Longitudinal Patterns of Medicaid and Medicare Coverage Among Disability Cash Benefit Awardees

by Kalman Rupp and Gerald F. Riley*

This article explores the role of the Social Security Disability Insurance (DI) and Supplemental Security Income (SSI) cash benefit programs in providing access to public health insurance coverage among working-aged people with disabilities, using a sample of administrative records spanning 84 months. We find that complex longitudinal interactions between DI and SSI eligibility determine access to and timing of Medicare and Medicaid coverage. SSI plays an important role in providing a pathway to Medicaid coverage for many low-income individuals during the 29-month combined DI and Medicare waiting periods, when Medicare coverage is not available. After Medicare eligibility kicks in, public health insurance coverage is virtually complete among awardees with some DI involvement. Medicaid coverage continues at or above 90 percent after 2 years for SSI-only awardees. Many people who exit SSI retain their Medicaid coverage, but the gap in coverage between stayers and those who leave SSI increases over time.

Introduction

In the United States (US), four public programs form the pillars of the safety net for working-aged people with substantial disabilities: Social Security Disability Insurance (DI), Supplemental Security Income (SSI), Medicare, and Medicaid. The interactions among the four programs are complex and little understood. They are important because access to cash benefits and health insurance coverage is essential to the well-being of people with severe disabilities. In addition, the availability of those benefits, or lack thereof, creates complex economic incentives with implications for labor markets, government budgets, and the functioning of the overall economy.[1] To our knowledge, this study is the first effort to link individual-level data from all four of these major US social safety net programs—DI, SSI, Medicare, and Medicaid—and to analyze longitudinal patterns of interactions among them in a unified analytic framework.

DI is a social insurance program available to people who have not reached the Social Security full retirement age (currently age 66), who meet categorical eligibility criteria as disabled, and who have sufficient recent work experience to qualify as "DI insured" prior to the start of receiving cash benefits. DI entitlement begins after a 5-month waiting period following the onset of disability. SSI is a means-tested federal/state cash assistance program—with optional state supplements—that provides cash benefits to elderly people aged 65 or older and to nonelderly people deemed disabled based on criteria identical to the

Selected Abbreviations

CMS	Centers for Medicare and Medicaid Services
DI	Disability Insurance
SSA	Social Security Administration
SSI	Supplemental Security Income

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rules used in the DI program. Unlike DI, SSI does not require prior work experience to qualify. Because SSI is a welfare program of last resort for a person determined disabled, onset is presumed to be the month immediately prior to application. In that sense, there is no waiting period for SSI.

Medicare is a federal social insurance program that provides health insurance coverage to most elderly people aged 65 or older, to DI beneficiaries after a 24-month waiting period, and to individuals with end-stage renal disease (Box 1).[2] Most DI beneficiaries who are no longer eligible to receive cash benefits because of work will continue to receive at least 93 consecutive months of Hospital Insurance (Part A—no premium payment requirement); Supplemental Medical Insurance (Part B), if enrolled; and Prescription Drug Coverage (Part D), if enrolled.[3]

Medicaid is jointly funded by federal and state governments and provides health insurance coverage to several target populations with low income and assets, including elderly people aged 65 or older, people younger than age 65 with disabilities (including most SSI eligibles), and others (Box 2).[4] Categories of people covered by Medicaid vary from state to state, and there is no waiting period for Medicaid coverage to begin. The Medicaid means test for disabled people is similar, but not identical, to the SSI means test and may vary by state. In some states, individuals are determined eligible for Medicaid based on less restrictive financial eligibility criteria than what is required for SSI, while a few other states do have Medicaid eligibility rules that are more stringent. In most states, SSI recipients are categorically eligible for Medicaid. Some states provide automatic Medicaid enrollment; others require separate application. Importantly, Medicaid beneficiaries who are no longer eligible for SSI payments may be eligible to continue Medicaid coverage if they still meet the disability requirement, need Medicaid benefits to continue to work, and satisfy some additional requirements.[5] The Centers for Medicare and Medicaid Services (CMS) administers Medicare, while Medicaid is administered by the state, with some federal oversight by CMS.

It is important to note that individuals younger than age 65 with severe disabilities sometimes have access to Medicare or Medicaid coverage without eligibility for DI or SSI benefits. For example, Medicaid coverage is available to disabled individuals without SSI if they qualify for Medicaid through medically needy programs or if they are institutionalized or have a need for care under home and community-based services waivers, various state programs, and other means (CMS 2011).

Box 1.
Medicare program highlights

Medicare is a health insurance program authorized under the Social Security Act for—

- People aged 65 or older
- People with Social Security Disability Insurance (DI), usually after a 24-month waiting period on the DI rolls
- People of all ages with end-stage renal disease

People whose DI benefits are discontinued because of work but who still have disabling impairments are provided continued Medicare coverage for at least 93 months after the first month of no DI benefits.

Medicare Part A covers inpatient care in hospitals and skilled nursing facilities, as well as home health and hospice services. Part A coverage is provided to DI beneficiaries premium free.

Medicare Part B covers outpatient care, including services of physicians, therapists, clinics, hospital outpatient departments, clinical laboratories, and so forth. Enrollment in Part B is voluntary and requires payment of a monthly premium. Most Medicare beneficiaries enroll in Part B.

Medicare Part C is the Medicare Advantage (MA) program, under which Medicare benefits are provided by managed care contractors. Enrollment in the MA program is voluntary.

Medicare Part D, the prescription drug program, began in 2006 and provides prescription drug coverage. Enrollment in Part D is voluntary and requires payment of a monthly premium. Low-income subsidies are available for persons with low income and assets. Over 70 percent of DI beneficiaries with Medicare were enrolled in Part D in 2009.

For more information on the Medicare program, see http://www.medicare.gov.

Box 2.
Medicaid program highlights

Program features

Medicaid provides health insurance to various population groups characterized by low income and assets, including certain individuals with severe disabilities. The program is jointly funded by federal and state governments and is administered by the states. Medicaid covers acute care, pharmacy, and long-term-care services, including nursing home stays. Some Medicaid eligibles may have coverage that is restricted to certain categories of services. There is no premium for Medicaid coverage, but there can be limited cost sharing for some services.

SSI and Medicaid

Most disabled individuals who are eligible for Supplemental Security Income (SSI) payments qualify for Medicaid, but eligibility criteria vary by state. There is no waiting period for Medicaid coverage. SSI recipients typically qualify for "full" coverage. Those who have earnings too high for an SSI cash payment may be eligible for continued Medicaid under Section 1619(b) of the Social Security Act if they continue to meet the disability screen and some other criteria.

For more information on the Medicaid program, see http://www.medicaid.gov.

The focus of this article is on interactions between the Social Security Administration's (SSA's) two disability programs—DI and SSI—and the two public health insurance programs—Medicare and Medicaid. A recent article by Rupp and Riley (2011) demonstrated the importance of longitudinal interactions between SSA's disability programs, but did not explicitly consider the public health insurance connection. This piece focuses on the ways in which complex longitudinal interactions between the two disability cash benefits programs affect Medicaid coverage, especially during the 24-month Medicare waiting period[6] of the DI program (Riley 2004, 2006; Livermore, Stapleton, and Claypool 2010). Access to Medicare among disabled people is an important concern in recent policy discussions of Medicare and for assessing the potential of the Patient Protection and Affordable Care Act to remedy some of the perceived problems (Cubanski and Neuman 2010). In that context, it is important that we assess overall public health insurance coverage considering both Medicare and Medicaid. The next section of the article outlines our research focus. We then discuss the data and methodology, followed by our analysis of the empirical results. Finally, we close with a summary of our conclusions and issues for future research.

Research Focus

Our fundamental purpose for conducting this analysis is to demonstrate how longitudinal patterns of DI and SSI benefit eligibility affect access to and timing of Medicaid and Medicare coverage among disabled people. It is important to determine whether severely disabled individuals are eligible for DI or SSI benefits or both because the two programs provide dramatically different paths toward public health insurance coverage. DI provides Medicare coverage only after a 24-month waiting period (with some exceptions[7]), which is in addition to the 5-month waiting period for DI benefit eligibility. SSI usually provides access to Medicaid, but not Medicare coverage.

In contrast to Medicare, Medicaid eligibility can be retroactive up to 3 months prior to application. Some people may be eligible for both DI and SSI cash benefits on a monthly basis, resulting in dual eligibility for both Medicare and Medicaid in many cases. In such situations, Medicare is the primary health insurer and Medicaid covers beneficiary cost sharing and certain services (primarily nursing home care and other long-term care services) that Medicare does not cover. Consequently, eligibility for Medicaid and Medicare benefits depends in part on the timing and sequence of eligibility for SSI and/or DI benefits. There are some clear longitudinal patterns of SSI and DI program participation as a result of interactions between SSI and DI benefit eligibility rules, particularly the 5-month waiting period for DI and the counting of Social Security as unearned income in the SSI program. Those common patterns of disability program participation in turn affect patterns of entry into and exit from the public health insurance programs.

Rupp and Riley (2011) identified and classified the following five longitudinal patterns that are responsible for about 98 percent of all first-ever disability awards for DI, SSI, or both: DI-only; SSI-only; DI-only transitioning to joint DI/SSI benefit eligibility; SSI-only transitioning to DI-only serial benefit eligibility; and SSI-only transitioning to joint SSI/DI benefit eligibility. We use a refined version of that classification. Our refinement arises from a longer follow-up period available for the present study, allowing us to observe additional DI-only to joint DI/SSI benefit eligibility transitions. According to our classification, *DI-only benefit eligibility* means that the person first became eligible to receive DI benefits and never gained SSI payment eligibility over the 72-month, postaward observation window starting

with the first month of DI benefit eligibility. *DI-only transitioning to joint DI/SSI benefit eligibility* means that the person started as DI-only during the month of award and became eligible for an SSI payment at least for 1 of the postaward months observed. *SSI-only benefit eligibility* means that the person first became eligible to receive SSI payments and never gained DI benefit eligibility over the postaward observation window. *SSI-only transitioning to DI-only serial benefit eligibility* means that the person started as an SSI-only eligible during the first month and lost SSI payment eligibility when DI benefit eligibility began after the 5-month DI waiting period, as a result of the Social Security benefit offset in the SSI income test. *SSI-only transitioning to joint SSI/DI benefit eligibility* is similar to serial eligibility in that DI kicks in after the 5-month waiting period, but differs because the beneficiary maintains his or her SSI payment eligibility afterward at least for 1 month. In those situations, the DI benefit does not completely offset the SSI payment the person was entitled to prior to the first month of DI eligibility.

The five longitudinal patterns of disability benefit eligibility provide different pathways to Medicaid and Medicare. Specifically, we predict the following clear patterns of relationships between disability benefit eligibility and Medicaid coverage:

- The DI-only longitudinal pattern of benefit eligibility is expected to be associated with generally low levels of Medicaid coverage.
- The DI-only transitioning to joint DI/SSI benefit eligibility is expected to be associated with a monotonic increase in Medicaid coverage arising from SSI entry, reflecting loss of income or spend-down of assets among some people who originally failed the SSI means test.
- The SSI-only longitudinal pattern of benefit eligibility is expected to be associated with relatively high Medicaid coverage over time.
- The pattern of SSI-only transitioning to DI-only serial benefit eligibility is expected to display a peak of Medicaid coverage around the end of the 5-month DI waiting period, with a sharp decline to follow the loss of SSI payment eligibility.
- The pattern of SSI-only transitioning to joint SSI/DI benefit eligibility is expected to display a similar increase up to the end of the 5-month DI waiting period, but with no sharp decline afterward.

With respect to Medicare coverage, we expect virtually complete coverage for all but the SSI-only group after the end of the 24-month Medicare waiting period. Finally, we expect that exits to nonbeneficiary status will affect Medicaid coverage, especially early exits from SSI eligibility status, while exits from the DI program after 2 years are expected to have virtually no effect on Medicare coverage. The anticipated Medicaid trend is the result of early exits from SSI that usually occur because of the loss of SSI income eligibility arising from the DI benefit being countable income. Later exits are more likely to be work related, and, as previously noted, allow for continued Medicaid coverage according to Section 1619(b) of the Social Security Act.[8] Exits from the DI program after the Medicare waiting period are rare, and as we discussed earlier, in many cases Medicare eligibility is protected for a 93-month period after DI exit.[9] For this analysis, we followed a cohort of new entrants to DI and SSI and tracked their patterns of participation in the Medicare and Medicaid programs.

Data Sources and Methodology

This study is based on the linkage of SSA and CMS administrative records and uses descriptive tabulations and multiple regression. The following sections provide more detail on the data and methodology.

Data

Our study is based on (1) Social Security administrative records covering the universe of DI and SSI beneficiaries and (2) CMS records covering the universe of Medicare and Medicaid enrollees. The use of administrative records for this analysis is particularly important because survey data are generally of poor quality where participation in the four programs of interest is concerned, and small sample sizes also severely limit the feasibility of analyzing the month-to-month dynamics that are so central to the research questions of interest in this article.[10]

We first created a 10 percent sample of disability beneficiaries from Social Security's Ticket Research File (TRF), which is compiled from a variety of Social Security record systems on disability program applicants and awardees. The TRF currently contains roughly 20 million observations. A description of the TRF and the Social Security source files was presented in a previous study (Rupp and Riley 2011). We created a "finder file" of Social Security

numbers and basic identifying information from the TRF. CMS used that finder file to pull enrollment records from the Medicare Enrollment Data Base and the Medicaid Analytic Extract record systems. The CMS extract files then were merged with the Social Security records extract. The study sample consisted of first-ever disability program entrants who were alive and aged 18–64 during the first-ever month of benefit entitlement for either DI, SSI, or both sometime in 2000. Notable features of the sample are that it does not include any adults who received SSI disability benefits as a child,[11] and it does not include any first-ever awardees for DI or SSI who had a previous enrollment spell in the other program. The subsample of DI awardees was limited to "primary beneficiaries." It was designed to exclude two special categories, "disabled adult child" beneficiaries and "disabled widow(er)" beneficiaries. Those restrictions assured that we focused on an adult awardee cohort that had its first disability benefit eligibility spell in 2000. This sample design facilitates a clear picture of how disability benefit caseload dynamics strategically affect Medicaid and Medicare eligibility. Our sample of 68,798 observations is identical to the sample used by Rupp and Riley (2011). However, we added Medicaid and Medicare files for each disability awardee at the individual level, covering a period that includes the 12-month preaward period and a 72-month follow-up period, starting with the first month of disability benefit eligibility. Table 1 provides summary data on demographic,[12] diagnostic, and programmatic characteristics of our sample.

In this study, we measure Medicare coverage by a variable denoting Part A coverage. All DI beneficiaries who qualify for Medicare are automatically eligible for Part A, while Part B is a matter of choice and comes with a monthly premium for people who do not qualify for Medicaid. Approximately 90 percent of Medicare DI beneficiaries are enrolled in Part B. Our Medicaid enrollment figures refer only to individuals with "full Medicaid" coverage and do not include less than full coverage situations, such as qualified Medicare beneficiaries (QMB)–only and specified low-income Medicare beneficiaries (SLMB)–only who are enrolled in more limited programs for dual eligibles (Box 3). This decision was partially motivated by the evolving nature of these other program components. Moreover, these program design changes are unrelated to the key issues of interest in this article.

Methods

Our analysis is based on (1) monthly person-level records containing individual characteristics measured at the month of first disability benefit eligibility and (2) time-varying data on DI and SSI benefit eligibility and Medicaid and Medicare coverage. We use health insurance coverage data for 12 months prior to first disability award and the subsequent 72-month period. Much of our analysis is based on detailed monthly trends over the combined 84 months of longitudinal data on disability benefit eligibility and Medicaid and Medicare coverage. Our key technique is logistic regression applied to repeated cross-sections of disability awardees.

Table 1.
Selected sample characteristics

Characteristic	Percent	Standard error
Demographic		
Aged 18–30	9.6	0.1
Aged 46–64	63.0	0.2
Women	48.1	0.2
White, non-Hispanic race/ethnicity [a]	70.8	0.2
Other race/ethnicity [a]	27.8	0.2
Most frequent SSA primary diagnoses		
Musculoskeletal	25.5	0.2
Mental [b]	22.6	0.2
Circulatory	12.2	0.1
Neoplasms	9.2	0.1
Nervous	7.9	0.1
Longitudinal pattern of benefit eligibility		
DI-only	60.3	0.2
DI-only to joint DI/SSI	9.6	0.1
SSI-only	15.7	0.1
SSI-only to DI-only serial	4.4	0.1
SSI-only to joint SSI/DI	8.1	0.1
Any other pattern	1.9	0.1
N	68,798	. . .

SOURCES: Authors' calculations from Social Security and Centers for Medicare and Medicaid Services administrative records.

NOTE: . . . = not applicable.

a. Variable reflects measurement error, arising from the fact that prior to 1980 the source data file did not contain data by Hispanic ethnicity. As a result, the percentage "White, non-Hispanic" reflects upward bias, while the reverse is true for "Other race/ethnicity." See Scott (1999) for detail on the measurement issue.

b. Not including intellectual disability.

Box 3.
Medicaid and Medicare: Dual eligibility highlights

Coverage and funding

Medicare beneficiaries can qualify for Medicaid coverage if they have limited income and assets. For individuals with Medicare and Medicaid coverage, referred to as dual eligibles, Medicare is the primary payer if a given service is covered by both programs. Medicaid pays for Medicare premiums and cost sharing for persons who are also enrolled in Medicare.

Dual eligibles with limited Medicaid coverage

Some dual eligibles have limited Medicaid coverage if their income or assets do not meet the means test to qualify for full Medicaid benefits. For example, those eligible for qualified Medicare beneficiary (QMB) benefits receive coverage for Medicare cost sharing requirements (deductibles and coinsurance) and Part B monthly premiums, but not for services not covered by Medicare. Those eligible for special low-income Medicare beneficiary (SLMB) benefits receive coverage for Part B monthly premiums, but not for Medicare cost sharing or services not covered by Medicare.

For more information on dual eligibility, see http://www.medicaid.gov.

Results

In this section, we present the empirical results pertaining to the relationship between Medicaid and Medicare coverage and longitudinal patterns of disability benefit coverage. That is followed by the analysis of the role of disability program exits in affecting Medicaid coverage and factors affecting persistent Medicaid nonparticipation. Chart 1 compares Medicaid coverage for the five longitudinal pattern groups. Appendix Table A-1 provides more detail at selected time points. The results are generally consistent with our hypotheses and show subgroup differences of substantial magnitude. Medicaid coverage for the *DI-only* pattern group is consistently low and shows only a slight upward trend during the first 2 years. It remains essentially flat after the end of the Medicare waiting period.

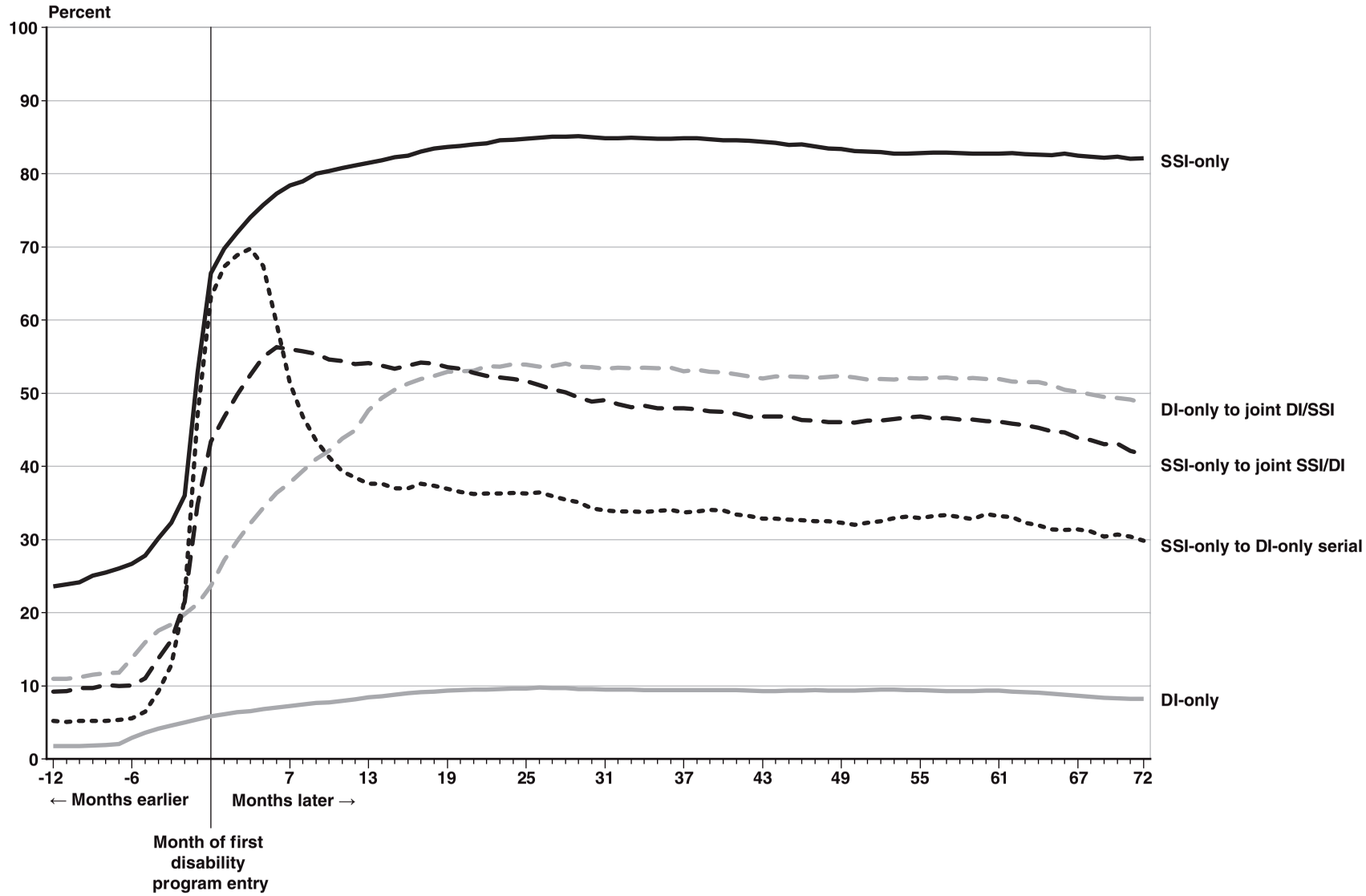
As expected, the *SSI-only* pattern group has consistently the highest rate of Medicaid coverage. A substantial minority (about 25 percent) have been covered by Medicaid 12 months prior to the first month of SSI payment eligibility.[13] Thus, SSI plays no role in establishing Medicaid coverage for that subgroup, although it may help people in the group retain their Medicaid eligibility if they cease to meet criteria for Medicaid coverage for another reason. Medicaid coverage sharply increases around the month of SSI entry, reaching 78 percent by month 6 and continuing with over 80 percent of coverage for most of the remaining months. Much of the remaining roughly 15–20 percent gap at any month afterward is attributable to SSI recipients who exited for reasons other than death or reaching age 65, as we will detail later in the article. The trends for the three longitudinal pattern groups with both DI and SSI involvement are between the DI-only and SSI-only trend lines for Medicaid coverage, but each trend displays a distinct shape consistent with longitudinal interactions between DI and SSI. All three of those groups start at low levels of Medicaid coverage 12 months prior to disability entry.

Medicaid coverage substantially increases during the months immediately preceding SSI entry and afterward. As expected, *serial entrants* show a very sharp increase in Medicaid coverage during the 3 months prior to SSI entry (the period of Medicaid coverage retroactivity) and shortly afterward, peaking at month 5 with 70 percent coverage. However, Medicaid coverage of serial entrants sharply declines during the months immediately following the peak—when DI kicks in and SSI eligibility ceases. Thus, SSI coverage during the DI waiting period is clearly very important for serial entrants, but for many, Medicaid coverage is temporary. Nevertheless, the level of Medicaid coverage is above 30 percent for this group until month 72, suggesting a more permanent attachment to Medicaid for some.

SSI/DI joint entrants show a sharp, but somewhat less spectacular increase in Medicaid coverage around the time SSI eligibility begins until a peak of about 57 percent during month 6. However, the decline of Medicaid coverage thereafter is more muted, and over 40 percent of those entrants are covered by Medicaid even at the end of the observation period.

Finally, *DI entrants with subsequent SSI involvement* show a gradual increase in Medicaid coverage during the first 2 years, peaking at 56 percent around month 24. Medicaid coverage stays above 50 percent for most of the remainder of our follow-up period. Note that there is a marked increase in Medicaid coverage beginning in month (-5), which corresponds to the beginning of the DI waiting period, despite the fact that SSI eligibility does not begin until after DI eligibility. Thus, some of that group of awardees is able to access Medicaid outside of SSI. Those people are categorically disabled during month (-6) according

Chart 1.
Percentage of survivors aged 18–64 with full Medicaid coverage, from 12 months before to 72 months after disability program entry, by longitudinal pattern group



SOURCES: Authors' calculations from Social Security and Centers for Medicare and Medicaid Services administrative records.

to criteria that are common to both programs, and they may have incomes low enough to meet the Medicaid means test. This may occur in states that have Medicaid financial eligibility criteria that are less restrictive than SSI (Kaiser Commission on Medicaid and the Uninsured 2010).

One may ask whether longitudinal patterns continue to be predictive of Medicaid coverage after various characteristics, such as demographics and primary diagnosis of awardees, are controlled for in a multivariate regression framework. The results of that test are shown in Table 2. We present estimates from logistic models of Medicaid coverage at various time points before and after the month of award. We assess the association between longitudinal patterns of disability program participation and Medicaid coverage after adjustments for demographic[14] and diagnostic characteristics. In addition, we include state indicators in the models to control for heterogeneity related to state-level variables. The table presents odds ratios and their estimated precision. The key finding from the "Longitudinal pattern" section of the table is that any involvement with SSI substantially increases the odds of Medicaid coverage. That pattern is consistent with the unadjusted differences we observed in Chart 1, and suggests that the striking differences presented in the chart are not artifacts of the association between coverage pattern and demographic or diagnostic variables or state of residence. The multivariate results strengthen the evidence that the link between longitudinal pattern

Table 2.
Results of logistic regressions on factors affecting Medicaid coverage 3 months before and 3 and 24 months after disability (DI and/or SSI) award in 2000

	Model 1: Month -3			Model 2: Month +3			Model 3: Month +24		
Independent variable	Odds ratio	Standard error	P > z	Odds ratio	Standard error	P > z	Odds ratio	Standard error	P > z
Demographic									
Aged 18–30	2.05	0.09	0.00	1.91	0.07	0.00	2.27	0.09	0.00
Aged 31–45	1.91	0.06	0.00	1.56	0.04	0.00	1.62	0.04	0.00
Aged 46–64 (reference category)	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Women	1.61	0.04	0.00	1.17	0.03	0.00	1.47	0.03	0.00
Men (reference category)	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Missing sex	1.38	0.22	0.04	1.26	0.19	0.13	1.77	0.56	0.07
White non-Hispanic race/ethnicity [a] (reference category)	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Other race/ethnicity [a]	1.42	0.04	0.00	1.30	0.03	0.00	1.47	0.04	0.00
Missing race/ethnicity [a]	0.78	0.09	0.03	0.94	0.10	0.56	0.94	0.10	0.60
Diagnostic									
Circulatory	1.57	0.08	0.00	1.69	0.07	0.00	1.38	0.06	0.00
Congenital	0.52	0.18	0.07	0.96	0.25	0.88	0.81	0.23	0.45
Digestive	1.47	0.13	0.00	1.73	0.13	0.00	1.47	0.12	0.00
Endocrine	1.45	0.12	0.00	1.44	0.10	0.00	1.52	0.10	0.00
Genitourinary	1.58	0.14	0.00	2.79	0.21	0.00	1.49	0.12	0.00
Infectious and parasitic	1.53	0.14	0.00	2.56	0.21	0.00	1.91	0.16	0.00
Injuries	1.32	0.10	0.00	1.46	0.09	0.00	1.14	0.07	0.04
Musculoskeletal (reference category)	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Neoplasms	1.22	0.07	0.00	1.98	0.09	0.00	1.07	0.07	0.28
Nervous	1.02	0.06	0.71	1.24	0.06	0.00	0.98	0.05	0.67
Other	1.35	0.21	0.06	1.11	0.16	0.49	0.99	0.14	0.96
Mental [b]	1.35	0.06	0.00	1.40	0.05	0.00	1.34	0.05	0.00
Respiratory	1.42	0.11	0.00	1.64	0.10	0.00	1.39	0.08	0.00
Intellectual disability [c]	1.07	0.08	0.34	1.25	0.08	0.00	1.36	0.10	0.00
Missing diagnosis	1.31	0.11	0.00	1.01	0.08	0.95	0.76	0.06	0.00

(Continued)

Table 2.
Results of logistic regressions on factors affecting Medicaid coverage 3 months before and 3 and 24 months after disability (DI and/or SSI) award in 2000—*Continued*

Independent variable	Model 1: Month -3			Model 2: Month +3			Model 3: Month +24		
	Odds ratio	Standard error	P > z	Odds ratio	Standard error	P > z	Odds ratio	Standard error	P > z
Longitudinal pattern									
DI-only [d] (reference category)	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
DI-only to joint DI/SSI	3.81	0.16	0.00	5.44	0.20	0.00	10.33	0.35	0.00
SSI-only	8.44	0.30	0.00	37.21	1.23	0.00	50.45	1.90	0.00
SSI-only to DI-only serial	2.77	0.17	0.00	34.31	1.62	0.00	5.23	0.25	0.00
SSI-only to joint SSI/DI	3.62	0.17	0.00	15.42	0.57	0.00	10.68	0.39	0.00
State dummies [e] (New York state is reference category)	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Number of observations	67,690			67,254			62,316		
Likelihood ratio Chi^2 (77) [f]	10,678.33			28,392.11			29,192.76		
Probability > Chi^2	0.0000			0.0000			0.0000		
Pseudo R^2	0.2139			0.3652			0.3782		
Log likelihood	-19,612.65			-24,676.06			-23,997.92		

SOURCES: Authors' calculations from Social Security and Centers for Medicare and Medicaid Services administrative records.

NOTES: Sample of first-ever disability (DI and/or SSI) program entrants in 2000 who were aged 18–64 during the first month of payment eligibility. "State-only" SSI first awardees are not included. At month +3 and month +24, the sample is limited to survivors younger than age 65. "Month 1" is defined as first-ever month of positive payment eligibility for program of first award. Immediately preceding that month is "month -1."

. . . = not applicable.

a. Variable reflects measurement error, arising from the fact that prior to 1980 the source data file did not contain data by Hispanic ethnicity. As a result, the percentage "White, non-Hispanic" reflects upward bias, while the reverse is true for "Other race/ethnicity." See Scott (1999) for detail on the measurement issue.

b. Not including intellectual disability (formerly known as mental retardation).

c. Formerly known as mental retardation.

d. DI-only is the reference group. "SSI/DI simultaneous" entrants and "Other" awardees are included in the multinomial logit model, but results are not presented here.

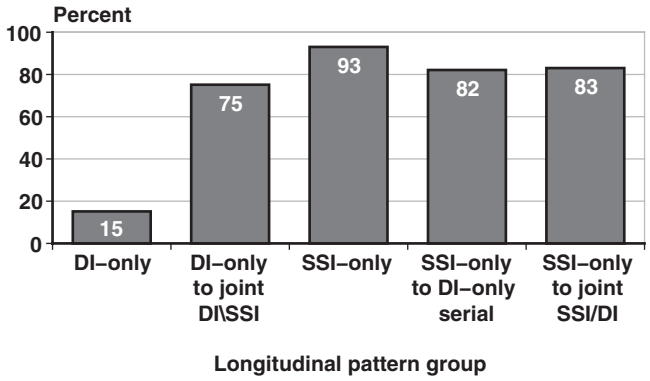
e. All states (except New York) and the District of Columbia are included. Puerto Rico may be omitted from some models. A residual category represents US territories.

f. Except model 3 where likelihood ratio Chi^2 (78) is applicable.

of disability benefit eligibility and Medicaid coverage is an important aspect of access to Medicaid in its own right. The results in Table 2 also show that the contrast in Medicaid access compared with the DI-only group is strongest for the SSI-only group for all three time points. Nevertheless, the table also suggests that demographic and diagnostic characteristics also matter, albeit the variation in relative odds is less dramatic.

Although Table 2 shows factors affecting Medicaid participation at selected time points, a somewhat different question is whether awardees are ever covered by Medicaid during the first 24 months after first disability benefit award. After all, Medicaid is the only major public health insurance program potentially available to all but a few awardees during that period.[15] Chart 2 shows the importance of longitudinal patterns from that perspective. The sample frame includes all calendar year 2000 first-ever disability awardees. The dependent variable is Medicaid coverage at least for 1 month between months 1 and 24 and prior to reaching age 65. Medicaid coverage during the first 24 months is clearly driven by the presence or absence of SSI involvement. Only 15 percent of the DI-only pattern group had any involvement with the Medicaid program during the period corresponding to the 24-month Medicare waiting period. Some Medicaid involvement is almost universal in the SSI-only group, while all three groups with concurrent involvement are much closer to SSI-only Medicaid involvement compared with the DI-only group.

Chart 2.
Percentage of awardee cohort ever covered by Medicaid during the first 2 years starting from the first month of disability benefit eligibility



SOURCES: Authors' calculations from Social Security and Centers for Medicare and Medicaid Services administrative records.

NOTES: Statistics are based on a 10 percent sample of all first-ever disability awardees in 2000. Not all sample members were at risk of Medicaid coverage prior to age 65 for the full 24-month observation period. Over 1 percent exited the sample because of reaching age 65. An additional 8 percent died before reaching either age 65 or the end of the observation period.

Because disability program participation is clearly affected by exits from disability benefit status (as well as reentries), it is worthwhile to look at the relationship between *current* cash benefit eligibility status at selected time points and Medicaid coverage. Table 3 provides that information by longitudinal pattern during month 24 and month 72. The first time point represents the last month prior to the start of Medicare eligibility for all of the groups with some DI involvement, while month 72 represents the longest time horizon we can use in the current analysis. We highlight a few important findings from this table. First, *current* SSI involvement (second column) is associated with very high Medicaid coverage for all three pattern groups where SSI involvement is feasible at month 24 and month 72 (DI-only to joint DI/SSI, SSI-only, and SSI-only to joint SSI/DI). The SSI-only pattern has clearly the highest degree of Medicaid coverage at both time points (90 percent at month 24 and 95 percent at month 72). However, differences by pattern category at month 72 are very small. Second, while DI-only *current* status (first column) is generally associated with low probabilities of Medicaid coverage, there are substantial differences by pattern. There is a large gap between the rate of Medicaid coverage for the DI-only pattern group (less than 10 percent) and the other longitudinal pattern groups with 30–43 percent Medicaid coverage. Current DI-only status does not explain those differences. This suggests that many disabled beneficiaries are able to retain Medicaid eligibility after termination of SSI payments. Third, consistent with our expectations, Medicaid coverage is the lowest among people who exited the disability rolls (third column), reflecting the *current* status of neither DI nor SSI benefit eligibility. However, the data also show substantial differences by pattern group. Almost half of the people who exited the SSI-only group by month 24 (47 percent) are still covered by Medicaid. The corresponding figure is only 6 percent for those who exited the DI-only group. Thus, longitudinal patterns matter, even after controlling for current benefit eligibility status.

While Medicaid coverage is relatively low among people who exited the cash benefit program(s) in all longitudinal pattern categories, as a practical matter, nonbeneficiaries form a sizable subgroup *only* within the SSI-only longitudinal pattern group. About 13 percent of SSI-only awardees were in nonbeneficiary status at month 24 and 21 percent at month 72. In contrast, the other longitudinal pattern groups had only 1–3 percent in nonbenefit status at month 24 and 4–9 percent at month 72 (authors' calculation). Because of the relative importance of exits to nonbeneficiary status among the SSI-only group, we present detail on trends in Medicaid coverage for that longitudinal pattern group separately for those who are receiving SSI payments and those who are not at various points in time (Chart 3).

The data clearly show an upward trend in Medicaid coverage among people who are in SSI program status at the given point in time and a downward trend among those who are not SSI program participants. Both series are affected by duration dependence. Importantly, 95 percent of people who are on SSI at month 72 are covered by Medicaid. The corresponding figure is 36 percent for those who are off SSI at that point. Thus, a large portion of the 15–20 percent observed Medicaid noncoverage among the SSI-only group seems to be attributable to those who exited the SSI rolls and did not die or reach age 65 by the given month. Members of that group, on average, are expected to have relatively good health. Some may no longer be disabled or they fail to meet the requirements of Section 1619b of the Social Security Act for some other reasons.

Table 3.
Percentage of people with full Medicaid coverage at selected time points after the first month of benefit eligibility, by longitudinal pattern and benefit eligibility status at months 24 and 72

Longitudinal pattern [a]	Benefit eligibility status during given month								Number of observations
	DI-only		SSI-only or both DI and SSI		Neither		Total [b]		
	Percent	Standard error	Percent	Standard error	Percent	Standard error	Percent	Standard error	
	Percentage with full Medicaid coverage at month 24								
DI-only	9.7	0.2	. . .	. . .	6.0	1.0	9.6	0.2	37,423
DI-only to joint DI/SSI	43.1	0.8	73.9	0.9	29.4	4.8	54.0	0.6	6,359
SSI-only	. . .	. . .	90.3	0.3		1.4	84.7	0.4	9,291
SSI-only to DI-only serial	36.8	0.9	. . .	. . .	23.6	5.0	36.4	0.9	2,681
SSI-only to joint SSI/DI	38.3	0.8	83.3	0.9	18.8	4.9	52.0	0.7	5,315
	Percentage with full Medicaid coverage at month 72								
DI-only	8.3	0.2	. . .	. . .	7.4	0.8	8.2	0.2	27,739
DI-only to joint DI/SSI	34.0	0.8	90.5	0.8	19.7	2.4	48.6	0.7	5,557
SSI-only	. . .	. . .	94.6	0.3	35.9	1.2	82.1	0.5	7,382
SSI-only to DI-only serial	31.3	1.1	. . .	. . .	14.9	2.7	29.9	1.0	2,045
SSI-only to joint SSI/DI	29.6	0.8	93.6	0.8	17.4	2.4	41.6	0.7	4,509

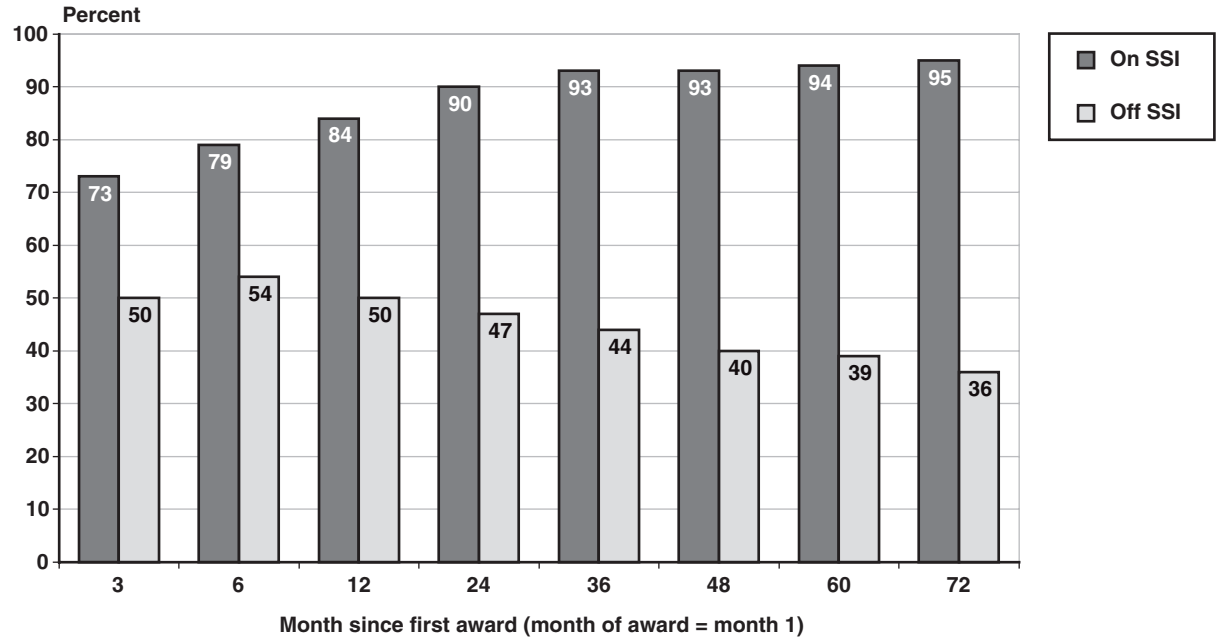
SOURCES: Authors' calculations from Social Security and Centers for Medicare and Medicaid Services administrative records.

NOTE: . . . = not applicable.

a. For the 72-month period starting with month of initial disability award.

b. Includes survivors younger than age 65 during given month.

Chart 3.
Percentage of survivors younger than age 65 with full Medicaid coverage among those alive at selected time points, by SSI payment eligibility status during given month: SSI-only awardees



SOURCES: Authors' calculations from Social Security and Centers for Medicare and Medicaid Services administrative records.

Chart 4 displays overall public health insurance coverage (as measured by Medicaid and/or Medicare coverage) for the five longitudinal pattern groups. Appendix Table A-2 provides more detail at selected time points. For the period prior to the month of award and the subsequent 2 years, the longitudinal pattern group trends are essentially driven by the Medicaid trends we have seen before. Medicare coverage is extremely rare prior to the end of the Medicare waiting period. However, for all but the SSI-only group, Medicare coverage jumps to 100 percent after the end of the combined DI and Medicare waiting period—29 months from the disability onset.[16] The temporal patterns of Medicaid and Medicare coverage associated with the five pattern groups provide important evidence for the relevance of longitudinal patterns of disability benefit eligibility in understanding the relative level and composition of public health insurance coverage among disability cash benefit awardees.

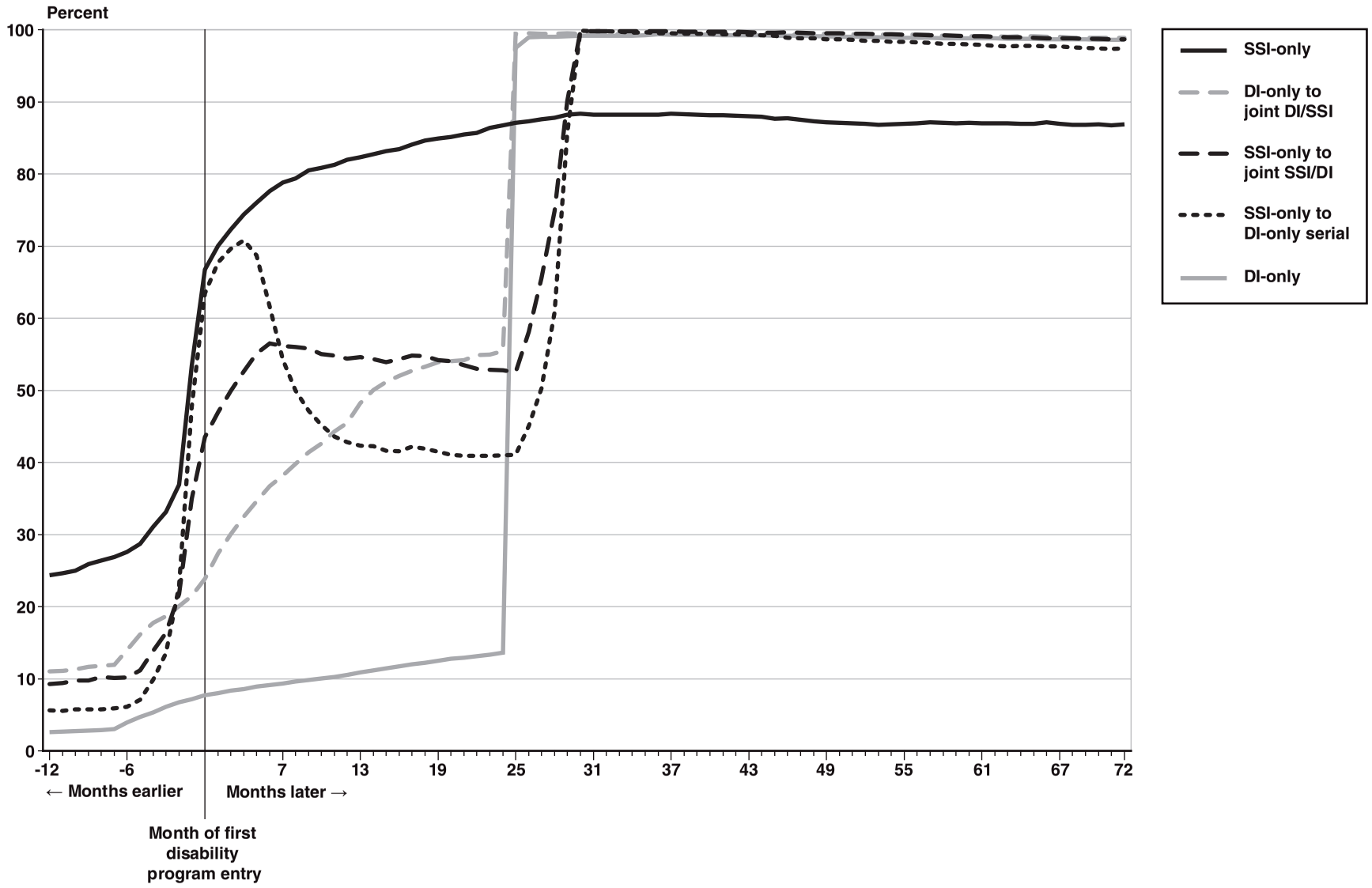
Conclusions

Our study is the first-ever effort to link, at the individual level, administrative records data from four of the largest and highly interrelated US public safety net programs—DI, SSI, Medicare, and Medicaid—and to analyze the month-to-month dynamics of interactions among them. The findings demonstrate that longitudinal patterns of disability benefit eligibility are important in explaining public health insurance coverage and display relationships that can be expected based on program rules affecting interactions among the four major federal programs for working-age adults with disabilities. To summarize, we highlight three points here: (1) SSI involvement (or the lack of) is the principal determinant of the level of public health insurance coverage during a roughly 2-year period after the first month of first disability benefit coverage for all subgroups; (2) the lead of the SSI-only group in *public* health coverage disappears after the first 24 months of disability benefit coverage, and in contrast to all of the other longitudinal pattern groups, a small portion stays without either Medicaid or Medicare coverage thereafter; and (3) people who are involved with both the SSI and DI programs at some point have more access to public health insurance compared with the DI-only group for two reasons. First, they have much higher levels of Medicaid coverage prior to the end of the Medicare waiting period. Second, many continue to benefit from dual Medicare and Medicaid coverage after Medicare begins.

Despite the significant roles played by Medicare and Medicaid, there are still some gaps in public health insurance coverage for beneficiaries in the SSI and DI programs. DI-only beneficiaries (who are not eligible for SSI) seldom have Medicaid or Medicare coverage during the 29 months that comprise the DI and Medicare waiting periods. Among people with SSI eligibility during the DI waiting period, some lose their Medicaid benefits when SSI eligibility is terminated because of the initiation of DI benefits. Typically this loss of Medicaid coverage occurs shortly after the completion of the 5-month DI waiting period. For those individuals, a substantial temporal gap of public health insurance exists after the cessation of Medicaid coverage and the start of Medicare coverage. Lastly, SSI eligibility does not always guarantee Medicaid eligibility, leaving some without a public source of health insurance if they are not eligible for DI or are in the Medicare waiting period.[17] Some disabled beneficiaries have other sources of health insurance, but for those that do not, lack of health insurance can severely impair access to health care (Riley 2006; Weathers and others 2010).

Several important issues remain for further analysis. One issue is the question of how implementation factors—such as delays in the SSA disability determination process, the use of more restrictive Medicaid criteria in the 209(b) states, and autoenrollment—affect the extent and timing of Medicaid coverage.[18] Another question of importance is how the patterns of Medicaid and Medicare coverage translate into utilization and program cost patterns. In addition, there is a need to reassess overall health insurance coverage among disabled people in light of the patterns identified in this article, but also to consider information on private sources of health insurance that were unobserved in the administrative data sets used for this study. Finally, the ongoing reforms to increase overall health insurance, particularly the expansion of Medicaid coverage and other important planned changes under the Affordable Care Act, will require the reassessment of links between disability cash benefits and public health insurance coverage. Expanding Medicaid coverage among nondisabled adults may weaken the role of SSI in providing access to health insurance in the future.

Chart 4.
Percentage of survivors aged 18–64 with Medicare Part A or full Medicaid coverage, from 12 months before to 72 months after disability program entry, by longitudinal pattern group



SOURCES: Authors' calculations from Social Security and Centers for Medicare and Medicaid Services administrative records.

Appendix

Table A-1.
Percentage of people with full Medicaid coverage among survivors aged 18–64 of longitudinal pattern groups, by selected months before and after first month of disability program entry

Month (month 1 = month of disability program entry) [a]	Number of observations	Longitudinal pattern [b]							Total
		DI-only	DI-only to joint DI/SSI	SSI-only	SSI-only to DI-only serial	SSI-only to joint SSI/DI	SSI/DI simultaneous	Other pattern	
-12	68,798	1.8	11.0	23.6	5.2	9.2	7.1	18.6	7.0
-6	68,798	2.9	13.8	26.7	5.5	10.1	11.5	19.8	8.6
Month of entry	68,798	5.8	23.7	66.4	63.1	43.4	47.8	54.5	23.5
2	68,599	6.1	27.2	69.8	67.3	46.8	50.0	57.8	25.0
3	68,361	6.4	29.8	72.0	68.9	49.7	51.2	59.8	26.1
4	68,038	6.6	32.3	74.1	69.8	52.5	49.8	61.0	26.9
5	67,710	6.8	34.4	75.7	67.4	54.9	49.9	63.5	27.6
6	67,349	7.0	36.3	77.3	59.5	56.3	49.0	64.7	27.9
7	66,983	7.2	37.8	78.4	51.4	56.0	48.7	67.1	27.9
8	66,663	7.5	39.4	78.9	46.8	55.7	47.8	67.8	28.1
9	66,373	7.6	41.0	80.0	43.5	55.4	46.1	68.8	28.3
10	66,071	7.8	42.1	80.4	41.3	54.6	45.5	68.8	28.4
11	65,784	8.0	43.8	80.8	39.3	54.4	45.6	69.6	28.6
12	65,497	8.2	44.9	81.1	38.4	54.0	45.2	69.4	28.9
18	63,800	9.2	52.4	83.5	37.3	54.1	46.1	71.9	30.6
24	62,316	9.6	54.0	84.7	36.4	52.0	44.5	72.4	31.0
25	66,663	7.5	39.4	78.9	46.8	55.7	47.8	67.8	31.0
26	66,373	7.6	41.0	80.0	43.5	55.4	46.1	68.8	31.1
27	66,071	7.8	42.1	80.4	41.3	54.6	45.5	68.8	31.0
28	65,497	8.2	44.9	81.1	38.4	54.0	45.2	69.4	31.0
29	65,198	8.4	47.7	81.5	37.7	54.1	45.0	69.0	30.8
30	60,755	9.6	53.5	85.0	34.2	48.9	41.5	74.1	30.7
36	59,138	9.4	53.5	84.8	34.0	48.0	43.4	71.9	30.6
48	55,479	9.4	52.2	83.5	32.5	46.1	42.4	69.5	30.3
60	51,752	9.4	51.9	82.8	33.5	46.2	40.8	67.8	30.5
72	48,286	8.2	48.6	82.1	29.9	41.6	37.0	66.2	29.1

SOURCES: Authors' calculations from Social Security and Centers for Medicare and Medicaid Services administrative records.

NOTES: Sample of first-ever disability (DI and/or SSI) program entrants in 2000 who were aged 18–64 during the first month of payment eligibility. "State-only" SSI first awardees are not included. "Month 1" is defined as first-ever month of positive payment eligibility for program of first award. Immediately preceding that month is "month -1." Because the sample frame was defined on the basis of benefit status in month 1, sample members were alive and younger than age 65 during the preceding 12 months; some may have been age 17 during prior months. The data for months 2 through 72 reflect only survivors younger than age 65 at given month.

a. Months corresponding to 12-month intervals 1 year before and 6 years after program entry are in bold. More detailed monthly information is given around important programmatic milestones.

b. Detailed classification of longitudinal cash benefit eligibility patterns during the 72-month period.

Table A-2.
Percentage of people with full Medicare Part A and/or Medicaid coverage among survivors aged 18–64 of longitudinal pattern groups, by selected months before and after first month of disability program entry

Month (month 1 = month of disability program entry) [a]	Number of observations	Longitudinal pattern [b]							Total
		DI-only	DI-only to joint DI/SSI	SSI-only	SSI-only to DI-only serial	SSI-only to joint SSI/DI	SSI/DI simultaneous	Other pattern	
-12	68,798	2.6	11.1	24.4	5.7	9.3	7.8	20.8	7.7
-6	68,798	3.9	14.0	27.6	6.1	10.2	12.1	22.0	9.4
Month of entry	68,798	7.7	23.9	66.7	63.5	43.5	48.3	54.9	24.7
2	68,599	8.0	27.4	70.0	67.8	46.9	50.6	58.2	26.2
3	68,361	8.4	30.1	72.3	69.6	49.9	52.2	60.0	27.4
4	68,038	8.6	32.5	74.4	70.8	52.7	51.2	61.2	28.3
5	67,710	8.9	34.6	76.1	68.7	55.1	51.4	63.9	29.1
6	67,349	9.1	36.7	77.6	61.6	56.5	50.6	65.1	29.4
7	66,983	9.4	38.2	78.8	54.3	56.2	50.5	67.7	29.5
8	66,663	9.6	39.8	79.4	50.0	56.0	49.8	68.6	29.7
9	66,373	9.8	41.4	80.5	47.2	55.8	48.2	69.8	30.0
10	66,071	10.0	42.6	80.9	45.2	55.1	47.7	70.0	30.1
11	65,784	10.2	44.3	81.3	43.6	54.9	47.8	70.8	30.4
12	65,497	10.5	45.5	82.0	42.8	54.4	47.6	71.2	30.7
18	63,800	12.3	53.3	84.7	41.9	54.7	48.4	74.5	33.0
24	62,316	13.6	55.5	86.8	41.0	52.8	46.9	76.4	34.2
25	62,073	97.5	99.4	87.1	41.0	52.5	99.3	77.2	89.7
26	61,803	99.0	99.5	87.3	45.1	58.1	99.6	78.4	91.3
27	61,546	99.0	99.5	87.6	50.3	65.6	99.5	78.7	92.3
28	61,272	99.1	99.5	87.8	60.8	74.9	99.5	81.1	93.6
29	60,998	99.1	99.5	88.2	85.7	90.1	99.6	83.2	96.1
30	60,755	99.2	99.5	88.3	99.9	99.8	99.7	84.4	97.6
36	59,138	99.4	99.4	88.3	99.5	99.8	99.7	91.0	97.7
48	55,479	99.1	99.4	87.3	98.8	99.5	99.3	93.7	97.4
60	51,752	98.8	99.1	87.1	98.0	99.1	98.1	95.0	97.0
72	48,286	98.6	98.9	86.9	97.4	98.7	97.3	97.7	96.8

SOURCES: Authors' calculations from Social Security and Centers for Medicare and Medicaid Services administrative records.

NOTES: Sample of first-ever disability (DI and/or SSI) program entrants in 2000 who were aged 18–64 during the first month of payment eligibility. "State-only" SSI first awardees are not included. "Month 1" is defined as first-ever month of positive payment eligibility for program of first award. Immediately preceding that month is "month -1." Because the sample frame was defined on the basis of benefit status in month 1, sample members were alive and younger than age 65 during the preceding 12 months; some may have been age 17 during prior months. The data for months 2 through 72 reflect only survivors younger than age 65 at given month.

a. Months corresponding to 12-month intervals 1 year before and 6 years after program entry are in bold. More detailed monthly information is given around important programmatic milestones.

b. Detailed classification of longitudinal cash benefit eligibility patterns during the 72-month period.

Notes

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[1] For instance Cogan, Hubbard, and Kessler (2008) were concerned about the effect of Medicare for disabled people on the market for private insurance. Yelowitz (1998) addressed the effect of Medicaid on SSI participation.

[2] Note also that under Section 10323 of the Patient Protection and Affordable Care Act (Public Law 111-148), the secretary of the Department of Health and Human Services may also deem individuals exposed to environmental health hazards eligible for Medicare coverage. See http://www.gpo.gov/fdsys/pkg/PLAW-111publ148/html/PLAW-111publ148.htm.

[3] For further detail, see http://www.socialsecurity.gov/redbook/index.html.

[4] Swartz (2008) reviewed the evolution of American attitudes and policy toward public health insurance for the poor. Dorn (2008) demonstrated the high prevalence of uninsured status among poor and near-poor nondisabled adults who were neither pregnant nor caring for dependent children.

[5] For further detail, see http://www.socialsecurity.gov/disabilityresearch/wi/1619b.htm.

[6] SSA is sufficiently concerned about health insurance coverage during the Medicare waiting period to have initiated the Accelerated Benefits Demonstration. For early results, see Weathers and others (2010).

[7] Individuals with amyotrophic sclerosis and transplant patients do not face a waiting period. Similar rules apply to end-stage renal disease patients; the waiting period is 3 months for dialysis patients, but is eliminated if those patients immediately undergo training for home dialysis. For details, see https://www.cms.gov/employerservices/04_endstagerenaldisease.asp.

[8] See http://www.socialsecurity.gov/disabilityresearch/wi/1619b.htm.

[9] For details on continued Medicare eligibility after the cessation of DI benefits for work-related reasons, see http://www.socialsecurity.gov/disabilityresearch/wi/medicare.htm.

[10] Huynh, Rupp, and Sears (2002) and Sears and Rupp (2003) reported substantial measurement error in data on DI and SSI in the Survey of Income and Program Participation. Davern and others (2009) demonstrated systematic underreporting of Medicaid coverage in the Current Population Survey.

[11] Health insurance coverage among young adults with childhood SSI experience is important, but outside the scope of our current analysis. See DeCesaro and Hemmeter (2009) for detail on health insurance coverage among SSI children.

[12] Some caution is needed in interpreting the race/ethnicity variable. This variable from Social Security administrative records is known to reflect some nonsampling error (Scott 1999). The nonsampling error arises from the fact that race and ethnicity are not measured separately in the administrative records, and the content of the variable has changed over time. Prior to 1980, the source data did not contain data on Hispanic ethnicity. As a result, the percentage shown in the table for the "White, non-Hispanic" category reflects upward bias, while the reverse is true for the "Other" category.

[13] Only 14.3 percent of this subgroup was covered for the reason of being "disabled, including blind." An additional 9 percent was covered by Medicaid as a "child" and less than 1 percent as an "unemployed adult." The overwhelming majority was classified as being covered for "other" reasons.

[14] Note that the race/ethnicity variable from Social Security administrative records is known to reflect nonsampling error (Scott 1999). Therefore, some caution is needed in the interpretation. While the point estimates from our regression models may be somewhat sensitive to this nonsampling error, we believe that the pattern of our estimated odds ratio results is not affected by this measurement error in a substantial way.

[15] As noted previously, the 24-month Medicare waiting period is substantially shortened or waived for certain DI awardees.

[16] Note that our anchoring point is the first month of benefit eligibility. For the DI-only group, that happens to be right after the completion of the 5-month DI waiting period. Thus, the jump to 100 percent Medicare coverage occurs during month 25. For the other groups with concurrent involvement, there appears some lag relative to our anchoring point, but that simply reflects the fact that SSI starts during the DI waiting period for these people. Nevertheless, the end of the combined DI and Medicare waiting period is always 29 months after disability onset for all four groups with DI involvement.

[17] In 11 states known as "209(b) states," both the financial and nonfinancial eligibility criteria can be more restrictive than the federal SSI standard, as long as the criteria are no more restrictive than the rules that were in place in 1972 (Kaiser Commission for Medicaid and the Uninsured 2010).

[18] Ungaro and Federman (2009) provided evidence that the restrictiveness in the Medicaid eligibility determination process has a negative effect on Medicaid enrollment among the elderly.

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