Factors Affecting the Work Efforts of Disabled-Worker Beneficiaries

*by John C. Hennessey**

Congress is currently placing considerable emphasis on returning disabled-worker beneficiaries to work. However, going back to work is only the first step in the complex process of program termination due to work and trust fund savings. Not only must the beneficiary get a job, but also the work effort must be sustained at what is considered a substantial gainful activity (SGA) level by the disability program (so that an SGA termination will result) and a reasonable living condition must be achieved by the beneficiary (so that the person is motivated to continue working and lose benefits). This article focuses on those factors that affect the ability of the beneficiary to sustain such a work effort. Combined with previous findings about returning to work, we begin to see the overall effect of the factors on work efforts.

Beneficiaries who have physical therapy rehabilitation have a higher tendency to start working and a lower tendency to stop. Those with vocational training or general education have a higher tendency to start working, but these factors do not help to sustain the effort. Beneficiaries who were helped with job placement have a higher tendency to start work, but they also have a higher tendency to stop. If beneficiaries knew about the trial-work period, but not about either the extended period of eligibility or Medicare continuation, then they had a higher tendency to start work and a higher tendency to stop. However, if they knew about all three work-incentive provisions, then the tendency to work was not affected.

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Introduction

Long-term financing of the Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI) program has in recent years commanded much attention from the public, Congress, and the Social Security Administration (SSA). This issue was addressed in the 1996 Annual Report of the Board of Trustees of the Federal Old-Age, Survivors, and Disability Insurance (OASDI) Trust Funds, which concluded:

> In view of the lack of close actuarial balance in the OASDI program over the next 75 years, we again urge that the long-range deficits of both the OASI and DI Trust Funds be addressed in a timely way. Because the DI Trust Fund is expected to be depleted several years earlier than the OASI Trust Fund, and because DI program growth has fluctuated widely in the past, it is essential that the DI program's future experience be monitored closely. It is important to address both the OASI and DI problems soon to allow time for phasing in any necessary changes and for workers to adjust their retirement plans to take account of those changes. We believe there is ample time to discuss and evaluate alternative solutions with deliberation and care. The size of the long-range deficit is such that long-range balance could be restored within the framework of the present program. Nonetheless, the magnitude of any required changes will be smaller the sooner they are enacted.

Part of the growth in the DI program mentioned above can be explained by the demographic shift of the DI population to younger beneficiaries[1] and an increase in primary diagnoses that have longer mean times in the DI program.[2]

Two ways that DI beneficiaries leave the program are by a substantial gainful activity (SGA) termination or a medical recovery. A medical recovery occurs when the medical condition improves to a point where the beneficiary is no longer considered disabled. An SGA termination occurs when, although currently

disabled, a person is able to adjust to the disability and to establish a work pattern that is considered SGA. Therefore, it is possible that savings to the trust funds could be realized by encouraging more SGA terminations, especially among younger beneficiaries.

Congress is currently placing considerable emphasis on returning DI beneficiaries to work. Several recent proposals provide examples of this trend. SSA has proposed to Congress a program that would replace the current SSA Vocational Rehabilitation (VR) Reimbursement Program with the implementation, on a phased-in basis, of the "Ticket to Independence" program for beneficiaries with disabilities.[3] Some elements of the new program are:

- The program will be conducted initially in a maximum of 10 States and will be phased-in to more States over a 10-year period;
- At the start of the pilot, many DI beneficiaries and Supplemental Security Income SSI recipients in the pilot States will be eligible to receive a ticket. In addition, many newly awarded beneficiaries will be eligible to receive a ticket at the time of award;
- A beneficiary who receives a ticket may give it to any participating public or private employment or rehabilitation provider of his choice (including State VR agencies who choose to participate in the program) in exchange for services. When a ticket is accepted by a provider, it will be registered with that provider for a specified period of time;
- SSA will select States for the operation of the pilot and will solicit providers in those States to participate in the program. Providers will need to satisfy certain criteria to be enrolled and serve SSA's beneficiaries;
- SSA's current VR programs will continue unchanged in nonpilot States;
- When a beneficiary goes to work and DI benefits or SSI Federally administered payments stop due to earnings, the provider holding the ticket at the time the beneficiary returns to work will receive payment based on a percentage of the disability payments that would have otherwise been paid to the beneficiary, for a specified period of time;
- To protect the rights of beneficiaries, SSA plans to supplement the funding of the existing State Protection and Advocacy system with funds specifically designated for serving SSA's beneficiaries; and
- The pilot of this new program will be conducted for a maximum of 10 years and will include assessments of its success after 3, 5, and 7 years of operation. At the end of the 10th year, the Commissioner of SSA will decide whether the implementation of the program should be ended or continued.

Another proposal is Project ABLE[4] (Able Beneficiaries' Link to Employers), a résumé bank, which provides employers with an easily accessible pool of qualified "job-ready" SSI and DI beneficiaries who are ready, willing, and interested in working. The résumé bank operates through the joint efforts of SSA, the Office of Personnel Management (OPM), the Department of Education's Rehabilitation Services Administration, and State VR agencies.

The Federal sector pilot began in 1993 in Maryland, Virginia, and Washington, DC, during which time all partners provided feedback and recommended many improvements to Project ABLE. As a result, we expanded this improved Federal model to California, Connecticut, Illinois, Massachusetts, Pennsylvania, and Texas.

Effective November 1996, private-sector employers with job openings have access to Project ABLE. Private-sector employers can call or send (mail, fax, e-mail) their job announcements or requirements to Project ABLE staff in Norfolk, Virginia. OPM representatives match the job vacancy information with ABLE candidates. As matches occur, résumés are sent to the private-sector employers.

In order to assess the impact of changes in the VR program and other work-incentive (WI) provisions in the DI program, we need to understand the effect of the present VR program and WI provisions. We also need to understand that going back to work is only the first step in a complex process toward a termination from the DI program due to work and trust fund savings. Not only must the beneficiary start a job, but also the work effort must be sustained at a level where the effort is considered SGA by the DI program and a reasonable living condition is sustained by the beneficiary. If the work is not considered SGA by the DI program, then the beneficiary will not be terminated. If the work effort does not provide a reasonable living condition for the beneficiary and his or her family, then they may be inclined to stop working so that the benefits may continue.

The New Beneficiary Follow-up Survey

This article is the fourth in a series that use the data from the New Beneficiary Follow-up (NBF) Survey combined with administrative data to analyze the factors that affect the successful SGA termination of disabled-worker beneficiaries. The NBF survey was a reinterview of beneficiaries who were originally interviewed in the New Beneficiary Survey about 9 years earlier. The NBF was designed to gather information about the changing circumstances of disabled and aged beneficiaries. A special disability work module was included in the NBF to collect information about work that cannot be obtained from administrative data systems. Three previous *Social Security Bulletin* articles have reported some findings about the work patterns of DI beneficiaries from the NBF. More detailed information about the NBF can be found in these articles.

The 1994 article[5] presented preliminary findings from the Disability Work Module of the survey. The research indicates

that most persons look for work for financial reasons. Only 1 in 4 are reported to have had VR services, and most of the beneficiaries were of the opinion that it was not helpful. About 80 percent were unaware of any work-incentive provisions of the DI program at the time they returned to work.

The 1995 article[6] focused on factors that help the beneficiary start his or her first job. In particular, the effects of VR efforts and WI provisions in the DI program were examined. The results suggest that a possible disincentive effect may be built into the WI provisions of the program—the trial-work period (TWP), the extended period of eligibility, and the Medicare continuation provisions. The analysis also suggests that, although most beneficiaries did not feel that the VR efforts were helpful, physical therapy, vocational training, general education, and job placement efforts did increase the tendency of the beneficiaries to go back to work.

The 1996 article[7] presented descriptive findings about the job patterns of the DI beneficiaries who start working. About 12 percent of those who enter the program as nonworking beneficiaries start a job while they are still entitled to DI benefits. The mean time from the start of entitlement to the start of the first job is 3.4 years. Of those who start a job during entitlement, 50 percent end the job during entitlement. Most of them stated that they are leaving the job for health-related reasons. Of those who end their first job, about 48 percent of them start a second job during entitlement. However, about 56 percent of that group end their second job during entitlement.

This article presents a more thorough analysis of the first work episode of the DI beneficiary. It focuses on the factors that aid in a successful SGA termination.

The Approach: A Dynamic Analysis

The 1996 article[8] argues that the appropriate overall strategy for the analysis of the work patterns of DI beneficiaries is a dynamic analysis. Chart 1 portrays the first entitlement period in the DI program as a dynamic process of transitions from one status to another.[9] Beneficiaries start in the process as nonworking beneficiaries. Various paths or sequences of transitions start from the initial state of nonworking beneficiary and end at an SGA termination. The simplest path would go from nonworking beneficiary to working beneficiary, then to an SGA termination. More complicated paths involve first switching back and forth from nonworking beneficiary to working beneficiary several times and then to an SGA termination. Such a path represents those beneficiaries who, after having several work attempts with significant gaps of unemployment in between, finally sustain a work effort long enough to experience an SGA termination.

Before we consider the effects of covariates on this process, we must understand that the basic elements of the process are the forces of transition from one state to another, represented by the arrows in chart 1. The strengths of these forces relative to one another determine the probabilities that a certain transition will take place. If we raise or lower the strength of some of the forces, then the percentage of beneficiaries who flow from one box to another will change. For example, chart 1 shows four arrows out of the "working beneficiary" box. If we lessen the strength of the force from working beneficiary to "nonworking beneficiary" and do not change the strength of the other three forces, then the flow of beneficiaries from working beneficiary to "SGA termination" will increase.

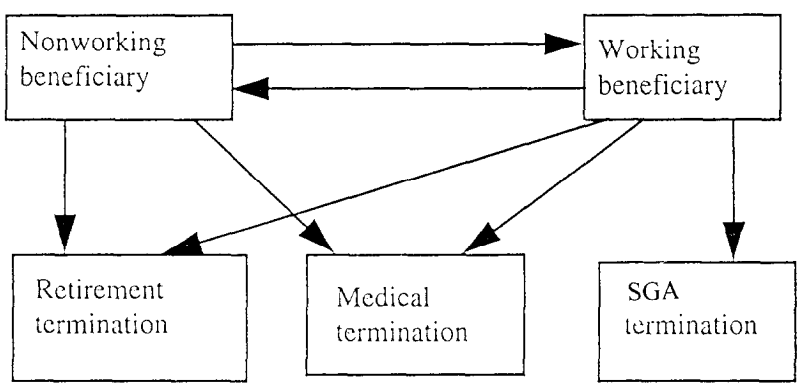
It is important, therefore, to analyze the forces leading to work and to understand the factors that affect the strength of these forces in order to increase the number of SGA terminations.

The Transition From Working Beneficiary to SGA Termination

Chart 1 shows that the only transition to an SGA termination is from the state of being a working beneficiary. Thus, we shall first analyze the force of this transition, that is, the tendency of the beneficiary to switch from working beneficiary status to that of an SGA termination. The first thing to note is that the strength of the tendency to make this switch varies with the length of time working and with the level of salary. If the beneficiary has been working for only several months, then it is impossible to experience an SGA termination at that time. The TWP guarantees beneficiaries the chance to work for 9 months without fear of losing benefits. If a working beneficiary is still disabled after the TWP, then he is eligible for the Extended Period of Eligibility (EPE) of 15 months. Benefits continue for 3 more months. Then, for the next 12 months of the EPE, benefits are not paid for each month the work is considered SGA, and benefits are paid for each month there is no work or the work is not considered SGA.

After the 15 months of EPE, the beneficiary is given an SGA termination in the next month in which the work is considered SGA. Therefore, from the start of the work episode,

Chart 1.—The first entitlement period as a dynamic process



throughout the entire TWP, and up until the end of the EPE, no beneficiary can move from the "working beneficiary" box to the "SGA termination" box.Thus, the force of transition from working beneficiary to SGA termination is zero from the time work starts to the last month of an EPE. After that, there is a transition to an SGA termination as soon as earnings reach the SGA level.

Covariate Effects

Information about such items as education and sex are not used in the SGA termination decision. An SGA termination is based directly on salary level, type of work, completion of TWP and EPE, and so forth. Only changes in such policies as the length of the TWP or the EPE, or salary levels considered SGA, could directly affect the force of this transition. Because the data were gathered retrospectively for a period almost 10 years ago, it was impossible to ask the respondent to describe the changes in wages for the first job over time. Thus, we cannot compute which months are considered SGA and which are not. Further, data about which months were considered TWP months or EPE months are only contained in the claims folders on paper. In this analysis, therefore, we cannot analyze the factors affecting the tendency to move from the category of working beneficiary to the status of SGA termination.

So, where else do factors such as education, vocational rehabilitation, and so forth, affect the process of starting as a nonworking beneficiary and ending at an SGA termination? The answer to this question lies in the fact that the only way for a transition from nonworking beneficiary to SGA termination to occur is for the beneficiary to remain working for a long enough period of time—until the end of the EPE—and then continue working above the SGA level.

The length of time spent as a working beneficiary is determined by the forces of transition out of that status. The stronger the forces are to leave the status of working beneficiary, the more beneficiaries will do so. As seen in chart 1, there are several ways out of the status of working beneficiary.

A retirement termination is controlled strictly by the age of the beneficiary. According to present policy, when the individual reaches age 65 there is an automatic conversion to the retirement program.

A medical termination occurs when the person has sufficient medical improvement. The force of this transition is affected by education, sex, and so forth. In fact, it is theoretically possible for changes to be made in the DI program that would decrease the number of SGA terminations because the number of medical terminations increased. An increase in the tendency toward medical terminations would not be considered an adverse outcome. However, for this article, we wish to focus on those factors that increase the tendency toward SGA terminations.

The remaining transition out of the working beneficiary status is accomplished by switching back to the status of nonworking beneficiary, that is, by stopping work. If the individual is in the nonworking beneficiary status, there cannot be a direct transition to a SGA termination. Thus, one of the ways to increase the number of SGA terminations is by lowering the force of transition from working beneficiary back to nonworking beneficiary, that is, to increase the tendency to sustain work. It is important, therefore, to understand the factors or covariates that affect the strength of the tendency to stop working.

The main covariates of interest are those that could be directly adjusted by program policy and regulations to help lower the tendency to stop working. These covariates would include such items as VR policy and knowledge of work-incentive provisions. Other covariates are related to the type of work the beneficiary is doing, for example, whether a person is working for the same predisability employer or not. Also, there are demographic and other economic covariates that do not relate directly to program policy issues, but are helpful to control for different characteristics of individuals. This category includes such variables as race, sex, and age. Inclusion of these variables allows one to assess the direct effects of the other variables on the tendency to sustain work and not the indirect effects through these variables.

Vocational Rehabilitation

The disability module of the NBF contains a series of questions about the VR experience of disability beneficiaries. Several questions were asked about five specific types of VR services: physical therapy, vocational training, job counseling, general education, and assistance in job placement. For each type of service, respondents were asked if they received that type of service, if the service began before the start of their first job after becoming disabled, and in what year it began. Respondents were also asked for their opinion about the effectiveness of the service, that is, did they think that the service helped them return to work or to continue working.

Work-Incentive Provisions

Respondents were asked if they were aware of any work-incentive provisions in the DI program that allowed them to test their ability to work. In particular, they were asked about the TWP, the EPE, and extended Medicare coverage. In the 1995 article, knowledge of the TWP was found to increase the tendency of a person to go back to work.[10] In this article, we are interested in testing to see if, once working, whether TWP has any effect on the tendency of beneficiaries to sustain their work effort.

Job Accommodations

A card that listed several possible accommodations an employer might offer in order to make it easier to do the work was shown to the respondent. The card included such items as:

(1) Get someone to help you with your work?

(2) Get special equipment for you to use on your job?

(3) Shorten your workday?
(4) Get someone to take you to work?

Each question was asked separately as a yes or no question. If there was more than one yes answer, the respondent was then asked which one of the accommodations was most important.

Age at Start of Work

The age of the beneficiary was felt to be a possible factor affecting the tendency to stop working. On the one hand, younger workers may be able to adjust to the new situation more quickly. On the other hand, older workers may be more accepting of the new circumstances. It is not clear, a priori, whether age has a positive, negative, or no effect on the tendency to sustain work. The age of the beneficiary at the start of the work episode was computed so that, as time progresses, individuals are being compared to persons of the same age.

Education

The 1995 article found that education is a factor that increases the tendency to go back to work. Clearly, the educational level of an individual can change over time. As with age, we would prefer to compute the educational level of the individual at the start of the work episode and then track it over time. Since the study was done retrospectively over a period of about 10 years, that level of precision was not possible. We, therefore, computed the education level at the start of entitlement as a covariate in the analysis.

Primary Insurance Amount

The primary insurance amount is the dollar figure on which cash benefits are based. It depends on the number of years and the amount of earnings covered by the Social Security program before the onset of the disability. As such, it gives a rough proxy for lifetime earnings. It also gives a rough indication of economic status because it is directly related to the cash benefit received.

Sex and Race

These covariates are included as standard demographic variables. Two race groups were constructed—white and other. The 1995 article[11] states that race had no effect on the tendency to start work and men had a stronger tendency to start. These demographic variables are included in our analysis of the tendency to sustain work.

Marital Status

The marital status of an individual did have an effect on the tendency to start working. Therefore, we include the variable in this analysis. It is a time-dependent covariate. An individual can switch from single to married and vice-versa. There are many reasons that one will switch from married to single—death of the spouse, divorce, and so forth. The Marital Changes and Economic Effects section of the NBF questionnaire contains questions from which a marital event history can be computed. It contains the dates when the beneficiary was single and when he or she was married. This event history is used to derive the time-dependent covariate for marital status. The value of the variable is 1 during the time when the individual is married and 0 during all other times.

Medical Status

The only information relating to the health of the individual that was measured at the time of the work episode is the question that asks whether the beneficiary was receiving medical treatments while working on the job. We include this variable in the model as a possible indicator of severity of disabling condition.

Job Characteristics

We wanted to test the hypothesis that a beneficiary who returns to work for the same employer and/or is doing the same tasks as before might have a better chance of sustaining the work effort. Consequently, two variables were included that compare the first job after the disability to the last job before becoming disabled. The first variable measures whether or not the employer was the same as the one before receiving disability benefits. The second one measures whether or not the same tasks were performed as on the previous job .

Jobs that require more physical activity may affect the tendency of the disabled worker to sustain the work effort. Consequently, beneficiaries were asked about the type of business or industry in which they were working. Their responses were classified according to the Alphabetical Index of Industries and Occupations. The groupings in this classification scheme are: (1) managerial and professional; (2) technical, sales, administrative support; (3) service; (4) farming, forestry, fishing; (5) precision production, craft, repair; and (6) operators, fabricators, and laborers. A preliminary attempt is made in this analysis to decide if beneficiaries who are in jobs that include more physical activity have a stronger tendency to stop working. In this attempt, a simple two-group classification was created. The white collar group contains groups 1 and 2 described above. Groups 3 through 6 are classified as "other."

In order to identify determinants of the tendency to stop working, we included a variable that measures whether or not the beneficiary worked as an employee or was self-employed. It is not clear whether or not this factor would have an effect, but, the situations are so different that it is included as a possible factor.

We also included a variable that distinguishes between a job that was for a charitable or tax-exempt organization and one that was not. We include this variable in an attempt to separate out those jobs that are considered sheltered work, not considered to be SGA by SSA most of the time. On the other

hand, the category of tax-exempt or charitable organization includes other, nonsheltered work, and so the variable may not be precise enough. Since it is the only variable that is related to the issue of sheltered work, it was included in the model.

Reasons for Working

Motivation for working may well influence the beneficiary's tendency to stay on the job. Respondents were asked why they returned to work. A list of reasons was given and they were asked to respond yes or no to whether the reason influenced their decision to return. If more than one reason was cited, they were then asked which was the most important reason. The responses, presented in the 1994 article,[12] cited financial need as the most important reason by over 57 percent of the beneficiaries. Just over 17 percent said that the most important reason was a personal preference—they wanted to work. About 8 percent said that the most important reason was that their health improved. Except for the "other" category, all of the remaining reasons had a lower response. We therefore included these reasons—financial need, wanted to work, and health improved—in our analysis.

Statistical Procedure: Survival Analysis

The force of transition from one state to another is analyzed by a statistical technique called Survival Analysis. Allison (1995) provides a practical guide to the technique using the SAS and was our primary source of information. Tuma and Hannan (1984) provide a description of the technique as it applies to the Social Sciences. Lawless (1982) presents the information from a technical biostatistical point of view. The data from the NBF have two features that make it difficult to handle with any other statistical procedure: censoring and time-dependent covariates. Some of the beneficiaries who work have a censored observation period, that is, the end of their work episode does not occur before the time of the interview. Thus, we cannot directly compute such quantities as the number of beneficiaries who stop working. Dropping those beneficiaries who have censored work episodes from the analysis would bias the calculations toward those with shorter work attempts. Survival analysis provides the proper means for utilizing the data from censored work episodes.

A time-dependent covariate is one that changes over time. For example, over time beneficiaries are married, then single, then married again. If, in fact, a working beneficiary who is married has a different tendency to stop work than one who is single, the adjustment would only be in effect over the time period during which he or she was married.

The Hazard Function

The model for the tendency or force of transition from one status to another is the hazard function. The units are the number of events per interval of time, which is why some persons refer to it as a rate. It is not a probability. If the value of the hazard function at some point in time is 1.2 and time is measured in years, then I would expect to see 1.2 events per year (assuming the rate stays constant during that year). Some persons refer to the value of the hazard function as the tendency for an event to occur, or the strength of the force of transition, or the risk level of the event. A higher value of the hazard function, all else being equal, indicates that the probability of the event will be higher. This function varies over time. For example, given a beneficiary who starts working, the tendency for that individual to stop working could be different during the first year of work when compared with the strength of the tendency to stop working after 10 years of work.

There are a number of statistical procedures that are available in survival analysis to analyze the effect of covariates on the hazard function. The procedure we have chosen is the Cox regression model. The SAS procedure called PHREG was used to estimate the parameters of the covariates in the model because it is one of the few procedures that accept time-dependent covariates. It also requires fewer assumptions about the structure of the hazard function while estimating the effect of covariates on the level of the tendency to stop working.

The Data

There are 6,820 records in the combined NBF and Add-On dataset that are disability cases. The Add-On sample was created to provide enough cases for a more detailed analysis of work. The Add-On sample consists of about 3,000 DI beneficiaries who showed some earnings from their entitlement (sometime in the sampling window of June 1980 to June 1981) to 1991. Previous articles focused on the actual return-to-work event of the DI beneficiaries. Therefore, the population in the analysis contained nonworkers as well as workers who were entitled for the first time to DI benefits. For this reason, the population for the previous articles[13] consisted of all respondents who were entitled to Social Security disabled-worker benefits for the first time between June 1980 and June 1981 (the sampling window); who were awarded benefits before May 1982 (since the original New Beneficiary Survey (NBS) sample was drawn around that time and, therefore, did not include late awards after then); who survived up to June 1992 (the time of the NBF reinterview), whose interview was not by proxy (we felt that proxy data on work events almost 10 years old would be unreliable); and who acknowledged receipt of disability benefits (data in the disability work module was not collected if they did not remember receiving DI benefits). When the above exclusions are applied, there are 4,405 cases remaining.

The population in the earlier articles excluded beneficiaries who were awarded benefits after May 1982. This exclusion was used because the NBF/Add-On sample contains no nonworkers who were awarded benefits after May 1982. Because the analysis in this article restricts the population to workers, we include the workers who were awarded benefits after May 1982. However, since the analysis only includes workers, the sample size is reduced to 1,003 respondents.

Findings

Table 1 shows the univariate distributions of each of the variables in the analysis for the population of workers. The estimates are obtained by using case weights designed for this stratified sample. Also shown is the percentage whose next event was censored (interviewed before a next event after the start of work occurred), deceased, stopped working, recovered, or retired. These percentages should be interpreted with caution for the following reason: Since different beneficiaries started to work at different times, the length of time from the start of work to the NBF interview varies by individual. In addition, since the age of the beneficiary at the start of work varies, the length of time from the start of work to age 65—retirement—varies by individual. Thus, the opportunity to observe a recovery or to observe a beneficiary stopping work varies by individual. It is for this reason that a more sophisticated analysis is necessary to understand the true relationship between the tendency to stop working and the covariates.

Table 2 presents the parameter estimates, standard errors, and the tendency ratios for all covariates in the Cox regression model. Since the effect of each covariate could change over time, there are two coefficients in the analysis for each covariate. For example, gender and gender-tm appear in table 2. The first coefficient, gender, accounts for the initial gender difference in the tendency to stop work that exists at the beginning of the work episode. The second coefficient, gender-tm, adjusts this difference over time. If the first coefficient were statistically significant, then one would conclude that there is an initial difference between men and women in the tendency to stop work. If the second coefficient were also statistically significant, then one would conclude that the difference between the two tendencies to stop work changes over time. How it changes over time would depend on whether the two coefficients have the same sign, different signs, and so forth. We will interpret the combination when it occurs. If the second coefficient were not statistically significant, one would conclude that the initial difference between the tendencies for men and women remains relatively constant over time.

The tendency ratio for the first coefficient of each covariate provides a measure of the strength of the effect of the variable. For indicator or dummy variables, it is the ratio of the tendency for those who are in the reference group to those who are not. For example, in table 2, the tendency ratio for those who knew about the TWP is 2.817. This means that, at the beginning of the work episode, the tendency to stop work for those who knew is about 2.8 times stronger than for those who did not know.

To understand the interpretation of the tendency ratio for a quantitative variable, we use age as an example. The tendency ratio is 1.013 (table 2). This means that an additional year of age at the start of work multiplies the tendency to stop work by about 1.013.

Sex, Race, and Age

The p-values for both coefficients for gender indicate that there are no gender differences in the tendency to stop work. Thus, men and women have about the same tendency to sustain work.

The coefficient for race is negative and significant and the coefficient, race-tm, is not statistically significant. The race variable was created so that the coefficient represents the adjustment to the tendency for white beneficiaries. Thus, the data indicate that the tendency for whites to stop working is lower than the tendency for all others and this difference is relatively constant over time. Chart 2 shows the estimate for the percent still working after various years from the start of work for whites and for nonwhites, computed directly from the data.[14] Because the tendency to stop working is less for whites, the percent of whites still working is higher than the percent of nonwhites.

The age of each respondent at the start of work was entered into the model. Table 1 presents the distribution of the age at the start of work for those who worked during entitlement. The age of the working population is fairly evenly distributed; the youngest group is the largest. This distribution differs from that of the overall disabled-worker population, which tends to be older.[15]

In the model, the p-value for the age coefficient, .0473, indicates that age at the start of work is significant at the .05 level. The positive coefficient, .013051, indicates that older individuals have a higher tendency to stop working. Since the p-value for the time coefficient for age, age-tm, is larger than .05, the effect of age on the tendency to work remains fairly constant over time. In other words, even after several years of working during entitlement, all else being equal, older individuals still have a higher tendency to stop work than younger individuals do.

Education

The coefficients for education and education-tm are not statistically significant. It is interesting to note (see table 1) that just under 70 percent of those who start work have at least a high school diploma. This contrasts with findings in the 1994 article that states that about 50 percent of the general population of worker and nonworker DI beneficiaries have obtained the level of high school graduate.

Primary Insurance Amount

The PIA coefficients are not significant. The PIA reflects two conflicting factors. On the one hand, it represents earnings before the onset of the disabling condition. One could argue, then, that a high PIA suggests that the job might be higher paying and less strenuous—that would enable the individual to sustain a work effort longer. On the other hand, it is the number from which monthly benefits are computed. Therefore, a higher PIA indicates higher monthly benefits that may lower the attractiveness of sustained work. The coefficient in the model represents the net result of both. As noted above, the data indicate little or no effect on work continuance.

Vocational Rehabilitation

Out of the five types of VR considered in this model,

Table 1.—Percentage distribution of workers, by reason for end of work episode

Variable	Total number	Total percent	Percent censored	Percent deceased	Percent who— Stop working	Recovered	Retired
Total population	19,324	100.0	18.9	0.5	43.8	28.4	8.4
Demographics							
Age at start of work							
18-34	7,679	39.7	18.8	...	42.8	38.4	...
35-49	5,971	30.9	24.6	1.4	46.3	27.7	...
50 or older	5,673	29.4	13.0	.3	42.5	15.6	28.7
Education at entitlement							
Missing	684	3.5	7.0	...	46.6	31.1	15.3
0-8 years	1,848	9.6	13.9	.6	39.2	34.2	12.0
9-11 years	3,788	19.6	17.5	1.7	46.8	27.3	6.8
Graduate high school	7,569	39.2	20.8	.3	43.9	26.2	8.7
13 or more years	5,434	28.1	20.4	...	42.7	29.9	7.0
Primary insurance amounts (in hundreds)							
$0-$200	263	1.4	...	...	...	100.0	...
$200-$399	3,584	18.6	17.3	...	36.9	43.0	2.9
$400-$599	6,685	34.6	24.5	.2	45.1	26.1	4.1
$600 or more	8,791	45.5	15.9	1.0	46.9	22.0	14.2
Sex							
Female	6,240	32.3	18.2	.2	43.0	26.5	12.1
Male	13,083	67.7	19.2	.7	44.2	29.3	6.6
Race							
Other	3,774	19.5	15.2	1.3	60.5	17.9	5.1
White	15,550	80.5	19.8	.3	39.7	31.0	9.2
Vocational rehabilitation							
Physical therapy							
Other	13,316	68.9	20.8	.6	42.0	29.5	7.2
Yes	6,007	31.1	14.7	.5	47.7	26.0	11.2
Vocational training							
Other	14,425	74.7	17.3	.5	44.5	28.4	9.2
Yes	4,899	25.4	23.5	.6	41.6	28.4	6.0
Job counseling							
Other	15,699	81.2	18.9	.6	43.3	28.8	8.5
Yes	3,625	18.8	19.0	.3	45.9	26.7	8.1
General education							
Other	16,224	84.0	18.2	.5	42.6	29.8	8.9
Yes	3,099	16.0	22.5	.5	50.0	21.3	5.6
Job placement							
Other	15,668	81.1	17.7	.6	43.2	29.1	9.5
Yes	3,656	18.9	24.2	.3	46.4	25.3	3.7
Knowledge of work incentives							
Trial-work period							
Other	15,152	78.4	17.1	.6	42.0	31.1	9.2
Yes	4,171	21.6	25.4	.1	50.3	18.8	5.4
Extended period of eligibility							
Other	16,333	84.5	16.9	.6	43.4	30.6	8.5
Yes	2,991	15.5	29.5	.1	46.1	16.2	8.1
Medicare continuation							
Other	17,718	91.7	18.6	.6	42.6	29.5	8.7
Yes	1,605	8.3	22.4	...	56.4	16.1	5.1

Table 1.—Percentage distribution of workers, by reason for end of work episode—*Continued*

Variable	Total number	Total percent	Percent censored	Percent deceased	Percent who— Stop working	Recovered	Retired
Married							
Never	7,412	38.4	14.5	1.0	47.0	28.3	9.3
At some point	11,912	61.6	21.6	.2	41.8	28.5	7.9
Job characteristics							
Same as predisability job							
No	14,506	75.1	16.8	.6	50.2	23.9	8.5
Yes	4,817	24.9	25.3	.2	24.5	41.9	8.2
Same tasks as predisability job							
No	13,283	68.7	18.6	.8	47.2	26.7	6.7
Yes	6,040	31.3	19.6	...	36.2	32.1	12.2
Self-employed							
No	17,702	91.6	17.1	.6	44.8	29.2	8.3
Yes	1,621	8.4	38.9	...	32.1	19.7	9.3
White-collar job							
No	11,103	57.5	15.3	.3	48.0	26.1	10.4
Yes	8,221	42.5	23.8	.9	38.1	31.5	5.7
Nonprofit, charitable, or tax-exempt organization							
No	17,600	91.1	18.3	.6	44.2	29.2	7.8
Yes	1,723	8.9	25.1	...	39.4	20.7	14.8
Job accommodations							
Employer had someone to help you with your work							
No	16,273	84.2	19.8	.5	43.7	28.0	8.0
Yes	3,051	15.8	14.0	.4	44.2	30.6	10.8
Employer got special equipment for you							
No	17,685	91.5	18.9	.5	44.0	28.1	8.5
Yes	1,639	8.5	18.4	.8	41.9	32.0	7.0
Employer switched you to different kind of work							
No	17,456	90.3	20.0	.5	43.5	27.3	8.7
Yes	1,868	9.7	8.8	.6	45.9	39.1	5.6
Employer helped you learn a new skill							
No	15,809	81.8	18.4	.4	44.8	27.6	8.8
Yes	3,515	18.2	21.0	1.0	39.4	32.2	6.5
Employer shortened your workday							
No	16,984	87.9	20.5	.6	42.5	28.6	7.9
Yes	2,339	12.1	7.4	...	53.2	27.2	12.3
Employer changed your start/stop times							
No	17,396	90.0	19.2	.6	43.2	28.5	8.6
Yes	1,928	10.0	16.3	...	49.3	27.9	6.5
Employer allowed more breaks							
No	16,768	86.8	19.3	.5	43.5	28.5	8.2
Yes	2,556	13.2	16.4	.4	45.4	27.6	10.2
Employer arranged special transportation							
No	18,428	95.4	18.4	.5	43.0	29.3	8.8
Yes	896	4.6	28.4	...	60.8	9.5	1.3
Employer got help for you to get to work							
No	18,879	97.7	18.8	.5	43.5	28.6	8.6
Yes	445	2.3	21.5	...	54.0	21.9	2.7

Table 1.—Percentage distribution of workers, by reason for end of work episode—*Continued*

Variable	Total number	Total percent	Percent censored	Percent deceased	Percent who— Stop working	Recovered	Retired
You received regular medical treatments while working							
No	10,906	56.4	18.1	.8	43.7	28.0	9.5
Yes	8,418	43.6	19.9	.2	43.9	29.0	7.1
Reasons for working							
Financial need							
No	3,514	18.2	7.0	1.4	54.4	30.1	7.1
Yes	15,810	81.8	21.5	.3	41.4	28.0	8.7
You wanted to work							
No	8,663	44.8	11.7	.7	47.4	31.8	8.4
Yes	10,660	55.2	24.7	.4	40.8	25.6	8.5
Your health improved							
No	12,389	64.1	19.2	.3	48.7	25.4	6.4
Yes	6,935	35.9	18.4	.9	35.0	33.7	12.0

physical therapy and job placement are the only ones that had a statistically significant effect on the tendency to stop working, that is, they influenced the tendency to continue working. The coefficient for physical therapy is negative, which implies that those who had physical therapy rehabilitation were less likely to stop work. The corresponding time variable is positive, with a p-value of .0544, slightly above the .05 level. This suggests that the effect diminishes as the length of time working increases. In chart 3, the darker curve, representing those with physical therapy, is slightly higher during the first few years after the start of work. Since the difference diminishes over time, the two curves eventually cross around 4 or 5 years. After this point in time, the darker curve is lower than the lighter curve, indicating that the effect has now reversed itself. Thus, for those whose work episode lasts longer than about 5 years and who had physical therapy, the tendency to stop working is higher than for those who did not have physical therapy.

The coefficient for job placement is not significant and the time coefficient is significant and positive. Near the beginning of work there is little difference in the tendencies to stop work between those who had job placement and those who did not (chart 4). However, for those beneficiaries who have been working for a period of time, those who had job placement have a higher tendency to stop working than those who did not. Again, the chart shows little difference between the two groups, indicating that, even though the effect is statistically significant, it is not large.

Work-Incentive Provisions

We examined the effect of the knowledge of the three major work-incentive provisions on the tendency of the beneficiary to stop working. The results present an interesting finding. The coefficients for knowledge of the EPE and Medicare continuation are not statistically significant. This finding suggests that knowledge of these two work-incentive

Chart 2.—Percent of persons still working after given number of years, by race

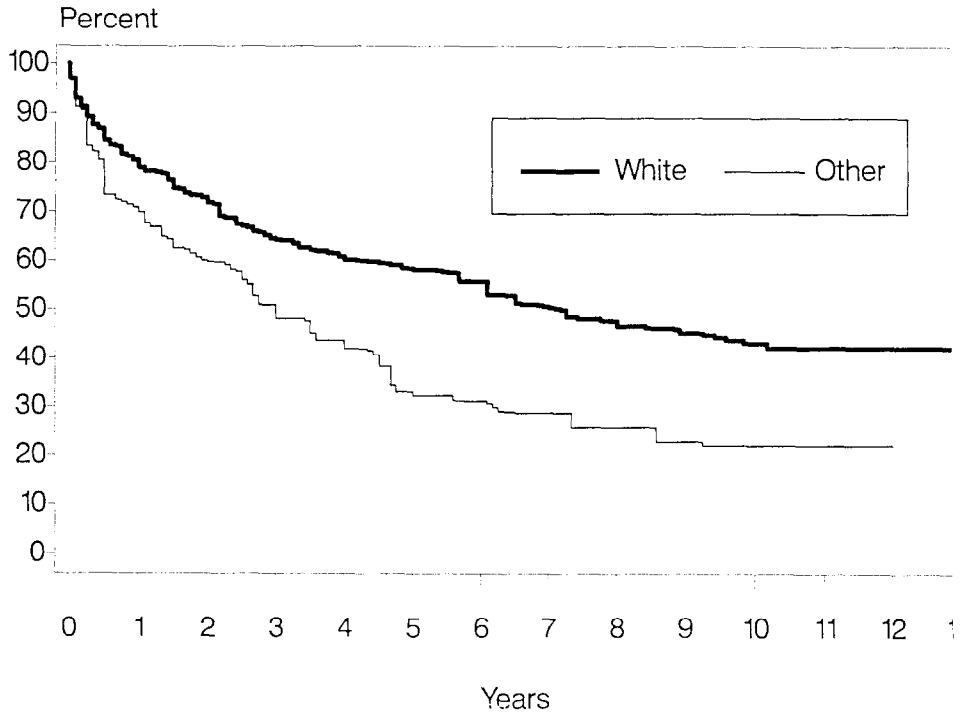


Table 2.—Cox regression results for tendency to stop working

Variable	Coefficient	Standard error	p-value	Tendency ratio
Demographics				
Age at start of work	0.013051	0.00658	0.0473	1.013
Age at start of work-tm	-.002910	.00231	.2085	.997
Sex (1 = male)	.024605	.17466	.8880	1.025
Sex-tm	-.068511	.05576	.2192	.934
Race (1 = white)	-.518524	.16891	.0021	.595
Race-tm	.038811	.05847	.5068	1.040
Years of education	.001395	.02999	.9629	1.001
Years of education-tm	.009084	.01035	.3800	1.009
Primary insurance amount	-.001637	.00406	.6871	.998
Primary insurance amount-tm	.001555	.00133	.2429	1.002
Marital status (1 = married)	.103872	.22206	.6399	1.109
Marital status-tm	.061965	.08731	.4779	1.064
Vocational rehabilitation (1 = yes)				
Physical therapy	-.353729	.17106	.0387	.702
Physical therapy-tm	.102977	.05354	.0544	1.108
Vocational training	.070890	.23935	.7671	1.073
Vocational training-tm	-.033995	.08623	.6934	.967
Job counseling	.108595	.26372	.6805	1.115
Job counseling-tm	-.117660	.09770	.2285	.889
General education	.214967	.26718	.4211	1.240
General education-tm	.011514	.09428	.9028	1.012
Job placement	-.383020	.27732	.1672	.682
Job placement-tm	.303413	.09759	.0019	1.354
Knowledge of work incentives (1 = knew before work)				
Trial-work period	1.035502	.28368	.0003	2.817
Trial-work period-tm	-.246908	.15269	.1059	.781
Extended period of eligibility	-.499880	.37826	.1863	.607
Extended period of eligibility-tm	.144152	.17669	.4146	1.155
Medicare continuation	-.174469	.37372	.6406	.840
Medicare continuation-tm	-.086112	.15648	.5821	.917
Job accommodations (1 = yes)				
Employer had someone help employee with work	-.110996	.22199	.6171	.895
Employer had someone help employee with work-tm	-.006815	.07662	.9291	.993
Employer got special equipment	-.164422	.31920	.6065	.848
Employer got special equipment-tm	.027735	.11287	.8059	1.028
Employer switched employee to different type of work	-.011843	.28036	.9663	.988
Employer switched employee to different type of work-tm	-.048832	.09042	.5892	.952
Employer helped employee learn a new skill	-.424331	.22230	.0563	.654
Employer helped employee learn a new skill-tm	-.062612	.07960	.4315	.939
Employer shortened workday	.480857	.24120	.0462	1.617
Employer shortened workday-tm	-.015835	.10488	.8800	.984
Employer changed start/stop times	-.138861	.26901	.6057	.870
Employer changed start/stop times-tm	.272865	.10451	.0090	1.314
Employer allowed more breaks	-.061129	.25230	.8086	.941
Employer allowed more breaks-tm	-.027284	.10345	.7920	.973
Employer arranged special transportation	.528385	.35443	.1360	1.696
Employer arranged special transportation-tm	.052078	.12898	.6864	1.053
Employer got employee help to get to work	.382031	.45860	.4048	1.465
Employer got employee help to get to work-tm	-.484139	.24330	.0466	.616

Table 2.—Cox regression results for tendency to stop working—*Continued*

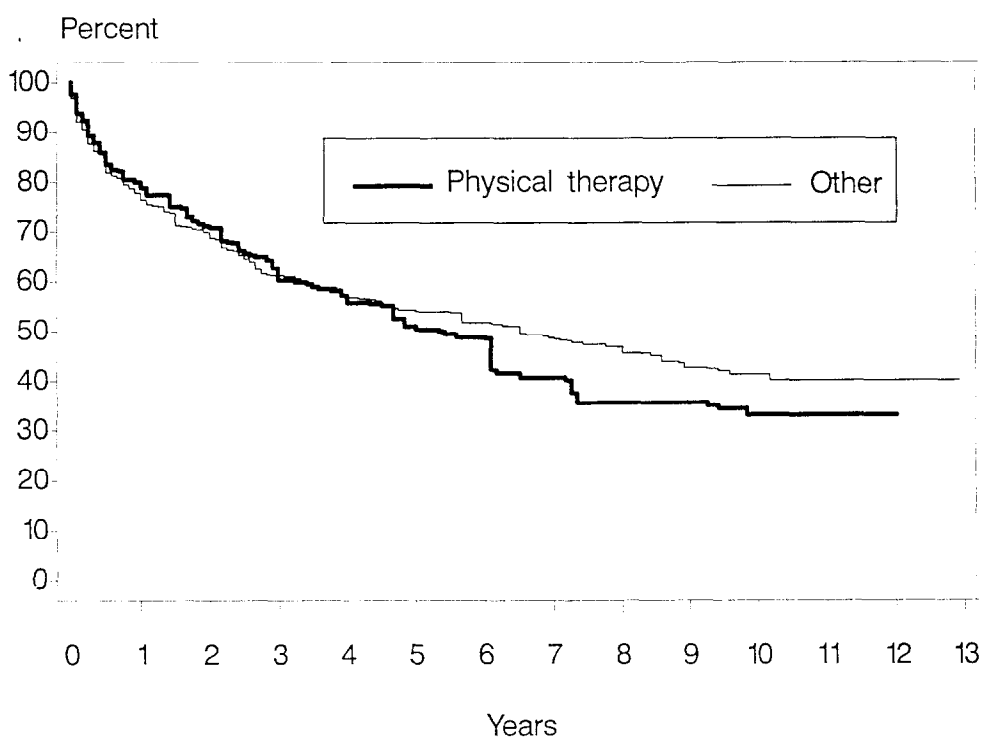
Variable	Coefficient	Standard error	p-value	Tendency ratio
Reasons for starting work (1 = yes):				
Financial need	-0.028867	0.18629	0.8769	0.972
Financial need-tm	-.179932	.05837	.0021	.835
Wanted to work	.217816	.15980	.1729	1.243
Wanted to work-tm	-.110344	.05486	.0443	.896
Health improved	-.410563	.16897	.0151	.663
Health improved-tm	.052896	.05318	.3199	1.054
Type of Job:				
Same job as before disability (1 = yes)	-1.014487	.24300	.0001	.363
Same job as before disability-tm	-.022757	.07012	.7455	.977
Same tasks as before disability (1 = yes)	-.481486	.19292	.0126	.618
Same tasks as before disability-tm	.159686	.06092	.0088	1.173
Employed/self-employed (1 = employed)	1.133647	.35064	.0012	3.107
Employed/self-employed-tm	-.144926	.08547	.0899	.865
Nonprofit, charitable, or tax-exempt organization (1 = yes)	-1.008733	.30059	.0008	.365
Nonprofit, charitable, or tax-exempt organization-tm	.142252	.08757	.1043	1.153
Kind of work (1 = white collar type)	-.249963	.16684	.1341	.779
Kind of work-tm	-.079054	.05460	.1477	.924
Regular medical treatments while working (1 = yes)	.127794	.15244	.4018	1.136
Regular medical treatments while working-tm	-.041722	.04935	.3978	.959

provisions have no effect on the tendency to stop working. The coefficient for knowledge of the TWP provision only is positive and significant. The corresponding time coefficient is not significant. Chart 5 shows a relatively steep drop in the percent still working during the first year for those who knew about the TWP. Thus, those workers who know about the TWP only, and not the EPE and Medicare continuation, have a higher tendency to stop work.

Job Accommodations

Of all the job accommodations questions that were asked, two of them are statistically significant and positive. The coefficient for those working beneficiaries where the employer shortened the work-day and the time coefficient for those whose employer changed their start and/or stop times was positive and significant. This suggests that these beneficiaries have a higher tendency to stop working. On the other hand, the coefficient for those beneficiaries where the employer helped them learn a new skill has a p-value of .0563, slightly above the .05 significance level. The coefficient is negative. Chart 6 shows that the curve for those who learned a new skill is slightly higher than the curve for the others. This suggests that the accommodation helped the beneficiary sustain the work. Also, the time coefficient for beneficiaries where the employer got help to get the beneficiary to work is negative and significant, suggesting that those beneficiaries, over time, have a lower tendency to stop working.

Chart 3.—Percent of persons still working after given number of years, by receipt of physical therapy



Motivation for Working

In the NBF, several questions were asked about why the beneficiary returned to work. As can be found in the 1994 article,[16] the most important reasons for starting to work were: (1) the beneficiary's financial need; (2) the beneficiary wanted to work; and (3) the beneficiary's health improved. These reasons were included in the model of the tendency to stop working. Table 2 shows that financial need -tm, wanted to work-tm, and health improved are significant and negative factors. Thus, those individuals with some medical improvement that allows them to go back or who were motivated by financial need, or the fact that they wanted to work have a lower tendency to stop working. Charts 7-9 show the curves for the corresponding groups.

Type of Job

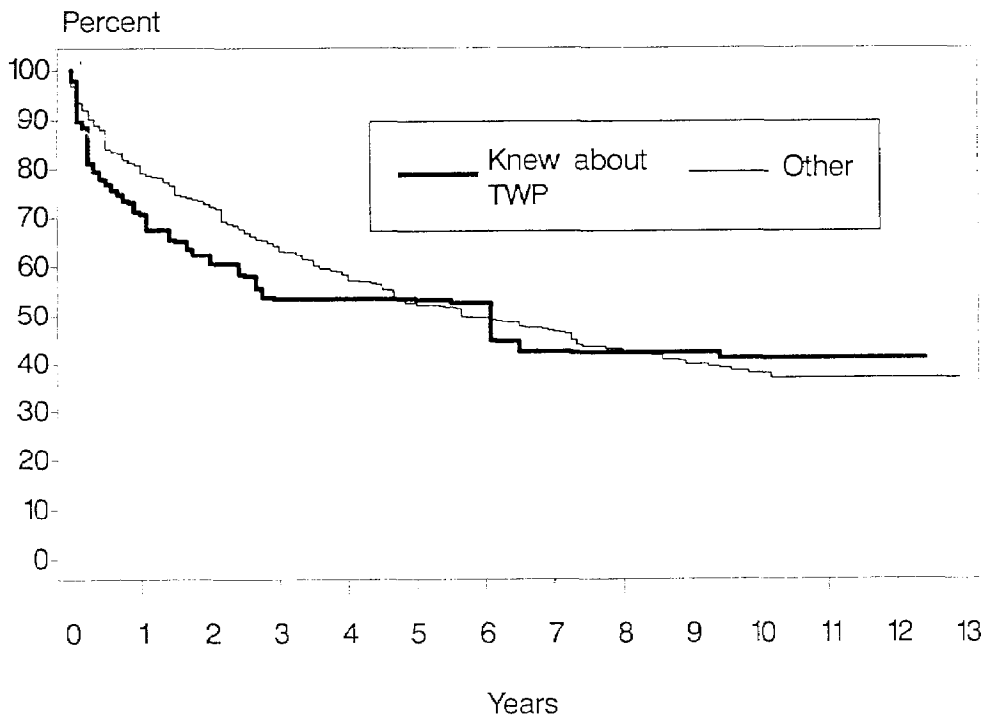
Several questions were asked about the type of job. The coefficient for beneficiaries who are going back to the same job as the predisability job is negative and significant. Thus, as chart 10 shows, the percentage of those still working is dramatically lower for those who are doing a different job than for those who are working at the same predisability job.

The coefficient for those who are going back to a job with the same task as the predisability job is also negative and significant. Thus, they have a higher tendency to sustain the work effort. Although the effect is not as dramatic as for those who go back to work at the same job, it is still worth noting.

The coefficient for employed/self-employed was significant and positive (chart 11). The percentage of employed beneficiaries who are working drops more quickly than the curve representing those who are self-employed.

Chart 4.—Percent of persons still working after given number of years, by receipt of job placement assistance

Chart 5.—Percent of persons still working after given number of years, by knowledge of the trial-work period (TWP)



The coefficient for a nonprofit, charitable, or tax-exempt organization is negative. This implies that those who work for a charitable or tax-exempt organization have a lower tendency to stop working.

Discussion

The 1995 article[17] analyzes the effect of a range of covariates on the tendency to start working. This article presents the effect of these covariates on the tendency to stop working. When the results are combined, we have a more complete picture of the effect of the variables on work.

Demographics

Older beneficiaries have a lower tendency to start working. Once working, older individuals have a higher tendency to stop working. Education helps the beneficiary to start working, but does not help to sustain it. Race has no effect on the tendency to start working, but, once working, whites have a lower tendency to stop working. Men have a higher tendency to go back to work. Once working, there is no difference in the tendency to stop working. Beneficiaries with a higher PIA have a lower tendency to start a job. PIA has no effect on sustaining the work effort. Those beneficiaries who are married have a lower tendency to start working. For those who are working, marital status has no effect on the tendency to stop working.

Vocational Rehabilitation

Beneficiaries who have had physical therapy have a higher tendency to start working and, once working, have a lower tendency to stop. When those who had physical therapy were asked if they thought it helped make them able to return to work or continue working, only 24 percent said yes. Thus, most beneficiaries do not see physical therapy as a direct help. These findings could result from the fact that individuals are screened for acceptance into

Chart 6.—Percent of persons still working after given number of years, by reason of job accommodation or other reason

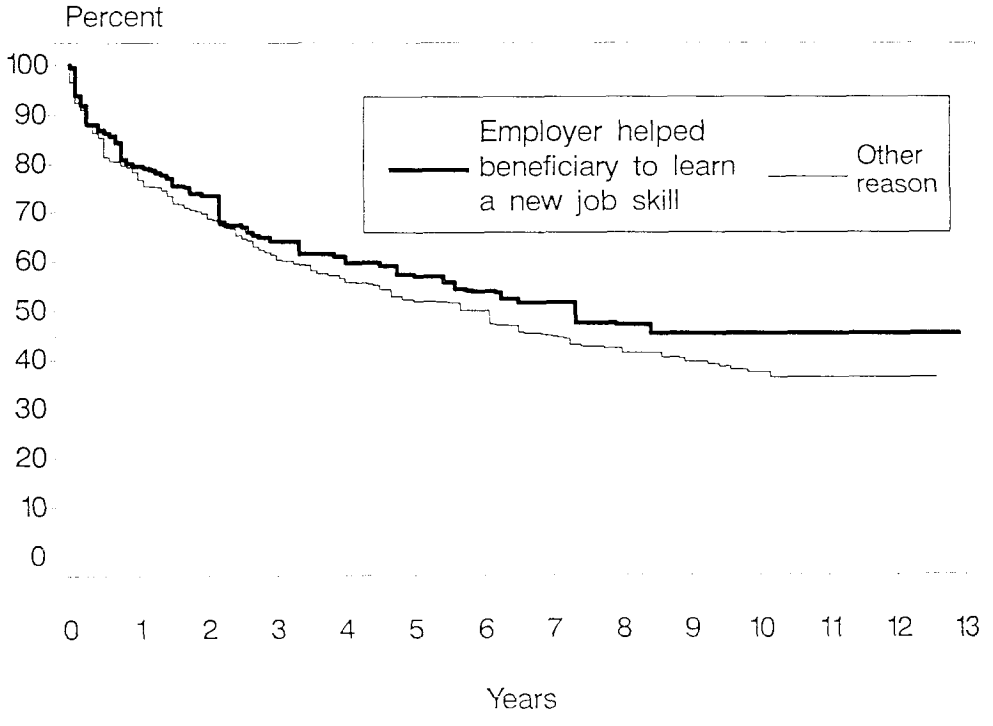


Chart 7.—Percent of persons still working after given number of years, by reason of financial need or other reason

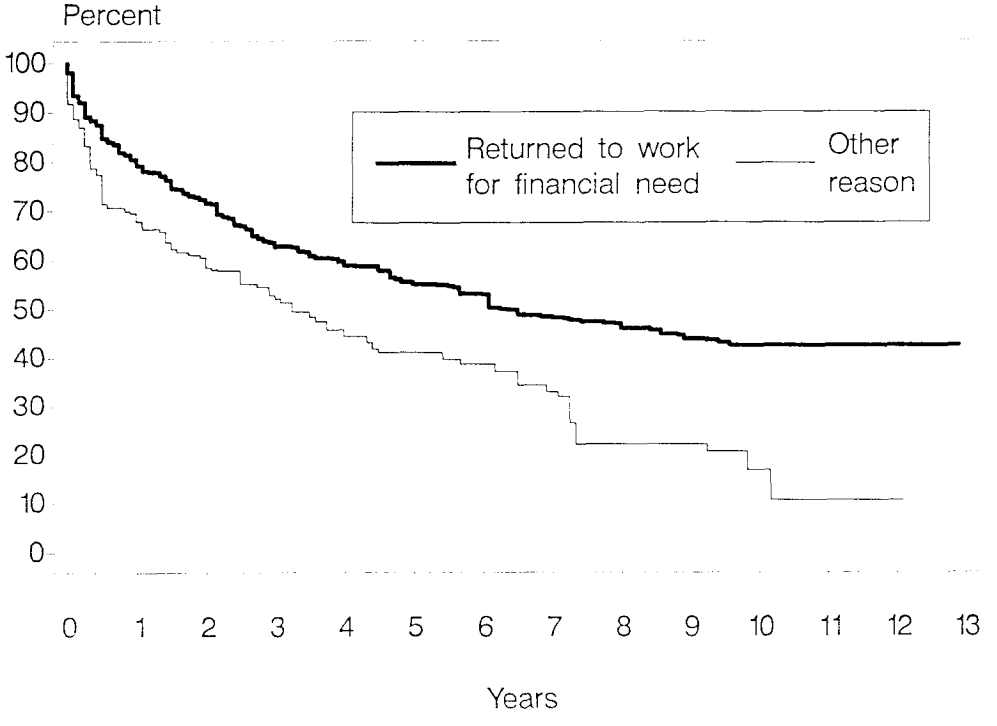


Chart 8.—Percent of persons still working after given number of years, by reason of desire to work or other reason

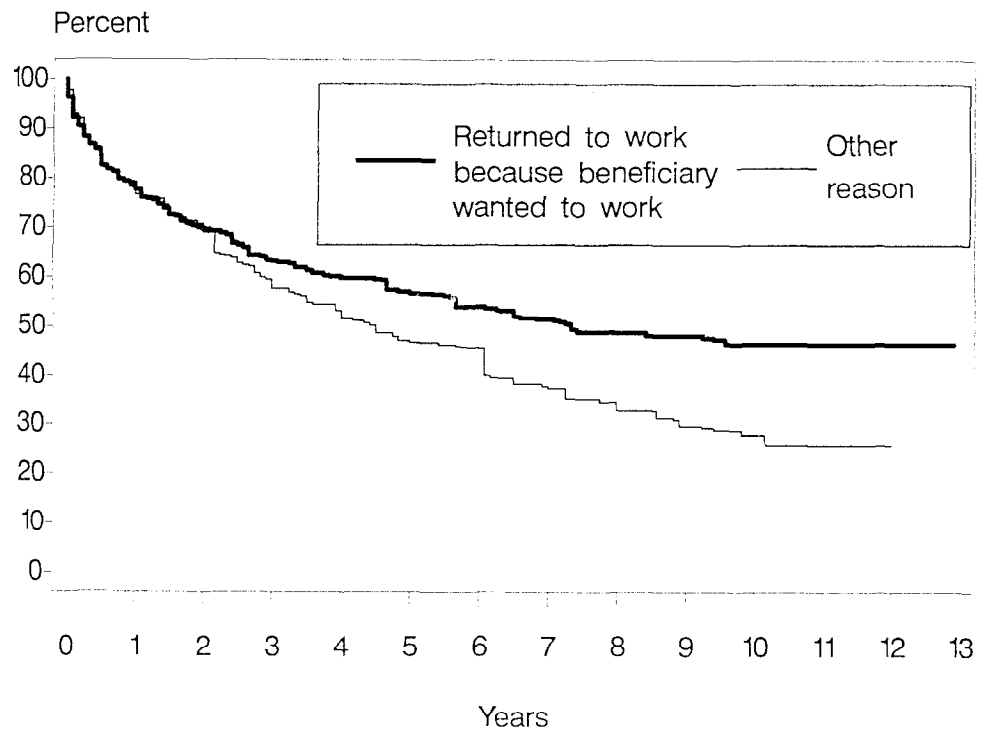
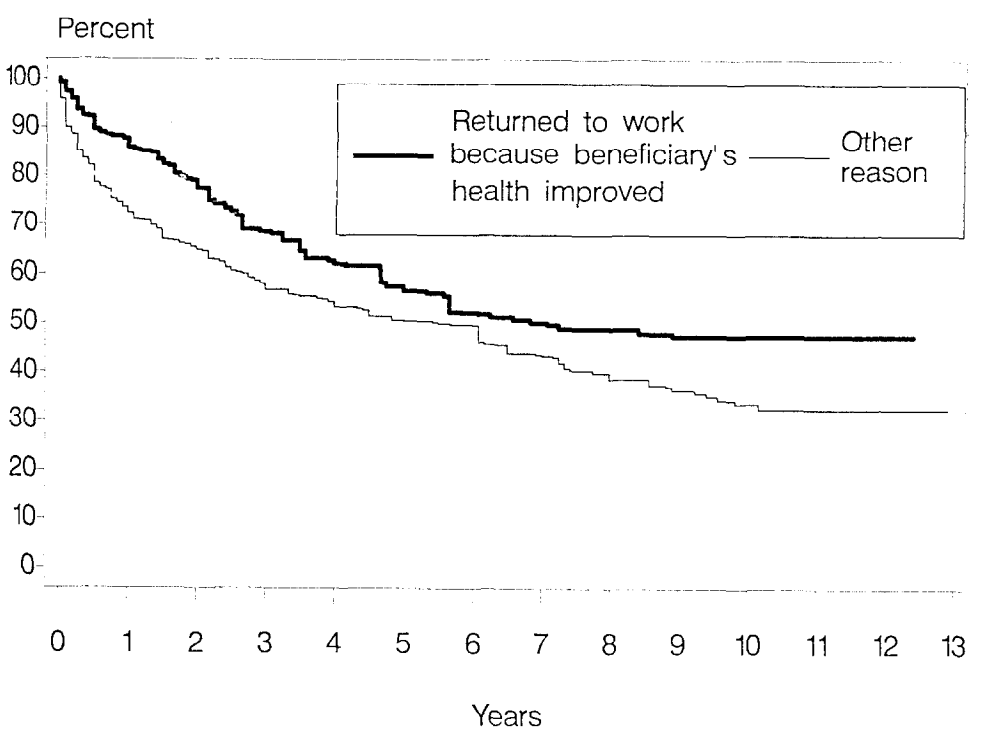


Chart 9.—Percent of persons still working after given number of years, by reason of improved health or other reason



physical therapy programs. Those who are accepted most likely exhibit some potential for medical improvement, perhaps because their impairment is less severe or it is one that is likely to improve over time. This screening process may single out individuals who are more likely to sustain work; thus, the variable is working as an indirect surrogate for severity. On the other hand, it is possible that the physical therapy itself helps the individual to sustain the work effort. Without some measure of severity, the two cannot be separated. On the other hand, chart 3 shows that, even though the physical therapy coefficient is significant statistically, the actual difference is not that large.

Vocational training and general education, similar to years of education, both increase the tendency to start a job but have no effect on the tendency to sustain it. In both cases, about half of the beneficiaries who had that type of VR service said that it helped. It is possible that these services provide the beneficiary with a broader range of types of jobs and an ability to learn new tasks more quickly. However, once the job starts, other factors control the tendency to sustain the work effort.

Job counseling has no effect on the tendency to start a job or on the tendency to stop, even though about half of those who had job counseling said that it helped. Job placement greatly increases the tendency to start working. However, over time, those with job placement have a greater tendency to stop work than those who did not have job placement. Almost 70 percent of those who had job placement said that it helped. This unusual finding could result from the fact that some beneficiaries who received job placement help are not as self-motivated as those who found a job without the help of job placement. These individuals might tend to stop working more easily.

Work Incentives

Few people who knew about the work-incentive provisions said that the provisions influenced them. A person who knows about the TWP only has a higher tendency to start working than one who does not know about any of the work incentives. This person also has a higher tendency to stop working. The effect is dramatic in the early years (chart 5). Perhaps the fear of the loss of benefits looms large in the minds of beneficiaries. Additional knowledge of the EPE, as well as the TWP, has no effect on either tendency. A person who knows about Medicare continuation, the TWP, and the EPE has the same tendency to start working as one who does not know about any of the work incentives. Once working, a person who knows about all three work incentives has the same tendency to stop working as one who knows about the TWP only. Thus, those who know about all three work-incentive provisions have no change in the tendency to start working and a higher tendency to stop, as compared with a beneficiary who does not know about any of the work incentives. If one also realizes that only about 21 percent even knew about the WI provisions, they do not appear to be major factors toward encouraging SGA terminations.

Job Accommodations

The 1994 article[18] shows that most beneficiaries who had some job accommodation thought that it was helpful. However, not all job accommodations decreased the tendency to stop work. Those who were taught a new job skill and those who had someone help them get to work had a higher tendency to sustain the work effort. Those who had the workday shortened or had the start and/or stop times changed had a higher tendency to stop working. This may be a result of the

Chart 10.—Percent of persons still working after given number of years, by reason of new or original employer

Chart 11.—Percent of persons still working after given number of years, by type of employment

fact that we are not controlling for the severity of the disabling condition. In fact, those working beneficiaries who have either of these two job accommodations are possibly more severely disabled than others. In the absence of a measure of the severity of the disability, it is possible that these job accommodations are acting in the model as a proxy for severity. It is interesting to note that the coefficients for one possible proxy for severity—the existence of regular medical treatments while working—are not significant.

Motivation

The three main reasons for starting work—financial need, wanted to work, health improved—all helped the beneficiary sustain the work effort. They were also cited as important reasons for going back to work.[19] Individuals who want to work to satisfy their financial need when the opportunity presents itself and they are healthy enough to do so, seem to take advantage of it. Individuals who are not motivated by these factors have a lower tendency to continue working.

Type of Job

Certain types of jobs were helpful in sustaining the work effort. As expected, those who returned to the same job that they had before disability had a much stronger tendency to sustain the work effort. Those who started a job with the same tasks also had a higher tendency to continue working. Both of these factors possibly led to higher paying jobs. Those who started work for a charitable or tax-exempt organization also had a stronger tendency to stay working. It could be that much of this work is in a sheltered work environment. Those who were self-employed also had a stronger tendency to sustain the work effort.

Conclusion

In summary, the VR efforts seem to help one start work, but do not seem to help one sustain the work effort. Few persons seem to know about the work incentives. Those who know about all three incentives have the same tendency to start working and have a higher tendency to stop, when compared with those who are not aware of the work incentives. There seems to be room for improvement in the VR and WI areas. The counterintuitive results with respect to job accommodations seem to indicate that other, unmeasured variables, such as severity of the limitations, are confounding the true effect of these factors. On the other hand, learning a new job skill and getting help to get to and from work showed some promise. More detailed data about job accommodations and related variables may be necessary to decide on the actual effect of job accommodations on the work effort. Motivation seems to be an important factor. Going back to work for the same employer and/or doing the same tasks seems to help. These two facts may speak to the type of job placement and job counseling efforts that might help increase work effort.

As we try to make sense out of all of these findings, we need to remember that the 1996 article reports health reasons as the most popular reason for stopping work (38 percent). When asked how their health problems stopped them from working, 63 percent said that they could not keep pace with the work. About 58 percent said that their health would not allow them to do the work they did earlier, which, as stated above, lowers the tendency to sustain work. About half said that they could not work as many hours as needed to stay on the job. And so, when measuring the success of VR programs and WI provisions for DI beneficiaries, it should not surprise us that these individuals, who were awarded DI benefits by providing evidence that their health problems are preventing them from working, are having difficulty getting back to work and sustaining the effort.

Notes

[1] See, John C. Hennessey and Janice M. Dykacz, "Comparison of Individual Characteristics and Death Rates of Disabled-Worker Beneficiaries Entitled in 1972 and 1985," *Social Security Bulletin*, Vol. 55, No. 3 (Fall), 1992, pp. 24-40.

[2] John C. Hennessey and Janice M. Dykacz, "Projected Outcomes and Length of Time in the Disability Insurance Program," *Social Security Bulletin* (September), 1989, pp. 2-41.

[3] Social Security Disability note, Social Security Administration, Office of Disability, Pub. No. 64-040 (No. 17), March 10, 1997.

[4] Ibid.

[5] John C. Hennessey and L. Scott Muller, "Work Efforts of Disabled-Worker Beneficiaries: Preliminary Findings from the New Beneficiary Follow-up Survey," *Social Security Bulletin*, Vol. 57, No. 3 (Fall), 1994, pp. 42-51.

[6] John C. Hennessey and L. Scott Muller, "The Effect of Vocational Rehabilitation and Work Incentives on Helping the Disabled-Worker Beneficiary Back to Work," *Social Security Bulletin*, Vol. 58, No. 1 (Spring), 1995, pp. 15-28.

[7] John C. Hennessey, "Job Patterns of Disabled Beneficiaries," *Social Security Bulletin*, Vol. 59, No. 4 (Winter), 1996, pp. 3-11.

[8] Ibid.

[9] This figure differs slightly from the one in the previous *Social Security Bulletin* article, Vol. 57, No. 3. The focus in that article was on job patterns of the DI beneficiary. Through that analysis, it was discovered that several jobs can make up the first work episode of a beneficiary. Some individuals start a second job while still working at the first job. The time between jobs is merely a small interval caused by the process of switching to another job. Because the focus of this article is on the first work episode and not on the individual jobs that make up the first episode, we have simplified the diagram as seen in chart 1.

[10] See note 7.

[11] See note 6.

[12] Ibid.

[13] See reference in note 6 for more details about the population selected.

[17] See note 7.

[18] See note 6.

[19] Ibid.

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