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Commissioner of Social Security

Douglas A. Turnbull
Analytics and Improvements

Editorial and Production Staff

Jessie Ann Dalrymple

Michael Leonesio, *Perspectives Editor*

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Perspectives

- 1 **Outcomes Following Termination of Social Security Disability Insurance Benefits**
by Michael T. Anderson, Monica Farid, Denise Hoffman, Serge Lukashanets, and Kai Filion

This article examines the experiences of Social Security Disability Insurance (DI) disabled-worker beneficiaries following termination of benefits due to medical improvement or work. The authors explore earnings, DI reentitlement, and Supplemental Security Income eligibility in the 5- and 10-year periods after benefit termination and find that beneficiaries whose benefits were terminated because of work tend to have higher post-termination earnings and greater likelihood of DI reentitlement than those whose benefits were terminated because of medical improvement. The authors also investigate the association between beneficiary characteristics and post-termination outcomes, finding that age, entitlement duration, the likelihood of medical improvement, and certain diagnoses—especially psychotic disorders, intellectual disorders, neoplasms, and injuries—correlated with earnings levels and the likelihood of disability program reeligibility in the years following termination.

OUTCOMES FOLLOWING TERMINATION OF SOCIAL SECURITY DISABILITY INSURANCE BENEFITS

by Michael T. Anderson, Monica Farid, Denise Hoffman, Serge Lukashanets, and Kai Filion*

We examined the experiences of former Social Security Disability Insurance (DI) disabled-worker beneficiaries in the years following termination of benefits due to medical improvement or work. Using Social Security Administration data, we found that approximately 16 percent of former DI-only beneficiaries whose benefits were terminated because of medical improvement between 2005 and 2014 returned to DI entitlement within 5 years of termination. By contrast, the DI reentitlement rate during the same period among those whose benefits were terminated because of work was significantly higher (about 32 percent). Fewer than half (45 percent) of former DI-only beneficiaries whose benefits were terminated because of medical improvement had average post-termination earnings exceeding the poverty threshold, compared with 71 percent of beneficiaries with work-based terminations. Age, entitlement duration, the likelihood of medical improvement, and certain diagnoses—especially psychotic disorders, intellectual disorders, neoplasms, and injuries—correlated with earnings levels and the likelihood of DI reentitlement in the years following benefit termination.

Introduction

The Social Security Disability Insurance (DI) program supports workers and their families by providing monthly cash benefits to qualifying individuals. In 2023, approximately 7.4 million people received DI disabled-worker benefits, with an average monthly benefit of \$1,537 (Social Security Administration [SSA] 2024). To be eligible for disabled-worker benefits, individuals must be unable to engage in substantial gainful activity (SGA) because of a medically determinable physical or mental impairment that is expected to result in death or to last for at least 12 continuous months.

To assess continued program eligibility, SSA conducts two types of continuing disability reviews (CDRs): medical and work. Benefits are terminated if a review finds that an individual's disabling condition has improved to the extent that he or she can perform SGA (termination due to medical improvement) or if an individual sustains work above the SGA earnings threshold for a predefined period (termination due to work).

Benefit termination can have implications for the economic well-being of former beneficiaries. Although those who lose benefits do not meet the standards for DI eligibility, they may be unable to earn at a level enabling self-sufficiency. By the time of benefit termination, many of these individuals have been out of the labor force for several years, potentially experiencing human capital depreciation and weakened social and employment networks (Brucker 2015; Autor and others 2015). Prior research has found that only one-third of beneficiaries whose benefits were terminated because of medical improvement between 1998 and 2008 had

Selected Abbreviations

CDR	continuing disability review
DAF	Disability Analysis File
DI	Disability Insurance
EPE	extended period of eligibility
EXR	expedited reinstatement
FMR	full medical review

* At the time this research was conducted, Michael T. Anderson was with Mathematica and Kai Filion was a policy analyst with the Social Security Administration. Monica Farid, Denise Hoffman, and Serge Lukashanets are with Mathematica.

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Selected Abbreviations—*Continued*

MEF	Master Earnings File
SGA	substantial gainful activity
SSA	Social Security Administration
SSI	Supplemental Security Income
TWP	trial work period

any earnings during a 5-year follow-up period (Hemmeter and Bailey 2016).

In light of these outcomes, SSA is conducting the Beyond Benefits Study.¹ This study combines in-depth interviews and focus groups, a national survey, and a Motivational Interviewing pilot to gather information on the service, medical, and employment needs of beneficiaries whose entitlement is ending because of medical improvement. The study aims to recommend policy changes or a demonstration that would promote substantive and sustainable employment.

Understanding the post-termination outcomes of former beneficiaries is also relevant to projecting program costs. Concerns about the DI Trust Fund's financial status have led to additional dedicated funding for program integrity initiatives (SSA 2020b, 2020d) and more stringent eligibility requirements (Morton 2013).

Former beneficiaries' reentitlement also raises questions about the longevity of the benefit termination decision. Prior research found that about one-fifth of DI-only beneficiaries whose benefits were terminated because of medical improvement between 2003 and 2008 returned to DI entitlement within 8 years (Hemmeter and Stegman 2013).

In this study, we investigated the earnings trajectories and SSA program return rates among beneficiaries whose benefits were terminated because of work or medical improvement to better understand how benefit termination affects beneficiaries' economic well-being and to identify which beneficiary groups are most likely to experience positive outcomes. Prior literature on the earnings and subsequent program participation of former DI beneficiaries has focused on medical improvement cases (Hemmeter and Stegman 2013; Hemmeter and Bailey 2016), and much of the research on terminations due to work has focused on termination rates, not post-termination outcomes (for example, Ben-Shalom and Mamun 2015 and Anand and Ben-Shalom 2018).

Individuals with benefit terminations due to work differ from those with terminations due to medical improvement in several ways that could affect subsequent outcomes. The latter group underwent a medical review during which a disability examiner and a medical expert determined that the individual's disabling condition had improved to an extent that the individual no longer had a qualifying disability. By contrast, those who lost eligibility because of work did not have their medical status reassessed but had verified sustained earnings above the SGA threshold, making them ineligible for benefits. In addition, individuals with work-based benefit terminations who continue to have the same underlying medical condition may be eligible for an expedited reinstatement, allowing quicker returns to benefits, if needed. These differences in disability and work histories and program rules can lead to differences in earnings trajectories and program participation in the years following benefit termination.

This study adds to the literature by examining the outcomes of former disabled-worker beneficiaries whose benefits were terminated because of either work or medical improvement. Although prior literature examined outcomes for people whose benefits were terminated up to 2008, our analysis extends from 2005 to 2014, encompassing the Great Recession (2007–2009) and its subsequent recovery years—a period of widespread changes in employment opportunities and social program participation. Comparing post-termination outcomes during and after the Great Recession allows us to observe whether the outcomes of former beneficiaries changed along with the business cycle.

We investigate trends in disability program participation and earnings in the 5- and 10-year periods following benefit termination separately by pre-termination program participation (DI-only versus concurrent DI and Supplemental Security Income [SSI]) and by reason for benefit termination (work versus medical improvement). We compare average post-termination earnings against the Census Bureau's single-person poverty threshold as a proxy for economic self-sufficiency. Finally, we examine which characteristics of former beneficiaries are associated with a successful return to work or independence from DI benefits in the years following benefit termination.

The remainder of this article is organized in four sections: a background on DI eligibility rules and benefit terminations, data and methods, main findings, and conclusions.

Background

This section reviews the principal eligibility criteria and administrative procedures relating to DI benefits for disabled-worker beneficiaries. It describes program requirements, work and medical CDRs, the appeals process, and recent patterns in benefit terminations.

Program Eligibility Requirements

In addition to the medical criteria described earlier, eligibility for DI worker benefits depends on a person's work history.² To be eligible, an individual must have sufficient earnings in recent years and sufficient cumulative work periods based on criteria that vary by claiming age. Although DI entitlement can be based on the work record of another person (such as a spouse), we restrict our analysis to disabled-worker beneficiaries, who are entitled to DI benefits based on their own work history.

About 10 percent of disabled-worker beneficiaries were also receiving SSI payments in 2019, the most recent year in our analysis (SSA 2021b). The SSI program provides payments to qualifying people with disabilities who have limited income and resources.³ For those eligible, SSI payments are reduced based on monthly unearned and earned income of more than \$20: by \$1 for every \$1 of unearned income (such as DI benefits), and by 50 cents for every \$1 of earned income over \$65 (beyond the \$20 general income exclusion). In 2019, for single SSI recipients living alone with no other income or exclusions, the threshold at which their SSI payments would reduce to zero was about \$1,600 of monthly earned income. Because the SSI program does not have a work history requirement, we expect SSI recipients to have weaker labor force attachment.

DI Rules Governing Work Activity

DI benefit eligibility depends on both work activity and impairment severity. Individuals eligible for DI benefits must be unable to engage in SGA because of a medically determined physical or mental impairment. The SGA earnings level is adjusted annually based on changes in the national average wage; in 2019, the monthly SGA amount for nonblind individuals was \$1,220.⁴

Program rules allow beneficiaries to test their ability to work without losing their benefits during a trial work period (TWP).⁵ This is potentially useful for beneficiaries who seek employment and for people with cyclic or episodic disabilities, such as psychotic

disorders, which are characterized by unpredictable periods of symptoms and wellness. Each month a beneficiary has earnings above an annually adjusted threshold (\$880 in 2019) counts as a trial work month. The TWP then consists of the first 9 trial work months (not necessarily consecutive) within a rolling 60-month window. Following the TWP, an extended period of eligibility (EPE) begins and lasts for at least 36 months. During the EPE, benefits are suspended for any month in which earnings exceed the SGA threshold, except for a grace period comprising the first month of SGA and 2 subsequent months. During the EPE, a beneficiary is eligible to receive DI benefits for any month in which earnings are below the SGA threshold. After the EPE, DI entitlement terminates if the beneficiary engages in SGA. Given this progression, the earliest benefit termination due to work can occur is 45 months after a beneficiary's return to work.

Work CDRs

DI beneficiaries must submit timely reports of work activity to SSA, but the agency also receives beneficiary earnings and work activity information from external sources, such as the Internal Revenue Service (IRS) and the National Directory of New Hires. When any of these records suggest earnings levels over the SGA threshold, the agency conducts a work CDR to determine whether the beneficiary's work activity affects DI entitlement. If a beneficiary has exhausted the TWP, EPE, and grace periods and subsequently engaged in SGA, SSA terminates benefits. In 2019, SSA completed 306,680 work CDRs (covering work activity in or before 2019) and terminated benefits because of SGA for 55,850 beneficiaries (SSA 2020a, 2021a).

Individuals with benefit terminations due to work may request expedited reinstatement (EXR) within 60 months of termination. EXR allows a faster return to benefits if work ceases or hours are reduced because of disability. EXR applicants must have had benefits terminated because of work, must not be performing SGA at the time of the EXR application, and must have the same or a related disabling condition as the one that originally prevented them from performing SGA. Applicants receive up to 6 months of provisional cash benefits while SSA reviews their case. EXR also facilitates quicker decisions than regular applications, which have an average processing time of nearly 4 months (for initial allowances, SSA 2020c).

Medical CDRs

SSA also conducts medical CDRs for beneficiaries typically once every 3 to 7 years, to assess possible medical improvement since the last favorable eligibility decision. The timing of the review depends on a clinical classification of the case into one of three “medical diary” categories: medical improvement expected (for example, neoplasms in remission or recently acquired back conditions), medical improvement possible, or medical improvement not expected (for example, intellectual or chronic psychotic disorders). The diary date, or the date of the next medical CDR, is set at the time of award and is subsequently updated after each CDR if benefits continue. However, because of fluctuating agency resources and priorities, medical CDRs may be delayed (SSA 2021c).

Medical CDRs are conducted using one of two approaches, depending on a case’s probabilistic score of likely medical improvement, called the CDR profile score. For a case with a high profile score, SSA initiates a full medical review (FMR). For a case with a lower score, SSA collects additional information from the beneficiary (via a mailer and questionnaire) before determining whether an FMR is warranted. In fiscal year 2019, SSA conducted 215,720 FMRs and 766,913

mailer CDRs for disabled-worker beneficiaries, resulting in 39,056 initial terminations (SSA 2025).

Appeals Process

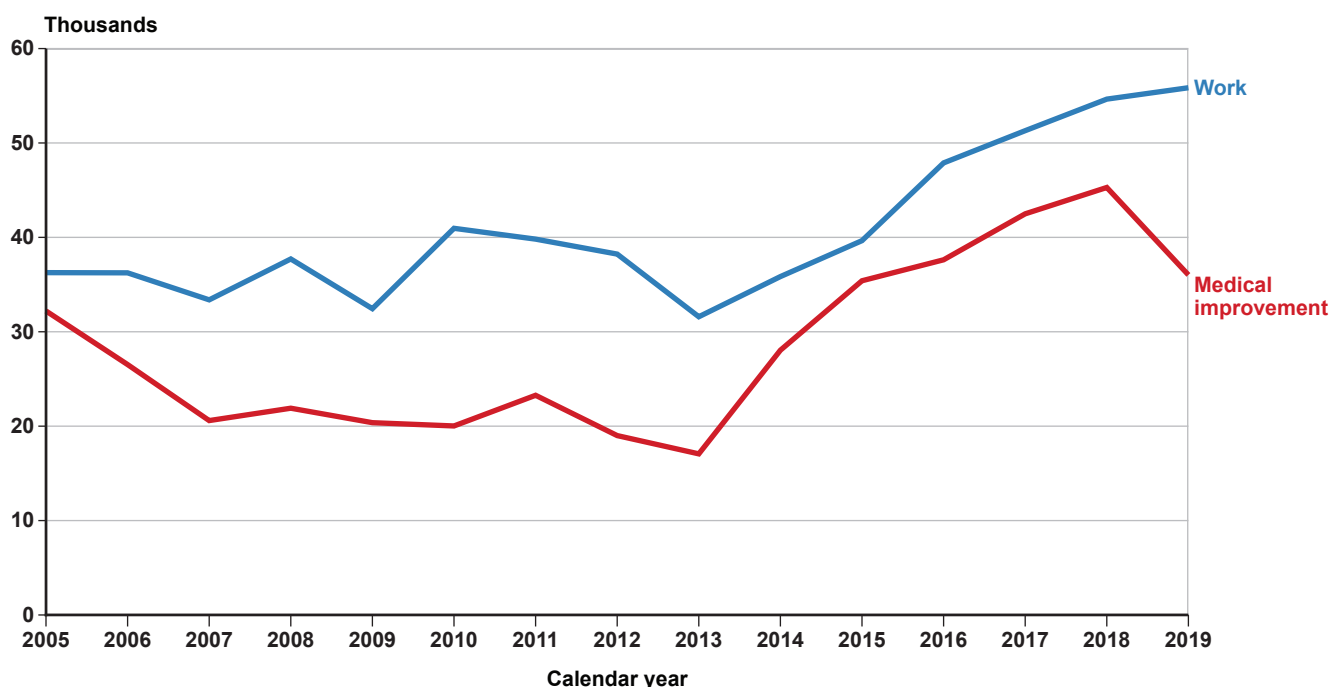
Beneficiaries have the right to appeal work and medical CDR decisions. For findings of medical improvement, if a beneficiary requests reconsideration within 10 days of the CDR notice, his or her benefits will continue during the reconsideration process. (Benefit continuation is not allowed for terminations due to work.)

Reconsideration is the first appeal level, possibly followed by a hearing before an administrative law judge and then further judicial appeals. SSA’s Office of the Chief Actuary estimates that, after all appeals, 2.4 percent of disabled-worker beneficiaries who underwent a medical CDR (either an FMR or a mailer CDR) during fiscal year 2019 ceased receiving benefits (SSA 2025).

Trends in DI Benefit Terminations

Benefit terminations due to work or medical improvement are rare, affecting only about 1 percent of disabled-worker beneficiaries annually (SSA 2020a). Chart 1 shows the number of disabled-worker beneficiaries whose benefits were terminated after a CDR between 2005 and 2019, by reason for termination.

Chart 1.
Number of disabled-worker beneficiaries whose benefits were terminated, by termination reason, 2005–2019



SOURCE: *Annual Statistical Report on the Social Security Disability Insurance Program*, 2005–2019 editions.

From 2005 to 2013, approximately 22,000 beneficiaries per year experienced benefit terminations due to medical improvement and about 36,000 due to work. The number of terminations due to medical improvement increased each year from 2014 to 2018, peaking near 45,000 before declining to 36,000 in 2019. The number of terminations due to work increased monotonically from 2014 to 2019, reaching nearly 56,000.

Data and Methods

This section describes the data sources, sample selection, outcome measures, and analytical methods used in our study.

Data and Sample Construction

Our primary data come from SSA's 2019 Disability Analysis File (DAF),⁶ a longitudinal data file consolidating administrative records on all DI beneficiaries and SSI recipients under full retirement age who received payments in any month between January 1996 and December 2019. The 2019 DAF includes FMR records sourced from SSA's CDR Waterfall File, covering each level of the FMR determination process through the final decision and the most recent action of any FMR,⁷ and work CDR records (for initial determinations only) from the Disability Control File (DCF). We supplemented the DCF-based data on the timing and outcome of the initial decision with information in the DAF sourced from the Master Beneficiary Record to establish the timing and outcome of the final decision.

We used Master Earnings File (MEF) records to construct measures of average earnings in the 5 and 10 years following benefit termination. The MEF contains earnings records based on IRS W-2 forms and annual tax returns, among other sources.⁸

The study population comprises disabled-worker beneficiaries whose DI benefits were terminated because of medical improvement or work between 2005 and 2014. We restricted the population to individuals who were younger than age 60 as of the initial decision and younger than age 62 as of the final decision (for beneficiaries who appealed an initial decision). Our final sample includes 177,505 former beneficiaries with work-based benefit terminations and 63,032 with benefit terminations due to medical improvement.

Although the 2019 DAF includes records through 2019, we excluded beneficiaries whose terminations occurred after 2014 to allow a 5-year follow-up period. We also studied outcomes over a 10-year follow-up period for the subset of beneficiaries whose benefits

were terminated between 2005 and 2009 (76,492 terminations due to work and 25,120 due to medical improvement).

Outcomes and Analyses

We identified DI reentitlement and SSI eligibility in the years following DI benefit termination using DAF data on current-payment status. We checked for current-payment status starting in the fourth month following the month of termination because individuals can continue to receive payments during a 3-month grace period. Individuals who were in sustained current-payment status—for at least 7 consecutive months—for DI, SSI, or both were classified as having returned to disability program eligibility.⁹ The 7-month criterion avoids misclassifying individuals who received presumptive SSI payments or provisional EXR benefits for up to 6 months during a review period but were ultimately denied benefits.¹⁰

We examined earnings following benefit termination using an approach similar to that of Hemmeter and Bailey (2016) by averaging annual earnings observed in the MEF during the 5 years after the year of benefit termination. Because all MEF earnings records are annualized, we excluded earnings in the year of termination to exclude pre-termination earnings from our measure. In cases of partial-year data because of a beneficiary's death, we calculated an annualized earnings measure for the year of death based on the number of months the individual was alive.¹¹ For example, if a former beneficiary died in June, we multiplied observed earnings in that year by two. All earnings were adjusted to 2019 dollars using the Consumer Price Index for All Urban Consumers (CPI-U).

We compared average post-termination earnings with the Census Bureau's single-person poverty threshold, which is based on the cost of a minimum food diet in 1963 adjusted for inflation.¹² In 2010, the midpoint of our analysis period, the annual poverty threshold for a single person younger than 65 was \$11,344.¹³ This poverty measure is typically used to establish whether an individual's income is sufficient to cover basic needs. In our analysis, we use the poverty threshold as a proxy for whether a former beneficiary's earnings were adequate for attaining economic self-sufficiency.¹⁴

To explore whether certain beneficiary characteristics correlated with achieving economic self-sufficiency, we compared the characteristics of individuals who did not return to DI entitlement within 5 years with the characteristics of people who did

return, conditional on two case aspects: the reason for benefit termination and the pre-termination program eligibility (DI only or concurrent DI and SSI). We conducted a similar comparison for those who had earnings above versus below the poverty threshold in the years following benefit termination. The characteristics we examined were age group, primary impairment category, likelihood of medical improvement (from most recent medical diary category), past participation in the Ticket to Work program,¹⁵ entitlement duration as of benefit termination, and county unemployment rate in the year of termination.

Results

This section presents our main findings, including patterns of post-termination program participation, earnings outcomes, and factors associated with economic self-sufficiency among former beneficiaries.

Program Participation in the Years Following Benefit Termination

Individuals whose benefits were terminated because of work between 2005 and 2014 returned to DI entitlement at a higher rate than those whose benefits were terminated because of medical improvement over the same period. Table 1 presents the percentage of former beneficiaries in current-payment status for DI, SSI, or both within 5 years of benefit termination.

Among former DI-only and concurrent beneficiaries who lost eligibility because of medical improvement, 15.7 percent and 14.2 percent, respectively, returned to

DI current-payment status within 5 years. These rates are 1 to 2 percentage points higher than those reported by Hemmeter and Stegman (2013) for FMR terminations between 2003 and 2008. A notably higher share of former DI-only beneficiaries (32.3 percent) and former concurrent beneficiaries (50.2 percent) who lost eligibility because of work returned to DI current-payment status within 5 years. This difference may partly reflect the availability of EXR for beneficiaries with benefit terminations due to work, but not for those with terminations due to medical improvement.¹⁶ These results are consistent with recent research indicating that about half of beneficiaries whose benefits were suspended because of work subsequently returned to benefits (Shenk and Livermore 2021).

The highest DI entitlement return rate (50.2 percent) was observed for former concurrent beneficiaries with work-based benefit terminations. This group comprises a relatively small number of former beneficiaries whose pre-termination earnings were in the narrow range above the SGA threshold (\$1,220 in 2019) but below the SSI countable income amount that would fully offset their entire SSI payments (about \$1,600 of earned income in 2019). These individuals' pre-termination earnings were the lowest among the work-based benefit termination cases (not shown), indicating a more tenuous labor force attachment than that of those whose pre-termination income and resources were too high for SSI eligibility.

The likelihood of subsequent SSI participation also varied substantially by pre-termination program

Table 1.
Disability program eligibility within 5 years of benefit termination due to work or medical improvement among former disabled-worker beneficiaries, by case type (in percent)

Disability program eligibility	All former disabled-worker beneficiaries	DI-only beneficiaries with benefit terminations due to—		Concurrent beneficiaries with benefit terminations due to—	
		Work	Medical improvement	Work	Medical improvement
DI	28.1	32.3	15.7	50.2	14.2
DI only	25.2	30.4	11.7	33.1	4.2
Concurrent DI and SSI	2.9	1.9	4.1	17.1	10.0
SSI	4.2	2.6	5.7	25.6	17.2
SSI only	1.3	0.7	1.6	8.5	7.2
Concurrent DI and SSI	2.9	1.9	4.1	17.1	10.0
Neither DI or SSI	70.6	67.0	82.7	41.3	78.7
Observations	240,537	174,668	53,167	2,837	9,865

SOURCE: Authors' calculations using the 2019 Disability Analysis File.

NOTES: Includes cases with terminations between 2005 and 2014.

Totals do not necessarily equal the sum of rounded components.

eligibility. People who previously received SSI were much more likely to successfully apply for SSI after DI benefit termination than people previously entitled to DI only. Similar to the findings of Hemmeter and Stegman (2013), of those who lost eligibility because of medical improvement, 17.2 percent of former concurrent beneficiaries successfully reapplied to SSI within 5 years of termination compared with 5.7 percent of former DI-only beneficiaries with successful applications. Among the cases of work-based benefit termination, one-quarter (25.6 percent) of former concurrent beneficiaries returned to SSI, whereas only 2.6 percent of former DI-only beneficiaries successfully applied for SSI.

A relatively small share (1.3 percent) of former beneficiaries entered SSI current-payment status within 5 years of benefit termination but did not return to DI benefits within the same period. Among former concurrent beneficiaries who returned to SSI current-payment status, notable shares (7.2 percent of medical improvement cases and 8.5 percent of work-based benefit terminations) returned to SSI only (rather than to concurrent benefits).

We also examined subsequent program participation over a 10-year horizon following benefit termination for the subset of former beneficiaries for whom we have at least 10 years of follow-up data: those whose benefits were terminated between 2005 and 2009 (Table 2). As expected, the magnitude of return to the disability programs was higher over the longer period, though not proportionally: the likelihood of

return tends to decrease over time so the rate of return over 10 years is not double the rate of return over 5 years. Outcome patterns by reason for termination and pre-termination program eligibility were generally the same in the 10-year period as they were for the 5-year period.

Timing of Subsequent Program Participation

Charts 2 and 3 illustrate the timing of returns to disability program (DI or SSI) eligibility within 5 years following benefit termination, by reason for termination and pre-termination program eligibility. Generally, rates of return to DI benefits and return or new eligibility for SSI peaked in the second year following benefit termination and declined thereafter. An exception was former concurrent beneficiaries who lost eligibility because of work; this group was most likely to return to SSI in the first year after termination.

Subsequent Program Participation and Economic Conditions

Prior research documents a positive relationship between the unemployment rate and DI applications and awards (Stapleton and others 1998; Cutler, Meara, and Richards-Shubik 2012; Maestas, Mullen, and Strand 2015, 2021). In addition, Nichols, Schmidt, and Sevak (2017) found a positive association between the unemployment rate and SSI applications. Our data include cohorts of former disabled-worker beneficiaries whose benefits were terminated before, during, and after the Great Recession, a period of high unemployment.

Table 2.
Disability program eligibility within 10 years of benefit termination due to work or medical improvement among former disabled-worker beneficiaries, by case type (in percent)

Disability program eligibility	All former disabled-worker beneficiaries	DI-only beneficiaries with benefit terminations due to—		Concurrent beneficiaries with benefit terminations due to—	
		Work	Medical improvement	Work	Medical improvement
DI	43.1	47.2	30.9	62.9	26.2
DI only	37.4	43.2	22.3	38.7	7.5
Concurrent DI and SSI	5.8	4.0	8.6	24.2	18.6
SSI	7.9	5.0	12.7	30.7	31.7
SSI only	2.1	0.9	4.1	6.5	13.1
Concurrent DI and SSI	5.8	4.0	8.6	24.2	18.6
Neither DI or SSI	54.7	51.9	65.0	30.6	60.8
Observations	101,612	75,447	21,044	1,045	4,076

SOURCE: Authors' calculations using the 2019 Disability Analysis File.

NOTES: Includes cases with terminations between 2005 and 2009.

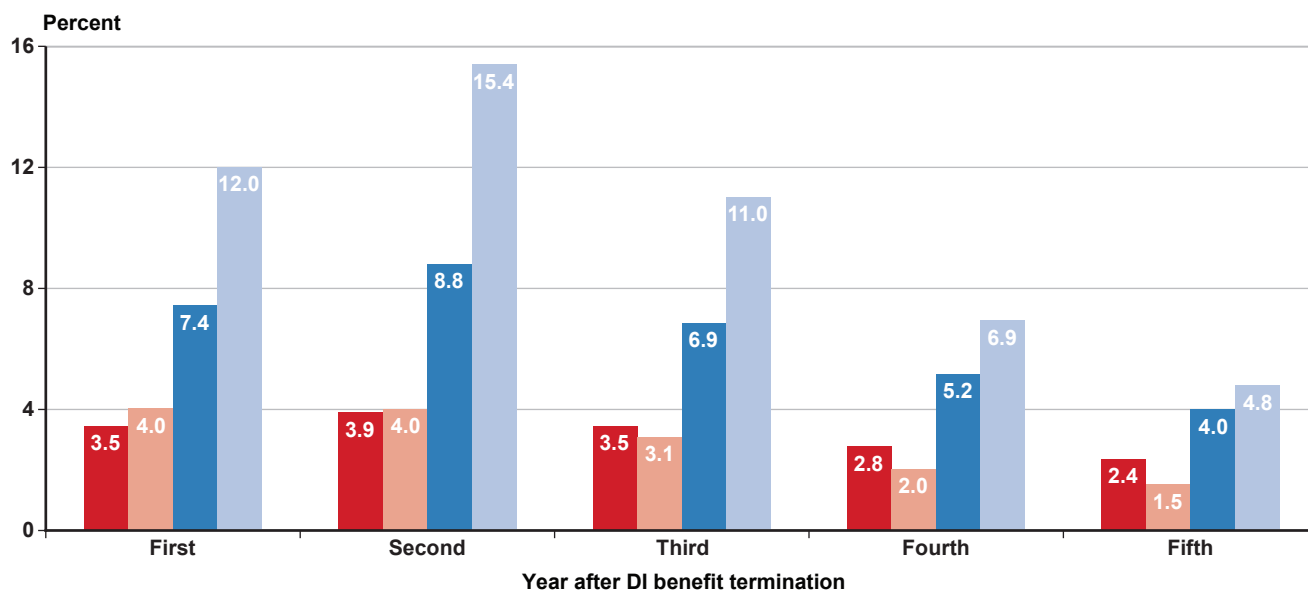
Totals do not necessarily equal the sum of rounded components.

Chart 2.

Percentage of former disabled-worker beneficiaries reentitled to DI after benefit termination due to medical improvement or work between 2005 and 2014, by year after DI benefit termination and case type

DI-only beneficiaries: ■ Medical improvement (n = 53,167) ■ Work (n = 174,668)

Concurrent beneficiaries: ■ Medical improvement (n = 9,865) ■ Work (n = 2,837)



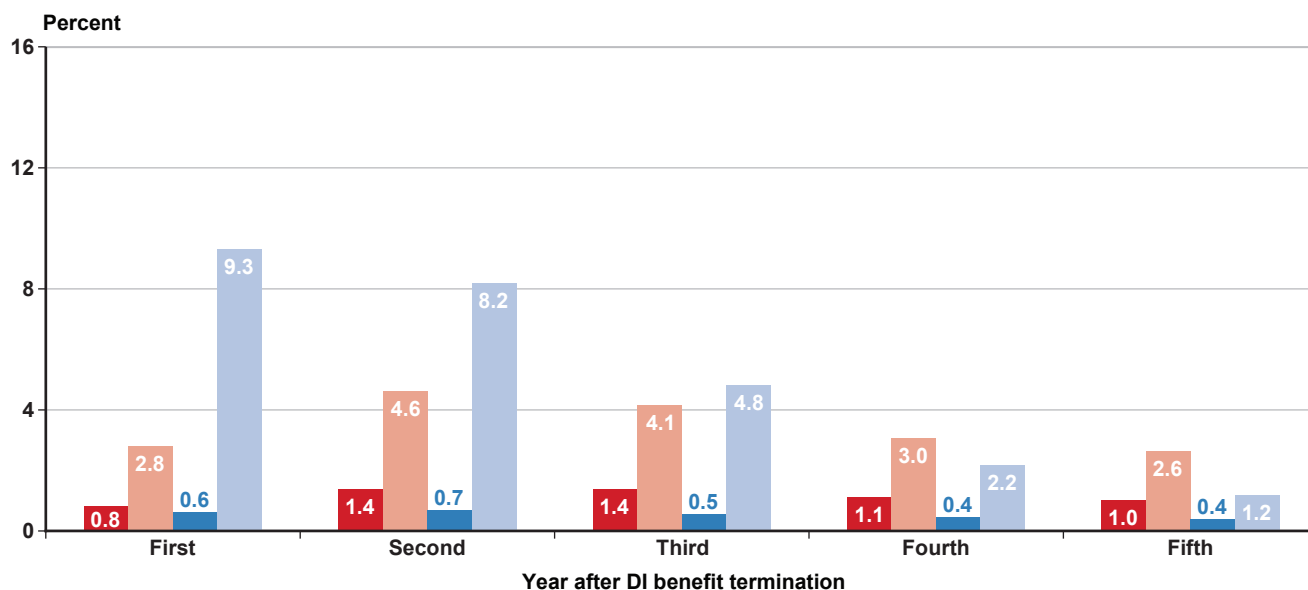
SOURCE: Authors' calculations using the 2019 Disability Analysis File.

Chart 3.

Percentage of former disabled-worker beneficiaries (re)eligible for SSI after benefit termination due to medical improvement or work between 2005 and 2014, by year after DI benefit termination and case type

DI-only beneficiaries: ■ Medical improvement (n = 53,167) ■ Work (n = 174,668)

Concurrent beneficiaries: ■ Medical improvement (n = 9,865) ■ Work (n = 2,837)



SOURCE: Authors' calculations using the 2019 Disability Analysis File.

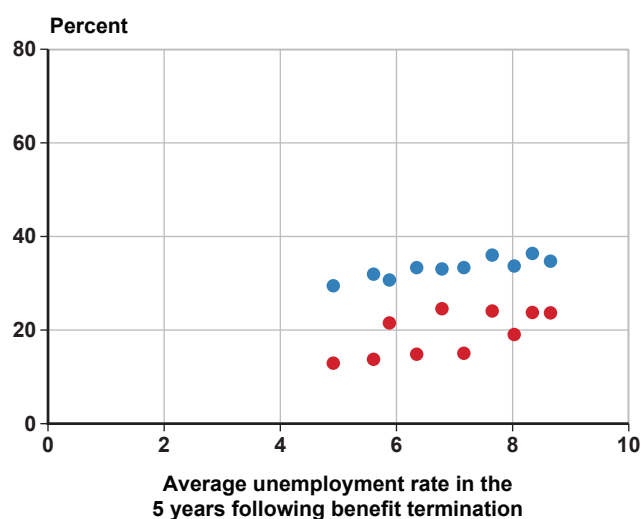
Chart 4 shows the correlation between the national unemployment rate and disability program reeligibility rate. Each dot in the chart represents a cohort of beneficiaries whose benefits were terminated within a single calendar year between 2005 and 2014; cohorts with terminations due to medical improvement are shown in red and those due to work in blue. The vertical scale shows the share of the cohort that returned to disability program (DI or SSI) eligibility within 5 years of DI benefit termination. The horizontal scale shows the average unemployment rate applicable to the cohort over the 5 years following benefit termination.

The results show a positive correlation between the unemployment rate and return to disability program eligibility. The correlation is stronger for people whose benefits were terminated because of work (coefficient of 0.88) than for those whose benefits were terminated because of medical improvement (0.67). These results are consistent with prior research and the theory that economic conditions in the period following benefit termination could play a role in the likelihood of subsequent program participation.

Chart 4.
Percentage of same-year benefit termination cohort with DI or SSI (re)eligibility within 5 years of benefit termination due to medical improvement or work between 2005 and 2014, by average unemployment rate in the 5 years following benefit termination

■ Medical improvement (n = 63,032)

■ Work (n = 177,505)



SOURCE: Authors' calculations using the 2019 Disability Analysis File.

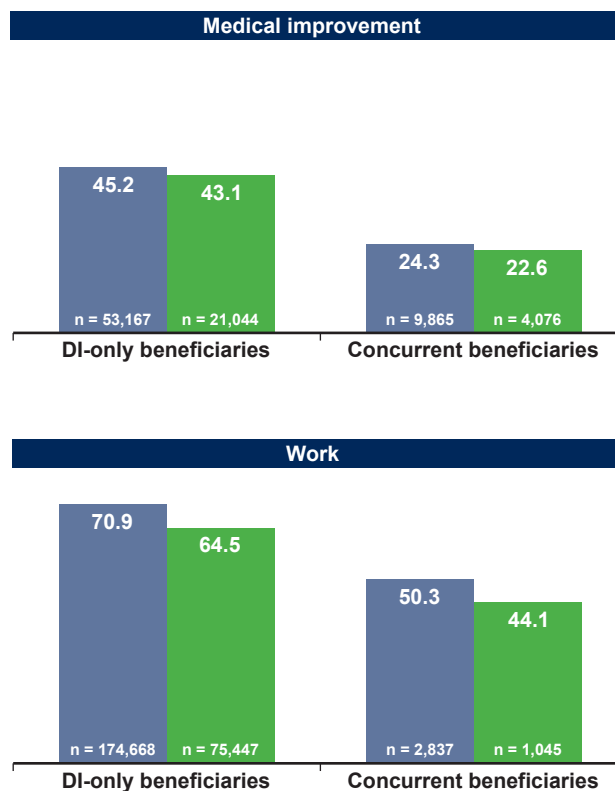
NOTE: Unemployment rates are based on the national civilian labor force as reported by the Bureau of Labor Statistics.

Earnings in the Years Following Benefit Termination

DI-only and concurrent beneficiaries with benefit terminations due to work were more likely to have average earnings above the poverty threshold than those with benefit terminations due to medical improvement. Chart 5 shows the percentages of former beneficiaries who had average post-termination earnings above the single-person poverty threshold. Of former DI-only beneficiaries whose benefits were terminated because of work, 71 percent had average post-termination earnings above the poverty threshold during the first 5 calendar years after benefit termination, compared with 45 percent of those with medical improvement cases. The percentage of former concurrent beneficiaries who

Chart 5.
Percentage of former disabled-worker beneficiaries with average post-termination earnings above the poverty threshold in the 5 and 10 years following benefit termination due to medical improvement or work, by case type

■ 5 years ■ 10 years



SOURCE: Authors' calculations using the 2019 Disability Analysis File.

NOTE: Five-year cohorts include cases with benefit terminations due to medical improvement or work between 2005 and 2014; 10-year cohorts include terminations between 2005 and 2009.

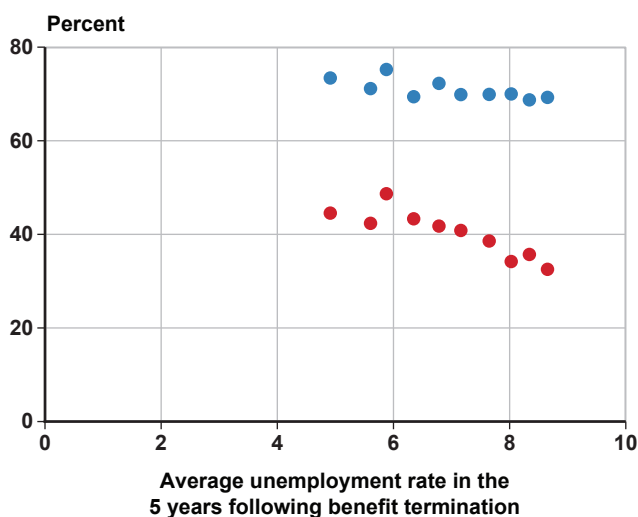
attained earnings above the poverty threshold was about 20 percentage points lower than that of former DI-only beneficiaries, regardless of the reason for benefit termination. Fewer former beneficiaries attained average earnings above the poverty threshold over the 10-year horizon than over the 5-year horizon.

Chart 6 shows the correlation between the national unemployment rate and the share of individuals with earnings above the poverty threshold. Each dot in the chart represents a cohort of beneficiaries within a single calendar year between 2005 and 2014; cohorts with terminations due to medical improvement are shown in red and those due to work in blue. The vertical scale shows the share of the cohort with average post-termination earnings above the poverty threshold. The horizontal scale shows the average unemployment rate applicable to the cohort during the 5 years following benefit termination.

There is a negative correlation between the unemployment rate and post-termination earnings for all former beneficiaries regardless of benefit termination

Chart 6.
Percentage of same-year benefit termination cohort with average post-termination earnings above the poverty threshold in the 5 years following benefit termination due to medical improvement or work between 2005 and 2014, by average unemployment rate in the 5 years following benefit termination

■ Medical improvement (n = 63,032)
■ Work (n = 177,505)



SOURCE: Authors' calculations using the 2019 Disability Analysis File.

NOTE: Unemployment rates are based on the national civilian labor force as reported by the Bureau of Labor Statistics.

reason. The results indicate that the earnings of people with work-based benefit terminations were less sensitive to economic conditions at the time of termination (coefficient of -0.73) than were those of people with medical improvement cases (-0.88). The former group may have a stronger connection to the labor force, while the latter would more likely be new job seekers. If so, this is consistent with literature on the labor market that finds economic recessions make job finding more difficult but do not increase job loss to the same extent (Hall 2005).

Joint Outcomes: Earnings and Subsequent Program Participation

The previous sections presented post-termination disability program participation and earnings outcomes separately. We also grouped the study population into four categories based on combinations of these two measures. Of the four outcome categories, we consider former disabled-worker beneficiaries with earnings above the poverty threshold who also remained independent from the DI and SSI programs as having achieved economic self-sufficiency, an outcome that aligns with the goals of the Beyond Benefits Study.

Table 3 shows the percentage distributions for these four outcome categories. Overall, about half of former disabled-worker beneficiaries had earnings above the poverty threshold and independence from the DI and SSI programs in the years after benefit termination. Seventeen percent neither returned to current-payment status nor had average earnings above the poverty threshold. Almost one in five former beneficiaries did not have earnings above the poverty threshold and requalified for benefits, while one in 10 attained average earnings above the poverty threshold but also returned to disability program eligibility within 5 years. This final group had sufficient earnings to exceed the poverty threshold when averaged over 5 years but eventually requalified for benefits.

Two notable findings emerge when stratifying by reason for termination and pre-termination program eligibility. First, conditional on reason for termination, former DI-only beneficiaries were at least 20 percentage points more likely to have had earnings above the poverty threshold and to have maintained independence from the DI and SSI programs than were former concurrent beneficiaries. Second, individuals with benefit terminations due to medical improvement were more likely than those with benefit terminations due to work to remain in nonbeneficiary status and have average earnings below the poverty threshold.

Table 3.

Percentage distributions of outcomes for former disabled-worker beneficiaries with benefit terminations due to work or medical improvement between 2005 and 2014, by case type

Outcome	All former disabled-worker beneficiaries	DI-only beneficiaries with benefit terminations due to—		Concurrent beneficiaries with benefit terminations due to—	
		Work	Medical improvement	Work	Medical improvement
No return to disability program eligibility and average earnings—					
Above the poverty threshold	52.7	57.8	42.6	33.4	23.4
Below the poverty threshold	17.4	8.7	39.8	7.7	54.8
Return to disability program eligibility and average earnings—					
Above the poverty threshold	10.3	13.1	2.7	16.9	0.9
Below the poverty threshold	19.5	20.4	15.0	42.0	20.9
Observations	240,537	174,668	53,167	2,837	9,865

SOURCE: Authors' calculations using the 2019 Disability Analysis File.

NOTES: Outcome measures are within 5 years of benefit termination.

Rounded components of percentage distributions do not necessarily sum to 100.0.

Characteristics Associated with Economic Self-Sufficiency

Thus far, we have presented results separately for four groups of former beneficiaries defined by case profile (determined by reason for benefit termination and prior program eligibility). It is possible that beneficiaries in each of these groups differ from one another in other ways that could affect their outcomes after benefit termination. For example, if those whose benefits were terminated because of work were younger on average than those whose benefits were terminated because of medical improvement, age could be the factor that drove the differences in outcomes we observed. To assess these effects, we examined characteristics of each of the four case profile types, overall, in Tables 4 and 5, and separately by outcomes, in Appendix Tables A-1 through A-4.

Tables 4 and 5 summarize the variations in characteristic prevalence for the four case types depending on outcomes. Specifically, Table 4 shows that the characteristics of individuals who maintained independence from the disability programs differ from those who returned to DI or SSI eligibility. A positive value for a given characteristic (for example, aged 18–29) indicates higher prevalence of that characteristic among individuals who did not return to current-payment status than among those who did. Table 5 is similarly constructed but shows characteristics by average post-termination earnings, above versus below the poverty threshold.

Age at benefit termination is the most significant differentiator between former beneficiaries who did or did not attain economic self-sufficiency following benefit termination. Regardless of termination reason or pre-termination program eligibility, former beneficiaries who earned above the poverty threshold and maintained independence from the disability programs were younger than those who did not. This is not surprising given that younger age corresponds with better work outcomes and age is a specific consideration in the disability determination process.

Shorter entitlement duration before benefit termination was associated with a higher likelihood of either measure of economic self-sufficiency in the years following benefit termination. Similarly, beneficiaries with medical diary classifications of medical improvement expected or possible were more likely to achieve positive outcomes than were those with classifications of medical improvement not expected. The local unemployment rate at the time of benefit termination is also associated with the likelihood of attaining earnings above the poverty threshold in the years following benefit termination.

Certain diagnoses were also correlated with post-termination outcomes. Beneficiaries with a primary impairment of either “schizophrenia spectrum and other psychotic disorders” or “intellectual disorders” were less likely to meet the measures of self-sufficiency in the years following benefit termination than were people with other diagnoses. Conversely,

Table 4.

Differences in characteristic prevalence between former disabled-worker beneficiaries who did not return to disability program eligibility within 5 years of benefit termination and those who did, by case type (in percentage points)

Characteristic	DI-only beneficiaries with benefit terminations due to—		Concurrent beneficiaries with benefit terminations due to—	
	Work	Medical improvement	Work	Medical improvement
Age at benefit termination				
18–29	4.9	5.3	23.0	13.0
30–39	5.4	9.6	0.0	7.6
40–49	3.1	-2.4	-11.5	-12.7
50–59	-13.4	-12.5	-11.5	-7.9
Primary impairment				
Congenital anomalies	-0.1	0.0	0.2	0.1
Endocrine, nutritional, and metabolic diseases	-0.8	0.0	-0.1	0.2
Infectious and parasitic diseases	0.4	0.0	-0.2	-0.2
Injuries	1.6	1.9	1.1	1.4
Mental disorders				
Intellectual disorders	-0.9	-0.7	-1.7	-0.8
Schizophrenia spectrum and other psychotic disorders	-1.7	-4.9	-1.0	-5.6
Other mental disorders	-0.3	-0.1	2.5	3.1
Neoplasms	4.1	1.6	0.6	0.8
Diseases of the—				
Blood and blood-forming organs	-0.1	0.3	0.4	-0.1
Circulatory system	-1.2	-0.9	-0.5	-0.9
Digestive system	0.5	-0.3	0.7	0.8
Genitourinary system	0.5	-2.5	0.7	-1.9
Musculoskeletal system and connective tissue	-2.8	1.5	-4.2	0.3
Nervous system and sense organs	-1.2	1.1	3.0	1.0
Respiratory system	-0.2	0.0	-0.9	-0.1
Skin and subcutaneous tissue	0.1	0.1	-0.1	0.2
Other or unknown	2.1	2.9	-0.7	1.7
Expectation for medical improvement				
Expected	4.0	4.4	2.6	4.1
Possible	1.7	-1.5	3.3	0.6
Not expected	-6.2	-1.7	-3.7	-2.4
No information	0.1	-1.3	-2.1	-2.3
Pre-termination DI entitlement duration				
Fewer than 2 years	0.2	0.3	0.2	0.8
2–3 years	1.8	1.3	1.2	2.5
4–5 years	3.4	2.7	6.6	3.3
6 years or more	-5.4	-4.3	-7.9	-6.7
Past participation in Ticket to Work program	-0.2	0.1	-0.3	0.2
County unemployment rate in month of benefit termination	-0.1	0.2	0.0	0.2
Observations	174,668	53,167	2,837	9,865

SOURCE: Authors' calculations using the 2019 Disability Analysis File.

NOTES: Includes cases with benefit terminations due to work or medical improvement between 2005 and 2014.

The values shown are calculated from the unrounded values in Appendix Tables A-1 through A-4. A positive value indicates that the prevalence of the associated characteristic (for example, aged 18–29) was higher among those who did not return to disability program eligibility than among those who did return to disability program eligibility within 5 years of benefit termination.

Table 5.

Differences in characteristic prevalence between former disabled-worker beneficiaries with average earnings above the poverty threshold and those with average earnings below the poverty threshold in the 5 years following benefit termination, by case type (in percentage points)

Characteristic	DI-only beneficiaries with benefit terminations due to—		Concurrent beneficiaries with benefit terminations due to—	
	Work	Medical improvement	Work	Medical improvement
Age at benefit termination				
18–29	3.3	4.8	19.2	15.5
30–39	1.6	2.8	-1.6	1.4
40–49	0.5	-3.2	-10.6	-12.6
50–59	-5.4	-4.4	-7.0	-4.3
Primary impairment				
Congenital anomalies	0.0	0.0	0.5	0.1
Endocrine, nutritional, and metabolic diseases	-0.5	0.2	0.2	0.3
Infectious and parasitic diseases	0.3	0.0	-0.4	0.1
Injuries	1.7	0.6	1.5	0.5
Mental disorders				
Intellectual disorders	-1.6	-0.6	-1.6	-1.3
Schizophrenia spectrum and other psychotic disorders	-2.7	-3.5	-3.0	-3.0
Other mental disorders	-3.8	-4.7	-0.9	-3.7
Neoplasms	2.3	4.4	0.4	2.4
Diseases of the—				
Blood and blood-forming organs	0.0	0.4	0.3	0.5
Circulatory system	-0.5	0.1	0.3	0.8
Digestive system	0.4	-0.4	0.6	0.5
Genitourinary system	0.9	1.3	0.8	0.8
Musculoskeletal system and connective tissue	0.2	0.1	-3.1	0.1
Nervous system and sense organs	2.1	0.5	4.6	1.2
Respiratory system	-0.2	0.2	0.2	0.3
Skin and subcutaneous tissue	0.1	0.0	-0.1	-0.2
Other or unknown	1.2	1.1	-0.4	0.5
Expectation for medical improvement				
Expected	2.9	6.0	1.9	5.2
Possible	-2.9	-3.2	-1.2	-3.2
Not expected	-0.6	-0.8	0.9	-0.8
No information	0.4	-2.0	-1.6	-1.1
Pre-termination DI entitlement duration				
Fewer than 2 years	-0.1	2.3	0.0	2.0
2–3 years	0.7	6.7	0.2	4.0
4–5 years	6.7	3.0	8.8	3.0
6 years or more	-7.3	-11.9	-9.0	-8.9
Past participation in Ticket to Work program	0.0	0.4	-0.1	0.4
County unemployment rate in month of benefit termination	-0.7	-0.4	-0.6	-0.3
Observations	174,668	53,167	2,837	9,865

SOURCE: Authors' calculations using the 2019 Disability Analysis File.

NOTES: Includes cases with benefit terminations due to work or medical improvement between 2005 and 2014.

The values shown are calculated from the unrounded values in Appendix Tables A-1 through A-4. A positive value indicates that the prevalence of the associated characteristic (for example, aged 18–29) was higher among those who had average earnings above the poverty threshold than among those who had average earnings below the poverty threshold in the 5 years following benefit termination.

individuals with a primary impairment of neoplasms or injuries were more likely to remain independent from the disability programs and earn above the poverty threshold. These correlations held regardless of case profile.

“Other mental disorders” is the modal diagnosis in our analysis, with divergent correlations depending on the outcome measure. For earnings outcomes, a primary impairment of “other mental disorders” is correlated with a lower likelihood of attaining earnings above the poverty threshold, regardless of case profile. By contrast, among former concurrent beneficiaries, a diagnosis of “other mental disorders” is correlated with a higher likelihood of independence from the disability programs in the years following benefit termination.

Musculoskeletal and connective tissue diseases, the second most common diagnosis overall, showed mixed associations with self-sufficiency measures depending on the reason for benefit termination. For individuals with benefit terminations due to work, a musculoskeletal or connective tissue impairment is generally correlated with worse outcomes after benefit termination, whereas for those with benefit terminations due to medical improvement, this impairment either has no relationship with the outcomes we studied or is associated with better outcomes.

Discussion and Conclusion

Our findings suggest that former DI disabled-worker beneficiaries whose benefits were terminated because of work were both more likely to have substantive post-termination earnings and more likely to return to DI entitlement than were individuals whose benefits were terminated because of medical improvement. Several factors could drive these findings. First, benefit termination due to work inherently implies that the beneficiary has already demonstrated an ability to sustain earnings above the SGA threshold. Second, EXR provides these former beneficiaries with an easier path back to entitlement than is available to those whose benefits were terminated because of medical improvement.

Certain characteristics among former beneficiaries are correlated with return to work and benefit independence regardless of benefit-termination reason. Specifically, former beneficiaries who were younger, entitled to DI for fewer than 6 years, or classified with “medical improvement expected” were more likely

to return to work or earn above the poverty threshold than their counterparts were. Former beneficiaries with a primary impairment of neoplasms or injuries also had better post-termination outcomes, possibly because these conditions are more likely to resolve over time than are other impairments (such as psychotic or intellectual disorders).

We found some evidence that economic conditions at the time of benefit termination (and in subsequent years) may affect former beneficiaries’ outcomes, particularly earnings. Former beneficiaries who had higher post-termination earnings were more likely to reside in areas with lower unemployment rates at the time of termination compared with those with lower post-termination earnings. Cohorts whose 5-year follow-up period most overlapped with the higher unemployment rates of the Great Recession experienced worse earnings outcomes and a higher likelihood of program reeligibility than did cohorts with benefits terminated during periods of lower unemployment.

In 2019, SSA convened a Technical Experts Panel to consider a potential demonstration intended to provide beneficiaries with assistance achieving self-sufficiency and to reduce returns to entitlement after benefit terminations due to medical improvement (Gubits and others 2019). Our findings suggest that former beneficiaries whose entitlements ended because of medical improvement may benefit from employment supports. However, the higher rates of reentitlement among people with benefit terminations due to work than among those who medically improved suggest that expanding the target population of the demonstration to beneficiaries with work-based benefit terminations could be beneficial. The nature of the interventions would likely differ by termination reason; for example, individuals who have already transitioned to employment may require support focused on job retention.

The average earnings measure that we used in this analysis offers a simple way to account for earnings over a relatively long period following benefit termination: 5 or 10 years. However, this approach has limitations. First, this measure does not account for income from sources other than individual earnings, such as family support or other cash transfers, nor does it account for other financial resources such as savings or assets. Second, the binary outcome indicating that average earnings were either above or below the poverty threshold obscures variation in earnings

distributions across individuals and years. Despite these limitations, average earnings relative to the poverty threshold is a useful indicator of economic self-sufficiency in the years following benefit termination.

Our study suggests potential avenues for further research. We found that certain beneficiary characteristics—such as age, specific diagnoses, and the expected likelihood of medical improvement—correlate with earnings outcomes. Nevertheless, some beneficiaries whose demographic characteristics would suggest a greater risk of lower earnings do successfully earn above the poverty threshold and remain independent of the DI program. Analyzing these variations in earnings pathways could inform opportunities for promoting self-sufficiency for all disabled-worker beneficiaries.

Through the Beyond Benefits Study, SSA is currently gathering data on the needs of beneficiaries whose entitlement is ending because of medical improvement. The study results will be used to inform policy recommendations or identify a potential demonstration that could promote substantive and sustainable employment. More broadly, and aligned with prior literature (Brucker 2015; Autor and others 2015), our findings show that individuals who leave the workforce may find it challenging to reenter and sustain employment at a level that provides income above the poverty threshold. These results underscore

the importance of programs that provide employment supports, such as state vocational rehabilitation agency services, to facilitate employment and job retention for people with disabilities.

In collaboration with the Department of Labor, SSA has also recently funded the Retaining Employment and Talent After Injury/Illness Network (RETAIN) demonstration, which tests the effectiveness of early interventions to improve labor force participation and job retention among individuals with recently acquired injuries or disabilities who are at risk of leaving the labor force. For people already on the disability rolls, SSA's Ticket to Work program offers services that support career development and facilitate transitions to employment following benefit termination. Our findings highlight the importance of efforts to minimize, to the extent possible, prolonged labor force absences and to promote successful workforce reentry for individuals who do experience such gaps.

Finally, our study focused on post-termination earnings trajectories and disability program participation rates as broad markers of former beneficiaries' economic outcomes. Further research is needed to better assess the effects of benefit terminations on former beneficiaries' financial resources, health, employment activities, and more granular measures of economic well-being.

Appendix

Table A-1.

Percentage distributions of former DI-only beneficiaries with benefit terminations due to work between 2005 and 2014, by outcome measure and characteristic

Characteristic	Total, all outcomes	Disability program eligibility status		Average earnings relative to the poverty threshold	
		Did not return	Returned	Above	Below
Age at benefit termination					
18–29	12.7	14.3	9.4	13.7	10.4
30–39	24.5	26.3	20.9	25.0	23.4
40–49	34.7	35.7	32.6	34.8	34.3
50–59	28.1	23.7	37.1	26.5	31.9
Primary impairment					
Congenital anomalies	0.3	0.2	0.3	0.3	0.3
Endocrine, nutritional, and metabolic diseases	2.1	1.9	2.6	2.0	2.5
Infectious and parasitic diseases	3.7	3.8	3.4	3.8	3.5
Injuries	5.7	6.3	4.6	6.2	4.6
Mental disorders					
Intellectual disorders	4.8	4.5	5.4	4.3	5.9
Schizophrenia spectrum and other psychotic disorders	4.9	4.4	6.0	4.1	6.8
Other mental disorders	28.0	27.9	28.2	26.8	30.6
Neoplasms	7.0	8.4	4.3	7.7	5.4
Diseases of the—					
Blood and blood-forming organs	0.8	0.8	0.9	0.8	0.8
Circulatory system	3.6	3.3	4.4	3.5	4.0
Digestive system	1.9	2.1	1.6	2.0	1.6
Genitourinary system	4.4	4.6	4.1	4.7	3.8
Musculoskeletal system and connective tissue	16.1	15.1	18.0	16.1	15.9
Nervous system and sense organs	10.8	10.4	11.7	11.5	9.4
Respiratory system	1.4	1.3	1.5	1.3	1.5
Skin and subcutaneous tissue	0.3	0.3	0.2	0.3	0.2
Other or unknown	2.0	4.9	2.7	4.5	3.3
Expectation for medical improvement					
Expected	8.4	9.7	5.7	9.2	6.4
Possible	57.3	57.8	56.1	56.4	59.3
Not expected	25.7	23.7	29.8	25.5	26.1
No information	8.4	8.4	8.3	8.5	8.1
Pre-termination DI entitlement duration					
Fewer than 2 years	0.3	0.3	0.1	0.2	0.3
2–3 years	4.5	5.1	3.2	4.7	4.0
4–5 years	27.1	28.2	24.9	29.1	22.5
6 years or more	68.2	66.4	71.8	66.0	73.3
Past participation in Ticket to Work program					
Yes	2.1	2.0	2.3	2.1	2.1
No	97.9	98.0	97.7	97.9	97.9
County unemployment rate in month of benefit termination	7.4	7.3	7.4	7.3	8.0
Observations	174,668	117,028	57,640	121,804	52,864

SOURCE: Authors' calculations using the 2019 Disability Analysis File.

NOTE: Outcome measures are within 5 years of benefit termination.

Table A-2.

Percentage distributions of former concurrent beneficiaries with benefit terminations due to work between 2005 and 2014, by outcome measure and characteristic

Characteristic	Total, all outcomes	Disability program eligibility status		Average earnings relative to the poverty threshold	
		Did not return	Returned	Above	Below
Age at benefit termination					
18–29	33.2	46.7	23.7	42.8	23.6
30–39	27.2	27.2	27.2	26.4	28.0
40–49	26.2	19.5	31.0	21.0	31.5
50–59	13.4	6.7	18.1	9.9	16.9
Primary impairment					
Congenital anomalies	0.8	0.9	0.7	1.1	0.6
Endocrine, nutritional, and metabolic diseases	2.1	2.0	2.1	2.2	2.0
Infectious and parasitic diseases	2.9	2.8	3.0	2.7	3.1
Injuries	3.1	3.8	2.7	3.9	2.4
Mental disorders					
Intellectual disorders	14.6	13.6	15.3	13.8	15.4
Schizophrenia spectrum and other psychotic disorders	8.6	8.0	9.0	7.1	10.1
Other mental disorders	36.4	37.9	35.4	36.0	36.9
Neoplasms	1.3	1.6	1.0	1.5	1.1
Diseases of the—					
Blood and blood-forming organs	1.6	1.9	1.4	1.8	1.5
Circulatory system	1.8	1.5	2.0	1.9	1.6
Digestive system	1.0	1.4	0.7	1.3	0.6
Genitourinary system	1.9	2.3	1.6	2.3	1.5
Musculoskeletal system and connective tissue	10.0	7.6	11.8	8.5	11.6
Nervous system and sense organs	10.9	12.6	9.6	13.2	8.6
Respiratory system	1.4	0.9	1.8	1.5	1.3
Skin and subcutaneous tissue	0.0	0.0	0.1	0.0	0.1
Other or unknown	1.5	1.1	1.8	1.3	1.7
Expectation for medical improvement					
Expected	5.8	7.3	4.7	6.8	4.9
Possible	65.4	67.4	64.0	64.8	66.0
Not expected	23.5	21.3	25.1	24.0	23.1
No information	5.2	3.9	6.1	4.4	6.0
Pre-termination DI entitlement duration					
Fewer than 2 years	0.1	0.2	0.0	0.1	0.1
2–3 years	1.8	2.5	1.3	1.9	1.7
4–5 years	26.4	30.3	23.7	30.8	22.0
6 years or more	71.7	67.0	75.0	67.2	76.2
Past participation in Ticket to Work program					
Yes	2.7	2.6	2.8	2.7	2.8
No	97.3	97.4	97.2	97.3	97.2
County unemployment rate in month of benefit termination	7.7	7.7	7.7	7.6	8.2
Observations	2,837	1,171	1,666	1,422	1,415

SOURCE: Authors' calculations using the 2019 Disability Analysis File.

NOTE: Outcome measures are within 5 years of benefit termination.

Table A-3.

Percentage distributions of former DI-only beneficiaries with benefit terminations due to medical improvement between 2005 and 2014, by outcome measure and characteristic

Characteristic	Total, all outcomes	Disability program eligibility status		Average earnings relative to the poverty threshold	
		Did not return	Returned	Above	Below
Age at benefit termination					
18–29	13.6	14.5	9.2	16.3	11.4
30–39	34.0	35.6	26.1	35.5	32.7
40–49	37.0	36.6	39.0	35.2	38.5
50–59	15.4	13.3	25.7	13.0	17.4
Primary impairment					
Congenital anomalies	0.1	0.1	0.1	0.1	0.1
Endocrine, nutritional, and metabolic diseases	1.8	1.8	1.8	1.9	1.7
Infectious and parasitic diseases	0.3	0.3	0.2	0.3	0.2
Injuries	7.9	8.2	6.3	8.2	7.6
Mental disorders					
Intellectual disorders	1.4	1.3	1.9	1.1	1.6
Schizophrenia spectrum and other psychotic disorders	4.9	4.0	8.9	2.9	6.4
Other mental disorders	26.8	26.8	26.9	24.2	28.9
Neoplasms	14.4	14.7	13.1	16.8	12.4
Diseases of the—					
Blood and blood-forming organs	0.8	0.9	0.6	1.0	0.6
Circulatory system	4.2	4.0	4.9	4.2	4.1
Digestive system	4.2	4.2	4.5	4.0	4.4
Genitourinary system	6.2	5.8	8.3	7.0	5.7
Musculoskeletal system and connective tissue	13.1	13.4	11.9	13.2	13.1
Nervous system and sense organs	5.6	5.8	4.7	5.8	5.4
Respiratory system	1.8	1.8	1.8	2.0	1.7
Skin and subcutaneous tissue	0.4	0.4	0.4	0.4	0.4
Other or unknown	2.5	6.6	3.8	6.8	5.6
Expectation for medical improvement					
Expected	29.2	29.9	25.5	32.5	26.5
Possible	58.5	58.2	59.7	56.7	59.9
Not expected	3.3	3.0	4.8	2.8	3.7
No information	8.9	8.7	10.0	7.8	9.8
Pre-termination DI entitlement duration					
Fewer than 2 years	3.2	3.3	3.0	4.5	2.2
2–3 years	19.3	19.5	18.2	23.0	16.3
4–5 years	27.1	27.6	24.9	28.8	25.8
6 years or more	50.3	49.6	53.9	43.7	55.6
Past participation in Ticket to Work program					
Yes	0.7	0.7	0.6	0.9	0.5
No	99.3	99.3	99.4	99.1	99.5
County unemployment rate in month of benefit termination	7.0	7.1	6.9	6.9	7.3
Observations	53,167	43,962	9,205	23,567	29,600

SOURCE: Authors' calculations using the 2019 Disability Analysis File.

NOTE: Outcome measures are within 5 years of benefit termination.

Table A-4.

Percentage distributions of former concurrent beneficiaries with benefit terminations due to medical improvement between 2005 and 2014, by outcome measure and characteristic

Characteristic	Total, all outcomes	Disability program eligibility status		Average earnings relative to the poverty threshold	
		Did not return	Returned	Above	Below
Age at benefit termination					
18–29	29.2	31.9	18.9	41.0	25.5
30–39	36.6	38.3	30.6	37.7	36.3
40–49	27.3	24.5	37.3	17.7	30.3
50–59	7.0	5.3	13.2	3.7	8.0
Primary impairment					
Congenital anomalies	0.2	0.2	0.1	0.3	0.1
Endocrine, nutritional, and metabolic diseases	1.7	1.7	1.5	1.9	1.6
Infectious and parasitic diseases	0.2	0.1	0.3	0.3	0.2
Injuries	5.6	5.9	4.5	6.0	5.5
Mental disorders					
Intellectual disorders	4.8	4.7	5.5	3.9	5.1
Schizophrenia spectrum and other psychotic disorders	8.5	7.3	13.0	6.3	9.2
Other mental disorders	40.0	40.6	37.6	37.2	40.9
Neoplasms	7.9	8.1	7.3	9.7	7.3
Diseases of the—					
Blood and blood-forming organs	0.8	0.8	0.9	1.2	0.7
Circulatory system	3.1	2.9	3.8	3.7	2.9
Digestive system	2.2	2.4	1.6	2.6	2.1
Genitourinary system	3.1	2.7	4.5	3.7	2.9
Musculoskeletal system and connective tissue	8.7	8.8	8.5	8.8	8.7
Nervous system and sense organs	5.8	6.0	5.0	6.7	5.5
Respiratory system	2.2	2.2	2.2	2.4	2.1
Skin and subcutaneous tissue	0.3	0.4	0.1	0.2	0.4
Other or unknown	2.6	5.4	3.7	5.4	4.9
Expectation for medical improvement					
Expected	21.2	22.1	18.0	25.1	20.0
Possible	67.6	67.7	67.0	65.1	68.3
Not expected	3.1	2.6	5.0	2.5	3.3
No information	8.1	7.6	10.0	7.3	8.4
Pre-termination DI entitlement duration					
Fewer than 2 years	2.1	2.3	1.5	3.6	1.7
2–3 years	11.9	12.5	9.9	14.9	11.0
4–5 years	24.2	24.9	21.6	26.5	23.5
6 years or more	61.8	60.3	67.0	55.0	63.9
Past participation in Ticket to Work program					
Yes	0.5	0.6	0.3	0.9	0.4
No	99.5	99.4	99.7	99.1	99.6
County unemployment rate in month of benefit termination	7.4	7.5	7.3	7.2	7.5
Observations	9,865	7,759	2,106	2,349	7,516

SOURCE: Authors' calculations using the 2019 Disability Analysis File.

NOTE: Outcome measures are within 5 years of benefit termination.

Notes

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¹ Information about the Beyond Benefits Study is available at <https://www.ssa.gov/disabilityresearch/bbs.htm>.

² For more information on DI eligibility requirements, see <https://www.ssa.gov/benefits/disability/qualify.html>. For more information on how work credits are earned, see <https://www.ssa.gov/pubs/EN-05-10072.pdf>.

³ Individuals who are at least 65 years old do not have to be disabled to receive SSI benefits. For more information on SSI eligibility requirements, see <https://www.ssa.gov/ssi/text-eligibility-ussi.htm>.

⁴ In 2025, the monthly SGA amount for nonblind individuals is \$1,620.

⁵ See the SSA Red Book for a summary of work incentive rules applicable to DI beneficiaries and SSI recipients (<https://www.ssa.gov/redbook/eng/introduction.htm>).

⁶ Further DAF information is available from [ORDES .DAF@ssa.gov](https://www.ssa.gov/ordes/DAF@ssa.gov).

⁷ DAF documentation (volume 9) contains more details on the CDR Waterfall File and is available from [ORDES .DAF@ssa.gov](https://www.ssa.gov/ordes/DAF@ssa.gov).

⁸ See Olsen and Hudson (2009) for background information on the MEF.

⁹ This requirement necessitates 66 months of follow-up data (for the 5-year follow-up period). Given that our data extend through December 2019, our observation window for reentitlement is censored for people whose benefits were terminated in the last half of 2014 and who returned to current-payment status in the final months of the 60-month follow-up period. Among beneficiaries reentitled to DI, most return within 4 years of benefit termination, therefore it is likely we have captured the majority of DI cases among beneficiaries whose benefits were terminated in 2014.

¹⁰ This requirement would not count a former beneficiary as having returned if that person returned to current-payment status but died within the next 6 months. We found this to be a very rare occurrence. Of those we identified as not having returned to DI (or SSI) eligibility, fewer than 0.003 percent returned to current-payment status before dying within the next 6 months.

¹¹ We tested two alternative approaches for handling earnings in the year of death: (1) not including the year of death in the average, and (2) extrapolating the earnings

trend from the years prior to the year of death. Our results were not sensitive to either of these alternative approaches.

¹² For more information about the poverty measure, see <https://www.census.gov/topics/income-poverty/poverty/about/history-of-the-poverty-measure.html>.

¹³ Obtained from the Census Bureau at <https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-poverty-thresholds.html>.

¹⁴ We tested two alternative thresholds: the federal minimum wage and an annualized version of the SGA threshold. The results were not sensitive to these alternate thresholds. Results are available upon request (research@ssa.gov).

¹⁵ Ticket to Work is a voluntary SSA program that supports career development for beneficiaries who would like to return to work or work for the first time. Information on the program is available at <https://choosework.ssa.gov/library/fact-sheet-what-is-social-security-ticket-to-work-program>.

¹⁶ In 2010, SSA terminated the DI benefits of 40,959 beneficiaries for SGA (SSA 2011, Table 50). In that same year, 10,127 individuals received EXR (Table 58). This suggests that a notable number of former DI beneficiaries—perhaps on the order of one-quarter—who had benefits terminated because of work received EXR.

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