04	0.46	0.402	0.057	81.5	0.380	0.076	0.010
9	Aug-04	0.47	0.409	0.058	81.5	0.386	0.077	0.010
10	Sep-04	0.46	0.403	0.060	81.0	0.381	0.079	0.011
11	Oct-04	0.50	0.432	0.065	80.8	0.409	0.085	0.012
12	Nov-04	0.53	0.458	0.070	80.8	0.435	0.091	0.013
13	Dec-04	0.56	0.486	0.072	81.0	0.463	0.095	0.014

Source: July 2005 extract from SSA's Disability Control File.

Note: The July 2005 extract was used to ensure that delays in the reporting of assignments would not impact the statistics.

Table C.4. Percentage of Beneficiary Entrants to SVRA Services Who Assigned a Ticket, by Phase and SVRA Entry Month (Supports Figure III.4)

Months From Rollout Start	Phase		
	1	2	3
-132	9%	3%	1%
-131	9	3	1
-130	9	3	1
-129	9	2	1
-128	10	2	1
-127	9	3	1
-126	9	3	1
-125	9	3	1
-124	8	3	1
-123	8	3	2
-122	8	3	2
-121	7	3	3
-120	7	3	3
-119	7	3	3
-118	7	3	4
-117	6	4	4
-116	8	4	4
-115	8	4	4
-114	7	4	3
-113	8	4	3
-112	9	5	3
-111	8	5	3
-110	8	5	3
-109	8	5	2
-108	8	4	2
-107	8	4	2
-106	8	4	3
-105	8	4	3
-104	8	3	3
-103	9	3	3
-102	8	3	3
-101	8	3	3
-100	9	3	3
-99	8	3	2
-98	8	3	2
-97	7	4	2
-96	7	3	2
-95	8	4	3
-94	9	4	3
-93	9	4	3
-92	8	4	3
-91	9	4	3

Table C.4 (continued)

Months From Rollout Start	Phase		
	1	2	3
-90	10	5	4
-89	9	4	3
-88	9	4	3
-87	9	4	3
-86	9	4	3
-85	9	4	3
-84	8	4	3
-83	8	4	3
-82	8	5	3
-81	9	5	4
-80	9	5	4
-79	9	5	4
-78	9	5	4
-77	9	5	5
-76	9	5	5
-75	9	5	5
-74	9	5	5
-73	9	5	6
-72	9	5	6
-71	10	6	6
-70	10	6	7
-69	10	6	7
-68	11	6	7
-67	11	6	8
-66	12	7	8
-65	12	7	8
-64	12	7	8
-63	12	7	8
-62	12	8	9
-61	12	8	9
-60	13	9	9
-59	14	10	9
-58	15	11	11
-57	16	13	11
-56	18	15	12
-55	19	16	12
-54	20	18	13
-53	21	19	12
-52	21	19	13
-51	21	20	11
-50	21	20	9
-49	20	21	8

Table C.4 (continued)

Months From Rollout Start	Phase		
	1	2	3
-48	19	21	7
-47	18	22	8
-46	19	22	9
-45	19	23	8
-44	19	23	9
-43	18	23	9
-42	19	22	9
-41	19	21	9
-40	19	19	10
-39	18	18	10
-38	18	16	10
-37	18	15	10
-36	18	13	11
-35	18	14	11
-34	18	14	12
-33	18	14	11
-32	18	15	12
-31	18	14	13
-30	18	15	13
-29	19	15	13
-28	20	14	14
-27	21	15	13
-26	21	14	13
-25	21	15	13
-24	22	15	12
-23	20	14	13
-22	20	14	14
-21	19	14	13
-20	18	14	14
-19	18	15	14
-18	19	14	15
-17	18	15	14
-16	18	15	15
-15	18	16	15
-14	18	16	15
-13	19	16	15
-12	20	15	16
-11	20	16	17
-10	21	16	18
-9	21	15	17
-8	21	14	17
-7	22	15	17

Table C.4 (continued)

Months From Rollout Start	Phase		
	1	2	3
-6	22	16	17
-5	22	17	17
-4	22	16	18
-3	22	17	17
-2	22	18	18
-1	23	18	19
0	23	19	19
1	24	20	20
2	25	22	20
3	26	24	19
4	27	26	20
5	28	28	20
6	29	31	19
7	30	33	18
8	30	34	17
9	31	35	
10	32	36	
11	31	37	
12	32	38	
13	31	39	
14	31	39	
15	31	39	
16	30	39	
17	30	38	
18	30	36	
19	31	36	
20	32	35	
21	32	33	
22	34		
23	34		
24	34		
25	35		
26	34		
27	34		
28	34		
29	34		
30	35		

Source: Analysis of RSA 911 data linked to Ticket assignment data from SSA's Disability Control File. Includes cases closed and reported to RSA by September 2003. Month zero is the rollout start month. Values reported are 6-month moving averages, based on the six months ending in the month indicated.

Table C.5. Net Deactivations as a Percentage of Assigned Tickets, by Phase and Month Since Rollout Start (Supports Figure III.7)

Months Since Rollout	Phase		
	1	2	3
0	0.0%	9.1%	1.7%
1	1.0	1.3	0.0
2	1.2	1.4	0.8
3	0.9	5.2	0.7
4	0.9	0.5	1.8
5	1.9	2.4	2.0
6	2.7	1.9	2.1
7	2.4	1.9	1.5
8	4.6	1.3	1.1
9	3.3	2.1	1.7
10	4.3	2.1	0.7
11	4.2	1.8	1.1
12	4.6	2.8	1.7
13	6.0	2.1	2.1
14	3.3	1.9	
15	5.2	1.8	
16	1.7	2.0	
17	1.2	2.4	
18	1.2	1.3	
19	1.5	2.1	
20	1.7	2.0	
21	1.2	1.4	
22	2.6	2.1	
23	1.0	1.3	
24	1.0	0.7	
25	1.0	1.0	
26	1.7		
27	2.3		
28	1.9		
29	2.4		
30	1.2		
31	0.4		
32	0.3		
33	1.1		
34	0.4		

Source: July 2005 extract from SSA's Disability Control File.

Note: The July 2005 extract was used to ensure that delays in the reporting of assignments would not impact the statistics.

C. PARTICIPATION STATISTICS BY STATE AND BY BENEFICIARY CHARACTERISTICS

This section presents statistics on participation rates in December 2004 by state and by beneficiary characteristics for beneficiaries who were on the DI or SSI rolls by September 2004, based on the TRF and a July 2005 extract from the Disability Control File. We used the later extract to identify participation in December 2004 because of delays in the reporting of assignments.

Table C.6 presents state participation rates, grouped by phase, in total, by provider type, and by payment type. More extensive statistics on the characteristics of participants, by phase, are presented in Table C.7. For each beneficiary group (e.g., those age 40 to 44), we present three statistics for each phase: the percentage of eligible beneficiaries with the characteristic; the participation (Ticket assignment) rate for those beneficiaries; and the percentage of the group's Tickets that are assigned at SVRAs.

Raw differences in participation rates for any pair of groups reflect the potential influences of all other characteristics that are different for those two groups. For example, differences across impairment groups reflect differences between the age distributions of beneficiaries in those two groups. The effects are illustrated in our previous report (Thornton et al. 2006), in which we report the results that control for differences in other factors. That analysis applied multiple regression to March 2004 data for the Phase 1 states. We did not update that analysis for this report.

**Table C.6. Participation Rates by State, Payment System, and Provider Type, March 2004
(Supports Figure II.6)**

State of Residence (December 2004)	Payment System			Provider Type		
	Total	Traditional	Milestones + Outcomes	Outcomes Only	SVRA	EN
Phase 1 States						
Arizona	0.66	0.49	0.14	0.03	0.66	0.08
Colorado	0.65	0.53	0.05	0.06	0.65	0.10
Delaware	2.84	2.59	0.10	0.15	2.84	0.22
Florida	0.85	0.63	0.17	0.04	0.85	0.21
Illinois	2.03	1.79	0.15	0.09	2.03	0.23
Iowa	1.40	1.32	0.06	0.01	1.40	0.06
Massachusetts	0.55	0.51	0.03	0.01	0.55	0.03
New York	1.59	1.50	0.07	0.02	1.59	0.08
Oklahoma	1.61	0.82	0.78	0.01	1.61	0.02
Oregon	0.56	0.54	0.02	0.00	0.56	0.02
South Carolina	1.35	1.29	0.04	0.02	1.35	0.06
Vermont	5.60	5.04	0.54	0.03	5.60	0.16
Wisconsin	2.72	1.91	0.01	0.81	2.72	0.01
Phase 2 States						
Alaska	0.79	0.41	0.24	0.15	0.61	0.19
Arkansas	0.31	0.25	0.04	0.03	0.25	0.06
Connecticut	1.05	0.87	0.11	0.07	0.90	0.15
District of Columbia	0.89	0.79	0.06	0.03	0.83	0.06
Georgia	0.81	0.55	0.19	0.07	0.58	0.23
Indiana	1.16	0.85	0.12	0.19	1.00	0.16
Kansas	1.36	1.16	0.17	0.03	1.17	0.19
Kentucky	0.29	0.27	0.01	0.01	0.27	0.02
Louisiana	1.13	1.01	0.10	0.02	1.01	0.12
Michigan	1.49	0.79	0.64	0.07	0.87	0.62
Mississippi	0.70	0.69	0.01	0.01	0.69	0.01
Missouri	1.00	0.82	0.13	0.05	0.83	0.17
Montana	0.90	0.75	0.13	0.02	0.75	0.15
Nevada	0.95	0.84	0.09	0.02	0.86	0.09
New Hampshire	0.18	0.10	0.00	0.07	0.17	0.01
New Jersey	0.33	0.23	0.10	0.01	0.32	0.01
New Mexico	0.26	0.24	0.01	0.00	0.24	0.01
North Dakota	0.23	0.12	0.11	0.00	0.23	0.01
South Dakota	2.74	2.53	0.11	0.09	2.54	0.20
Tennessee	0.98	0.94	0.03	0.01	0.94	0.03
Virginia	1.14	1.11	0.00	0.03	1.14	0.00
Phase 3 States						
Alabama	0.07	0.00	0.07	0.00	0.00	0.07
California	0.21	0.14	0.06	0.01	0.15	0.05
Hawaii	0.21	0.16	0.04	0.01	0.16	0.05
Idaho	0.23	0.17	0.04	0.02	0.19	0.04
Maine	0.24	0.15	0.08	0.01	0.21	0.03
Maryland	0.34	0.19	0.14	0.01	0.33	0.02
Minnesota	0.40	0.30	0.09	0.01	0.31	0.09
Nebraska	0.51	0.40	0.10	0.01	0.43	0.08
North Carolina	0.56	0.49	0.07	0.00	0.49	0.07

Table C.6 (continued)

State of Residence (December 2004)	Total	Payment System			Provider Type	
		Traditional	Milestones + Outcomes	Outcomes Only	SVRA	EN
Ohio	0.60	0.00	0.60	0.00	0.00	0.60
Pennsylvania	0.62	0.51	0.10	0.01	0.52	0.10
Puerto Rico	0.64	0.59	0.04	0.00	0.59	0.05
Rhode Island	0.66	0.51	0.13	0.03	0.60	0.07
Texas	0.67	0.61	0.06	0.00	0.62	0.05
Utah	0.70	0.59	0.10	0.02	0.59	0.11
Virgin Islands	0.75	0.70	0.04	0.01	0.71	0.05
Washington	0.84	0.82	0.01	0.01	0.82	0.01
West Virginia	1.20	1.16	0.03	0.01	1.18	0.03
Wyoming	1.49	1.39	0.09	0.01	1.44	0.04

Source: Participation status based on a July 2005 extract from the Disability Control File. See Table C.1 for other sources.

Table C.7. Characteristics of Eligible Beneficiaries, Participation Rates and Percentage Assigned Under the Traditional Payment System in December 2004, by Phase^a

	Phase 1 States			Phase 3 States			Phase 3 States		
# Eligible (December, 2004)	2,718			2,836			3,684		
Group Definition	% of Eligible ^b	Part. Rate ^c	% in TPS ^d	% of Eligible ^b	Part. Rate ^c	% in TPS ^d	% of Eligible ^b	Part. Rate ^c	% in TPS ^d
All Eligible Beneficiaries	100.0	1.38	89.4	100.0	0.90	83.1	100.0	0.56	81.8
Initial Eligibility Status^a									
New	25.6	17.0	0.87	19.0	0.82	83.0	12.1	0.47	78.6
Existing	74.4	83.0	1.05	81.0	0.91	83.1	87.9	0.57	82.2
Title									
DI only	55.1	1.23	88.3	57.1	0.78	81.2	55.8	0.51	81.2
Concurrent	13.8	2.03	90.2	14.0	1.23	85.0	12.7	0.81	83.5
SSI only	31.1	1.36	90.6	29.0	0.97	84.8	31.5	0.55	81.9
Sex									
Male	50.2	1.42	89.7	50.4	0.92	83.3	50.8	0.57	81.4
Female	49.7	1.35	89.0	49.6	0.88	82.8	49.2	0.54	82.3
Age									
18 – 24	7.0	3.53	93.4	6.1	3.03	87.6	5.6	1.63	88.6
25 – 29	4.5	2.89	89.9	4.5	2.00	84.3	4.3	1.24	81.9
30 – 34	6.1	2.50	89.3	5.9	1.66	82.2	5.3	1.06	81.6
35 – 39	9.0	2.18	89.6	8.4	1.38	82.8	7.5	0.91	82.2
40 – 44	12.4	1.80	88.6	11.8	1.15	80.8	11.0	0.77	80.4
45 – 49	14.2	1.37	88.6	14.2	0.84	81.7	13.8	0.61	81.2
50 – 54	16.6	0.82	86.7	16.4	0.54	80.5	16.1	0.40	81.1
55 – 59	19.7	0.40	86.2	19.4	0.26	81.0	19.2	0.20	76.4
60 – 64	10.4	0.20	82.6	13.4	0.14	80.8	17.1	0.10	70.3
Age in Years - Broad Ranges									
< 40	26.6	2.73	90.9	24.9	1.96	84.8	22.8	1.19	84.2
40 – 49	26.6	1.57	88.6	26.0	0.98	81.2	24.8	0.68	80.8
50 – 64	46.8	0.51	86.1	49.2	0.32	80.7	52.4	0.23	78.0

Table C.7 (continued)

# Eligible (December, 2004)	Phase 1 States			Phase 3 States			Phase 3 States		
		2,718			2,836		3,684		
Group Definition	% of Eligible ^b	Part. Rate ^c	% in TPS ^d	% of Eligible ^b	Part. Rate ^c	% in TPS ^d	% of Eligible ^b	Part. Rate ^c	% in TPS ^d
Months Since Ticket Mailed									
0 – 3	2.0	0.20	85.7	2.2	0.24	85.6	11.9	0.23	82.5
4 – 6	2.7	0.44	86.0	2.8	0.55	83.9	30.6	0.37	81.1
7 – 9	2.5	0.53	85.8	2.6	0.55	80.2	28.9	0.57	81.2
10 – 12	2.0	0.71	84.9	2.1	0.72	86.8	18.5	0.85	83.0
13 – 15	2.8	0.92	84.2	11.5	0.76	84.0	9.0	0.91	82.5
16 – 18	2.3	1.13	88.9	27.3	0.87	83.7	0.2	1.13	73.4
19 – 24	4.0	1.39	87.8	43.0	1.01	82.6	0.4	1.21	79.7
24+	81.7	1.51	89.7	8.6	1.04	82.2	0.5	1.38	78.2
Months on Disability Rolls									
0 – 6	7.1	0.96	88.3	4.6	0.64	83.6	2.3	0.39	74.7
7 – 12	4.5	1.16	86.1	3.6	0.78	79.4	2.6	0.49	71.8
13 – 18	3.9	1.23	86.3	3.5	0.82	81.9	2.9	0.53	78.7
19 – 24	3.4	1.28	89.0	3.3	0.86	80.7	3.1	0.56	84.1
25 – 30	3.0	1.36	88.9	3.1	0.90	81.0	3.0	0.68	81.9
31 – 36	2.9	1.33	88.9	3.0	0.93	82.4	3.0	0.63	82.1
37 – 48	6.1	1.43	88.5	5.9	0.97	84.0	6.0	0.65	80.8
49 – 60	4.9	1.42	89.5	5.1	0.91	84.4	5.5	0.62	79.7
61 – 120	23.8	1.43	88.7	22.8	0.90	82.7	23.1	0.56	80.2
120+	40.1	1.47	90.6	45.1	0.93	83.6	48.3	0.54	83.9
Negative Months	0.3	1.13	89.9	0.1	0.65	80.8	0.0	0.40	75.0
Language for Communication with SSA									
English	58.3	1.50	88.8	63.4	1.01	83.3	62.0	0.67	81.8
Spanish	4.3	0.46	89.4	1.0	0.20	72.7	6.5	0.18	56.6
Other	0.5	0.68	91.6	0.1	0.70	92.9	0.9	0.19	75.8
Missing	36.8	1.31	90.4	35.5	0.71	82.5	30.7	0.42	84.3

Table C.7 (continued)

# Eligible (December, 2004)	Phase 1 States			Phase 3 States			Phase 3 States		
	% of Eligible ^b	Part. Rate ^c	% in TPS ^d	% of Eligible ^b	Part. Rate ^c	% in TPS ^d	% of Eligible ^b	Part. Rate ^c	% in TPS ^d
		2,718			2,836			3,684	
Race/Ethnicity									
Asian/Pacific Islander	1.3	1.27	89.1	0.7	1.10	88.5	3.0	0.51	81.1
Black (not Hispanic)	20.6	1.65	88.6	26.0	1.03	79.0	19.5	0.68	74.0
Hispanic	8.8	0.91	90.4	2.7	0.56	80.7	9.6	0.45	73.3
Native American/Alaskan	0.9	1.22	71.7	0.7	0.83	89.7	0.7	0.50	85.1
White	64.5	1.38	89.7	67.2	0.87	84.9	63.3	0.55	85.9
Coded as Other	1.3	0.77	90.0	0.6	0.52	86.4	1.7	0.28	75.6
Missing	2.7	1.16	91.0	2.0	0.73	81.7	2.3	0.43	83.7
Years of Education									
0 – 8	8.0	0.48	89.5	8.1	0.28	81.1	6.3	0.15	74.5
9-11	11.4	1.05	89.4	10.5	0.70	83.1	9.5	0.41	82.8
12	21.3	1.40	89.5	19.0	0.86	83.1	18.3	0.58	82.5
13-15	6.2	1.84	87.8	4.8	1.33	81.7	5.2	0.88	81.1
16+	3.3	1.74	83.8	2.4	1.29	76.5	2.6	0.86	78.2
Missing	49.7	1.51	90.0	55.2	0.99	83.7	58.1	0.58	82.1
Primary Disabling Condition									
Major affective disorders	13.2	1.75	87.2	11.8	1.15	81.5	13.8	0.72	80.0
Schizophrenia and Psychoses	7.7	2.02	87.9	6.5	1.27	80.1	7.5	0.78	77.4
Anxiety and neurotic disorders	3.6	1.47	87.9	2.9	0.82	79.4	3.1	0.59	79.5
Other mental disorders	4.9	1.61	89.9	4.7	1.10	85.8	4.9	0.72	86.2
Mental retardation	11.5	1.78	92.1	13.7	1.25	83.6	12.3	0.58	85.2
Back Disorders	9.1	0.63	87.5	9.8	0.37	83.1	9.3	0.24	76.1
Musculoskeletal system	7.6	0.74	85.7	7.6	0.44	83.6	7.8	0.30	74.5
Infectious & parasitic diseases	0.4	1.41	89.4	0.4	0.69	84.1	0.4	0.61	75.0
HIV/AIDS	1.6	1.41	88.4	0.9	0.96	69.2	1.1	0.70	75.3
Neoplasms	1.9	0.74	82.3	1.9	0.47	80.4	1.8	0.34	69.8
Endocrine/nutritional	3.3	0.95	87.8	3.7	0.60	80.2	3.5	0.37	79.8
Blood/blood-forming diseases	0.3	1.56	92.0	0.3	1.46	80.3	0.2	0.72	63.1

Appendix C: Beneficiary Participation Statistics

Table C.7 (continued)

# Eligible (December, 2004)	Phase 1 States			Phase 3 States			Phase 3 States		
		2,718			2,836		3,684		
Group Definition	% of Eligible ^b	Part. Rate ^c	% in TPS ^d	% of Eligible ^b	Part. Rate ^c	% in TPS ^d	% of Eligible ^b	Part. Rate ^c	% in TPS ^d
Severe visual impairment	2.0	2.48	91.2	2.2	1.90	86.5	2.2	1.46	92.3
Severe hearing impairment	0.9	8.21	95.4	0.8	4.44	87.4	0.9	2.73	92.8
Severe speech impairment	0.1	3.40	94.1	0.1	2.25	73.3	0.1	0.87	92.3
Nervous system	5.7	1.73	91.7	5.5	1.20	86.3	5.8	0.71	85.4
Circulatory system	6.8	0.59	87.8	7.7	0.38	80.3	6.9	0.27	76.6
Respiratory system	2.5	0.47	85.9	2.8	0.27	81.3	2.3	0.22	68.0
Digestive system	1.1	0.82	82.2	1.1	0.59	76.3	1.1	0.37	76.3
Genitourinary system	1.3	1.68	90.0	1.4	1.32	79.0	1.4	0.71	78.3
Skin/subcutaneous tissue	0.2	1.02	86.3	0.2	0.62	90.3	0.2	0.50	66.7
Congenital anomalies	0.3	2.91	95.4	0.3	2.23	85.6	0.4	1.31	85.3
Injuries	3.5	1.85	91.3	3.3	1.33	87.8	3.4	0.79	85.0
Other	3.1	0.80	88.9	3.3	0.59	85.0	2.9	0.35	86.1
Missing	7.4	0.83	87.2	7.5	0.54	81.9	6.7	0.29	77.7
Benefit Amount									
DI-only Beneficiaries									
\$0	1.5	1.18	88.3	1.4	0.73	79.4	1.0	0.51	81.7
\$1 to \$250	0.6	0.97	86.3	0.6	0.57	79.4	0.9	0.29	72.0
\$250 to \$500	3.6	1.38	89.9	3.8	0.87	81.2	3.7	0.47	77.5
\$500 to \$750	17.0	1.62	88.6	17.7	1.05	82.2	16.9	0.62	81.5
\$750 to \$1,000	14.1	1.32	88.5	14.7	0.83	81.4	14.6	0.56	81.3
>=\$1,000	18.3	0.79	86.9	18.7	0.47	79.3	18.8	0.38	81.9
Missing	0.1	0.23	71.4	0.1	0.13	100.0	0.1	0.10	66.7
Concurrent Beneficiaries									
\$0	0.1	1.85	83.8	0.1	0.85	88.2	0.1	0.70	78.6
\$1 to \$250	0.5	1.63	92.5	0.5	0.98	81.0	0.2	0.73	78.8
\$250 to \$500	1.1	2.63	92.3	1.1	1.78	86.4	0.8	1.10	85.5
\$500 to \$750	8.6	2.08	89.8	9.4	1.28	84.7	7.8	0.80	82.7
\$750 to \$1,000	1.3	2.31	91.5	1.1	1.01	88.1	2.9	0.76	84.2
>=\$1,000	2.3	1.55	89.5	1.7	0.88	84.1	1.0	0.86	86.2
Missing	0.0	0.00	50.0	0.0	0.00	100.0	0.0	0.00	.

Table C.7 (continued)

	Phase 1 States			Phase 3 States			Phase 3 States		
# Eligible (December, 2004)	2,718			2,836			3,684		
Group Definition	% of Eligible ^b	Part. Rate ^c	% in TPS ^d	% of Eligible ^b	Part. Rate ^c	% in TPS ^d	% of Eligible ^b	Part. Rate ^c	% in TPS ^d
SSI-only Beneficiaries									
\$0	1.4	1.74	89.4	0.5	0.96	80.6	0.5	0.19	70.6
\$1 to \$250	1.4	2.24	91.9	1.9	0.82	82.4	1.7	0.34	82.2
\$250 to \$500	6.1	2.11	91.3	5.5	1.47	84.6	3.0	0.89	83.3
\$500 to \$750	3.7	2.12	88.3	18.3	0.87	85.0	17.0	0.56	81.4
\$750 to \$1,000	0.7	1.78	87.9	1.0	0.54	85.0	7.2	0.51	82.1
>=\$1,000	0.5	1.01	92.4	1.8	0.92	87.2	2.0	0.39	84.7
Missing	0.0	0.00	50.0	0.0	0.20	100.0	0.0	0.00	.
Adjudicative Level of Allowance									
Initial Determination	68.8	1.58	89.7	67.1	1.06	83.2	68.1	0.65	82.4
Reconsideration	7.3	1.26	88.7	6.5	0.74	81.8	6.3	0.51	80.8
Higher level of appeal	3.5	1.03	87.4	3.9	0.57	83.7	3.2	0.33	78.3
Missing	20.4	0.80	87.8	22.5	0.52	82.8	22.4	0.34	79.1
Section 1619 Status									
DI only ^e	55.1	1.23	88.3	57.1	0.78	81.2	55.8	0.51	81.2
SSI and 1619(a)	0.2	4.08	90.6	0.1	2.65	79.2	0.2	1.83	84.4
SSI and 1619(b)	1.1	4.22	88.8	0.9	3.09	84.8	0.8	1.89	82.8
SSI and not in 1619	43.5	1.49	90.5	42.0	1.01	84.9	43.2	0.60	82.5

Source: Participation status based on a July 2005 extract from the Disability Control File. See Table C.1 for other sources.

^a"Existing" beneficiaries are those who met Ticket eligibility criteria in the first month in which Tickets were distributed in their state. "New" beneficiaries are those who came on the rolls after that month.

^bPercentage of all eligible beneficiaries.

^cParticipation rate (i.e., the percentage of eligible beneficiaries with Ticket assignments).

^dPercentage of assignments under the traditional payment system (TPS).

^eSection 1619 does not apply to DI-only beneficiaries.

APPENDIX D

METHODOLOGICAL APPROACH TO ESTIMATING THE IMPACT OF TICKET TO WORK

A. OVERVIEW

This appendix summarizes our methodological approach to estimating the impact of the TTW program during the initial stages of rollout (through 2003). The program was rolled out to Phase 1 states in 2002 and to Phase 2 states in 2003.¹ Our impact estimates represent outcomes from the early stages of implementation.

Our preferred approach is based on a model that captures the impacts of TTW over its first two years of implementation. We include longitudinal data for a single cohort of 4.7 million beneficiaries covering the period from the year before the Phase 1 Ticket mailing in 2001 and continuing through the end of 2003. Our model uses temporal variation in the availability of Ticket in two ways. First, it uses pre-post rollout variation within the Phase 1 and 2 states (that is, states in which the rollout occurred in these years). Second, it compares pre-post variation within Phase 1 and 2 states to contemporaneous pre-post variation within states where the rollout had not yet occurred. In both years, the comparison states include the Phase 3 states, and the TTW states include the Phase 1 states. The role of the Phase 2 states in generating impacts changes from 2002 to 2003 because the program was rolled out in these states in 2003. Hence, in 2002, the Phase 2 states are comparison states, but in 2003 they are TTW states.

We present impact estimates for the core outcomes described in Chapter XIII that include SVRA-only service enrollment, total (SVRA and EN) service enrollment, earnings, and benefit amounts, as well as three supplemental outcomes not reported in the text that include annual employment, any annual benefit receipt, and left cash benefits due to work.

¹ Phase 1 states include Arizona, Colorado, Delaware, Florida, Illinois, Massachusetts, New York, Oklahoma, Oregon, South Carolina, Vermont, Wisconsin, and Iowa. Phase 2 states include Alaska, Connecticut, New Hampshire, New Jersey, Washington DC, Virginia, Georgia, Kentucky, Mississippi, Montana, Tennessee, Indiana, Michigan, Arkansas, Louisiana, New Mexico, Kansas, Missouri, North Dakota, South Dakota, and Nevada. Phase 3 states include Maine, Rhode Island, Maryland, Pennsylvania, West Virginia, Alabama, North Carolina, Minnesota, Ohio, Texas, Nebraska, Utah, Wyoming, California, Hawaii, Idaho, and Washington.

We are most likely to observe impacts on the core outcomes, especially total service enrollment, if the TTW program succeeded in creating a new market for employment services. The supplemental outcomes represent a more restrictive set of outcomes that requires a change in employment status (i.e., from no work to some work during a year) or benefit receipt (i.e., from benefit receipt to no benefit receipt) and, hence, change less frequently relative to the core outcomes above.

TTW appeared to have a small impact on promoting service enrollment during the first year of rollout. Our upper-bound estimates indicate that TTW increased service enrollment by up to 0.4 percentage points. Using a more restrictive set of assumptions for service enrollment, we obtain a lower-bound estimate of Ticket's impact of 0.1 percentage point. We find no compelling evidence of TTW affecting beneficiary earnings and benefits during the program's first two years. Our results show that mean earnings in Phase 1 states were increasing relative to Phase 2 and 3 states before TTW rollout and those trends persisted after rollout. Hence, although it is possible that relative trends in these variables after the rollout were partly or even completely caused by the rollout itself, it seems highly likely that the environmental factors behind the earlier relative trends explain a substantial share of the relative changes after the rollout—perhaps all of it. The relative trends for these variables observed before TTW rollout are consistent with SSA's selection of Phase 1 states based on their readiness for TTW rollout. In contrast, we do not find relative trends in service enrollment before TTW rollout, giving us confidence that the enrollment estimates represent TTW impacts. We speculate that relative trends in service enrollment are less sensitive than relative trends in earnings and benefits to state policy and economic changes. The effects of TTW on the three supplemental outcomes are all small and/or statistically insignificant.

Section B describes the initial approach for estimating impacts outlined in the Ticket evaluation design report by Stapleton and Livermore (2002). We use the suggestions in the design report to inform our selection of the econometric model for estimating impacts as well as to outline other potential approaches for estimating impacts. Section C provides an overview of the longitudinal research file created by MPR to conduct the TTW evaluation, using SSA program and earnings records and RSA administrative files, including our sample selection criteria and definition of key outcomes. This discussion is helpful for understanding the structure of the administrative data, which will likely become a valuable source of information for future SSA program evaluation projects. Section D provides full derivation of the econometric model used to estimate impacts, which is important in identifying all of the sources of variation captured in our approach and in motivating a set of sensitivity tests that we apply to our impact estimates. Section E provides a detailed summary of findings for each of our econometric specifications, including a summary of impact estimates and sensitivity tests. Finally, Section F summarizes the alternative approaches considered in the impact analysis based on the original suggestions outlined in the design report. We briefly describe our rationale for not using these models to generate impacts, discussing their limitations relative to our preferred approach.

B. BACKGROUND ON APPROACHES CONSIDERED IN ESTIMATING IMPACTS

The design report by Stapleton and Livermore (2002) summarized a general approach to estimating impacts using SSA and RSA administrative data by comparing outcomes for TTW eligibles and participants with outcomes for similar beneficiaries in states where the Ticket has not yet been implemented. Longitudinal SSA and RSA administrative data were the only feasible source of information for estimating impacts given the absence of pre-TTW survey data and the prohibitive costs of collecting enough survey data to identify meaningful contemporaneous differences in outcomes across states.

The general approach for estimating impacts addresses SSA's top evaluation priority--to assess whether TTW significantly reduces dependence on SSA benefits through increased earnings. If TTW is to achieve its objectives, it must increase the enrollment of eligible beneficiaries in employment services, which should subsequently translate into higher earnings and lower DI and SSI benefit amounts. Initial impacts should occur first on enrollment in services as beneficiaries assign their Ticket and/or become more aware of employment service options in their area. Any impacts on earnings and, especially, benefits are expected to take longer to emerge; earnings increases are not likely to occur for some time after Ticket assignment because it may take some time for those who assign a Ticket to find employment, and DI benefits will not be reduced until earnings have exceeded the SGA level for a period that can be as long as 12 months.

Within their general approach, Stapleton and Livermore proposed the three approaches listed below for estimating impacts of TTW on both participants and all eligibles. These approaches exploit variation over time in TTW rollout and across states in the three phases of program implementation.

- ***Within-State Contemporaneous Comparisons of Participant Outcomes.*** Contemporaneous comparisons of outcomes for TTW participants to contemporaneous outcomes for selected non-participants in the same state.
- ***Within-State Pre-Post Comparisons.*** Comparisons of outcomes for beneficiaries in the period after TTW rollout to outcomes for beneficiaries in the same state before TTW rollout.
- ***Across-State Contemporaneous Comparisons of Changes in Outcomes.*** Contemporaneous comparisons of changes in beneficiary outcomes in the early-implementation states to corresponding changes in matched late-implementation states, especially during the period from rollout in the early-implementation states to rollout in the late-implementation states.

Stapleton and Livermore argued for testing several comparison groups to examine the sensitivity of impact findings, which is important in a non-experimental framework in which other factors, especially changes in state policy and the economic environment, could influence key TTW outcomes. They indicated that the models should carefully control for observed differences in beneficiary characteristics and compare findings across subgroups of beneficiaries defined by their likely participation in TTW.

The impact evaluation team has since refined the original design outlined in Stapleton and Livermore in consultation with SSA. Our early work in the project specified several opportunities for estimating impacts based on the three approaches by using alternative model specifications for TTW-eligibles and TTW participants as well as for subgroups within each of these beneficiary groups (see Fraker and Stapleton, 2004).

We determined that the strongest approach was to incorporate the pre-post and contemporaneous comparisons of outcomes into a longitudinal fixed effects model to track outcomes for a single beneficiary cohort of Ticket-eligibles before and after TTW rollout. We assumed that TTW might affect all Ticket-eligibles regardless of whether they assign their Ticket and participate in the program. That is, TTW might be associated with general changes in attitudes of SSA staff, participants, and providers regarding return-to-work activities for disability beneficiaries as well as with changes in SSA administrative procedures related to beneficiary earnings and employment. Our process findings from the first two reports indicate that TTW did have some effect in changing the culture in providing return-to-work service in ways that likely affect non-participants as well as participants.

The strategy incorporates and builds on the ideas in the Stapleton and Livermore design report while providing a framework within which methodological decisions are apparent. We measure impacts as the differences in the values of the outcome measures for the treatment group (beneficiaries who were eligible for TTW and were living in states where TTW had already been rolled out) and the contemporaneous values for the comparison group (beneficiaries who were eligible for TTW but were living in states where the program had not yet been rolled out), after controlling for characteristics in the pre-rollout year.

The model uses data for a 2001 cohort of beneficiaries for whom we track changes in outcomes through 2002 and 2003 and compare changes across the different phases of the rollout schedule (Appendix Exhibit D.1). During this period, some states had implemented TTW (Phase 1 states in 2002 and 2003 and Phase 2 states in 2002), and some had not (Phase 2 states in 2002 and Phase 3 states in 2002 and 2003) (Exhibit XIII.3).

It is important to note that our model primarily captures changes in Phase 1 states relative to the remaining states. To the extent that the impacts of TTW vary across the states included in each phase, our confidence in extrapolating the Phase 1 impact estimates to the other rollout phases is diminished. Moreover, the generalizability of the Phase 1 results could be compromised if TTW was rolled out differently in Phase 2 or Phase 3 states.

As discussed in more detail in Section F, we also considered other approaches for estimating impacts that are variants of the approaches in the Stapleton and Livermore report, including participant comparisons and alternative pre-post and contemporaneous comparison models that incorporated several cohorts of beneficiaries. However, for two reasons, these approaches were less feasible than originally envisioned in the Stapleton and Livermore report. First, Ticket participation rates, which our first report showed as less than 1 percent in Phase 1 states, were much lower than the 5 percent participation rate assumed in the design report by Stapleton and Livermore. Second, the TTW program rolled out during a period of economic recession and large SSA caseload growth, posing difficulties in making comparisons across several cohorts. For these reasons, we determined that the fixed

effects longitudinal model would be best suited for producing credible impact estimates relative to the alternative options during the early rollout periods covered in our data.

C. DATA DESCRIPTION

We developed a multiyear longitudinal file for the purpose of generating impact estimates that includes administrative data from several SSA and RSA administrative data sources. We created a single multiyear longitudinal analysis file by using three data sources: the Ticket Research File, which contains data from several SSA files on DI and SSI beneficiaries; SSA's Summary Earnings Records (SER) file; and a file on closed SVRA cases maintained by RSA.

We selected a sample of DI and SSI beneficiaries between age 18 and 57 in January 2001 (one year before Ticket rollout) whose outcomes we tracked through 2003. We included in our sample only beneficiaries who met the Ticket eligibility requirements once the program was implemented in their state following rollout. Given our expectation that impacts would vary with age and program groups based on our findings in the participation analysis (Chapter III), we stratified the sample by nine program-age subgroups.

We estimated TTW impacts for the core outcome measures—SVRA-only service enrollment, total service enrollment, annual earnings, and annual benefit amounts—that are reported in Chapter XIII. We also estimated TTW impacts for three supplemental measures that captured a more restrictive measure of the core earnings and benefit outcomes requiring a change in overall benefit and/or employment status. The supplemental measures include annual employment, any annual benefit receipt, and left cash benefits due to work.

One important limitation of the longitudinal data file is that core service enrollment measures from RSA data are available only through 2002 (the first rollout year), whereas the core and supplemental employment, earnings, and benefit variables are available through 2003 (the second rollout year). The amount of information on service enrollment was limited because of a two-year lag in obtaining case closure information for SVRA cases. At the time of the analysis, we had SVRA data through calendar year 2004 such that we could confidently use the file to identify nearly all SVRA participants only through 2002. In contrast, the lag in obtaining SSA earnings and benefit amount outcomes was shorter, allowing us to estimate impacts for these outcomes through 2003.

The implication is that we can estimate TTW impacts on all outcomes in the year of Ticket mailing and on selected outcomes (earnings, benefit amounts, and each of the supplemental outcomes) in the year after Ticket mailing. Below, we provide a brief description of the three data sources for the longitudinal file, describe our sample selection for the impact analysis, and present descriptive statistics on each of the outcomes measures.

1. Ticket Research File (TRF) Includes SSA Program and TTW Participation Information

The TRF is an analytic file constructed by MPR to support the research needs of the TTW evaluation. It contains longitudinal and one-time administrative program data on approximately 16 million beneficiaries between age 18 and 64 who participated in SSI or DI programs at any time between 1994 and 2004. The data are housed on the mainframe computer at SSA's data center and are available on a restricted basis.

The data are culled from various SSA files, including:

- Disabled Beneficiaries and Dependents (DBAD) and Master Beneficiary Record14 (MBR14), which includes information on DI beneficiaries characteristics, payments and address information
- Quarterly ZIP files, which provide historical snapshots of MBR; the files save information about previous places of residence because MBR address information is over-written when new information is obtained
- SSI Longitudinal file, which provides information about SSI receipt and payments from the Supplemental Security Record (SSR)
- REMICS and SORD files, which record historical snapshots of SSR for retaining information on earlier use of SSI work incentives and previous places of residence
- NUMIDENT file, which provides information about beneficiary deaths
- Disability 831/832/833 files, which include information on disability determinations and other characteristics, such as education (information on continuing disability reviews also can be obtained from DBAD for DI beneficiaries)
- Integrated Data Management System (formerly called the Disability Control File or DCF), which includes information on participation in the TTW program and other earnings and post-entitlement actions
- Vocational Rehabilitation Reimbursement Management System (VRRMS), which includes data on payments that SSA has made to state vocational rehabilitation agencies for the purpose of assisting beneficiaries in returning to work

MPR staff worked with SSA staff to link these files across systems and to produce TRF for use in this evaluation. The longitudinal TRF variables include monthly benefit payments, program eligibility, EN service enrollment, state of residence, and disability diagnosis codes. The one-time variables include SSN, date of birth, and race/ethnicity. Data from SSI and

DI sources are combined in a single TRF record per beneficiary. Hildebrand, Loewenberg, and Phelps (2005) provide full documentation for TRF.

2. Summary Earnings Records File (SER) Includes Annual Earnings Information

We supplemented the program information in TRF with information on annual earnings by using data from SER. We accessed SER by following protocols developed by SSA and MPR staff that allowed our team to include analyses of earnings trends that would otherwise have been impossible to conduct or would have required substantial effort on the part of SSA staff. Contractors do not have direct access to SER because the Internal Revenue Service (IRS) collects the data, which are then subject to IRS access rules rather than SSA access rules. A formal agreement between IRS and SSA authorizes the linking of SER and SSA data for the TTW evaluation. The agreement stipulates that non-SSA evaluation staff would not have direct access to SSN-identified linked data and that the data would remain in a secure site in an SSA facility.

SER provides person-level annual data on Social Security–taxable earnings, with one record in the file for each person. IRS wage records are the primary source of information for SER. A record contains the annual FICA earnings amount for each year from 1937 to the present.

3. Rehabilitation Services Administration 911 Data (RSA-911) Includes Information on SVRA Service Enrollment

To obtain information on use of SVRA services, we included data from the RSA-911 Case Service Report, a data file containing information on all closed SVRA cases. RSA updates the file annually to include an additional record for each SVRA case that closed during the most recently completed federal fiscal year. An individual may receive SVRA services repeatedly over a lifetime, resulting in several case records in the file. A record includes the individual's Social Security number (SSN) and information on his or her disability characteristics, services, health insurance, and employment.

Through a formal data-sharing agreement between SSA and RSA, MPR obtained a 100 percent extract of the RSA-911 file containing records for SVRA cases closed in fiscal years 1997 through 2004 (October 1997 through September 2004).

For purposes of the TTW impact analysis, the key data elements in an RSA-911 record are the date of SVRA eligibility determination and the date of case closure. These two pieces of information allow us to create a complete timeline of eligibility by disability beneficiaries for SVRA services during the period covered by the RSA data.

4. Research File for TTW Impact Estimates

The longitudinal analysis file contains annual individual-level data on 24 variables from the three data sources described above. An SSI or DI beneficiary was included in the file if the following criteria were satisfied:

- The individual would have been eligible for benefits in at least one month between January 1996 and December 2004 if TTW had been in effect throughout that period. Ticket eligibility is defined as a DI or SSI beneficiary in current pay status who is not classified as Medical Improvement Expected (MIE) and is not a former child SSI recipient awaiting an adult redetermination.
- The individual was 18 years old or older on January 1, 2004.
- The individual was alive and less than 65 years old on December 31, 2004.

Some 9.6 million beneficiaries satisfied these initial criteria, each of whom has at least one record in the longitudinal file. The file contains a record for each year, 1996 through 2004, for each beneficiary who was at least 18 years old on January 1. The file contains 83,898,010 records.

Most of the variables in the longitudinal analysis file come from TRF and include date of birth, gender, race and ethnicity, years of education, date of first eligibility for disability benefits, primary disabling condition, annual combined DI and SSI benefit, DI and SSI payment status, whether the beneficiary left cash benefits due to work, and Ticket mailing and assignment dates. The one RSA data variable is an indicator of eligibility for SVRA services or of an actively assigned Ticket at any time during the year. The analysis file does not include a measure of annual earnings from SER, but protocols consistent with data security requirements were developed by SSA staff to link that variable temporarily to the file for specific analyses.

Our sample for the impact estimates includes beneficiaries from the longitudinal analysis file who were between age 18 and 57 in January 2001. We excluded older beneficiaries because they generally had low TTW participation rates during rollout relative to younger beneficiaries and relatively fewer prospects for using TTW to return to work. For example, Chapter III reports that beneficiaries age 18 to 24 were 5.7 times more likely to participate than those age 55 or older. We track outcomes for the younger cohort through the end of 2003. We imposed the age restriction to ensure that beneficiaries in our sample were under age 60 through the end of the observation period and, presumably, far enough away from retirement age to benefit from TTW. Hence, we assume the impact for the population who were over age 58 in 2001 was zero.² We will verify this assumption in future reports.

With all of our outcomes measured in annual terms, we also exclude new beneficiaries who started receiving benefits in calendar year 2001. This restriction allows for full comparisons of annual outcomes since calendar year 2001. In addition, it is difficult to assign base-year earnings and benefit amounts for new beneficiaries. For example, it is likely that many new beneficiaries, especially DI beneficiaries, will have reported at least some

²In future reports, we could test this restriction. However, the size of the beneficiary subgroup over age 57 is large, making the costs of generating impacts for this subgroup particularly costly.

annual earnings according to SER, but we cannot determine what portion of the earnings came before versus after benefit receipt (or before or after the onset of disability). New beneficiaries could have received substantial base-year earnings before program enrollment, which could introduce a downward bias in estimates of the earnings impacts of TTW in later years. In future reports, we can relax these assumptions about base-year earnings so as to develop impact estimates for new beneficiaries by using modified versions of the outcome measures.

As discussed in more detail in Section D, we also included data from earlier cohorts to generate sensitivity tests for our impact estimates. We tracked outcomes for these cohorts based on the criteria noted above. We conducted sensitivity tests with samples from the 1999 cohort (1999–2001), 1998 cohort (1998–2000), 1997 cohort (1997–1999), and 1996 cohort (1996–1998).

5. Impacts Estimated for Program-Age Groups

Based on our selection criteria, the impact analysis sample includes 4.7 million beneficiaries. We stratified the sample by nine program-age groups to allow for projected differences in outcomes across age and, to a lesser extent, program titles. The stratification is consistent with our findings of differences in participation rates across age and, to a lesser extent, program groups in the participation analysis in Chapter III. The age categories are 18 to 39, 40 to 49, and 50 to 57. The Title groups, which are mutually exclusive, are DI-only, SSI-only, and concurrent (DI and SSI) beneficiaries. The concurrent group includes beneficiaries who received DI and SSI benefits at some time during the course of the base year and serial beneficiaries who receive first SSI and then DI in the course of a year (defined as 2001 for the impact analysis). The SSI-only group includes only beneficiaries who received SSI during the year. Finally, the DI-only group includes only beneficiaries who received DI during the year. The sample sizes for each program-age group are particularly large, ranging from a minimum of 193,000 (concurrent beneficiaries age 50 to 57) to 1.1 million (DI-only beneficiaries age 50 to 57).

6. Core Outcomes Included in Impact Analysis

We assessed the TTW's impact on annual measures of:

- SVRA-only service enrollment
- Total (SVRA and EN) service enrollment- upper bound
- Total service enrollment- lower bound
- Benefit amounts
- Earnings

The SVRA-only measure was of interest to assess whether the Ticket had any impact in either inducing or crowding out SVRA enrollment by beneficiaries. This impact could be negative because some beneficiaries who, under TTW, only receive services from ENs after the rollout would have enrolled for services at an SVRA in the absence of TTW. It could be positive if TTW stimulated enrollment at SVRAs. The estimate of the impact on SVRA enrollment might also be downward biased if the TTW rollout increased the number of Phase 1 SVRA enrollees who were not included in the RSA data available for the analysis because their cases were still open.

The first total service enrollment measure (upper bound) captured SVRA and EN participation as measured in the RSA-911 and/or TRF data files. This measure included beneficiaries who had assigned their Ticket or had an open SVRA case sometime during the course of that calendar year. It addressed a limitation of the SVRA-only measure by capturing impacts on the private rehabilitation market through the inclusion of EN service enrollment information. In years before the TTW rollout in a phase group, a beneficiary was counted as enrolled for services in a calendar year only if the beneficiary had an open case at an SVRA in at least one month as measured in the RSA-911 data. In the first rollout year for Phase 1 (calendar 2002), a beneficiary was considered to be enrolled for services if, in at least one month, the beneficiary had an open SVRA case and/or has a Ticket assigned to an EN or SVRA as measured in the RSA-911 and/or TRF data files.

We refer to impact estimates using this first total service enrollment measure as an “upper bound” because we were concerned that it included an upward bias related to a change in the methods used to account for SVRA and, to a lesser extent, non-SVRA participants after the Ticket rollout. In 2002, Phase 1 beneficiaries enrolled for services under a Ticket assignment to an SVRA would be counted as enrolled in the TRF even if their SVRA case had not closed, whereas before the rollout, only closed cases are counted. Thus, this total service enrollment impact estimates might capture increases in measured enrollment that reflects only changes in measurement that coincided with the TTW rollout. It might also miss some beneficiaries who used non-SVRA rehabilitation service providers before the rollout in each phase. However, we believe the bias associated with non-SVRA participation is minimal based on a finding from our process analysis that suggests that the vast majority of ENs had not served beneficiaries prior to the TTW rollout, except possibly under contract to provide services to SVRA clients (Thornton et al. 2004).

To address this potential upward bias, we created a second total service enrollment variable (lower bound) that measured SVRA participation using the SVRA-only measure and added in the proportion of Phase 1 beneficiaries who had assigned a Ticket to an EN during at least one month in 2002.³ We use this measure to generate a “lower bound” impact estimate because it assumed that, if anything, the SVRA-only estimates had a downward bias, and the non-SVRA providers rarely gave services to beneficiaries except under contract to

³ Unlike the upper bound measure, the lower bound measure did not include open SVRA participants measured in the TRF file in any month of 2002.

SVRAs. Our qualitative findings from the first Ticket evaluation report suggest that this assumption is reasonable (Thornton et al. 2004).

The earnings measure came from SER and the benefit amount measure from TRF. Both variables were topcoded at the 99.5 percentile values. This restriction was more important for the benefit amount variable because some beneficiaries receive substantial retroactive payments during the course of the year that can make their annual benefit amounts large.

Our constructed benefit amount variable includes the sum of the federal SSI amount paid and the DI benefit amount due. The amount paid represents the benefit actually received by the beneficiary in a particular month and the amount due is the amount that SSA is scheduled to pay the beneficiary. The two amounts can differ if there are changes in the beneficiary's status. For example, if SSA retroactively has adjusted a beneficiary's record for an overpayment due to excess earnings, the amount due will be less than the amount paid. In later months, collection of overpayments will reduce amounts paid relative to amounts due.

We would have preferred to use the amount paid variables for both SSI and DI, because the amount paid accurately captures SSA's benefit cost experience. At the time of our analysis, however, the DI benefit amount paid was not available. The implication for the measurement of this outcome is likely limited given that there generally are only relatively small differences between the amount paid and amount due variables in DI.⁴ The differences between amount due and amount paid are larger for SSI beneficiaries because, unlike DI, the benefit offset schedule reduces benefit amounts for lower levels of earnings. We will include the amount paid and due fields for both SSI and DI in future TRF extracts. For future reports, we plan to estimate impacts on benefit amounts using the amount paid and amount due fields to test whether substantial differences exist.

We also modified the benefit amount variable so that its values in 2002 and 2003 were fixed at 2001 levels unless the beneficiary was employed at some time during the analysis period. This adjustment was necessary because benefit amounts can vary for several administrative reasons. For example, DI and SSI benefits may fluctuate if a beneficiary's check was reduced as a consequence of a previous overpayment or a change in living arrangement. Because we do not have enough information to identify all the reasons for administrative changes in benefit checks, we control for this variation by allowing benefit amounts to change only when a person has reported earnings from SER. This eliminates annual variation in benefit amounts for those with no earnings in any sample year as a source of estimation error.

⁴ New beneficiaries are an exception, because in their award month they often receive a retroactive payment for earlier months of DI eligibility. As discussed in Section C.4, we excluded new beneficiaries from our analysis. The timing could also be an issue because benefits due can be retroactively adjusted while benefits paid is not generally retroactively adjusted.

7. Three Supplemental Outcomes in Impact Analysis

We examined three supplemental outcome measures—annual employment status, annual benefit receipt, and an indicator from SSA administrative records of beneficiaries who left the DI and SSI programs because of work (“left benefits due to work”). These measures are more restrictive than the core measures of benefit and earnings outcomes. For this reason, we expected the impacts on the supplemental measures to be smaller than those on core annual earnings and benefit amount measures. The annual employment status measure came from SER and was defined as any earnings during the calendar year. The annual benefit receipt and left-rolls-due-to-work measures came from TRF. The annual benefit receipt measure was defined as the receipt of any DI or SSI benefits in the calendar year. The left-rolls-due-to-work measure is an SSA-defined concept that identifies beneficiaries who leave DI or SSI for a full year because of work.

8. Descriptive Statistics on Core and Supplemental Outcome Measures

Exhibit D.2 summarizes the core and supplemental outcome measures for the sample during the period of our analysis, defined as calendar years 2001 through 2003. The summary consists of a brief definition followed by mean values across each of the nine program-age groups. For all measures except service enrollment, the values are averaged over the three years for the impact analysis (2001–2003). In addition, all dollar-denominated values were adjusted for inflation to reflect January 2004 real dollars.

D. ECONOMETRIC MODEL

Our longitudinal fixed effects model for estimating impacts has been commonly used to estimate non-experimental impacts in the econometrics literature (Wooldridge 2002 Chapter 10). Our model identifies TTW program impacts through variation in the outcomes at the individual and state levels as well as variation over time. A key to identifying TTW impacts is disentangling the effects of the TTW program from other state programmatic and economic changes.

We present a full derivation of our model to illustrate our assumptions for generating impact estimates. The derivation is important in identifying all sources of variation captured in our impact estimates, including potential confounding state programmatic and economic factors that could bias our estimates. We use the derivation to specify a general econometric model for generating impacts and to motivate our sensitivity tests of the assumptions underlying the model. We test these assumptions by using sensitivity tests originally proposed by Heckman and Hotz (1989), where we apply our econometric model to earlier cohorts of beneficiaries when TTW was not available. If our assumptions are valid, the estimated coefficient on our treatment indicator should be zero during the periods before rollout given that the TTW program did not exist.

1. Derivation of Longitudinal Fixed Effects Model for Estimating Impacts

The regression model for estimating net TTW impacts can be summarized using the following general specification:

$$\text{Equation (1)} \quad Y_{isy} = \alpha + \lambda T_{sy} + \gamma M_i + \omega N_{iy} + \sigma P_s + \delta X_{sy} + c_y + d_i + e_{iy} + h_s + k_{sy} + u_{isy}$$

where,

Y_{isy} = outcome variable (service enrollment, earnings, benefit amounts, employment, benefit receipt, and left due to work) for individual i , in state s , during year y

T_{sy} = TTW treatment indicator in state s in year y

M_i = time invariant observed characteristics for individual i

N_{iy} = time variant observed characteristics for individual i during year y (such as education)

P_s = time invariant observed characteristics in state s (such as major industries /employment laws/immigration levels within the state)

X_{sy} = time variant observed characteristics in state s during year y (such as unemployment rate)

c_y = unobserved national fixed effect

d_i = time invariant unobserved characteristics for individual i

e_{iy} = time variant unobserved characteristics for individual i during year y (such as health)

h_s = time invariant unobserved state characteristics in state s

k_{sy} = time variant unobserved state characteristics in state s during year y (such as the state disability program environment)

u_{isy} = random disturbance for individual i , in states, during year y assumed to be uncorrelated with T_{sy} , M_i , N_{iy} , P_s , X_{sy} , and c_y .

The coefficient λ is the mean impact of TTW, and γ , ω , σ , and δ are vectors of parameters associated with the respective vectors of observed and unobserved characteristics M_i , N_{iy} , P_s , and X_{sy} .

To consistently estimate λ , the TTW impact, we utilize the individual level longitudinal data and estimate equation (1) using fixed effects estimation technique. We can transform Equation (1) into a fixed effects model as follows:

$$\text{Equation (2)} \quad Y_{isy} = a_i + b_s + c_y + \omega N_{iy} + \delta X_{sy} + \lambda T_{sy} + \varepsilon_{isy}$$

where,

$a_i = (M_i \gamma + d_i)$ = individual (observed and unobserved) fixed effects for individual i

- $b_s = (P_s \sigma + h_s)$ = state (observed and unobserved) fixed effects for state s
- c_y = annual national fixed effect for year y , and
- $\varepsilon_{isy} = e_{iy} + k_{sy} + u_{isy}$ = unobserved disturbance term that incorporates unobserved time variant individual and state characteristics and random disturbance for individual i in state s in year y .

The fixed effect estimation approach we used eliminates the time-invariant unobserved and observed individual, state, and time effects by analyzing variation around the temporal mean for the individual.⁵ Only the time-variant observed and unobserved individual and state effects remain. Because the disturbance term in equation (2) incorporates time-variant unobserved components (e_{iy} and k_{sy}) along with a random component (u_{isy}), the key identifying fixed effects assumption for our purposes is that the changes in the time variant unobserved components are uncorrelated with the changes in Ticket eligibility status indicator (T_{sy}) (see Wooldridge, 2002, chapter 10, section 10.5 for a discussion of this assumption in fixed effects models).

As outlined in Section B, the advantage of this strategy is that it allows each source of variation—cross-state, pre-post, and within-period cross-person—to play a role in identification, where the relative influence of each is allowed to be determined by the data. This specification allows us to control for unobserved factors at the individual and state levels that do not change over time, as well as unobserved national time effects. Hence, this model maximizes opportunities to reduce bias from fixed individual confounding factors, such as motivation and severity of impairment, and fixed state confounding factors, such as differences in infrastructures for delivering services to people with disabilities.

2. Final Econometric Model for Impact Estimates

We modified our specification for Equation 2 based on the available data, which included limited options for specifying observable individual and state time variant terms (N_{iy} and X_{sy}). Possible controls that could be included for the individual time variant

⁵ Fixed effects estimation involves transforming equation (1) first by averaging over time-period y to get: Equation (1a):

$$\bar{Y}_{is} = \alpha + \bar{T}_s \lambda + M_i \gamma + \bar{N}_i \omega + P_s \sigma + \bar{X}_s \delta + \bar{c}_y + d_i + \bar{e}_i + h_s + \bar{k}_s + \bar{u}_{is}$$

where the variables with horizontal-bars over them indicate the mean over time of the original variable. Subtracting equation (1a) from equation (1) for each time-period y gives the fixed effects transformed equation, Equation (1b):

$$Y_{isy} - \bar{Y}_{is} = (T_{sy} - \bar{T}_s) \lambda + (N_{iy} - \bar{N}_i) \omega + (X_{sy} - \bar{X}_s) \delta + (e_{iy} - \bar{e}_i) + (k_{sy} - \bar{k}_s) + (u_{isy} - \bar{u}_{is})$$

As is apparent from equation (1b), the fixed effects transformation removes the time-invariant (fixed) observed and unobserved effects at individual (i.e., $M_i \gamma + d_i$), state ($P_s \sigma + h_s$) and time variant fixed effect at the national level (c_y).

characteristics, such as education, changes in health, and marital status, are either not well measured or completely unavailable in the SSA administrative data. We explored several options for controlling for state time variant characteristics, though we only identified the county unemployment rate as a viable option. The use of county data on unemployment is important given that economic conditions can vary substantially within states and likely influence the employment and benefit outcomes of SSA beneficiaries (Stapleton et al. 1995). We considered several other possible state time-variant factors correlated with Ticket outcomes, but concluded we could not adequately quantify these factors. In our process analysis and discussions with SSA, we did not identify any major state-specific policy change that directly influenced TTW outcomes and could be quantified in a meaningful variable (e.g., state terms interacted with year dummies that could be used to capture a major state policy change). Additionally, we did not find reliable quantitative data on other state time-varying factors that might influence outcomes, such as changes in the support infrastructure for people with disabilities (e.g., transportation, accommodation changes) and changes in the availability of support services (e.g., mental health services).

Based on the available data, we estimated the following econometric model:

$$\text{Equation (3)} \quad Y_{icsy} = a_i + b_s + c_y + \delta X_{cy} + \lambda_1 T1_{sy} + \lambda_2 T2_{sy} + \varepsilon_{icsy}$$

Where:

Y_{icsy} = outcome for individual i in county c in state s during year y (use of employment and training services, benefit receipt and amount, and employment and earnings)

a_i = individual (observed and unobserved) fixed effects for individual i

b_s = state (observed and unobserved) fixed effects for state s

c_y = time fixed effects for year y

X_{cy} = unemployment rates in county c in year y

$T1_{sy}$ = mailing-year TTW treatment indicator in state s in year y

$T2_{sy}$ = year-after-mailing TTW treatment indicator in state s in year y (earnings and benefit amount equations only)

ε_{icsy} = unobserved disturbance term for individual i in county c in state s in year y

The replacement of the single treatment dummy (T_{sy}) with two dummies ($T1_{sy}$ and $T2_{sy}$), differentiated by rollout year, allows the impacts of TTW to differ across the first two years. The key coefficients of interest in the model are λ_1 and λ_2 , which represent impacts in the year of Ticket mailing and the year after Ticket mailing, respectively. The impact estimates themselves are a relatively sophisticated version of differences-in-difference estimates—estimates based on comparison of mean changes for a treatment group to the corresponding changes for comparison group. Specifically, for earnings and benefits, the

impact estimate in the year of Ticket mailing, represented by λ_1 , is a combination of a) mean changes in outcomes from 2001 to 2002 in Phase 1 states net of contemporaneous mean changes in the corresponding outcomes in both Phase 2 and 3 states, and b) mean changes in outcomes from 2002 to 2003 in Phase 2 states net of contemporaneous mean changes in outcomes in Phase 3 states, holding constant changes in other factors that are captured in the model. Similarly, the impact estimates for these outcomes in the year after Ticket mailing, represented by λ_2 , is the mean change in cohort outcomes from 2001 to 2003 in Phase 1 states net of the corresponding change in Phase 3 states, holding other factors captured in the model constant. With TTW fully implemented in all states after 2003, there is no comparison group in the year after Ticket mailing for Phase 3 states.

For the service enrollment outcome, the model is capable of estimating an impact only in the year of Ticket mailing (i.e., λ_1) because, as noted above, RSA administrative data on SVRA enrollment in calendar year 2003 were incomplete when the analysis was conducted. The first-year estimates are mean changes in cohort service enrollment in Phase 1 states net of mean changes in Phase 2 and 3 states only, holding other factors captured by the equation constant; the first year of the Phase 2 rollout does not affect these estimates.

3. Motivation for Heckman-Hotz Sensitivity Tests

A key assumption of our model is that our measures of TTW treatment status ($T1_{sy}$ and $T2_{sy}$) are uncorrelated with the error term (ε_{icsy}) in Equation 3. Given the limitations in our ability to identify individual and state time variant characteristics in the data, which are reflected in the e_{ty} or k_{sy} components of the error term, it is important to test whether this assumption holds.

We are especially concerned that unobserved time variant state (k_{sy}) effects could influence outcomes based on the criteria used to select states for Phase 1 TTW rollout. Specifically, we are concern that (k_{sy}) may be correlated with our treatment indicators ($T1_{sy}$ and $T2_{sy}$). Stapleton and Livermore (2002) noted that the criteria for the selection of Phase 1 TTW states included the following:

- Whether the state is a recipient of a State Partnership Initiative Cooperative agreement
- Whether the state operated sites in the Employment Support Representative pilot
- Strength of the advocacy community
- Whether the state is a Disability Redesign “Prototype” State
- Strength of the provider community, including the vocational rehabilitation agency and U.S. Department of Labor “One-Stop” sites

- Recommendations of the regional commissioners
- Size of the beneficiary population (with the goal of including no more than 30 percent in the first round)

Because we have longitudinal data from pre-ticket rollout years for individuals in all three rollout-phase states, we can use the method suggested by Heckman and Hotz (1989) to test whether such differences in mean outcome changes existed across the phase groups prior to the Ticket rollout.

The test involves applying the model in Equation (3) to earlier cohorts of beneficiaries not exposed to the treatment. Specifically, for the cohort on the rolls r years prior to the year we used to determine the cohort for the impact estimates themselves (i.e., the 2001 - r beneficiary cohort), we estimated the following model, in which the TTW treatment indicators are all advanced by r years (i.e., as if the rollout had occurred r years earlier):

$$\text{Equation (4)} \quad Y_{icsw} = a_i + b_s + c_y + \delta' X_{cw} + \lambda_1' T1_{sw} + \lambda_2' T2_{sw} + \varepsilon_{icsw}$$

Where the variables and coefficients are all the same as Equation 3, except the year subscript w , which represents the pre-Ticket cohort and is equal to $y-r$ years. For example, given the 3 years covered in our model, the first pre-Ticket cohort would be 3 years prior to the 2001 cohort. Hence, w in this case would equal 1998 given that $y=2001$ and $r=3$.

Because the TTW was actually rolled out r years later than is implied by the treatment dummies in this specification, the “impact” estimates are expected to be insignificantly different from zero. That is, we hypothesize that:

$$E(\lambda_1') = 0 \text{ and } E(\lambda_2') = 0$$

Estimates that are significantly different from zero for λ_1' or λ_2' would indicate the presence of significant variation in changes in mean outcomes across phase groups prior to TTW rollout. It would also indicate a potential violation of our assumption that $T1_{sy}$ and $T2_{sy}$ are uncorrelated with the error term (ε_{icsy}) in Equation 3. Hence, our confidence in the impact estimates would be undermined for the actual TTW rollout because differences found in the pre-TTW period might well persist after the TTW rollout – especially if they are found for several earlier cohorts. That is, the TTW impact estimates would be confounded with the effects of the factors that led to the significant results in the pre-TTW period.

As with our base set of equations, we estimate regression models by using three years of panel data, which include a baseline cohort year and two years of follow-up data. We chose the most recent cohorts when the follow-up period did not overlap with TTW rollout. Consequently, we selected beneficiary cohorts before 1999 to avoid any overlap and chose the most recent beneficiary cohorts available for each outcome in our data research file

(which dated back to 1996).⁶ We created four pre-Ticket cohorts for the earnings and benefit outcomes (1999, 1998, 1997, and 1996) but were limited to two pre-TTW cohorts for service enrollment outcomes (1999 and 1998) because our linked RSA data include information on service enrollment only since 1998. We apply the sensitivity tests only for those outcomes and age-program groups for which we find large numbers of statistically significant impact estimates when the model is applied to the 2001 cohort.⁷ The test is formally applied by checking whether the estimated coefficients on $T1_{sw}$ and $T2_{sw}$, represented by λ_1' and λ_2' are significantly different from zero.

E. FINDINGS

Exhibits D.3 through D.9 present our impact findings across each of the nine age-program groups for:

- SVRA-only service enrollment (Exhibit D.3)
- Total service enrollment- Upper Bound Estimates (Exhibit D.4)
- Annual earnings (Exhibit D.5)
- Annual benefit amounts (Exhibit D.6)
- Annual employment (Exhibit D.7)
- Any positive benefit amounts (Exhibit D.8)
- Left cash benefits due to work (Exhibit D.9)

We report impact estimates for each of the outcomes above, which are represented by the estimated coefficients for λ_1 and λ_2 in Equation 3. λ_1 and λ_2 represent the impact

⁶ The method used to capture the county unemployment rate measure changed between 1999 and 2000 as part of the Local Area Unemployment Statistics (LAUS) redesign. The change created a break in county level unemployment rate measure time series in 2000. Because this change did not influence post-2000 cohorts, it has no effect on our impact estimates. More detailed information about these changes are available at www.bls.gov/lau. This change influences the coefficient estimate for the county unemployment rate in the 1998 and 1999 cohorts because we are measuring unemployment rates pre and post-1999. However, it does not affect our substantive conclusions from the sensitivity tests; we find the coefficient estimates on λ_1 and λ_2' do not substantively change when drop the county unemployment rate measure from our model. Our estimates presented in each of the exhibits include the county unemployment rate for all cohorts (including the problematic years), though we do not report the coefficient for this estimate. The separate estimates without the county unemployment rate are available upon request.

⁷ In some of our findings below, we find impact estimates that are statistically insignificant for all but a small number of program-age subgroups (e.g., SVRA-only). In these cases, we conclude that TTW generally had an insignificant impact on the outcome; thus, we do not attempt to conduct further sensitivity tests for the smaller subgroups.

estimates in the year of Ticket mailing and the year after Ticket mailing, respectively. The sensitivity test results include estimates from earlier cohorts using the same econometric model from the impact analysis. The findings from these tests are represented by λ_1' and λ_2' in Equation 4. We report statistically significant results at the 1% level because the large sample sizes make it highly likely that we will find even small effects statistically significant.

1. SVRA-Only Service Enrollment Measures and Lower Bound Total Service Enrollment Impact Estimates

The estimates based on the SVRA-only enrollment measure indicate impacts close to zero for all age-program groups, and we do not find any evidence that TTW had a statistically significant negative impact on any group (Exhibit D.3). The largest negative statistically significant point estimate is -0.3 percentage points for age 18 to 39 concurrent beneficiaries and age 40 to 49 SSI-only beneficiaries had a positive impact estimate of 0.1 percentage point. All other groups had statistically insignificant point estimates. Given the generally insignificant findings, we did not conduct further sensitivity tests for these estimates.

As noted in Chapter XIII, based on the findings of a zero impact on SVRA-only services, we generate a lower-bound estimate of TTW's impact on total service enrollment under the assumption that the only increases in enrollment occurred through non-SVRA ENs. Our findings in the second report indicate that just under 0.1 percent of the Phase 1 caseload (approximately 10 percent of TTW participants in Phase 1 states) enrolled in a non-SVRA EN. Hence, a reasonable lower-bound estimate for the service enrollment impacts based only on non-SVRA ENs is 0.1 percentage point.

2. Upper-Bound Impacts of TTW on Total Service Enrollment

The estimated impacts of TTW for the Ticket-mailing year (represented by λ_1) on service enrollment are positive in all age-program groups and generally are larger among younger beneficiaries (Exhibit D.4, 2001 cohort). The impact estimates for beneficiaries age 18 through 39 imply an increase of less than 0.5 percentage points (concurrent beneficiaries) to just over 0.6 percentage points (DI-only beneficiaries) in enrollment in SVRA and EN services during the initial Ticket rollout year (2002). In contrast, the estimated impacts for the two older groups of beneficiaries are smaller, ranging from 0.1 percentage point (age 50 to 57 concurrent beneficiaries) to 0.4 percentage points (age 40 to 49 SSI-only recipients and age 40 to 49 concurrent beneficiaries).

In general, the magnitude of the impacts is consistent with the participation findings in Chapter III and, hence consistent with the expectation of relatively small relative service impacts. The magnitude of the impacts ranges from 0.1 to 0.6 percentage points, indicating a small increase in total service enrollment in each of the age-program groups. The largest point estimate is for DI-only beneficiaries age 18 to 39 and the smallest for concurrent beneficiaries age 50 to 57. The larger impacts for younger beneficiaries are consistent with higher TTW participation rates for this population. In general, we do not observe large

differences in impacts on service enrollment across program categories within each age group.

Our confidence in the impact estimates is bolstered by our findings of generally insignificant estimates for λ_1' in our Heckman-Hotz tests for earlier cohorts. We generally find small, statistically insignificant point estimates and, in some cases, small negative estimates for the estimate of λ_1' (e.g., DI beneficiaries age 40 to 49 and DI beneficiaries in the 1999 cohort). Because the coefficient estimates on λ_1' are generally small or insignificant, we conclude that trends in service enrollment changed appreciably across states only after rollout, thereby affirming our impact estimates above.

3. Annual Earnings Impacts Are Too Small to Differentiate from Historical Variation

The basic model yields estimated impacts of TTW on annual earnings that are negligible in the year when Tickets were mailed (i.e., the coefficients for λ_1) and generally positive, although small, in the year after mailing (i.e., the coefficients for λ_2) (Exhibit D.5, 2001 cohort). For the mailing year, the estimated impacts across all program-age groups are close to zero. Impacts on earnings in the year following Ticket mailing are larger among beneficiaries under age 50 regardless of program group. For those age 18 to 39, impact estimates in the year after rollout range from \$25 (SSI-only) to \$37 (DI-only) per TTW-eligible beneficiary. For beneficiaries age 40 to 49, impact estimates fall in the same range for DI-only and SSI-only beneficiaries, but the estimated impact on annual earnings by concurrent beneficiaries is not significantly different from zero. Finally, among beneficiaries age 50 to 57, the estimated impacts of TTW on earnings for DI-only and SSI-only beneficiaries are positive but small (\$13 and \$11 per eligible, respectively) while, again, the estimated impact on concurrent beneficiaries is not significantly different from zero. In general, these impact findings are as expected as there were no immediate effects in the year of mailing (while most TTW-eligible beneficiaries were presumably pursuing service and employment opportunities) and stronger positive effects in the year after Ticket mailing.

However, when we apply the Heckman-Hotz sensitivity test, we find that our estimates of λ_2' are statistically different from 0. In many cases, the estimate for λ_2' for those in the pre-Ticket cohorts are larger than the corresponding estimate for λ_2 in the 2001 cohort. For example, the λ_2 estimate for DI-only beneficiaries age 18 to 39 in our 2001 cohort is \$37, which is lower than the estimates for λ_2' in each of the pre-Ticket cohorts (\$54 in 1999, \$94 in 1998, \$123 in 1997, and \$120 in 1996). In other cases, such as SSI-only beneficiaries age 40 to 49, the coefficients in the pre-Ticket cohorts sometimes are smaller than in the 2001 cohort (e.g., 1998 cohort) and sometimes larger (e.g., 1999 cohort). For this reason, we are skeptical that the point estimates for the 2001 cohort reflect true TTW impacts on earnings. Instead, the estimates from earlier cohorts indicate a persistently positive trend in earnings levels in Phase 1 states relative to Phase 2 and Phase 3 states before TTW rollout.

4. Annual Benefit Amount Impacts Are Too Small to Differentiate from Historical Variation

Similar to our earnings estimates, our basic model indicates that TTW had small negative impacts on disability benefit amounts during the year that Tickets were mailed and larger negative impacts in the following year (Exhibit D.6, 2001 cohort). The estimates for λ_1 are \$19 or less for all program-age groups during the mailing year. The impacts in the year after Ticket mailing (λ_2) are larger for the youngest age groups and concurrent beneficiaries. For example, the impact estimates in the year after Ticket mailing for concurrent beneficiaries from youngest to oldest are -\$60, -\$30, and -\$37, respectively. By comparison, the impact estimates from youngest to oldest for DI-only beneficiaries are smaller at -\$41, -\$21, and -\$12, respectively; and those for SSI-only beneficiaries are smaller yet at -\$23, -\$19, and -\$8.

However, as with the earnings equations, our estimates for λ_2' are positive and significant from the Heckman-Hotz sensitivity tests, indicating that our benefit amount impacts are not distinctly different from historical trends in these outcomes. The estimated values of λ_2' in the pre-Ticket cohorts generally are larger than the corresponding estimates of λ_2 from the 2001 cohort, although the reverse is true for some cases.

5. Phase-Specific, Time-Varying Factors More Strongly Influence Earnings and Benefit Amounts Than Service Enrollment

The differential trends in earnings and benefit amounts in the pre-TTW period across states were likely related to state differences with respect to policy and economic conditions. As noted, SSA picked the Phase 1 states on the basis of their readiness for TTW. Thus, the pre-TTW outcome trends likely reflect factors related to readiness for TTW. The findings also indicate that differences in state environments had a larger effect on earnings and benefit amounts than on service enrollment. It is plausible that differential trends in the policy and economic environment had a stronger effect on relative trends in earnings and benefit amounts than on relative trends in service enrollment, given the more direct effects associated with changes in economic conditions and earnings.

It is important to note that the differences in impacts represent relative trend differences (i.e., factors associated with r_{sy} in Equation 15) across states, not aggregate state differences. It is likely that economic conditions affect all of our outcomes. While our econometric model makes adjustments for any initial differences that exist across states, our ability to control for any within-state changes in policy or economic conditions (beyond controls for the unemployment rate) is limited. We argue that it is these within-state differences that have a stronger influence on earnings and benefits relative to service enrollment.

6. Impacts for Supplemental Benefits and Earnings Outcome Measures Are Generally Insignificant

Our impact estimates for the supplemental measures of employment and benefits—annual employment, annual benefit receipt, and exit from the disability program rolls due to work—all are very small compared to the estimated impacts on the core outcomes discussed above (Exhibits D7 through D9). For most program-age groups, the estimates are not significantly different from zero.

F. OTHER APPROACHES CONSIDERED IN ESTIMATING TTW IMPACTS

We explored three alternative approaches to estimating impacts based on the general options outlined in Stapleton and Livermore (2002), including:

- ***Participant Comparisons.*** There are several options for estimating participant models that would make contemporaneous comparisons of outcomes for TTW participants to contemporaneous outcomes for selected non-participants in the same state. The advantage of the options is that they would provide an estimate of the effect of the treatment on the treated. In addition, the estimates could be used as a comparison to those from the Ticket-eligible models above to assess the credibility of the results. We provided a full summary of these options in Fraker and Stapleton (2004).
- ***Comparison Models Using Several Historical Cohorts.*** A DID model similar to the one used in our analysis in Section D could be estimated with several beneficiary cohorts. It would increase sample size for the estimates and allow for tests of differences in TTW impacts across beneficiary cohorts. For example, rather than including a single cohort back to Ticket, we could theoretically include in our analysis all cohorts from 1996 to 2002.
- ***Other Models (Pre-Post-Only or Contemporaneous Comparison-Only) Using a Single Cohort.*** A final set of options would use a single cohort to focus on only pre-post comparisons or contemporaneous comparisons across states. For example, a within-state pre-post cohort comparison, as originally envisioned in the second approach proposed by Stapleton and Livermore (2002), could be readily estimated by comparing outcomes in, say, Phase 1 states before Ticket rollout to estimates in the same states after rollout. Alternatively, a contemporaneous comparisons model could compare outcomes across states (but not over time).

Below, we briefly provide our rationale for excluding these models by discussing their limitations relative to the fixed effects longitudinal model presented in earlier sections.

1. Low Ticket Participation Rates and Challenges in Identifying TTW Participants Limited the Viability of Matching Models (participant comparisons)

A general participant impact model can be specified directly by defining T as an indicator of whether the individual assigned his or her Ticket to an EN. Specifically, an alternative measure of T could be incorporated into Equation 16 that compares outcomes of participants and non-participants. In such a model, the treatment indicator would identify whether a beneficiary was a Ticket participant while the estimate of λ would represent the effect of the treatment on the treated.

As pointed out by Stapleton and Livermore (2002), the key concern with the general participant impact model is that participants differ from nonparticipants in ways that cannot be adequately observed (for example, in severity of disability, support from family and friends, motivation, availability and accessibility of jobs). The probability of a very low participation rate—likely to be less than one percent in the first rollout year compared to the five percent assumed by Stapleton and Livermore—likely exacerbates the potential problem in identifying differences in participants and non-participants. In fact, Chapter III discusses the challenges in identifying TTW participants based on observable characteristics in administrative data and the importance of characteristics observed in survey data after controlling for those observed in administrative data.

Even with higher participation rates than those observed, experience from MPR's evaluation of the State Partnership Initiatives (SPI) (Peikes et al. 2005) and anecdotal findings from the process study suggest that it would likely be impossible to control adequately for unobserved factors. In the SPI projects, Peikes et al. estimated impacts by matching participants to non-participants based on propensity scores and then comparing non-experimental estimates to experimental estimates based on differences in outcomes for randomly assigned control and treatment groups. The latter were presumably unbiased, implying that the intervention did not produce a substantial impact on employment outcomes. The researchers found that, although they matched on hundreds of variables, had large pools of beneficiaries for the comparisons, and tested the process several times, the non-experimental methods produced impact estimates that were often statistically significant substantially different from the experimental estimates. As the experimental estimates are not biased, the non-experimental estimates are presumably biased, most likely because of unobserved differences between the treatment and comparison groups.

For these reasons, we did not view participant comparisons as a feasible option for estimating impacts. It is also unlikely that participant comparisons will be a feasible way to estimate future impacts.

2. Historical Cohort Comparison Approaches Are Limited Because of the Business Cycle

An alternative to a fixed effects longitudinal model using a single cohort was to use the same approach to estimate impacts using historical cohorts or repeated cross-sections. A panel data approach would pool data from multiple cohorts (from as early as 1996 given the availability of administrative data). The econometric model for estimating impacts would be

the same as Equation 16, except that it would include additional controls for each cohort to control for cohort effects. A second approach would be to use repeated cross-sections of cohorts using the same model presented in Equation 16, except that it would include individual identifiers (e.g., race, age, impairment) rather than individual fixed effects. Under both approaches, the primary challenge is finding a comparison group of beneficiaries in similar economic and policy conditions.

Of the two possibilities for estimating impacts using historical cohorts, the panel option would provide a stronger approach relative to a repeated cross-section approach, because the latter does not allow use of individual fixed effects to control for many unobservable, but important, individual factors.

In effect, the historical cohort approach would pool the data from the 2001 cohort used to produce the estimates presented here with the earlier cohorts used to produce estimates for the Heckman-Hotz tests, and eventually add later cohorts. The historical cohort estimates would net out a blend of the estimates of the λ_i' from the pre-TTW cohorts from the estimates of the λ_i for the later cohorts. It is apparent from the estimates reported that the estimated impacts on employment services for Phase 1 would change little under this approach, but many of the estimates for earnings and benefits would be zero or significant with a sign opposite that predicted.

The problem with the historical cohort approach is that the factors behind the non-zero estimates of the λ_i' for earnings and benefits likely change over time, reflecting changes in macroeconomic conditions as well as changes in the policy environment other than TTW. We illustrate the effects of macroeconomic conditions by tracking employment rates across cohorts of beneficiaries from 1997 to 2003. As shown in Exhibit D.10, the annual employment rate of disability beneficiaries changed significantly in the periods before TTW rollout, rising to 19.9 percent in 2000 from 18.7 percent in 1997. Conversely, during the 2001 recession and the weak labor market that followed, the employment rate of disability beneficiaries fell to 16.2 percent in 2003, a relative reduction of about 20 percent from the 2000 peak. Consequently, estimates of TTW impacts based on any historical cohort approach would likely be confounded with the effects of changes in the business cycle. Unfortunately, it is difficult to control for the economic and policy changes that would likely be confounded with TTW impacts. Although we could explore the use of various state or even county variables for this purpose, we would still question their adequacy for the task. Our evidence suggests that any TTW impacts are small; therefore, we would need to be confident that we have accurately controlled for changes in the policy and economic environment. Otherwise, we would never know whether most or all of the estimated “effects” of TTW reflect the impacts of TTW rather than some error in the specification of the relevant environmental and policy changes.

3. Other Single Cohort Models Offered Less Flexibility Relative to DID Approach

We considered other single cohort models that use a more simplified estimate of pre-post within-state comparisons and contemporaneous comparisons across states. These models identify a specific source of variation in TTW outcomes across rollout (pre-post) or

across states (contemporaneous comparisons). A pre-post approach to estimating TTW impacts would estimate impacts by comparing variation over time in outcomes for a treatment group of TTW-eligibles in Ticket states to outcomes for a cohort of pre-TTW beneficiaries who would have been eligible for TTW if it had been in effect. For example, the TTW impacts could be calculated by comparing the outcomes of a cohort of beneficiaries in Phase 1 states after the rollout of TTW to the outcomes of a pre-TTW cohort of beneficiaries in the same states before rollout. Alternatively, a contemporaneous comparisons-only approach would compare the outcomes of states where TTW had been implemented (for example, Phase 1 states in 2002) to states where it had not been implemented (for example, Phase 2 and 3 states in 2002).

However, both of these approaches were limited to our fixed effects longitudinal model in large part because they incorporated less information. For example, the pre-post-only estimate impacts would be more heavily influenced by national changes that could affect outcomes. As shown in Exhibit D.10, these effects could be quite large depending on the pre-post period chosen. Similarly, contemporaneous-only comparison estimates would be subject to unobserved state differences, which, based on the selection of Ticket states in Phase 1, could be large. For these reasons, we did not consider these models for estimating initial impacts.

Nevertheless, we might consider a pre-post-only model to estimate impacts in future reports if we reached and could identify an economic period that is similar to some or all of the pre-TTW periods for which we have comparable data (1997 through 2001). We might be approaching an economy that is similar to the strong economy of the late 1990s, but it is too early to know whether such an economic period will be achieved soon. Further, long-term changes in the policy environment and long-term structural changes in the economy might still be confounded with the impact of TTW, even if we can precisely control for the effects of the business cycle.

Exhibit D.1. TTW Implementation Schedule Through 2003

Year	Phase 1 States	Phase 2 States	Phase 3 States
2003	Year after Ticket mailing	Year of Ticket mailing	Prior to TTW rollout
2002	Year of Ticket mailing	Prior to TTW rollout	Prior to TTW rollout
2001	Prior to TTW rollout	Prior to TTW rollout	Prior to TTW rollout

Exhibit D.2. Three Year Average (2001-2003) of Outcome Measures for the 2001 DI and SSI Beneficiary Cohort Used in the Impact Analysis

Outcome Measure	Definition	Data Source	Mean Values (percentages unless otherwise indicated)									
			Total	DI-only			SSI-only			Concurrent		
			All Ages	Age 18-39	Age 40-49	Age 50-57	Age 18-39	Age 40-49	Age 50-57	Age 18-39	Age 40-49	Age 50-57
CORE OUTCOME MEASURES												
Service enrollment	The beneficiary was an open SVRA case in at least one month of the year or had an actively assigned Ticket sometime during the year.	RSA-911 and TRF	5.3	9.3	5.0	2.4	8.9	3.5	1.8	11.4	5.9	3.4
RSA-only service enrollment	The beneficiary was an open SVRA case in at least one month of the year	RSA-911	4.8	8.4	4.6	2.2	8.1	3.2	1.7	10.5	5.5	3.2
Annual Earnings	Total earnings from FICA-covered employment over the year.	SER	\$706	\$1,831	\$1,017	\$570	\$634	\$311	\$157	\$934	\$438	\$259
Benefit amount	The total combined DI and SSI benefit amount over the year. Benefit amounts are fixed to 2001 values unless the beneficiary had some earnings reported in the SER.	TRF	\$8,740	\$8,677	\$10,038	\$10,904	\$6,729	\$6,826	\$6,985	\$7,638	\$7,944	\$8,089
SUPPLEMENTAL OUTCOME MEASURES												
Annual employment	Total earnings during the year are greater than \$0	SER	16.3	30.3	18.0	11.7	20.8	9.3	4.7	29.2	16.1	10.0
Annual benefit receipt	Total combined DI and SSI benefit amount during the year is greater than \$0	TRF	99.8	99.8	99.9	100.0	99.4	99.6	99.7	99.9	100	100
Left cash benefits due to work	Beneficiary is classified by SSA as having left cash benefits due to work and remained off for the entire year	TRF	0.01	0.01	0.00	0.00	0.04	0.02	0.01	0.00	0.00	0.00
Number of beneficiaries (x 1,000)			4,694	413	910	1,096	599	492	386	315	289	193

Source: Tabulations based on linked TRF, RSA-911, and SER longitudinal data files. In accordance with the Internal Revenue Service/SSA data agreement, MPR researchers did not access earnings data with personal identifiers.

Exhibit D.3 Impact Estimates on SVRA-only Service Enrollment for Ticket-Eligible Beneficiaries Age 18 to 57, by Age-Program Group

Variables	DI-only Beneficiaries			SSI-only Beneficiaries			Concurrent Beneficiaries		
	Age 18-39	Age 40-49	Age 50-57	Age 18-39	Age 40-49	Age 50-57	Age 18-39	Age 40-49	Age 50-57
Impact Estimates									
2001 Cohort									
Ticket mailing year (λ_1)	-0.10	-0.06	-0.04	-0.03	0.11*	0.02	-0.29*	0.03	-0.10
Ticket one year after mailing (λ_2)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Observations (x 1,000)	826	1820	2192	1198	984	772	630	578	386

Source: Tabulations of econometric estimates are based on linked TRF and RSA-911 longitudinal data files.

Notes: The dependent variable equaled one if the beneficiary was an open SVRA case in at least one month of the year; otherwise, it equaled zero. All models include an intercept and controls for the county unemployment rate, individual fixed effects, state fixed effects, and year fixed effects. The impact estimates are regression coefficients (x 100) from separate econometric analyses for each age-program group. The sensitivity tests were not applied here because most impact estimates were statistically insignificant.

*Significant at the 1% level.

Exhibit D.4 Impact Estimates and Sensitivity Tests for Total (SVRA and EN) Service Enrollment Outcomes For Ticket-Eligible Beneficiaries Age 18 to 57, by Age-Program Group (Upper Bound)

Variables	DI-only Beneficiaries			SSI-only Beneficiaries			Concurrent Beneficiaries		
	Age 18-39	Age 40-49	Age 50-57	Age 18-39	Age 40-49	Age 50-57	Age 18-39	Age 40-49	Age 50-57
Impact Estimates (percentage)									
2001 Cohort									
Ticket mailing year (λ_1)	0.62*	0.38*	0.16*	0.53*	0.41*	0.15*	0.45*	0.44*	0.13*
Ticket one year after mailing (λ_2)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Observations (x 1,000)	826	1820	2192	1198	984	772	630	578	386
Sensitivity Tests Using the Same Model for Earlier Cohorts									
1999 Cohort									
λ_1'	-0.04	-0.10*	-0.07*	-0.21*	-0.03	-0.06*	-0.12	-0.12*	-0.06
λ_2'	NA	NA	NA	NA	NA	NA	NA	NA	NA
Observations (x 1,000)	818	1679	1973	1231	893	700	657	532	357
1998 Cohort									
λ_1'	-0.10	-0.09*	-0.04*	-0.14*	0.07	0.01	-0.17*	-0.07	0.09
λ_2'	NA	NA	NA	NA	NA	NA	NA	NA	NA
Observations (x 1,000)	827	1608	1831	1263	847	655	665	505	339

Source: Tabulations of econometric estimates are based on linked TRF and RSA-911 longitudinal data files.

Notes: The dependent variable equaled one if the beneficiary was an open SVRA case in at least one month of the year or had an actively assigned Ticket at some time during the year; otherwise, it equaled zero. All models include an intercept and controls for the county unemployment rate, individual fixed effects, state fixed effects, and year fixed effects. The impact estimates are regression coefficients (x 100) from separate econometric analyses for each age-program group. λ_1 represents the impact estimate in the year of Ticket mailing. The sensitivity test results include estimates from earlier cohorts using the same econometric model from the impact analysis. λ_1' represents the estimate of λ_1 applied to an earlier cohort. Summaries of the coefficient estimates appear in Exhibit XIII.4.

*Significant at the 1% level

Exhibit D.5 Impact Estimates and Sensitivity Tests for Annual Earnings For Ticket-Eligible Beneficiaries Age 18 to 57, by Age-Program Group

Variables	DI-only Beneficiaries			SSI-only Beneficiaries			Concurrent Beneficiaries		
	Age 18-39	Age 40-49	Age 50-57	Age 18-39	Age 40-49	Age 50-57	Age 18-39	Age 40-49	Age 50-57
Impact Estimates									
2001 Cohort									
Ticket mailing year (λ_1)	-1.97	0.41	-0.69	-6.19	2.21	-0.28	-6.16	-7.81	-6.09
Ticket one year after mailing (λ_2)	37.00*	35.91*	13.19*	25.27*	28.02*	11.00*	29.73*	12.98	-10.36
Observations (x 1,000)	1240	2730	3289	1797	1475	1158	945	868	580
Sensitivity Tests Using the Same Model for Earlier Cohorts									
1999 Cohort									
λ_1'	2.06	-9.69*	3.20	-12.57*	-3.50	-1.49	-24.20*	-22.39*	-10.43*
λ_2'	54.14*	41.60*	19.93*	39.25*	32.86*	8.90*	33.47*	9.29	6.16
Observations (x 1,000)	1226	2518	2815	1846	1339	1004	985	798	514
1998 Cohort									
λ_1^*	6.76	-6.39	2.55	1.79	-4.47	-3.65	-26.56*	-19.57*	1.30
λ_2^*	94.49*	31.39*	14.25*	70.47*	26.80*	10.06*	24.79*	2.11	24.37*
Observations (x 1,000)	1240	2411	2616	1895	1271	938	998	757	487
1997 Cohort									
λ_1^*	18.54*	7.27	4.52	20.02*	7.67*	-2.92	17.91*	3.74	-6.64
λ_2^*	123.27*	61.88*	22.64*	81.43*	41.23*	19.80*	61.61*	31.66*	4.47
Observations (x 1,000)	1269	2319	2401	1936	1201	873	1013	721	461
1996 Cohort									
λ_1'	18.14*	2.21	-0.61	16.96*	7.74*	6.37*	-1.27	0.08	-13.84*
λ_2'	120.79*	40.81*	19.31*	72.67*	52.75*	19.22*	64.73*	40.90*	-7.78
Observations (x 1,000)	1295	2229	2182	1978	1157	812	1036	687	434

Source: Tabulations of econometric estimates are based on linked TRF files and SER longitudinal data files. In accordance with the Internal Revenue Service/SSA data agreement, MPR researchers did not access earnings data with personal identifiers.

Notes: The dependent variable equaled the total Social Security earnings from employment during the year. All models include an intercept and controls for the county unemployment rate, individual fixed effects, state fixed effects, and year fixed effects. The impact estimates are regression coefficients from separate econometric analyses for each age-program group. λ_1 and λ_2 represent the impact estimates in the year of Ticket mailing and the year after Ticket mailing, respectively. The sensitivity test results include estimates from earlier cohorts using the same econometric model from the impact analysis. λ_1' and λ_2' represent the estimates of λ_1 and λ_2 applied to an earlier cohort.

*Significant at the 1% level.

Exhibit D.6 Impact Estimates and Sensitivity Tests for Adjusted Federal Benefit Amount For Ticket-Eligible Beneficiaries Age 18 to 57, by Age-Program Group

Variables	DI-only Beneficiaries			SSI-only Beneficiaries			Concurrent Beneficiaries		
	Age 18-39	Age 40-49	Age 50-57	Age 18-39	Age 40-49	Age 50-57	Age 18-39	Age 40-49	Age 50-57
Impact Estimates									
2001 Cohort									
Ticket mailing year (λ_1)	-10.69*	-3.76*	-4.43	-10.93*	-4.97	-1.59	-18.90*	-13.51*	-15.89*
Ticket one year after mailing (λ_2)	-41.48*	-21.54*	-12.92	-22.56*	-19.12*	-8.13*	-60.25*	-30.29*	-37.14*
Observations (x 1,000)	1240	2730	3289	1797	1475	1158	945	868	580
Sensitivity Tests Using the Same Model for Earlier Cohorts									
1999 Cohort									
λ_1'	-3.23	-2.30	-2.92*	-12.79*	0.71	1.47	-10.60*	3.16	-2.82
λ_2'	-18.87*	-23.54*	-13.78*	-31.92*	-6.64*	-0.71	-9.42	-0.12	1.36
Observations (x 1,000)	1226	2518	2815	1846	1339	1004	985	798	514
1998 Cohort									
λ_1'	-10.06*	-7.74*	-6.35*	-18.41*	-0.81	4.07*	-2.49	-1.14	-9.81*
λ_2'	-41.91*	-28.98*	-18.61*	-33.45*	-8.87*	0.86	-6.54	-5.15	-12.99*
Observations (x 1,000)	1240	2411	2616	1895	1271	938	998	757	487
1997 Cohort									
λ_1'	-9.71*	-9.22*	-5.47*	-13.10*	-3.21*	0.15	-3.95	-1.60	-0.92
λ_2'	-49.85*	-29.01*	-18.89*	-30.57*	-9.44*	-3.98*	-13.42*	-12.56*	-6.60
Observations (x 1,000)	1269	2319	2401	1936	1201	873	1013	721	461
1996 Cohort									
λ_1'	-12.86*	-5.14*	-2.71*	-6.93*	-3.44*	-0.09	-0.32	-4.52	0.16
λ_2'	-50.22*	-20.78*	-15.18*	-22.51*	-13.69*	-5.77*	-27.23*	-18.26*	-5.57
Observations (x 1,000)	1295	2229	2182	1978	1157	812	1036	687	434

Source: Tabulations of econometric estimates are based on longitudinal TRF data files.

Notes: The dependent variable is the total combined DI and SSI benefit amount over the year. All models include an intercept and controls for the county unemployment rate, individual fixed effects, state fixed effects, and year fixed effects. In estimating impacts, we allow benefits to vary from their base year only when a person reports employment. We make this restriction to avoid fluctuations in benefit amounts that might not be related to Ticket, such as overpayments. The impact estimates are regression coefficients from separate econometric analyses for each age-program group. λ_1 and λ_2 represent the impact estimates in the year of Ticket mailing and the year after Ticket mailing, respectively. The sensitivity test results include estimates from earlier cohorts using the same econometric model from the impact analysis. λ_1' and λ_2' represent the estimates of λ_1 and λ_2 applied to an earlier cohort.

*Significant at the 1% level.

Exhibit D.7 Impact Estimates for Annual Employment For Ticket-Eligible Beneficiaries Age 18 to 57, by Age-Program Group

Variables	DI-only Beneficiaries			SSI-only Beneficiaries			Concurrent Beneficiaries		
	Age 18-39	Age 40-49	Age 50-57	Age 18-39	Age 40-49	Age 50-57	Age 18-39	Age 40-49	Age 50-57
Ticket mailing year (λ_1)	-0.00	0.00	-0.02	-0.28*	0.02	0.04	-0.14	-0.16	-0.04
Ticket one year after mailing (λ_2)	-0.04	-0.16	-0.29*	-0.50*	0.13	0.09	0.12	-0.26	-0.19
Observations (x 1,000)	1240	2730	3289	1797	1475	1158	945	868	580

Source: Tabulations of econometric estimates are based on linked TRF files and SER longitudinal data files. In accordance with the Internal Revenue Service/SSA data agreement, MPR researchers did not access earnings data with personal identifiers.

Notes: The dependent variable equaled one if the beneficiary total earnings during the year were greater than \$0; otherwise, it equaled zero. All models include an intercept and controls for the county unemployment rate, individual fixed effects, state fixed effects, and year fixed effects. The impact estimates are regression coefficients (x 100) from separate econometric analyses for each age-program group. The sensitivity tests were not applied here because most impact estimates were statistically insignificant.

*Significant at the 1% level.

Exhibit D.8 Impact Estimates for Any Positive Benefit Amounts For Ticket-Eligible Beneficiaries Age 18 to 57, by Age-Program Group

Variables	DI-only Beneficiaries			SSI-only Beneficiaries			Concurrent Beneficiaries		
	Age 18-39	Age 40-49	Age 50-57	Age 18-39	Age 40-49	Age 50-57	Age 18-39	Age 40-49	Age 50-57
Ticket mailing year (λ_1)	0.01	0.00	0.01	-0.08*	-0.02	0.01	-0.05*	-0.03*	0.01
Ticket one year after mailing (λ_2)	-0.05	-0.04*	-0.02	-0.18*	-0.05	-0.01	0.00	-0.03	0.01
Observations (x 1,000)	1240	2730	3289	1797	1475	1158	945	868	580

Source: Tabulations of econometric estimates are based on longitudinal TRF data files.

Notes: The dependent variable equaled one if the combined total DI and SS benefit amount over the years was greater than \$0; otherwise it equal zero. All models include an intercept and controls for the county unemployment rate, individual fixed effects, state fixed effects, and year fixed effects. In estimating impacts, we allow benefits to vary from their base year only when a person reports employment. We make this restriction to avoid fluctuations in benefit amounts, such as overpayments, that might not be related to the Ticket. The dependent variable equaled one if the beneficiary's Total combined DI and SSI benefit amount during the year is greater than \$0; otherwise, it equaled zero. The impact estimates are regression coefficients (x 100) from separate econometric analyses for each age-program group. The sensitivity tests were not applied here because most impact estimates were statistically insignificant.

*Significant at the 1% level.

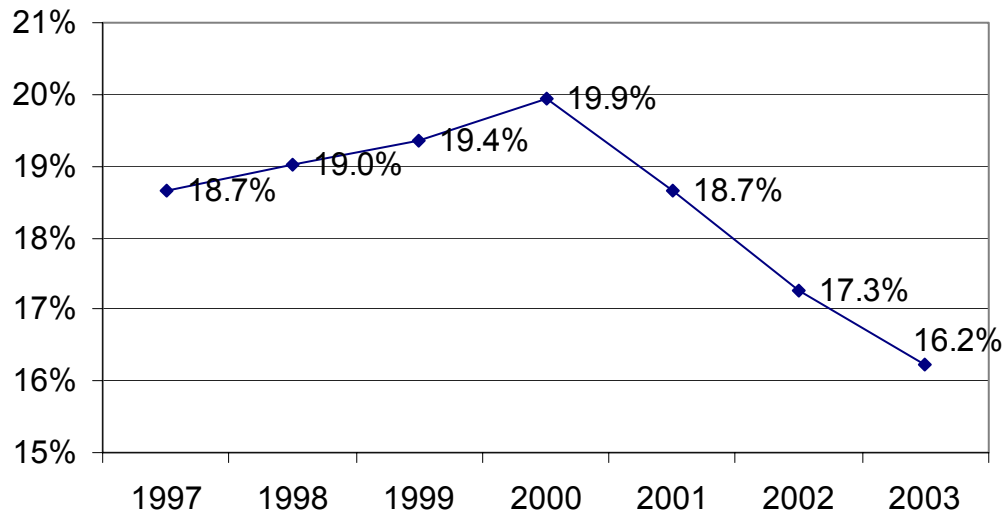
Exhibit D.9. Impact Estimates for Left Cash Benefits Due to Work For Ticket-Eligible Beneficiaries Age 18 to 57, by Age-Program Group

Variables	DI-only Beneficiaries			SSI-only Beneficiaries			Concurrent Beneficiaries		
	Age 18-39	Age 40-49	Age 50-57	Age 18-39	Age 40-49	Age 50-57	Age 18-39	Age 40-49	Age 50-57
Ticket mailing year (λ_1)	0.00	-0.00	-0.00	-0.00*	0.00	0.00	0.00	0.00	-0.00
Ticket one year after mailing (λ_2)	0.00	-0.00*	-0.00*	-0.00*	0.00	0.00*	0.00	0.00	-0.00
Observations (x 1,000)	1240	2730	3289	1797	1475	1158	945	868	580

Source: Tabulations of econometric estimates are based on longitudinal TRF data files.

Notes: The dependent variable equaled one if SSA classified the beneficiary as having left cash benefits due to work and remained off for the entire year; otherwise it equaled zero. All models include an intercept and controls for the county unemployment rate, individual fixed effects, state fixed effects, and year fixed effects. The impact estimates are regression coefficients (x 100) from separate econometric analyses for each age-program group. The sensitivity tests were not applied here because most impact estimates were statistically insignificant.

*Significant at the 1% level.

Exhibit D.10. Annual Employment Rate of Disability Beneficiaries Age 18 to 57, 1997 - 2003

Source: Tabulations are based on linked TRF and SER data files. In accordance with the Internal Revenue Service/SSA data agreement, SSA staff produced these tabulations; MPR researchers did not access earnings data with personal identifiers. The sample includes cross-sections of SSI and DI beneficiaries who received 12 months of benefits in each year. A person was employed if s/he had any earnings in the SER during the calendar year.

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APPENDIX E

**DEFINING THE ADEQUACY OF INCENTIVES
(AOI) GROUPS USING SURVEY AND
ADMINISTRATIVE DATA**

The TTW legislation identifies four groups of beneficiaries as likely to find it difficult to obtain services in the performance-based program environment. These groups, referred to as the adequacy of incentives (AOI) groups, are:

- Group 1: Individuals with a need for ongoing support services
- Group 2: Individuals with a need for high-cost accommodations
- Group 3: Individuals who earn a subminimum wage
- Group 4: Individuals who work and receive partial cash benefits

Thornton et al. (2004) as well as Stapleton and Livermore (2002) used SSA administrative data on the primary medical diagnosis as the preliminary means to develop a methodology that approximates the size of AOI groups 1 and 2. That approach was considered preliminary because a medical diagnosis is an imperfect indicator of both functional status and the need for technology and other services. With the availability of the NBS data, we can define the AOI groups based on information that allows us to more directly measure the need for ongoing supports and high-cost accommodations.

This appendix describes the survey-based definitions of each AOI group and compares the group 1 and 2 definitions to the definitions based on SSA administrative data. We focus on groups 1 and 2 for two reasons: because they represent the vast majority of AOI beneficiaries and because the SSA earnings data needed to construct the group 3 and 4 definitions for individual survey sample members are not available.¹

¹ SSA and IRS policy does not allow us to merge their individual-level earnings data to the NBS.

A. SURVEY-BASED DEFINITIONS OF AOI GROUPS

The NBS items used to define the AOI groups are shown in Table E.1. As defined, group 1 includes individuals who use supports that are likely to be ongoing (such as a job coach or help from another person at work) and individuals who are likely to need ongoing supports because of their functional status (indicated by very poor mental health, substance abuse, severe physical limitations, or the need for assistance with multiple ADLs). Group 2 includes individuals who use assistive technology and other accommodations and individuals likely to use assistive technology because of sensory impairments or limitations in their ability to get around at home and outside the home. Group 3 includes those whose wages are less than \$5.15 per hour, and group 4 includes those who work and receive partial benefits. Selected characteristics of Phase 1 AOI group members are shown in Table E.2.

B. COMPARING THE DEFINITIONS FOR GROUPS 1 AND 2 BASED ON SURVEY AND ADMINISTRATIVE DATA

Nearly all beneficiaries classified into one of the four AOI groups (99 percent) are also part of the first two groups: those needing ongoing supports—group 1, and those requiring high-cost accommodations—group 2 (see Chapter XVI). In our last report (Thornton et al. 2006), we used primary diagnosis information from SSA administrative data to identify beneficiaries in groups 1 and 2. According to SSA’s disability determination process, the primary diagnosis represents the primary medical reason for SSI or DI eligibility. In contrast, the survey data used to define groups 1 and 2 are more direct indicators of functional status, which we believe to be a better way than the medical condition to classify beneficiaries into groups 1 and/or 2.

Both definitions indicate that a large majority of all beneficiaries fall into at least one of the two AOI groups. Based on the survey-based definition, 69 percent of beneficiaries are classified in at least one of the two groups, with 36 percent needing ongoing supports (group 1), 9 percent needing high-cost accommodations (group 2), and 25 percent needing both, i.e., meeting the criteria for both groups. Based on administrative data, 65 percent are in one of the two groups: 57 percent in group 1 and 8 percent in group 2 (Table E.3). In addition—and in contrast to the survey-based definition—the groups defined by administrative data are mutually exclusive, so beneficiaries cannot meet the criteria for both groups.

According to at least one of the two definitions, more than 87 percent of all beneficiaries are in AOI group 1 or 2, but only 47 percent of all beneficiaries are in group 1 or 2 under both definitions.² Many beneficiaries are in group 1 or 2 according to one definition but not the other. For example, 30 percent of beneficiaries who meet the criteria for group 1 as defined by administrative data do not meet the criteria for either group 1 or 2 as defined by the survey data. Similarly, 34 percent of beneficiaries identified as being in both groups as defined by the survey data are not so identified by the administrative data. Half of the beneficiaries in group 2 according to the administrative data are in both groups 1 and 2 according to the survey data (Table E.3).

² Authors’ calculations are based on data in Table E.3.

Table E.1 AOI Group Inclusion Criteria and Percent of Beneficiaries Meeting Criteria

AOI Group Components	Survey Variables Used to Construct Component	% All Beneficiaries	% All Phase 1 Beneficiaries
Group 1—Need for Ongoing Support			
Required assistance or proxy respondent to complete survey due to poor memory, confusion, not knowing how to answer, or other mental condition	M14_1=1 or m14_7=7 or m14_8=8	19.1	19.6
Lowest 10 th percentile of U.S. adult population for mental health composite summary (MCS score based on the SF-8)	0<=C_mcs8tot LE 36	16.6	17.5
Alcohol abuse based on CAGE index	CageScore_indicator_i eq 1	4.3	3.9
Other indicators of substance abuse	i66 = 1 or i67 = 1 or i73 = 1 or i74 = 1 or i75 = 1 or i76 =1	4.8	4.4
Needs assistance of another person such as interpreter or attendant	i24_7 = 7 or i28_3 = 3 or i32_5 = 5	4.3	4.2
Needs assistance of another person with at least three ADLs and/or IADLs	c_numadlassist_i + c_numiadlassist_i ge 3	26.2	26.5
At least three severe physical limitations	c_numsevphyylim_i ge 3	23.3	26.3
Received assistance from a person at work	c27 = 1 or c33_e = 1	4.1	4.8
Discussed goals with a job coach	(b38 =1 and (b39 = 4 or b42=4 or b45=4))	0.4	0.8
Total AOI Group 1		60.2	62.7
AOI Group 2: Need for High-Cost Accommodations			
Required assistance or proxy respondent to complete survey due to hearing or speech problem	m14_4=4 or m14_5=5	4.2	4.7
Use of assistive technology	i20_1 = 1 or i20_2 = 2 or i20_4 = 4 or i24_3 = 3 or i24_4 = 4 or i24_6 = 6 or i28_1 = 1 or i28_2 = 2	3.3	3.3
Severe sensory limitations	c_numsevsenlim_i ge 1	16.2	18.0
Use of mobility aids	i32_2 = 2 or i32_3 = 3 or i32_4 = 4 or i32_6 = 6 or i32_7 = 7	13.2	14.6

Table E.1 (continued)

AOI Group Components	Survey Variables Used to Construct Component	% All Beneficiaries	% All Phase 1 Beneficiaries
Difficulty getting around at AND outside the home, but doesn't need help from another person to get around	(i45_i = 1 AND i47_i = 1) AND (i46_i = 0 AND i48_i eq 0)	3.7	3.8
Current or former use of an accommodation	c33_a = 1 or c33_d = 1 or c23_3 = 3 or c23_4 = 4 or c23_5 = 5 or c37=1	2.6	2.8
Total AOI Group 2		33.6	35.4
AOI Group 3: Earns a Subminimum Wage			
Working at a wage of less than \$5.15 per hour	if C1 ge 1 and (0<C_MainCurJobHrPay_i <5.15 or 0<C_CurJob2HrPay < 5.15 or 0<C_CurJob3HrPay<5.15 or 0<C_CurJob4HrPay <5.15)	2.9	3.3
AOI Group 4: Works and Receives Partial Cash Benefits			
SSI or concurrent beneficiaries who work and receive benefits	SSI-only or concurrent beneficiary at interview and (k3>0 and (k4=1))	2.6	2.4

Source: 2004 National Beneficiary Survey.

Note: Sample sizes = 7,603 for all beneficiaries; 2,932 for all Phase 1 beneficiaries.

Table E.2. Characteristics of Phase 1 AOI Group Members (AOI Status Defined by Survey-Based Criteria)

Characteristic	All AOI	All Non-AOI	Group 1 Ongoing Support	Group 2 High-cost Accomm.	Group 3 Subminimum Wage	Group 4 Partial Benefits	Group 1 (not in group 2)	Group 2 (not in group 1)	Group 1 and 2
Number	1,862,389	722,656	1,621,722	914,011	84,113	61,635	930,270	222,559	691,452
Percent of Phase 1 Beneficiaries	72.0	28.0	62.7	35.4	3.3	2.4	36.0	8.6	26.7
TTW Participation Rate (%)	0.74	1.0	0.69	0.70	1.45	3.3	0.71	0.81	0.6
Title (%)									
SSDI-only	50.8	57.3	49.1	54.4	60.2	0.0	47.9	66.3	50.6
Concurrent	15.7	16.0	15.9	15.3	20.8	60.7	15.3	11.0	16.7
SSI-only	33.5	26.7	35.1	30.3	19.0	39.3	36.8	22.7	32.8
Mean Monthly Benefit (Federal + State \$)	764.57	829.09	755.76	799.04	741.10	546.96	736.9	854.5	781.2
Months Since Initial Award (%)									
<24	2.4	6.4	2.6	1.6	0.0	0.6	3.1	0.6	2.0
24 - 59	16.1	23.2	15.1	15.5	14.7	12.9	16.9	24.3	12.7
60 - 119	24.5	24.9	23.4	26.6	12.8	14.1	22.3	32.2	24.9
120+	57.0	45.6	58.9	56.2	72.5	72.4	57.7	42.9	60.5
Mean Months Since Initial Award	165.8	136.1	168.7	172.4	199.5	183.0	159.9	147.3	180.5
Childhood Disability Onset (%)	28.7	16.1	29.9	28.2	72.6	63.2	29.1	19.8	30.9
Age in Years (%)									
18 - 24	5.0	4.3	5.2	4.1	8.1	21.9	5.7	2.7	4.6
25 - 39	16.9	18.0	17.5	13.8	21.5	36.9	19.5	10.7	14.8
40 - 54	41.0	31.5	40.8	41.5	46.0	41.0	40.3	41.8	41.5
55 +	37.1	46.3	36.5	40.6	24.4	0.2	34.4	44.8	39.2
Mean Age (Years)	48.2	49.4	48.0	49.6	45.0	36.3	47.1	50.7	49.2
Sex (%)									
Male	49.5	47.7	49.6	50.4	71.9	65.2	48.5	48.2	51.1
Female	50.5	52.3	50.4	49.6	28.1	34.8	51.5	51.8	48.9
Race and Ethnicity (%)*									
White	70.4	67.9	69.7	72.7	85.7	69.9	68.1	74.9	72.0
Black or African-American	22.2	27.9	23.2	19.1	12.1	23.8	25.2	14.5	20.6
Other race	7.5	4.2	7.0	8.2	2.2	6.3	6.8	10.7	7.4
Hispanic or Latino	16.1	12.9	17.3	15.4	0.1	8.2	17.0	8.0	17.7
Parental Education > HS (%)	17.2	18.3	16.7	16.4	20.9	26.0	17.8	19.9	15.3

Table E.2 (continued)

Characteristic	All AOI	All Non-AOI	Group 1 Ongoing Support	Group 2 High-cost Accomm.	Group 3 Subminimum Wage	Group 4 Partial Benefits	Group 1 (not in group 2)	Group 2 (not in group 1)	Group 1 and 2
Education (%)									
Less than HS diploma	42.1	31.7	44.2	40.9	46.3	38.2	43.7	28.7	44.8
HS diploma	34.9	42.8	33.9	32.7	39.3	43.9	36.1	38.7	30.8
More than HS	23.1	25.5	21.9	26.4	14.3	17.9	20.1	32.6	24.4
Marital Status and Living Arrangement (%)									
Lives alone or with unrelated others	39.5	39.8	41.2	42.5	48.4	48.5	37.0	28.7	46.9
Lives with spouse or other relatives, no children	47.1	45.1	46.3	42.8	44.8	42.9	50.9	51.0	40.1
Lives with spouse and own children	6.7	7.3	6.3	7.6	5.8	2.0	6.0	10.5	6.6
Unmarried lives with own children	6.7	7.9	6.2	7.2	1.0	6.6	6.1	9.8	6.4
Income as a Percent of Federal Poverty Level (%)									
<100	52.7	46.3	54.3	51.2	33.1	54.1	54.4	41.6	54.3
100 - 299	34.8	40.5	33.2	35.6	51.7	35.1	33.7	45.3	32.5
300 +	12.5	13.2	12.5	13.2	15.2	10.8	11.9	13.1	13.3
Self-Reported Reason(s) for Limitation (%)*									
Mental illness	35.7	30.6	36.9	25.7	29.4	40.8	45.2	25.4	25.8
Mental retardation	10.6	1.7	12.0	9.9	23.7	24.9	11.5	1.3	12.7
Musculoskeletal	29.9	34.1	30.1	30.8	16.6	10.2	29.3	29.9	31.1
Sensory disorders	11.8	4.6	10.3	18.3	18.6	11.6	5.7	23.9	16.5
Other diseases of the nervous system	17.2	11.2	17.6	22.2	4.4	6.3	12.5	15.6	24.4
Other	61.1	64.6	60.9	68.0	50.1	51.7	54.3	62.3	69.8
No conditions limiting activities	3.6	8.2	3.5	2.0	10.7	10.5	4.9	3.4	1.6
Missing	1.0	1.7	1.2	0.3	6.7	4.1	1.8	0.2	0.3
Obese									
Obese	39.7	39.2	40.3	37.3	29.9	47.7	41.7	34.3	38.3
Substance Abuse									
Substance Abuse	8.8	0.0	10.1	4.0	5.3	11.2	13.7	0.0	5.3
General Health									
Excellent/very good	11.0	7.6	10.9	8.9	40.0	32.2	12.3	9.1	8.9
Good/fair	45.9	62.3	45.9	45.4	47.9	48.1	46.4	46.0	45.2
Poor/very poor	43.1	30.1	43.3	45.7	12.1	19.7	41.3	44.9	45.9
Worked in 2003 (%)									
Worked in 2003 (%)	14.1	12.1	13.5	13.8	91.9	82.0	13.1	12.9	14.1
Working at Interview (%)									
Working at Interview (%)	11.5	5.4	11.0	10.8	100.0	96.7	10.5	8.1	11.6
Goals Include Work/Career Advancement (%)									
Goals Include Work/Career Advancement (%)	30.7	36.1	31.0	27.4	46.1	63.4	33.3	25.9	27.9
Sees Self Working for Pay (%)									
In the next year	22.5	26.3	21.8	19.1	93.7	91.0	24.5	22.0	18.2
In the next five years	28.5	32.6	27.2	24.3	75.9	84.2	31.3	32.4	21.7

Table E.2 (continued)

Characteristic	All AOI	All Non-AOI	Group 1 Ongoing Support	Group 2 High-cost Accomm.	Group 3 Subminimum Wage	Group 4 Partial Benefits	Group 1 (not in group 2)	Group 2 (not in group 1)	Group 1 and 2
Sees Self Working Enough to Stop Disability Benefits									
In the next year	7.8	11.5	7.5	6.6	10.8	21.7	8.9	9.2	5.8
In the next five years	14.9	23.7	14.5	10.8	13.1	33.1	18.3	15.7	9.2

Source: 2004 National Beneficiary Survey.

Note: Sample size = 2,932 for all Phase 1 beneficiaries.

Table E.3. AOI Group 1 and 2 Distributions Based on the Survey and Administrative Data Criteria

AOI Group Based on Administrative Data	AOI Group Based on Survey Data				Total
	Not in AOI Group 1 or 2	Group 1 only	Group 2 only	In both Groups 1 and 2	
Not in AOI Group 1 or 2					
Number (weighted)	1,078,571	924,680	283,197	746,584	3,033,031
Row percent	36%	30%	9%	25%	100%
Column percent	40%	30%	36%	34%	35%
AOI Group 1					
Number (weighted)	1,498,405	2,119,210	351,659	1,058,502	5,027,775
Row percent	30%	42%	7%	21%	100%
Column percent	55%	68%	45%	49%	57%
AOI Group 2					
Number (weighted)	137,762	79,064	147,656	361,535	726,017
Row percent	19%	11%	20%	50%	100%
Column percent	5%	3%	19%	17%	8%
Total					
Number (weighted)	2,714,737	3,122,953	782,511	2,166,621	8,786,823
Row percent	31%	36%	9%	25%	100%
Column percent	100%	100%	100%	100%	100%

Source: 2004 National Beneficiary Survey matched to SSA administrative data. Sample size = 7,603.

Assuming that the survey-based definition is preferable and that it represents the “true” AOI status of beneficiaries, we calculated the sensitivity of the AOI definitions that are based on administrative data. The sensitivity measures the percentage of beneficiaries in each AOI group (as defined by the survey data) who are correctly identified as being in each group as defined by the administrative data. As shown in Table E.4, the administrative data perform only moderately well in terms of identifying individuals in group 1 (60 percent are correctly identified) and do somewhat better in terms of identifying individuals who are in one group or the other without distinguishing between the groups (68 percent are correctly identified). The administrative data perform particularly poorly in terms of identifying members of group 2 (only 17 percent are correctly identified).

Table E.4. Sensitivity of the Administrative Data-Based Classifications

AOI Group	Sensitivity
Group 1 (all)	0.60
Group 2 (all)	0.17
All in either group 1 or 2	0.68
All not in either group 1 or 2	0.40

Source: 2004 National Beneficiary Survey matched to SSA administrative data.

Note: Sample size = 7,603. The sensitivity is equal to the percentage in each AOI group based on the survey definition correctly identified using the administrative data-based definition (true positives/(true positives + false negatives).

Table E.5 shows the degree to which the classification based on administrative data agrees with the classification based on survey data by primary diagnosis (as documented in the administrative data). Column C shows the AOI group to which a beneficiary is assigned by the primary diagnosis from the administrative data, if the primary diagnosis corresponds to an AOI group. Under the definition based on administrative data, all beneficiaries with a primary diagnosis assigned to one of the two AOI groups are classified as being in those groups. The percentage of beneficiaries with a given primary diagnosis who would be in group 1 and/or 2 based on the survey data is shown in columns E through H. The findings indicate that there is considerable variation across primary diagnoses in the degree to which the two definitions concur. For example, according to the administrative data, all beneficiaries with a fracture of the vertebral column and spinal cord injury (ICD 806) are in group 2. Similarly, 93 percent of beneficiaries with that primary diagnosis are in group 2 as defined by the survey data. In contrast, only 46 percent of beneficiaries with a primary diagnosis of epilepsy (ICD 345), which falls into group 1 under the administrative data-based definition, meet the survey criteria for either group 1 or 2.

In addition to epilepsy, several other diagnoses appear to be categorized incorrectly according to the administrative data. Physiological malfunction arising from mental factors (ICD 306), unspecified mental retardation (ICD 319), and osteoarthritis and allied disorders (ICD 715) are categorized as group 1, while inflammatory and toxic neuropathy (ICD 357) are categorized as group 2. However, fewer than 65 percent of beneficiaries with each of these primary diagnoses would fall into either group as defined by the survey data (Table E.5).

The definitions based on administrative data also exclude several diagnoses—common to over 80 percent of beneficiaries—from one or both groups that would otherwise be included were the groups defined by survey data. These diagnoses include obesity and other hyperalimentation (ICD 278), specific delays in development (ICD 315), other retinal disorders (ICD 362), heart failure (ICD 428), other peripheral vascular disease (ICD 443), and spina bifida (ICD 741).

Table E.5. Survey-Based AOI Group Assignment by Primary Diagnosis

(A) Primary Diagnosis	(B) Description	(C) Admin Data AOI Group	(D) % Beneficiary Population	Percent of Beneficiaries in Each Survey-Based AOI Group			
				(E) Survey Group 1 only	(F) Survey Group 2 only	(G) Survey Group 1 and 2	(H) Survey Group 1, 2, or both
Total			100%	36%	9%	25%	69%
Mental Illness			27.5%	46	7%	16%	69%
296	Affective psychoses	1	13.1	47	7%	16	70
295	Schizophrenic disorders	1	6.9	49	6%	12	67
294	Other organic psychotic conditions (chronic)	1	3.4	38	5%	25	68
300	Neurotic disorders	1	2.5	45	10%	17	71
301	Personality disorders	1	0.9	41	15%	11	67
306	Physiological malfunction arising from mental factors	1	0.2	30	0%	30	60
299	Psychoses with origin specific to childhood	1	0.2	55	3%	29	87
310*	Nonpsychotic mental disorders due to organic brain damage		0.1	51	49%	0	100
314	Hyperkinetic syndrome of childhood		0.1	52	0%	0	52
	Other mental illness (290*, 292*, 303*, 304*, 307*, 309*, 312*, 313*)		0.2	84	8	0	91
Musculoskeletal System and Connective tissue			19.7%	34%	10%	23	66
724	Other and unspecified disorders of back	1	8.3	38	10	18	66
715	Osteoarthritis and allied disorders	1	4.0	36	8	20	63
	Rheumatoid arthritis and other inflammatory polyarthropathies		1.7	40	12	24	76
714	Disorders of muscle, ligament, and fascia-		1.1	45	18	13	76
728	Fracture of vertebral column with spinal cord injury	2	0.7	4	5	88	97
806	Late effects of musculoskeletal and connective tissue injuries	2	0.7	4	36	38	78
905	Other disorders of bone and cartilage		0.6	23	7	23	53
733	Other, multiple, and ill-defined fractures of lower limb		0.6	27	1	24	52
827	Diffuse diseases of connective tissue		0.6	30	2	20	52
710	Other musculoskeletal/connective tissue disorders (716*, 719*, 720*, 722*, 730*, 737*, 754*, 756*, 818*, 828*, 829*, 834*, 839*, 844*, 848*, 879*, 884, 894*, 897*)		1.40	25	3	30	58

Table E.5 (continued)

(A) Primary Diagnosis	(B) Description	(C) Admin Data AOI Group	(D) % Beneficiary Population	Percent of Beneficiaries in Each Survey-Based AOI Group			
				(E) Survey Group 1 only	(F) Survey Group 2 only	(G) Survey Group 1 and 2	(H) Survey Group 1, 2, or both
Mental Retardation			13.6%	46%	5%	27%	78%
318	Other specified mental retardation	1	12.4	46	5	28	79
319	Unspecified mental retardation	1	0.6	26	4	13	42
317	Mild mental retardation	1	0.5	55	5	16	76
315	Specific delays in development		0.1	70	0	14	84
Circulatory System			8.4%	24%	9%	22%	54%
414	Other forms of chronic ischemic heart disease		2.7	19	9	13	42
438	Late effects of cerebrovascular disease	2	1.8	16	11	44%	72
425	Cardiomyopathy		0.7	24	13	12%	49
401	Essential hypertension		0.5	15	0	35%	50
443	Other peripheral vascular disease		0.5	40	15	27%	83
402	Hypertensive heart disease		0.5	49	0	22%	71
428	Heart failure		0.4	32	16	36%	84
459	Other disorders of circulatory system		0.3	16	4	6%	26
410*	Acute myocardial infarction		0.2	45	0	0%	45
	Other circulatory system disorders (391*, 395*, 396*, 398*, 411*, 413*, 416*, 424*, 427*, 430*, 431*, 434*, 441*, 446*, 448*, 451*, 454*)		0.8	31	0	0	31
Nervous System			5.9%	21%	9%	44%	74%
340	Multiple sclerosis	1	1.1	12	14	52	78
343	Infantile cerebral palsy	1	1.1	15	5	57	77
907	Late effects of injuries to the nervous system	1	0.8	28	17	35	81
345	Epilepsy	1	0.7	30	0	16	46
349	Other and unspecified disorders of the nervous system		0.4	27	8	36	71
336	Other diseases of spinal cord	2	0.4	9	16	67	92
359	Muscular dystrophies and other myopathies	2	0.3	23	6	64	92
357	Inflammatory and toxic neuropathy	2	0.3	9	27	27	63
346	Migraine-classical migraine		0.3	43	0	22	65
331	Other cerebral degenerations	2	0.2	12	4	66	82
358*	Myoneural disorders	1	0.1	51	0	18	69

Table E.5 (continued)

(A) Primary Diagnosis	(B) Description	(C) Admin Data AOI Group	(D) % Beneficiary Population	Percent of Beneficiaries in Each Survey-Based AOI Group			
				(E) Survey Group 1 only	(F) Survey Group 2 only	(G) Survey Group 1 and 2	(H) Survey Group 1, 2, or both
337*	Disorders of the autonomic nervous system		0.0	0	27	30	57
335*	Anterior horn cell disease	2	0.0	0	0	100	100
	Other nervous system disorders (329*, 330*, 332*, , 337*, 342*, 344*, 347*, 348*, 350*, 356*)		0.10	19	5	46	71
Sensory			3.8%	10%	28%	44%	82%
369	Blindness and low vision	2	1.8	6	31	40	78
389	Hearing loss	2	0.7	7	22	69	98
362	Other retinal disorders		0.3	21	37	34	91
368	Visual disturbances	2	0.3	31	24	12	66
365	Glaucoma	2	0.2	0	44	56	100
366*	Cataract	2	0.2	5	24	37	65
386*	Vertiginous syndromes and other vestibular disorders	2	0.1	7	0	39	46
361*	Retinal detachments and defects	2	0.1	0	66	34	100
	Other Sensory impairments (367*, 374*, 375*, 378*, 388*)		0.1	28	0	59	87
Endocrine, Nutritional and Metabolic Diseases			4.0%	34%	10%	26%	70%
278	Obesity and other hyperalimentation		2.4	41	9	33	83
250	Diabetes mellitus		1.0	19	14	16	49
282	Hereditary hemolytic anemias		0.2	7	0	13	19
246*	Other disorders of thyroid		0.1	100	0	0	100
281*	Other deficiency anemias		0.1	89	0	0	89
274*	Gout		0.1	25	0	75	100
277*	Other and unspecified disorders of metabolism		0.1	28	0	11	39
279*	Disorders involving the immune mechanism		0.0	60	11	0	71
289*	Other diseases of blood and blood-forming organs		0.0	0	0	0	0
	Other Endocrine, nutritional and metabolic diseases (263*, 270*, 276*, 284*, 286*)		0.1	44	19	12	75

Table E.5 (continued)

(A) Primary Diagnosis	(B) Description	(C) Admin Data AOI Group	(D) % Beneficiary Population	Percent of Beneficiaries in Each Survey-Based AOI Group			
				(E) Survey Group 1 only	(F) Survey Group 2 only	(G) Survey Group 1 and 2	(H) Survey Group 1, 2, or both
Respiratory System			3.0%	24%	10%	25%	58%
496	Chronic airway obstruction, not elsewhere classified		1.9	16	11	27	53
493	Asthma		0.8	42	12	22	76
519*	Other diseases of respiratory system		0.1	12	0	41	53
492*	Emphysema		0.1	48	0	0	48
	Other Respiratory system disorders (494*, 505*)		0.1	0	0	0	0
Genitourinary System			2.5%	31%	12%	14%	57%
585	Chronic renal failure		1.3	20	13	20	54
571	Chronic liver disease and cirrhosis		0.4	43	8	5	56
555	Regional enteritis		0.3	69	5	6	80
569	Other disorders of intestine		0.2	51	12	0	63
	Other Genitourinary disorders (553*, 556*, 558*, 573*, 581*, 583*, 620*)		0.2	14	17	14	45
Neoplasms			2.2%	21	13%	28%	62%
	All (141*, 150*, 153*, 154*, 155*, 157*, 162*, 163*, 170*, 172*, 173*, 174, 179*, 183*, 184*, 185*, 186*, 188*, 189*, 191, 194*, 195*, 198*, 200*, 202*, 207*, 217*, 225*, 229*)		2.20	12	21	42	75
Infectious and Parasitic Diseases			2.6%	31%	12%	31%	74%
43	Human immunodeficiency virus [HIV] disease		0.7	35	6	19	60
138	Late effects of acute poliomyelitis	2	0.5	17	17	58	93
136*	Other and unspecified infectious and parasitic diseases		0.2	39	17	39	94
	Other infectious and parasitic diseases (1, 7*, 31*, 38*, 42*, 44*, 94*, 135*)		1.2	32	13	26	70
Congenital Anomalies			0.4%	25%	7%	58%	90%
741	Spina bifida		0.2	0	13	87	100
758	Chromosomal anomalies	1	0.1	40	4	53	96
	Other congenital anomalies (742*, 746*, 759*, 760*)		0.1	47	0	12	60

Table E.5 (continued)

(A) Primary Diagnosis	(B) Description	(C) Admin Data AOI Group	(D) % Beneficiary Population	Percent of Beneficiaries in Each Survey-Based AOI Group			
				(E) Survey Group 1 only	(F) Survey Group 2 only	(G) Survey Group 1 and 2	(H) Survey Group 1, 2, or both
Other			1.6%	32%	4%	40%	76%
	Nonspecific or ill defined conditions (780*, 783*, 784, 789*, 791, 792*, 793, 869*)		1.2	25	0	53	78
	Intercranial injury (852*, 854)		0.2	25	0	53	78
	Skin and Subcutaneous Tissue (694-696*, 705*, 709*)		0.2	42	0	0	42

Source: 2004 National Beneficiary Survey matched to SSA administrative data.

Note: Sample size = 7,603. Table excludes observations with missing or invalid ICD codes.

* Indicates that fewer than ten survey respondents have this primary diagnosis.