

Disability Beneficiaries Who Work and Their Experience Under Program Work Incentives

*by L. Scott Muller**

This research examines the return to work by Disability Insurance beneficiaries who were first entitled to benefits in 1980-81 and who were originally selected to be interviewed in the New Beneficiary Survey. To facilitate an examination of actual labor-force participation by beneficiaries, information on work and participation in program work incentives was collected from their claims folders. The analysis shows that approximately 10 percent of disability beneficiaries work during their initial period of benefit entitlement. About 80 percent are granted a trial work period, and over 70 percent of those granted trial work successfully complete it. More than half of them, however, were not successful in leaving the rolls through their work effort. In fact, benefit terminations due to work occurred for fewer than 3 percent of all beneficiaries in the cohort; approximately one-third of them had returned to the rolls by the end of the period under study. Beneficiaries most likely to make a work attempt were young and had a high level of education. Those with a high Social Security benefit amount were less likely to make a work attempt.

*Disability Research Staff, Office of Research and Statistics, Social Security Administration.

In 1990, the Social Security program paid Disability Insurance (DI) benefits totaling \$28.8 billion to disabled workers (3.0 million) and their dependents (1.3 million). In 1989,¹ Medicare benefits of more than \$10 billion were provided to disability beneficiaries who had been on the rolls for more than 24 months. Although 462,000 individuals became entitled to benefits in 1990, 344,000 left the rolls. Death or attainment of age 65 accounted for 318,000 of those terminations. Only 26,000 individuals left the rolls because of a medical recovery or a return to work. The number of beneficiaries returning to work has remained small despite improvements in program work incentives over the history of the DI program.

This research examines post-entitlement work efforts among a cohort of beneficiaries becoming entitled to disability benefits for the first time during the period beginning July 1980 and ending June 1981, and who were interviewed as part of the 1982 New Beneficiary Survey (NBS). Using data from the NBS as a baseline, information on post-entitlement work while in beneficiary status was collected from beneficiary claims folders. This article focuses on who works while in beneficiary status and their participation in DI program work incentive provisions such as the trial work period (TWP) and extended period of eligibility (EPE), and examines the programmatic outcomes associated with the work attempt. The description of work patterns under the TWP and EPE provides some insight into why some individuals who have successful outcomes under the work incentive provisions eventually return to the DI rolls.

Prior studies on work and benefit terminations have been relatively limited. Past research on work by Disability Insurance beneficiaries have focused on Social Security posted earnings as an indicator of work,² yet there is evidence that half the beneficiaries with posted earnings in a given year report not having worked

that year.³ Examination of claims folders in this project show that some of the discrepancy can be accounted for by commissions from prior year's work, back pay, sick pay, profit sharing, pension income, and, to some extent, misposted earnings. This research extends the prior studies by establishing that, for program purposes, actual labor-force activity occurred. Past studies on benefit terminations⁴ focused on terminations in general, due to the inability to separate the reason for termination: medical recovery or earnings above the substantial gainful activity (SGA) level. That research melded the outcomes of two potentially divergent processes.

This article extends the previous analysis by separating return to work from medical recoveries and focusing solely on the return to work process. It examines work as the first event occurring after an individual becomes a beneficiary. Other events may occur first that would preclude the beneficiary from returning to work—for example, attainment of age 65, medical recovery, and death. With the exception of death, work may have occurred after one of these events but would not be considered for the purposes of this study as the work did not occur while the individual was receiving disability benefits.

Work Incentive Provisions

The Disability Insurance program offers beneficiaries a menu of work incentives intended to encourage return to work:

- The trial work period;
- The extended period of eligibility;
- Exclusion of work below SGA;
- Extended Medicare eligibility;
- Elimination of a second waiting period for both cash and Medicare benefits;
- Medicare buy-in; and
- Impairment-related work expenses.

A detailed description and brief history of each of these provisions appears in the appendix.

Although this research focuses on the

experience during the trial work period (TWP) and the extended period of eligibility (EPE), it is important to remember that all of the provisions affect the individual's choice to work, and the impact of individual work incentives cannot be isolated.

Both the TWP and EPE protect the beneficiary's right to cash benefits while he or she makes a work attempt. The TWP permits an individual to maintain cash benefits for 9 months of work, which need not be consecutive, regardless of any earnings below \$200. Only earnings above \$200 per month count as a month of trial work. Recently, the trial work period was altered to become a "rolling TWP," that is, the individual is entitled to 9 months of trial work within a 5-year period. The TWP is completed only if 9 months of trial work are completed within the most recent 60-month period. Basically, this entitles the beneficiary to additional trial work months until 9 months have been completed in this 60-month period. Once the beneficiary has completed 9 months of TWP and continues in work at or above the SGA level, benefits are paid for 3 additional months and then put into suspense.⁵

The extended period of eligibility begins in the first calendar month after the completion of the 9th month of trial work. This period lasts for 36 consecutive months, with the beneficiary being automatically reentitled to cash benefits in any month in which earnings fall below the SGA level. The EPE, which was established as a 15-month period in 1980, was lengthened to 36 months in 1988. (Most beneficiaries in this study had an EPE of 15 months.) Benefit terminations occur after completion of the first month of SGA level after the end of the EPE. If the individual's benefit is terminated, Medicare coverage continues for 3 months beyond the end of the EPE.

The Data

The New Beneficiary Survey provides an excellent source of baseline

data for this project because it drew the sample from a single cohort of entitlements and the elapsed time since entitlement provides sufficient time to observe beneficiaries who make a work attempt, take advantage of work incentive provisions, and leave the DI rolls. The survey, which was conducted by the Social Security Administration (SSA) in 1982, includes interviews of 5,198 individuals entitled to disability benefits from mid-1980 to mid-1981. Because the sample of entitlements was drawn in the spring of 1982, a number of retroactive entitlements are not represented in this sample nor are individuals who died during the intervening period between entitlement and interviewing. For purposes of this research, the sample was limited to individuals for whom this was their first entitlement to Social Security benefits. Thus eliminated were persons with a prior entitlement to Social Security benefits (for example, those who were originally entitled as Adults Disabled since Childhood (DAC) on a parent's earnings record and who subsequently qualified as disabled-worker beneficiaries and persons over age 62 who chose early retirement benefits during the application or waiting period).⁶ This selection criteria reduced the sample to 4,453. The purpose of this selection was to establish that each beneficiary was entitled to a trial work period during the post-selection period.

The survey data were matched to SSA administrative records from the Master Beneficiary Record (MBR) and the Summary Earnings Record (SER). In order to obtain specific administrative data on work while in beneficiary status and the utilization of work incentive provisions, information was collected from claims folders.

There are a number of limitations inherent in this data set. First, the small number of individuals who attempted work made it impossible to pursue certain areas of analysis. For example, we could not examine the timeframe during which the return to work occurred.

Second, there are weaknesses inherent in an approach that uses

Claims Folder Retrieval and Review

Information from the claims folders was obtained by claims examiners in the Federal Disability Determination Services via a specially designed data collection form. Due to the considerable work associated with retrieving folders from various storage facilities within SSA and in reviewing the folders to gather the required data, folders were requested only if there was an indication of work from any of the following three sources of information:

- The NBS responses indicating work activity during the 1½ to 2½ years between benefit entitlement and the date of the interview;
- Earnings posted to the SER after the year of entitlement to benefits; or
- An indication of trial work on the MBR.

The choice to limit the folder review may have resulted in missing work performed by some beneficiaries whose employment was not covered by Social Security or whose only work attempt occurred in the year of entitlement. Prior research showed that as many as 10 percent of disability beneficiaries who report working in a given year may not have earnings posted to the SER for that year. Although this may be the result of noncovered employment or posting errors, it was found that approximately one-fourth of these individuals did have earnings posted in the following year. This delayed posting may have prevented the selection of the folder of an individual who made a concerted attempt at return to work.

In order to assess the possible undercount of early post-entitlement work attempts associated with not reviewing folders of individuals whose only earnings appeared in the year of entitlement, a 10-percent random sample of beneficiaries who had earnings posted during the year of entitlement (and had no other indication of post-entitlement work) was selected and the folders retrieved. Of the 185 cases selected, only two folders showed evidence of any work; in both cases, the earnings were insufficient to constitute trial work. It would appear that little or no work by disability beneficiaries was missed by not retrieving folders where the only posted earnings occurred during the year of entitlement and there was no other indication of work.

Claims folders were requested for 1,495 individuals meeting the criteria for inclusion in the study. Folders were located, reviewed, and data collection sheets completed for 1,150 of these cases—a completion rate of 77 percent. Demographic characteristics and administrative outcomes were compared to evaluate the possibility of systematically excluded data. There were no significant differences in completed or incompleting cases by demographic characteristics. However, significant differences were found between completed and incompleting cases in administrative actions such as benefit terminations. As one might expect, the retrieval rate was somewhat higher among beneficiaries who were still on the rolls (79 percent) than for those whose benefits had been terminated or suspended (71 percent). In order to adjust survey weights for missing folders, a proportionate adjustment was made within four MBR outcome categories. These weights are shown below, along with the MBR outcomes upon which they were based:

MBR outcome	Probable meaning	Weighting factor
No termination, excluding death	Continued	1.2673845
Termination only	Medical termination	1.4349556
Suspense then termination	SGA termination	1.3618548
Suspense only	Completed TWP, returned in EPE	1.4090909

variables measured at a single point in time to predict behavior occurring over an extended period. The NBS interview provided a snapshot of beneficiaries at a single point in time—approximately 18-30 months after their first receipt of benefits. The analysis, however, covers an extended period of as much as 10 years during which an individual's circumstances may have changed, producing measurement errors in the explanatory variables. In the present context, key variables such as health, family income, and other sources of disability benefits could very easily change over time and thus influence the decisionmaking process.

Finally, changes have occurred in the disability program over the decade since this cohort became entitled, and the results obtained here may not apply to those currently entering the program. The early 1980's witnessed an acceleration of continuing disability reviews (CDRs), possibly with more strict standards than are currently applied. This led to a moratorium during which no CDRs were conducted and to a number of changes in the work incentive provisions. These changes have the potential to affect work behavior of this cohort over time, and the work behavior of subsequent cohorts.

Work Outcomes

Table 1 presents a summary of the work outcomes for the New Beneficiary Survey cohort. Nearly 88 percent of the cases showed no indication of work (either because the claims folder was not targeted for review or because the folder contained no information that work had been performed). Of the 41,832 beneficiaries represented by individuals whose folders were reviewed, 57 percent had some nonwork explanation of posted earnings.⁷ A scant 1.5 percent of the cases had reports of beneficiary earnings or other indications of work but with no documentation, which made it impossible to ascertain whether work was in fact performed. Since work was not established for SSA

operational purposes, these cases were treated as nonworkers in the analysis.

Some indication of work was found for just over 10 percent of the beneficiaries.

- 2.8 percent had a successful return to work, that is, leading to an SGA termination.⁸ For 1 in 5, their terminations were not timely; that is, it occurred beyond the EPE when work exceeded SGA.
- 5 percent attempted trial work but it did not result in an SGA termination. Nearly two-thirds of these individuals had completed 9 months of trial work, but were either engaged in their EPE or had completed their EPE and had not worked at a level above SGA.
- 1.5 percent (15 percent of those who worked) had a report of work that led to a continuing disability review and a termination for medical recovery.

- 0.5 percent (5 percent of those who worked) reported working at a level that was not sufficient to constitute trial work.

Beneficiaries Who Work

The claims folder was used as the source of information about the various levels of work outcomes among Disability Insurance beneficiaries. In particular, the folder provided information about (1) whether the individual worked while in benefit status, (2) whether the work constituted trial work, (3) whether the 9 months of trial work was exhausted, and (4) whether the benefit was terminated for SGA.

The analysis of these outcomes employed a continuation ratio model which applies to outcomes that have a natural order.⁹ In this case, the model is used to estimate each level of work outcome conditional on the individual's

successfully completing the prior level (for example, the probability of successful completion of the TWP given that the individual did, in fact, engage in trial work). The actual estimation procedure is a series of independent Logit models with dichotomous outcomes. The Logit model assesses the influence of all independent variables at once, thus providing the net impact of each variable on the work outcome, absent the impact of other variables.

The variables identified as having a potential impact on the decision to return to work, and their hypothesized relationship, are discussed below.

Age.—There are a number of reasons younger individuals would be expected to have a higher probability of return to work than older individuals. Younger persons have a longer time horizon to recoup investments in retraining, a greater potential for wage growth, and face a different set of disabling conditions. These conditions often have a sudden onset, a higher propensity for improvement or recovery, or are less likely to be degenerative in nature, thus increasing adaptability. Older persons often face adaptability problems, find it more difficult to (or have less incentive to) obtain new skills, and may face bleaker labor-market opportunities by virtue of their age and disability. To some extent, disability benefits may in fact represent an early retirement option. Finally, older individuals have a higher probability of leaving the rolls during the period under study due to death or attainment of age 65. Since only work performed while in beneficiary status is considered in this article, the probability of returning to work will, again, be lower for older individuals.

Education.— Higher levels of education increase both adaptability to other jobs and one's earning potential and would be expected to increase the probability of return to work.

Race.—The race variable is included to account for differences in labor-force attachment, labor-market segmentation, and, perhaps, the results of earlier labor-market discrimination. Whites

Table 1.— Work outcomes for initial entitlements among the New Beneficiary Survey cohort ¹

Work outcome	Unweighted number	Weighted	
		Number	Percent
Total beneficiaries.....	4,108	192,774	100.0
No indication of work ²	3,703	169,523	87.9
Work/earnings found; not developed.....	53	2,933	1.5
Trial work period:			
Successful; SGA termination at end of extended period of eligibility.....	73	4,365	2.3
Successful; SGA termination some time after end of extended period of eligibility.....	17	1,033	.5
Started; not completed or not yet terminated.....	179	9,971	5.2
Report of work led to continuing disability review and termination for medical recovery.....	46	2,843	1.5
Work not at trial work period level.....	18	988	.5
Not entitled to benefits.....	16	946	.5
Other (for example, failure to cooperate)....	3	172	.1

¹ Weighted counts based on New Beneficiary Survey weights adjusted for nonretrievable claims folders.

² Of the 169,523 individuals with no indication of work, 127,691 were comprised of individuals whose claims folders were not reviewed because there was no indication of work or earnings on SSA's automated records or in the survey interview. The remaining 41,832 individuals had either no indication of work or earnings in the claims folder, or the folder contained development that identified the earnings as unrelated to work (for example, commissions, back pay, sick pay, pension or other income, or misreported earnings).

generally have higher labor-force participation rates and have higher earnings than nonwhites; thus one might expect white beneficiaries to have a higher probability of return to work.

Sex.— Men, particularly married men, tend to have a greater attachment to the labor force than do women. Among males, married men would have a higher propensity to return to work.

Marital status.—The impact of marital status is, *a priori*, indeterminate. Although having a family may increase one's attachment to the labor force, the presence of a substitute worker may reduce labor-force attachment. In some situations, additional benefits may be payable to a dependent spouse or child, thus increasing the value of the benefit package relative to labor-market options. The impact of marital status may depend on one's sex, and a marital status-sex interaction term was included. As mentioned above, married males are expected to have a strong labor-force attachment.

Presence of a child under age 18.— The presence of one or more minor children could increase or decrease the probability of return to work. Although family obligations may encourage return to work, the cost of meeting those obligations (for example, child care services) may discourage return to work. Additionally, dependent's benefits for disabled workers reach a maximum with one dependent, hence there is some incentive to substitute a stay-at-home spouse for the disabled worker in the labor force.

Amount of DI benefit.—This is a variable intended to measure the income effect of the worker's actual benefit amount (as represented by the primary insurance amount (PIA)). Other things held constant, the higher the PIA the less likely the individual will return to the labor force.

Other sources of disability income.—This variable represents the presence of disability income in addition to the DI benefit. Sources of other income include workers'

compensation, private and public disability pensions, veterans benefits, and Black Lung benefits. The presence of an additional benefit is expected to discourage return to work for two reasons: The additional income will make the disability benefits package much more attractive than work, and making a work attempt, successful or not, may result in the loss of these additional benefits.

Family income.— The higher one's family income, the less likely the individual will return to the labor force. Family income was measured as of the survey date (16-26 months after entitlement) and respondent earnings were included. As will be noted below, many workers who succeed in returning to work begin their trial work period early in their entitlement. Hence their earnings may have increased family income by the survey date, creating a measurement that is not completely independent of the outcome variable.¹⁰ This misspecification, and the higher income associated with the presence of earnings among those who made an early return to work, will attenuate the anticipated effect of this variable.

Average predisability earnings.— Each individual's yearly earnings over the past 10 years were indexed to 1982, based on the wage index series employed by SSA in computing benefits, and then averaged. This measure is used as an indicator of the upper bound on earnings potential of the beneficiary. The disability beneficiary is likely to be only downwardly, not upwardly, mobile in returning to the job market, although younger individuals have potential for wage growth. It is anticipated that the higher the level of predisability earnings, the greater the probability of returning to work. This measure excludes employment not covered by Social Security, however, since all individuals had enough recent earnings to qualify for disability benefits it is unlikely that many of them had noncovered jobs. The earnings measure is subject to the limits of the Social Security taxable maximum.

Spouse's work experience.—This variable is constructed as the proportion of quarters of coverage earned by the spouse since attainment of age 18 and is intended to measure the spouse's attachment to the labor force. If the attachment is strong, there is less opportunity to substitute workers, but it may indicate more marketable skills of the spouse, higher spousal income, and less need for the beneficiary to return to work. The impact of this variable on work is, *a priori*, indeterminate. As with the measure above, this variable would exclude work that is not covered by Social Security.

Impairment.— Two measures were included to control for differences in impairment and severity. First, a series of diagnostic groups were created from self-reported conditions. It is anticipated that persons in certain diagnostic groups may have a higher probability of return to work than others. Second, a variable was created that counts the number of limitations an individual reported. It is anticipated that the more limitations a person has the more severity constrained will be his or her ability to return to work. Both measures represent the severity of impairment as of the survey date; however, given the length of time under study, a ratio model which applies to outcomes that have a natural order unfortunately may not accurately represent the extent of the impairment when the individual made his or her work attempt.

Occupation.— The beneficiary's predisability occupation (either main occupation or, lacking that, most recent occupation) was separated into four categories: managerial/professional, sales, farm, and crafts/construction/other. It is anticipated that individuals in the managerial/professional and sales occupations would find their former occupation more adaptable to their disability, and hence have a higher probability of returning to work. Furthermore, individuals in the more physically demanding occupations may not have the skills required to obtain work in less demanding occupations.

Table 2 presents the multivariate Logit results of the continuation ratio model that analyzes the characteristics of individuals at each level of work outcome, conditional on reaching the prior level of work outcome.

Table 3 presents, univariately, the relationship between key variables in the Logit model and the outcome measures under study. Conservative generalized sampling errors of estimated percentages are provided in appendix table II on page 18.

In general, the Logit results show significant differences exist in the demographic, economic, and health characteristics between those beneficiaries who work and those who do not (equation 1), while little is found to discriminate other work outcomes among those who make a work attempt (for example, engage in a TWP, successfully complete the 9-month TWP, or work above the SGA level). The relatively small number of those attaining higher level work outcomes may contribute to the inability to find significant differences in work outcomes.

Work Equation

The first equation estimates the probability that individuals will engage in any type of work while in beneficiary status, including work constituting trial work, work at a level insufficient to be considered trial work, work by individuals who medically recover, and so forth. These results appear in column 1 of table 2.

Individuals attempting work while in beneficiary status are significantly younger and better educated than those who do not make a work attempt. Race also is associated with the work outcome, with whites having a greater probability of engaging in some level of work than minorities. All three variables—age, education, and race—had the anticipated effect.

Sex and marital status and an interaction term were each statistically significant (although the sex variable was significant only at the 0.10 level). Evaluating this combination of factors, one finds that single females were most

Table 2.— Logit results for beneficiary work, participation in and completion of trial work period, and substantial gainful activity (SGA) termination ¹

Variable	Any work	Trial work	9 months of trial work	SGA termination
Intercept	1.31678*** (.50362) [.0089]	1.19615 (1.27922) [.3498]	.90523 (1.15078) [.4315]	-.68012 (1.33967) [.6117]
Age	-.07081*** (.00659) [.0000]	-.00367 (.01725) [.8315]	-.01247 (.01586) [.4318]	-.02941 (.01831) [.1083]
Education	.09747*** (.02426) [.0001]	.07232 (.05688) [.2036]	.11228** (.05463) [.0399]	.05643 (.06614) [.3935]
Race (1 = white)	.35127** (.17427) [.0438]	-.26689 (.44942) [.5526]	-.03646 (.38889) [.9253]	1.63101*** (.52683) [.0020]
Sex (1 = male)	-.37933* (.20101) [.0591]	.16170 (.45906) [.7247]	.19758 (.45247) [.6623]	.01927 (.49120) [.9687]
Marital status (1 = married)	-.65089*** (.23684) [.0060]	.37515 (.61674) [.5430]	-.36642 (.59418) [.5374]	.71056 (.60027) [.2365]
Marital status x sex (1 = married male)	.58546** (.28720) [.0415]	-.37353 (.71651) [.6021]	-.20601 (.67481) [.7601]	-.63742 (.72618) [.3801]
Child under age 18 (1 = yes)	.28499* (.16241) [.0793]	.43105 (.3341) [.3341]	-.40585 (.36643) [.2680]	-.16978 (.44634) [.7037]
Disability Insurance benefit (PIA)	.02996*** (.01093) [.0061]	.00454 (.02925) [.8767]	-.01079 (.02623) [.6807]	-.00719 (.02879) [.8030]
Other disability income (1 = yes)	-.32471* (.18461) [.0786]	.74066 (.53495) [.1662]	-.41616 (.41117) [.3115]	.09659 (.49265) [.8446]
Family income	.00871 (.00537) [.1051]	-.00586 (.01299) [.6517]	.05424** (.02135) [.0111]	-.00584 (.01220) [.6324]
Average predisability earnings	.06151** (.02717) [.0236]	-.01841 (.07331) [.8017]	-.01746 (.06685) [.7940]	.05836 (.07199) [.4176]
Spouse's work experience	-.12757 (.22028) [.5625]	-.44009 (.58351) [.4507]	-.61359 (.53720) [.2534]	.45756 (.67325) [.4967]
Diagnosis:				
Visual/hearing	-.28475** (.13422) [.0339]	-.05300 (.34224) [.8769]	-.36446 (.30937) [.2388]	-.33054 (.36592) [.3664]
Orthopedic	.00993 (.14598) [.9458]	.09854 (.36802) [.7889]	.38994 (.34916) [.2641]	.32554 (.41338) [.4310]
Nervous disorder	-.09246 (.18163) [.6107]	.38106 (.48568) [.4327]	-.21111 (.41844) [.6139]	-.77414 (.49939) [.1211]
Respiratory	-.02876* (.16791) [.0867]	.52417 (.50512) [.2994]	-.39978 (.37712) [.2891]	-.20690 (.51172) [.6860]
Digestive	.07941 (.13808) [.5652]	.58659 (.38751) [.1301]	.05552 (.33061) [.8666]	-.36683 (.38356) [.3389]
Neoplasm	-.10252 (.25195) [.6841]	.76589 (.81991) [.3502]	-.30684 (.56889) [.5896]	.57850 (.71534) [.4187]

See footnote at end of table.

Table 2.— Logit results for beneficiary work, participation in and completion of trial work period, and substantial gainful activity (SGA) termination ¹—Continued

Variable	Any work	Trial work	9 months of trial work	SGA termination
Diagnosis (Continued):				
Mental disorder	-.12411 (.13643) [.3630]	-.35197 (.35358) [.3195]	-.25109 (.32719) [.4428]	-.76528* (.41162) [.0630]
Heart condition	.03040 (.14086) [.8289]	.43227 (.37789) [.2527]	.14977 (.34009) [.6597]	-.15921 (.39275) [.6852]
Severity (number of limitations)	-.09427*** (.02253) [.0000]	-.09137* (.05533) [.0987]	-.06904 (.05186) [.1831]	-.07409 (.05668) [.1912]
Occupation:				
Managerial/professional	-.16593 (.17122) [.3325]	-.22212 (.43912) [.6130]	-.47593 (.40431) [.2391]	-.11744 (.48610) [.8091]
Sales	-.13194 (.15439) [.3928]	-.40135 (.37928) [.2900]	.16377 (.37994) [.6664]	-.06570 (.44294) [.8821]
Farm	.13528 (.39857) [.7343]	.58530 (1.17817) [.6193]	1.29908 (1.19698) [.2778]	-.81290 (1.19407) [.4960]
Number of—				
Observations	4,088	340	285	200
Successes	340	285	200	89

(standard error)
[probability value]
*** significant to 0.01 level
** significant to 0.05 level
* significant to 0.10 level

¹ A program termination for successful trial work and SGA includes only a successfully completed trial work period and extended period of eligibility followed by immediate or eventual work at SGA that leads to the termination. Program terminations under other circumstances (for example, death, attainment of age 65, medical improvement, and other SGA terminations) are not included.

likely to return to work, followed by single males, married males, and married females. These findings are not consistent with the labor-force participation patterns of the general population where married males have the highest labor-force participation rate, followed by single males, single females, and married females. The presence of a child under age 18 in the household increased the probability of a work attempt, although this result was significant only at the 0.10 level. The associated increase in the probability of work was of sufficient magnitude for married males and married females with children in the household to have a higher probability of return to work than single males without children.

However, single females maintained the highest probability of returning to work, regardless of the presence of a child.¹¹

Among the economic variables in the model, the amount of the DI benefit, the presence of other sources of disability income, and the beneficiary's average predisability earnings were all statistically significant, and each had the anticipated effect. The income effect from higher DI benefits reduced the probability that an individual would make a work attempt. The presence of other disability income, although significant only at the 0.10 level, also reduced the probability of returning to work, as expected. Higher average predisability earnings were found to

increase the probability of a work attempt, even when age, education, and other earnings-related (human capital) variables are held constant. Variables measuring total household income and the spouse's labor-market experience were not statistically significant factors in returning to work. As discussed above, the hypothesized negative effect of household income on the decision to work may have been diminished by the fact that the variable includes earnings among those who made an early work attempt, which would raise household income.

Health was measured utilizing a series of dummy variables representing the diagnosis and a single severity measure composed of the number of self-reported activity limitations. The severity measure was highly significant, and, as one would expect, reduced the probability of a work attempt. Only two diagnostic categories, measuring the presence of visual/hearing impairments and respiratory problems, were statistically significant in determining whether an individual makes a work attempt, although the variable representing respiratory problems was significant only at the 0.10 level. Both reduced the probability of a work attempt. The lower probability of returning to work among individuals with visual/hearing impairments is somewhat surprising for two reasons: The impairments would seem to be more adaptable to returning to more types of jobs; and there exist special, more liberal, work incentives for the blind.

It was anticipated that individuals in more skilled, less physically demanding occupations would be more likely to return to work. Perhaps such gross categories fail to distinguish job requirements adequately. None of these rather broad occupational categories was statistically significant in determining who made a work attempt.

Other Equations

Three other equations were estimated representing participation in a trial work period, successful completion of

the TWP, and benefit termination for SGA. In each of these equations there were few significant variables, rather than the pattern of expected outcomes as detected in the work-no work equation. This may be a function of the small number of observations in the estimation of these higher level outcomes, or it may indicate that there is no structure in these outcomes and the few significant coefficients are a matter of chance. Although the results are discussed below, the reader is cautioned against overinterpretation of the results.

The second equation estimates the probability that an individual who makes a work attempt will participate in a trial work period. Workers may not participate in a TWP for several reasons including work at a level not sufficient to trigger trial work, work by individuals who medically improve, and

work that occurred subsequent to participation in an earlier trial work period.¹² Only one variable, severity of the impairment, was found to significantly influence participation in trial work—and that variable was significant only at the 0.10 level. Individuals with greater numbers of limitations were less likely to participate in the trial work period. Beneficiaries who medically recover are not eligible for a TWP; hence those participating in a TWP might be expected to be more, rather than less, impaired. Very severely impaired individuals, however, may be limited to work that is below the TWP level. The data show that the number of individuals who were not granted a TWP because they medically recovered while working was roughly the same as the number of individuals who worked below the trial work level. It would

appear that the latter group dominated to obtain this result, which may also reflect some systematic differential in the severity of the impairment occurring between the date of the interview and the date the respondent returned to work.

The third equation estimates the probability that an individual who enters the TWP successfully completes 9 months of trial work and enters a period of extended eligibility. Individuals may not have completed the TWP for several reasons: They stopped work and did not work again, they started the trial work period many years into their entitlement and have not had sufficient time to complete it, or they had a very “discontinuous” TWP with long periods of nonwork between nonconsecutive TWP months. Not completing the 9-month TWP does not mean the individual will never

Table 3.—Work experience of Disability Insurance beneficiaries, by selected characteristics

Characteristic	Total number	Total percent	Any work	Engaged in trial work period	Successful 9-month trial work period	SGA termination
Total.....	192,774	100.0	10.2	8.6	6.1	2.8
Sex:						
Male.....	138,122	71.6	9.4	7.9	5.6	2.6
Female.....	54,652	28.4	12.0	10.1	7.4	3.4
Education (years):						
0-8.....	58,580	30.4	4.9	3.8	2.2	.8
9-11.....	43,038	22.3	8.2	7.1	4.5	1.8
12.....	57,684	29.9	11.6	9.9	7.0	3.0
13 or more.....	32,583	16.9	19.8	16.6	13.3	7.2
Age (at entitlement):						
Under 40.....	36,335	18.8	29.1	24.3	18.5	9.3
40-49.....	29,969	15.6	12.4	10.7	6.8	3.0
50-59.....	94,359	49.0	4.8	4.1	2.7	1.1
60 or older.....	32,111	16.7	2.5	1.8	1.3	.2
Race:						
White.....	155,345	80.6	10.6	8.9	6.3	3.3
Nonwhite.....	37,429	19.4	8.5	7.3	5.2	.9
Marital status/sex/presence of child(ren) under age 18:						
Single male, none.....	34,616	18.0	15.2	12.7	10.2	5.1
Married male, none.....	72,658	37.7	4.5	3.7	2.4	1.0
Single male, child(ren).....	1,988	1.0	8.5	8.5	2.7	0
Married male, child(ren).....	28,860	15.0	15.1	12.8	8.2	3.6
Single female, none.....	23,972	12.4	14.3	11.8	8.6	3.8
Married female, none.....	22,630	11.7	6.8	5.9	4.5	2.0
Single female, child(ren).....	2,651	1.4	23.9	20.0	16.1	4.2
Married female, child(ren).....	5,399	2.8	18.3	16.0	10.3	7.2
Diagnosis:						
Visual/hearing.....	80,996	42.0	7.6	6.3	4.2	1.7
Orthopedic.....	143,921	74.7	8.6	7.2	5.1	2.3
Nervous disorder.....	22,691	11.8	12.8	11.1	7.9	3.2

Table 3.—Work experience of Disability Insurance beneficiaries, by selected characteristics—*Continued*

Characteristic	Total number	Total percent	Any work	Engaged in trial work period	Successful 9-month trial work period	SGA termination
Diagnosis (continued):						
Respiratory	53,179	27.6	5.5	4.9	2.8	1.2
Digestive	69,285	35.9	8.3	7.4	5.1	1.7
Neoplasm	15,676	8.1	7.8	7.0	4.5	3.1
Mental disorder	65,304	33.9	9.4	7.6	4.9	1.4
Heart condition	123,521	64.1	7.1	6.1	4.2	1.6
Occupation:						
Managerial/professional	38,670	20.1	8.5	7.0	4.2	2.0
Sales	52,808	27.4	8.4	6.5	4.8	2.1
Farm	6,453	3.4	7.2	6.2	5.4	.9
Construction/crafts/other	94,843	49.2	12.1	10.5	7.7	3.6
Other disability income:						
Receives other	30,734	15.9	9.7	8.8	5.9	2.6
No other source	162,040	84.1	10.3	8.5	6.2	2.9
Family income:						
Under \$5,000	30,434	15.8	15.7	13.6	9.6	3.6
\$5,000-\$9,999	56,281	29.2	10.1	8.5	5.6	2.2
\$10,000-\$19,999	66,495	34.5	7.3	6.0	4.2	2.1
\$20,000-\$39,999	35,504	18.4	11.0	8.7	6.9	4.2
\$40,000 or more	4,060	2.1	11.7	11.7	11.7	4.6
Average predisability earnings:						
Under \$5,000	39,126	20.3	17.3	14.8	11.4	5.0
\$5,000-\$9,999	54,819	28.4	9.7	8.4	5.8	2.9
\$10,000-\$19,999	96,392	50.0	7.5	6.0	4.2	1.9
\$20,000 or more	2,437	1.3	14.3	14.3	4.9	2.6
Disability Insurance benefit (PIA):						
Under \$200	8,244	4.3	20.4	18.3	13.6	5.1
\$200-\$399	67,415	35.0	13.2	11.0	7.9	4.1
\$400-\$599	80,126	41.6	7.2	6.1	4.2	1.5
\$600 or more	36,990	19.2	8.8	7.2	5.2	2.8

complete the TWP. However, as noted below, few individuals start a TWP long into their entitlement and few take extremely long periods to complete the TWP. This delay suggests that few of the one-third of trial work participants who had not yet successfully completed the TWP will do so in the future.

Only two variables, education and family income, were significant in determining successful completion of 9 months of trial work. Higher levels of education increased the probability of success, as one might expect. Higher levels of family income also increased the probability of success, although this result may be partially due to some confounding in the variable that was discussed previously.

The final equation models the SGA termination. It does not necessarily indicate that the EPE was completed in a timely fashion and that benefits

terminated immediately following the end of the 15- or 36-month EPE.

Terminations occurred for fewer than half the individuals entering the EPE, but additional terminations are likely for several individuals who are still in the EPE that is currently 36 months. Some appeared to be only a few months from a benefit termination. Terminations for 1 in 5 occurred not at the end of their EPE but at a later date after engaging in SGA.

Only two variables, race and the mental disorders category, were found to be statistically significant in differentiating those whose benefits were terminated for SGA from those who completed the TWP but had yet to complete the EPE and engage in SGA. Whites were found to have a higher probability of a benefit termination. There is no explanation for this result as race is not considered in SSA

decisionmaking processes. Race may be correlated to variables predicting labor market success such as education, occupation, and potential earnings, and thus be linked to more successful work outcomes. Terminations were less likely among individuals in the mental disorders group than for those in other diagnostic groups. However, the result was significant only at the 0.10 level. There are several possible explanations. Perhaps the mentally impaired are able to work, but relapses from stress and other factors make successful work attempts unlikely. It is also possible that persons who are mentally retarded may dominate among workers in this diagnosis category and these persons are often employed in sheltered work at earnings levels that represent trial work, but they seldom achieve self-sufficiency. This possibility was further investigated using data on the primary

and secondary diagnosis obtained from the claims folder. An examination of individuals in the mental disorders group who completed 9 months of trial work showed about 8 percent had a primary or secondary diagnosis of mental retardation. All of these individuals remained on the rolls. Of the other individuals in the mental disorders category, 20 percent were eventually terminated from the program. The mental disorders group had an overall termination rate of 19 percent, far below the rates for other categories, which ranged from 23 percent for digestive disorders to 44 percent for malignancies.¹³

This analysis clearly shows that although major differences exist in the characteristics of those who work compared with those who do not, few differences were found among individuals whose work constituted trial work, who completed 9 months of TWP, or who successfully left the rolls. It is unclear whether the lack of differences in the later regressions is because of the small number of cases, or related to a process that has no definitive pattern to achieve success at these hierarchical outcomes.

Program Outcomes

The return to work experience varies from individual to individual in several ways: the point at which trial work begins, its length (overall and the number of nonconsecutive months), and the number of months of non-SGA where benefits were paid during the extended period of eligibility.¹⁴

Trial Work Period

Table 4 shows the number of months elapsed from benefit entitlement until the beneficiary worked his or her first month of trial work. The largest number enter the TWP in the first 3 months of eligibility. The number of entrants per month then appears to decline nearly monotonically over time. Based on the large standard errors shown in appendix table II, it would not appear that the start date of the TWP has a statistically significant

association with an SGA termination, although the pattern appears to suggest a slightly higher success rate for a TWP beginning after the 18th month of entitlement rather than in the first few months of entitlement.

Table 5 shows the number of months of trial work for beneficiaries who completed their TWP. The vast majority (62 percent) completed their TWP months consecutively in a 9-month period. Among those whose TWP months were not consecutive, as

the number of months to complete the TWP increase, the number of persons requiring that number of months declines. Although large standard errors indicate a lack of statistical significance, it appears that the probability of a successful work outcome is consistently higher for the individual completing the TWP in 9 consecutive months. Fewer than 1 percent of the individuals who completed their trial work period required more than 60 months to do so.

Table 4.—Number of months from entitlement to start of trial work period, by trial work starts, SGA terminations, and number of entrants per month to trial work period¹

Number of months	Trial work period starts		Percent of SGA terminations	Number of entrants per month
	Number	Percent		
Total.....	16,189	100.0	32.9	...
3 or fewer.....	2,773	17.1	32.0	924
4-6.....	1,509	9.3	27.6	503
7-9.....	1,108	6.8	43.6	369
10-12.....	1,088	6.7	32.8	362
13-18.....	1,547	9.6	35.0	258
19-24.....	803	5.0	45.2	134
25-36.....	1,740	10.7	48.6	145
37-48.....	2,350	14.5	² 41.3	196
49-60.....	1,440	8.9	² 31.9	120
61 or more.....	1,837	11.3	² 0	...

¹ Excludes 289 weighted (4 unweighted) observations with missing or unknown trial work period start date.

² Because the extended period of eligibility was lengthened to 36 months effective January 1988, late starters (individuals who started their trial work period after the 42nd or 54th month, depending on date of entitlement from June 1981 to June 1980) would not have had sufficient time (work experience) to have been terminated from the program for SGA under the new 36-month extended period of eligibility.

Table 5.—Length of trial work period and associated outcome (SGA termination)¹

Number of months in trial work period	Beneficiaries		Percent of SGA terminations ²
	Number	Percent	
Total.....	11,693	100.0	45.5
9.....	7,229	61.8	51.7
10-12.....	1,441	12.3	40.2
13-15.....	730	6.2	27.3
16-18.....	643	5.5	40.4
19-24.....	338	2.9	50.7
25-36.....	587	5.0	32.7
37-60.....	617	5.3	29.9
61 or more.....	111	.9	0

¹ Excludes 77 weighted (1 unweighted) observations with missing or unknown trial work period start or end date.

² Some individuals, particularly those in the longer trial work period duration categories, would not have had sufficient time to complete the extended period of eligibility and leave the program rolls.

Based on the experience over the 10-year period under study, it would appear that few individuals would be affected by the new TWP provision, which provides a 60-month rolling period in which to complete the 9 months of trial work.

The number of nonconsecutive months (breaks) in the TWP is presented in table 6 for individuals who completed 9 months of trial work. As shown in table 5, nearly 2 out of 3 completed their TWP in 9 consecutive months. As the number of breaks increases, the number of individuals in the category declines. Although, as mentioned above, individuals whose TWP was continuous appear to be more likely to eventually leave the rolls, the large standard errors suggest no statistically significant difference in successful return to work associated with the number of interruptions in the TWP.

Extended Period of Eligibility

Table 7 shows the number of months during the EPE that each beneficiary was in non-SGA status and thus received a benefit check. Because fewer than 3 percent of the individuals who had completed their EPE were entitled to the 36-month EPE (effective for those who had not completed the 15th month of their EPE before January 1, 1988), table 7 shows the results only for individuals entitled to the 15-month EPE. Overall, 45 percent of beneficiaries completing the EPE had no months in which earnings were reported to be below the SGA level. Of those individuals whose benefits were terminated, nearly 70 percent had no non-SGA months, compared with only 14 percent of those with no terminations. The majority (55 percent) of individuals who remained on the rolls had nearly all of their EPE months (13 or more) in non-SGA status. For those whose benefits terminated on a timely basis (at the end of the EPE), 85 percent had no months in which earnings below SGA were reported, and fewer than 3 percent had more than 6 months of non-SGA earnings. Among those whose benefit

termination was not timely (it occurred at some point beyond the end of the EPE), nearly two-thirds spent 13 or more of the 15-month EPE in non-SGA status.

In summary, it appears (though not strictly statistically supportable) that the characteristics of a successful return to work include a first work attempt which is continuous (no breaks in the TWP) and results in earnings above the SGA level during the entire EPE. The point at which beneficiaries begin their work attempt is less important to a successful outcome.

Return to Beneficiary Status

Considerable attention has focused on a successful return to work—that is, a work attempt resulting in the beneficiary's leaving the rolls via an SGA termination. Success is tempered by the fact that the beneficiary may return to the rolls, often without even serving a waiting period. If beneficiaries are likely to return to the rolls, and particularly if the return occurs after only a short period off the rolls, the trust fund savings associated with return to work may be minimal. Although there are many aspects of

Table 6.—Number of nonconsecutive months (breaks) in the trial work period and percent of SGA terminations among individuals completing 9 months of trial work ¹

Number of breaks (nonconsecutive months)	Total completing 9 months of trial work	Total SGA terminations
Total number.....	11,693	5,321
Total percent.....	100.0	45.5
None.....	61.8	51.7
1 break.....	22.5	33.6
2 breaks.....	9.6	33.6
3 breaks.....	3.6	48.6
4 breaks.....	1.4	35.3
5 breaks.....	.5	100.0
6 breaks.....	.5	0

¹ Excludes 77 weighted (1 unweighted) observations with unknown number of nonconsecutive months of trial work.

Table 7.—Number of months not engaging in SGA during the extended period of eligibility (EPE) among individuals having exhausted EPE months (includes individuals entitled to a 15-month EPE only) ¹

Number of non-SGA months	Total	No termination	SGA termination		
			Total	Timely	Not timely
Total number.....	9,474	4,135	5,339	4,365	974
Total percent.....	100.0	100.0	100.0	100.0	100.0
0.....	45.3	14.2	69.4	84.9	0
1-3.....	6.8	8.4	5.6	4.3	11.5
4-6.....	8.2	7.3	9.0	8.2	12.3
7-9.....	5.4	9.7	2.1	1.3	5.8
10-12.....	3.8	5.7	2.3	1.4	6.4
13-15.....	30.4	54.6	11.7	0	63.9

Note: In some cases, the claims folder did not explicitly show whether each month's earnings during the EPE was at SGA level or not. Unless noted as non-SGA, it was assumed that each month's earnings were indeed at SGA level. The folder would note non-SGA level earnings if a benefit were paid, but might not indicate non-SGA status if the individual did not seek benefit payment.

¹ Excludes 287 weighted observations of individuals who were entitled to, and completed, a 36-month EPE. This was less than 3 percent of individuals who completed their EPE.

returning to the rolls that would be of interest, the small number of unweighted observations makes an indepth analysis impossible.

Data on return to the disability rolls came not from the claims folder, but from the automated Master Beneficiary Record. Because the actions contained in the claims folders are not necessarily entered into the automated system, inconsistencies may appear. In the evaluation of return to the rolls, a small number of cases indicate no benefit termination despite the fact that the folder showed such an action. Half of these cases showed benefit suspense, though no termination. It is possible that there was an administrative reason for not entering the terminating event and that omission resulted in a simultaneous return to the rolls and benefit termination.

Table 8 shows the return to the disability rolls among individuals whose benefits were terminated because of SGA. Overall, nearly one-third of the beneficiaries had returned to the rolls during the period under study. It would appear that a return to the rolls was less likely for those whose terminations occurred at the end of their EPE than for those whose terminations occurred later. The result, however, is not statistically significant.

Table 9 presents the Logit results for a model predicting return to the disability rolls among individuals whose benefits were terminated after completion of the TWP and EPE because of earnings above the SGA level. The model includes the same variables as the earlier equations, although the farm occupation variable has been integrated into the reference group as there were too few observations to estimate this coefficient.

The results show that older individuals are more likely to return to the disability rolls, as are persons with higher household incomes. Former beneficiaries with children are less likely to return to the rolls than are individuals without children. Three diagnostic categories were found to have a significant effect on the probability of return to benefit status:

Digestive problems, mental disorders, and a heart condition. Digestive problems and mental disorders increased the probability of returning to the rolls, while a heart condition decreased that probability.

Conclusions

This research has shown that relatively few Disability Insurance beneficiaries worked while in benefit status, and considerably smaller numbers had benefit terminations. Approximately 10 percent of individuals initially entitled to benefits from mid-1980 to mid-1981 were found to have worked while in benefit status over the approximately 10-year period under study. The vast majority (84 percent) of those who worked were granted a trial work period. Nearly 3 out of 4 individuals granted a TWP successfully completed 9 months of trial work, yet fewer than half of those who completed the TWP were eventually terminated from the program for SGA. Overall, fewer than 3 percent of this cohort of initial entitlements had SGA terminations and, among this small number, nearly one-third had returned to the rolls by 1990.

The research shows systematic differences in the economic status and demographic characteristics (as measured in the survey interview shortly after entitlement to disability benefits) between beneficiaries who make a work attempt while in benefit status and those who do not. Beyond this work outcome, however, a few characteristics were found to discriminate between individuals who are granted a TWP and those who are

not, between those who complete their trial work period and those who do not, and between those whose benefits are terminated and those whose are not. Individuals who are most likely to make a work attempt generally are younger, more educated, white, have lower Social Security benefits, no other source of disability income, higher predisability earnings, and fewer functional limitations. Perhaps surprisingly, single females have the highest probability of returning to work, followed by single males, and married males. As one might expect, married females had the lowest probability of returning to work. The presence of a child under age 18 increased the probability of return to work.

The probability of returning to the disability rolls after an SGA termination increases for older individuals, persons with no children, those with high family income and, by impairment, those with mental disorders or digestive problems. Persons with a heart condition were less likely to return to the rolls.

Future Research

The Social Security Administration has an ongoing commitment to encourage return to work. Part of that commitment is obtaining as much information as possible on the process of returning to work. Research in this area will continue. For instance, SSA has recently completed interviews in a followup to the New Beneficiary Survey, which was the data source for this article. The New Beneficiary

Table 8.— Return to the Disability Insurance program by individuals whose claims folder indicated an SGA termination

Outcome	Total	Timeliness of SGA termination	
		Timely	Not timely
Total number.....	5,398	4,364	1,033
Total percent.....	100.0	100.0	100.0
Returned to rolls ¹	31.8	28.3	46.9
Did not return.....	68.2	71.7	53.1

¹ Includes several unweighted cases whose Master Beneficiary Record (MBR) did not show a termination or period of nonentitlement.

Table 9.—Logit results for return to beneficiary status after a program termination for substantial gainful activity (SGA)

Variable	Return to Disability Insurance program	Variable	Return to Disability Insurance program	Variable	Return to Disability Insurance program
Intercept	-9.12466 (6.89191) [.18555]	Other disability income (1 = yes)	1.56087 (2.14635) [.4671]	Digestive	6.01760*** (2.25879) [.0077]
Age	.38257*** (.14839) [.0099]	Family income	.34674*** (.12409) [.0052]	Neoplasm	2.54000 (1.95561) [.1940]
Education (years)	-.22747 (.22225) [.3061]	Average predisability income	-.54485 (.40092) [.1741]	Mental disorder	3.06675** (1.45066) [.0345]
Race (1 = white)	-3.18682 (2.30733) [.1672]	Spouse's work experience	-1.74522 (2.19138) [.4258]	Heart condition	-3.92052** (1.71689) [.0224]
Sex (1 = male)	-2.73103 (2.22119) [.2189]	Diagnosis: Visual/hearing	1.61129 (1.14441) [.1591]	Severity (number of limitations)	-.16259 (.21858) [.4570]
Marital status (1 = married)	-2.36862 (2.21705) [.2854]	Orthopedic	.35595 (1.40434) [.7999]	Occupation: Managerial/professional	-.51523 (1.53841) [.7377]
Marital status x sex (1 = married male)	-.10646 (2.30806) [.9632]	Nervous disorder	2.31940 (1.57641) [.1412]	Sales	-.25204 (1.30660) [.8470]
Child under age 18 (1 = yes)	-4.77741** (2.11997) [.0242]	Respiratory	1.79598 (2.25879) [.2261]	Number of— Observations	89
Disability Insurance benefit (PIA)	-.00010 (.12970) [.9994]			Returns	29

(standard error)
[probability value]
*** significant to 0.01 level
**significant to 0.05 level
*significant to 0.10 level

Followup Survey reinterviewed the original sample, or their survivors, approximately 10 years after the original interview. A special disability-work module was designed to employ an event history approach to obtain retrospective information from disability beneficiaries about their post-entitlement work attempts (with special attention to the first job and current or last job), knowledge of work incentive provisions, experiences with vocational rehabilitation, and employer accommodations. This information should help explain the effect of changes in the desire or ability to work on work decisions, information that is lacking when data is drawn from a single point in time and a prospective analysis is performed.

In order to assure more reliable information on work by disability

beneficiaries, an additional sample of 3,000 beneficiaries who appear to have post-entitlement work was drawn to supplement the limited number of individuals with work experience in the original NBS frame. This additional sample was stratified on whether a benefit termination occurred so that sufficient numbers of individuals with successful and unsuccessful work attempts would be interviewed. The additional sample size will facilitate analyses which, for the purposes of this study, were not feasible due to the small number of observations.

The followup interview, supplemented by information from claims folders about work performed while receiving benefits, will allow more detailed investigation of return to work. Information will not be limited to work-no work decisions, but will

provide insight into the types of jobs, hours and weeks of work, and the duration of employment episodes. The extent to which returning to work is encouraged by program work incentives and facilitated by vocational rehabilitation and employer accommodations will be examined. Such future research will shed additional light on the process involved in returning disability beneficiaries to work at or above a substantial gainful activity level.

Notes

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¹ Medicare expenditures for all DI beneficiaries were \$10.4 billion in 1989, the last year of available data. With medical costs escalating in the 10-percent range and the DI rolls continuing to grow, it is likely that the 1990 Medicare costs for DI beneficiaries will exceed \$11 billion.

² A number of studies were published in the *Social Security Bulletin* during the 1970's on the effect of SGA levels on beneficiary work. See Paula A. Franklin, "Earnings of Disabled-Worker Beneficiaries," June 1974, pp. 18-24 and "Impact of Substantial Gainful Activity Level on Disabled Beneficiary Work Patterns," August 1976, pp. 1-9; and Paula A. Franklin and John C. Hennessey, "Effect of Substantial Gainful Activity Level on Disabled Beneficiary Work Patterns," March 1979, pp. 3-16.

³ L. Scott Muller, "Comparisons of Self-reported Work Activity and Administrative Earnings Reports of Individuals Recently Entitled to Social Security Disability Insurance Benefits," unpublished manuscript, Office of Research and Statistics, Social Security Administration, April 25, 1990.

⁴ John C. Hennessey and Janice M. Dykacz, "Projected Outcomes and Length of Time in the Disability Insurance Programs," *Social Security Bulletin*, September 1989, pp. 3-41; and Janice M. Dykacz and John C. Hennessey, "Postrecovery Experience of Disabled-Worker Beneficiaries," *Social Security Bulletin*, September 1989, pp. 42-46.

Appendix:

Work Incentive Provisions

Shortly after the program's inception in 1956, work incentive provisions were added to the Disability Insurance program to encourage beneficiaries to return to work. The first provision—the trial work period (TWP)—was enacted in 1960.¹ The number of work incentive provisions has increased over time, particularly in response to the growth in the disability rolls during the 1970's. Although additional work

⁵ In 1991, the SGA level was \$500 per month for non-blind persons and \$810 per month for blind persons. For more information about the significance of SGA, see the appendix.

⁶ This selection criteria eliminated 243 of the 1,738 persons from the sample whose claims folders were requested. This represents 14.0 percent of those targeted for possible work, approximately the same rate as the 14.3 percent of cases eliminated overall. The selection criteria eliminated only 22 individuals who had completed some or all of their trial work months.

⁷ Claims folders were targeted for review if there were any post-entitlement earnings, regardless of whether or not the individual was in beneficiary status at the time of the earnings. As a result, information on earnings acquired after leaving the rolls would not be in the claims folder. Reviewers were given the opportunity, but not required, to note the source of earnings that did not represent work. The fact that no explanation was noted in 40 percent of the cases is likely the result of case selection and the data collection instructions and not indicative of lack of attention to posted earnings by SSA.

⁸ There were 11,552 weighted cases in which there was a termination for medical recovery. This figure represents 6 percent of the cohort under study.

⁹ For further discussion of the continuation ratio model, see Stephen Feinberg, *The Analysis of Cross-Classified Categorical Data*, Cambridge, MA: MIT Press, 1977, pp. 86-90.

¹⁰ Earnings from household income are included. Earlier research shows that twice as many beneficiaries have Social Security

posted earnings as report having worked (see Muller, *op cit.*, footnote 7). Such nonwork earnings may represent commissions, income from a business, or delayed or back pay, and may be reported in the survey as well as on posted earnings records. These sources of income could significantly affect total income and thus labor supply decisions. The relationship is not tautological because nonwork earnings are expected and not all beneficiaries who are successful will have started work by the survey date and therefore have earnings from work to report.

¹¹ A variable accounting for the interaction between the presence of a child and marital status was tested; however, it proved not to be significant and was deleted from the model.

¹² Due to the selection of initial entitlements and concentration on the first episode of work, none of the individuals in this study fall into the last category, that is, they had exhausted eligibility due to a TWP in a prior episode.

¹³ The reader is cautioned that the summary counts by diagnosis are for illustrative purposes only and are not statistically reliable due to the extremely small sample at this point in the analysis.

¹⁴ The small number of observations make the estimates in this portion of the study subject to extremely large variances. This limits the ability to examine the characteristics of the TWP and EPE for the small number of individuals who enter the TWP, and the even smaller number who complete the EPE. However, some general patterns appear that can be useful in helping the reader understand the return to work process.

incentive provisions that are currently under study may ease the return to work for current beneficiaries, they may also increase the value of the DI benefit package for persons with disabilities who are not currently beneficiaries and induce some of these individuals to seek DI benefits.

Trial Work Period

The TWP was enacted as part of the Social Security Amendments of 1960 (P.L. 86-778), effective October 1960. The intent of the TWP is to provide

beneficiaries an opportunity to test their ability to work without affecting their eligibility for benefits. The TWP is a period of 9 months (not necessarily consecutive) during which an individual's entitlement to benefits and benefit payment are unaffected by earnings, so long as the individual's impairment remains severe by program standards. Months in which earnings are below a threshold amount do not count as months of trial work. In 1960, the trial work threshold was \$50 per month, and the threshold has been

raised only twice: to \$75 per month beginning in 1979, and to \$200 per month beginning in 1990. Self-employed individuals are also subject to an additional threshold: More than 15 hours of work in a given month constitutes trial work. At the completion of 9 months of trial work, a decision is made as to the individual's ability to engage in SGA. If the beneficiary is found to be working at SGA, disability benefits are paid for an additional 3 months and then cease; otherwise, benefits continue.

Certain beneficiaries may not be entitled to a TWP, depending on such factors as medical improvement, completing a TWP during an earlier period of entitlement, or the length of time since the completion of a TWP during another period of entitlement. The TWP was recently modified so that it is not necessarily a fixed 9-month period during a beneficiary's entitlement, but rather is a rolling period where the TWP is not exhausted until 9 months of trial work have been completed within a 60-month period. The new TWP means that a beneficiary who was entitled under the old provision may now have more than 9 months of trial work, if the initial work attempt fails and subsequent attempts occur much later in their period of entitlement. As was observed in the analysis portion of this article, this provision affects very few beneficiaries.

Extended Period of Eligibility

The extended period of eligibility (EPE) was enacted as part of the Social Security Disability Amendments of 1980 (P.L. 96-265). The EPE provides additional protection for individuals who return to work by providing cash benefit payments during any month in the EPE in which earnings fall below the substantial gainful activity level. (Benefits are withheld in any month in which earnings exceed SGA levels.) As originally enacted, the EPE represented a period of 15 months beginning in the month following the 9th month of the TWP. The Omnibus Reconciliation Act of 1987 (P.L. 100-203) lengthened the

EPE to 36 months for persons entitled after December 1987, and for current beneficiaries who had not completed the 15th month of the EPE before January 1, 1988.

As described in the previous section, benefits are paid only in the first 3 months of the EPE if the beneficiary was working at or above SGA. Benefits continue for those who are working at a non-SGA level until they complete their first month of work at the SGA level. At that point, benefits continue for that month, which is the month of cessation, and the following 2 months. In the event that SGA stops during the EPE, benefit payments begin again and are paid until work at SGA level is again performed. Benefit terminations (that is, removal from the rolls) can not occur until the beneficiary has worked a month of SGA after the completion of the EPE.

Work Excluded as Not Substantial Gainful Activity

Substantial gainful activity plays two parts in the Disability Insurance program: It is used to determine benefit eligibility and to determine whether or not work is to be disregarded in determining disability during the continuing disability review process. It is the latter part that influences return to work. Work below SGA is permitted, in most cases, without affecting one's entitlement to benefits. These disregarded earnings may encourage individuals to seek limited work that will not affect their benefits. Although non-SGA work does not meet the goal of the other work incentive provisions (to encourage individuals to work their way off the DI rolls), any limited work attempt may eventually lead to sustained work that will result in the beneficiary's leaving the rolls. Increasing the level of earnings which constitute SGA will result in increased incentives for beneficiaries to work; however, each such increment will result in both fewer individuals reaching SGA and leaving the rolls and more individuals, who are working and not receiving benefits, becoming eligible for benefits.

Originally, SGA determinations were based not just solely on an amount of earnings, but also on such criteria as energies, responsibilities, skills, hours, earnings, regularity, and related factors pertaining to the nature of the work performed. An earnings test was established in 1958 and was published as regulations in 1961. Under that test, \$100 of earnings was considered representative of SGA and earnings of less than \$50 were assumed to reflect non-SGA, absent some evidence to the contrary. The earnings between these amounts was considered a "gray area" and required the consideration of other factors to establish SGA. Since that time, the earnings level constituting SGA has been increased several times (table I).²

Elimination of Second Waiting Period

In addition to automatic reentitlement provisions in the EPE, the 1980 amendments provided that beneficiaries who leave the DI rolls are not required to serve a second 5-month waiting period for cash benefits if they return to the rolls within 60 months. Unlike the automatic reentitlement during the EPE, these individuals must complete a new application for benefits and be allowed based on current disability criteria. As a work incentive, this provision assures that beneficiaries who are unsuccessful at a work attempt and otherwise meets current program standards will be able to regain their cash benefits more quickly.

Extended Medicare Eligibility

Section 104 of the 1980 Social Security Disability Amendments provided for Medicare benefits to be continued for 24 months beyond the date the EPE (then 15 months) was completed. The Medicare extension is limited to those who work despite their impairment, and ends if the beneficiary recovers. When the EPE was lengthened to 36 months, the Medicare extension was unaltered, effectively providing individuals 3 months of Medicare coverage beyond the current EPE.

Elimination of Second Medicare Waiting Period

Section 103 of the 1980 Social Security Disability Amendments eliminated the requirement of another 24-month Medicare waiting period if a former beneficiary returned to the rolls within a set period. For disabled-worker beneficiaries that period is 60 months; the period is 84 months for disabled widows and adults disabled since childhood. This provision applies regardless of whether the individuals medically recovered or achieved SGA despite their impairment. As a work incentive, this provision assures beneficiaries that a longer term, but unsuccessful, work attempt will not preclude a return to full Medicare reciprocity.

Medicare Buy-In

The Omnibus Budget Reconciliation Act of 1989 (P.L. 101-239) provided individuals who continued to be disabled but who are no longer entitled to disability benefits due to an SGA termination, the opportunity to "buy into" the Medicare program after extended Medicare benefits expire. These individuals are permitted to purchase coverage at the same rate payable by noninsured aged individuals (in 1990, \$175 per month for Part A and \$28.60 per month for Part B). This buy-in is intended to facilitate work by beneficiaries who might not be able to obtain other health insurance due to

preexisting-condition exclusions or for other reasons. Without health insurance coverage, these beneficiaries might be unwilling to attempt work, or to continue working, if work might result in the loss of Medicare and, hence, access to needed health care.

Impairment-Related Work Expenses

Section 302 of the 1980 Social Security Disability Amendments provided that the costs (purchase, maintenance, and repair) of certain items and services required by an impaired person in order to work be deducted from earnings in determining SGA. Such expenses are deductible even if the items or services required are necessary for normal daily activities. Deductible costs include such things as attendant care, medical devices, equipment, and prostheses. Medical treatments and drugs are not deductible unless the drugs or services are required to control the disabling condition.

Benefit Caps

Intended to prevent disincentives to return to work, rather than act as a work incentive, benefit caps or reductions have been instituted to prevent excessively generous benefits. Holding down the rate at which earnings are replaced by benefits, subject to some level of adequacy, should increase the attractiveness of labor-force options for disability beneficiaries.

The Social Security Amendments of 1956 provided for a dollar-for-dollar offset of DI benefit payments for disability benefits received from any other Federal agency or State workers' compensation program. This provision was removed in 1958.

A workers' compensation offset provision was adopted in 1965 (P.L. 89-67). This provision reduced DI payments dollar for dollar for the amount that the combined disability benefit and workers' compensation payment exceeded 80 percent of the worker's average current earnings.³

In 1977, the Social Security benefit formula underwent a structural change designed to eliminate the duplicative effects of nominal wage growth and adjusting benefit levels for cost-of-living increases. This change was intended to return stability to replacement rates over time. It has been estimated that, on average, benefits for disabled-worker beneficiaries declined \$47 or 10.2 percent due to this legislative change.⁴ Overall, benefits were estimated to increase by as much as \$25 while others declined by as much as \$200. Estimates show 86 percent of individuals received benefit reductions while 14 percent received benefit increases.

The 1980 amendments capped or reduced benefits. The legislation placed two caps on family benefit amounts. First, the maximum family benefit amount could not exceed 85 percent of the worker's average indexed monthly earnings, although a minimum family benefit of 100 percent of the worker's primary insurance amount (PIA) was guaranteed. Second, the maximum family benefit could not exceed 150 percent of the worker's PIA. The legislation also limited the number of dropout years (years of lowest earnings excluded from the benefit computation) from 5 years for all beneficiaries to an age-dependent formula that provides 1 dropout year for each 5 years of earnings after age 22, up to a maximum of 5 years. These changes were estimated to affect one-third of the beneficiaries; among those

Table I.—Substantial gainful activity level

Effective date of change	Upper SGA cutoff	Lower non-SGA cutoff	Percent of full-time work, minimum wage ¹
Prior to July 1966.....	\$100	\$50	50
July 1966.....	125	75	59
December 1968.....	140	90	55
January 1974.....	200	130	63
January 1976.....	230	150	63
January 1977.....	240	160	65
January 1978.....	260	170	61
January 1979.....	280	180	60
January 1980.....	300	190	56
January 1990.....	500	300	74

¹ These figures are calculated as a percent of the Federal minimum wage in effect at the end of the established period multiplied by 160 hours (4 weeks of full-time work).

individuals, benefits were reduced by an average of \$75 or 15 percent.⁵

The 1981 Omnibus Budget Reconciliation Act (P.L. 97-35) contained two provisions that affected the benefits of relatively small numbers of disability beneficiaries. The first provision eliminated the minimum benefit, providing no absolute floor to benefits paid to disabled workers.⁶ It is estimated that this provision reduced benefits for 6 percent of newly entitled beneficiaries; among these individuals, the average benefit reduction was \$43 or 35 percent of the minimum benefit.⁷ The other provision created what is referred to as the MEGACAP. This provision reduced Social Security disability benefits by the amount received from other governmental programs (except veterans' benefits, means-tested benefits, and State and local government disability pensions earned under Social Security covered

employment) to the extent that the combined benefits exceeded 80 percent of the worker's average current earnings. Reductions in DI benefits occur dollar for dollar for each dollar in excess of 80 percent of the average current earnings (ACE) cap.

defined as the highest of the following measures of earnings: (1) The average monthly wage upon which the unindexed disability primary insurance amount is based, or (2) the average monthly earnings from covered employment and self-employment during the highest 5 consecutive years after 1950, or (3) the average monthly earnings based on the 1 calendar year of highest earnings from covered employment during a period consisting of the year in which disability began and the 5 preceding years.

Notes

¹ This statement applies to positive work incentive provisions and neglects a benefit offset provision that reduced DI benefits \$1 for each \$1 of Federal Government transfer payments incorporated in the original 1956 legislation. This offset provision was intended to avoid disincentives to return to work that might result from large unearned income from combined benefits.

² Since 1978, blind individuals have a separate SGA level. In 1978, that amount was \$334. The current amount is \$810.

³ Average current earnings (ACE) is

⁴ L. Scott Muller, *et al.* "The Impact of the 1977, 1980, and 1981 Social Security Amendments on Disability Insurance Benefit Amounts," Appendix B to *Report to the Congress on P.L. 96-265, The Social Security Disability Amendments of 1980*. Submitted to Congress January 14, 1985.

⁵ *Ibid.*

⁶ The minimum benefit was later reinstated for beneficiaries entitled prior to October 1981.

⁷ Muller, *op cit.*

Table II.—Conservative generalized sampling errors¹ of estimated percentages² for differences between two subgroups

n_2 (in thousands)	n_1 (in thousands)									
	10	15	50	100	175	250	400	600	900 or more	
$p^* = 1$ or 99 percent										
10.....	1.3									
15.....	1.2	1.2								
50.....	1.0	1.0	0.8							
100.....	.9	.8	.7	0.6						
175.....	.7	.7	.6	.6	0.5					
250.....	.7	.7	.6	.5	.5	0.5				
400.....	.6	.6	.5	.5	.4	.4	0.4			
600.....	.5	.5	.5	.4	.4	.4	.3	0.3		
900 or more.....	.4	.4	.4	.4	.3	.3	.3	.3	0.3	
$p^* = 5$ or 95 percent										
10.....	2.9									
15.....	2.7	2.6								
50.....	2.2	2.1	1.8							
100.....	1.9	1.8	1.6	1.4						
175.....	1.6	1.6	1.4	1.3	1.1					
250.....	1.5	1.4	1.3	1.2	1.1	1.0				
400.....	1.3	1.2	1.1	1.0	1.0	.9	0.8			
600.....	1.1	1.1	1.0	.9	.9	.8	.7	0.7		
900 or more.....	1.0	.9	.9	.8	.8	.7	.7	.6	0.6	
$p^* = 10$ or 90 percent										
10.....	3.9									
15.....	3.8	3.6								
50.....	3.1	2.9	2.5							
100.....	2.6	2.5	2.2	1.9						
175.....	2.3	2.2	1.9	1.7	1.6					

See footnotes at end of table.

Table II.—Conservative generalized sampling errors ¹ of estimated percentages ² for differences between two subgroups—
Continued

n ₂ (in thousands)	n ₁ (in thousands)								
	10	15	50	100	175	250	400	600	900 or more
p* = 10 or 90 percent—Continued									
250.....	2.0	2.0	1.8	1.6	1.5	1.4			
400.....	1.7	1.7	1.5	1.4	1.3	1.2	1.1		
600.....	1.5	1.5	1.4	1.3	1.2	1.1	1.0	0.9	
900 or more.....	1.3	1.3	1.2	1.1	1.0	1.0	.9	.9	0.8
p* = 25 or 75 percent									
10.....	5.7								
15.....	5.4	5.2							
50.....	4.4	4.2	3.6						
100.....	3.8	3.6	3.2	2.8					
175.....	3.3	3.2	2.8	2.5	2.3				
250.....	2.9	2.8	2.5	2.3	2.1	2.0			
400.....	2.5	2.5	2.2	2.1	1.9	1.8	1.6		
600.....	2.2	2.1	2.0	1.8	1.7	1.6	1.5	1.4	
900 or more.....	1.9	1.9	1.7	1.6	1.5	1.4	1.3	1.2	1.1
p* = 40 or 60 percent									
10.....	6.4								
15.....	6.1	5.8							
50.....	5.0	4.8	4.0						
100.....	4.3	4.1	3.6	3.2					
175.....	3.7	3.6	3.1	2.8	2.6				
250.....	3.3	3.2	2.9	2.6	2.4	2.2			
400.....	2.8	2.8	2.5	2.3	2.1	2.0	1.8		
600.....	2.5	2.4	2.2	2.1	1.9	1.8	1.7	1.5	
900 or more.....	2.1	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3
p* = 50 percent									
10.....	6.6								
15.....	6.3	6.0							
50.....	5.1	4.9	4.1						
100.....	4.3	4.2	3.6	3.2					
175.....	3.8	3.6	3.2	2.9	2.6				
250.....	3.4	3.3	2.9	2.7	2.4	2.3			
400.....	2.9	2.8	2.6	2.4	2.2	2.0	1.9		
600.....	2.5	2.5	2.3	2.1	2.0	1.9	1.7	1.6	
900 or more.....	2.2	2.1	2.0	1.9	1.8	1.7	1.5	1.4	1.3

¹ Sampling errors are based on a paired selections model for calculating sampling errors from complex samples. The sampling errors shown here are given in percentage points and are equal to one standard deviation of an estimated percentage.

² Arbitrarily, assume that $n_2 \geq n_1$. To use the proper table, calculate $p^* = (n_1 p_1 + n_2 p_2) / (n_1 + n_2)$ where p_1 and p_2 are the proportions being contrasted; n_1 and n_2 are the weighted totals in groups 1 and 2, respectively. Once p^* is calculated, turn to the table that has a value closest to p^* in the upper right corner (in percent).

Source: 1982 New Beneficiary Survey Users' Manual.