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The Ticket to Work Program and Beneficiaries with Blindness or Low Vision:
Characteristics of Beneficiaries Who Assign Their Tickets and Preliminary Outcomes

Abstract

Using Social Security Administration data, characteristics of blind and visually impaired beneficiaries who assigned their tickets, characteristics of these beneficiaries who assigned their tickets to employment networks (ENs), and preliminary employment outcomes were evaluated. Characteristics that predicted assignment of a ticket were younger age, higher education level, not having an additional disability, receiving SSDI, and being African American or White. The only substantial predictor of assignment of a ticket to an EN was race/ethnicity, with all minority groups more likely to assign to ENs than Whites. Differences in employment outcomes based on assignment to an EN versus a state vocational rehabilitation agency were found, with preliminary evidence favoring outcomes for beneficiaries served by ENs.

The Ticket to Work Program and Beneficiaries with Blindness or Low Vision:

Characteristics of Beneficiaries Who Assign Their Tickets and Preliminary Outcomes

The Ticket to Work (TTW) program has now been in operation for more than four years. It was originally established by the Ticket to Work and Work Incentives Improvement Act of 1999 and began in 13 states in February of 2002. By the end of 2004 the program was in effect nationwide. The intent of the TTW program is to help persons with disabilities who are receiving federal aid from the Social Security Administration obtain employment. However, because of the way in which the Act was implemented, concerns have been raised about whether it will be effective with hard-to-serve populations and with beneficiaries who have significant support needs (Livermore et al., 2004; Thornton et al., 2004), which would include many beneficiaries with blindness or low vision. This article represents the second component of a research project funded by the National Institute on Disability and Rehabilitation Research whose purpose is to evaluate TTW's effectiveness with blind and visually impaired consumers. This component of the research involves the analysis of TTW data obtained from the Social Security Administration (SSA).

Brief Overview of the Ticket to Work Program

Under the TTW program, eligible beneficiaries with disabilities who are receiving either Social Security Disability Insurance (SSDI) payments or Supplemental Security Income (SSI) payments are provided with a ticket which can be used to obtain rehabilitation services. The goal of these services must be return to employment, and they can be obtained from an employment network (EN) or a state vocational rehabilitation agency (SVRA). In the past, SVRAs were the only rehabilitation providers who could receive compensation from SSA for helping a beneficiary return to work. Under TTW, ENs, which can be non-profit private, for-profit private,

or public organizations, can now compete with SVRAs in rehabilitation service provision to SSA beneficiaries. The primary purposes of the TTW program are to (a) increase beneficiary choice in rehabilitation service providers, (b) increase the quality of rehabilitation services by providing competition among service providers, (c) encourage beneficiaries to obtain employment, and (d) provide long-term services to help beneficiaries retain employment (Livermore et al., 2003; Ticket to Work and Work Incentives Advisory Panel [TTWWIAP], 2004). An ultimate goal of the program is to provide a cost-savings for federal and state governments as a result of decreased SSA payments and increased tax revenues from beneficiaries who stop receiving benefits as the result of earnings from employment (Livermore et al., 2003). In addition to rehabilitation services, the Act also provides for more work incentives for beneficiaries. Examples of these work incentives are a policy that gives beneficiaries the option to reinstate benefits without a new application for a five-year period following return to work, extended Medicare coverage for SSDI beneficiaries who return to work, and Medicaid Buy-In programs.

The program was implemented in three phases, beginning in February of 2002 in 13 states. In September of 2004 ticket distribution was completed in all states. As of April 2006 tickets had been distributed to more than 10 million beneficiaries. Less than 1.5% of beneficiaries have assigned their tickets, with the vast majority (i.e., 93.1%) assigning them to SVRAs. Several concerns about the way the TTW program was implemented have been presented by the Ticket to Work and Work Incentives Advisory Panel (TTWWIAP; 2004) and various other organizations (e.g., Consortium for Citizens with Disabilities, Council of State Administrators of Vocational Rehabilitation).

In response to the concerns expressed, and presumably the results from the TTW evaluation conducted by Mathematica Policy Research, Inc. (MPR), SSA published a Notice of

Proposed Rulemaking in the Federal Register on September 30, 2005. With this notice, SSA proposed to revise their regulations for the TTW program in ways that would address many of the concerns that had been expressed about the program. Proposed changes include: (a) removing the requirement for a continuing disability review prior to eligibility for the program, (b) payment under the traditional cost reimbursement system for SVRA without ticket assignment, (c) beneficiary protection from continuing disability reviews while receiving services from an SVRA without ticket assignment, (d) possibility of payment to both an EN under the TTW payment system and to an SVRA under the cost reimbursement system for the same beneficiary, and (e) substantial changes to the EN payment system. By far, the most significant proposed changes are the ones to the payment system; these changes would allow for substantial payments to ENs (i.e., more than \$7,000 under the milestone-outcome system) even if the beneficiary never goes off benefits. These changes would likely make the program much more lucrative, which may attract more organizations to become ENs. It is important to remember that these changes are only proposed at this point, and the results presented in the paper reflect the current set of regulations.

Evaluation of TTW for Beneficiaries with Blindness or Low Vision

An evaluation component for the TTW program was included in its implementation and MPR was awarded a five-year contract to conduct the evaluation. MPR has published two evaluation reports to date, which are available on their website (www.mathematica-mpr.com/disability). This evaluation will provide valuable information about the program in general, but it will not focus on specific disability groups, such as persons with blindness or low vision. The Rehabilitation Research and Training Center on Blindness and Low Vision at Mississippi State University has been funded by the National Institute on Disability and

Rehabilitation Research (grant #H133B010101) to evaluate TTW's effectiveness with this population. When the TTW program was implemented, there was concern in the blindness field that its payment system and structure would act as a disincentive to serving persons who are blind. There were several reasons for this concern, one being the higher level of earnings required for blind persons to terminate SSDI benefits. During calendar year 2006, this difference was almost \$600 per month (i.e., \$1,450 compared to \$860 for others). Other reasons for this concern are that persons with blindness or low vision: (a) are more likely to require expensive services and assistive technology, (b) are perceived by many to be difficult to place, and (c) require assistance from persons with specialized training in working with this population (Cavanaugh, 1999, 2000; Gallagher, 1988; Spungin, 1997). These reasons were hypothesized to result in ENs being less likely to serve this population, and, as a result, in the TTW program not being effective with this population.

This general hypothesis has been investigated using two primary research methods: survey research with ENs and statistical analyses of secondary data obtained from SSA. The EN survey, which provided information about their perceptions of working with persons with blindness or low vision, was conducted in 2004 (Author, 2005). Findings from that study supported the hypothesis that ENs would have concerns about working with this population, but the overall conclusions were that ENs did not indicate an unwillingness to serve persons with blindness or low vision simply because of their disability, but rather considered all characteristics of an individual in determining whether they would provide services to them. The present article represents this project's first report of the results from analyses utilizing SSA administrative data. It focuses on a comparison of the characteristics of beneficiaries with blindness or low vision based on assignment of tickets and preliminary employment outcomes for this population

of beneficiaries who assigned their tickets. The following three specific hypotheses were investigated:

1. There are differences between the demographic and personal characteristics of beneficiaries with blindness or low vision who assign their tickets versus those who do not assign their tickets.
2. There are differences between the demographic and personal characteristics of beneficiaries with blindness or low vision who assign their tickets to ENs versus those who assign their tickets to SVRAs.
3. There are differences in employment outcomes between those beneficiaries with blindness or low vision who assign their tickets to ENs versus those who assign their tickets to SVRAs.

Method

Data

The data used for this research was obtained from the Social Security Administrations' Office of Program Development and Research. The data was taken from the Ticket Research File (TRF), which is an analytical file that contains longitudinal data on persons with disabilities aged 18 to 64 who received benefits from the SSI or SSDI programs at any time between the years 1994 and 2003 (Hildebrand, Loewenberg, & Phelps, 2005). The TRF was developed for use in the general TTW evaluation being conducted by MPR. The data included in the file were amassed from several SSA data files and consists of three components: TRF.DEMO, which contains primarily demographic information; TRF.Annuals, which includes a file for every year from 1994 to 2004 that contains monthly data, such as the amount of SSDI payment made and education level; and TRF.TKT, which contains data necessary for the administration of the TTW

program and includes all beneficiaries who received a ticket. The ticket-specific longitudinal variables in the TRF are available from January 2001 to May 2005; other longitudinal variables in the database are available from January 1994 to December 2004. In October 2005 the total number of beneficiaries in the Ticket Research File who had received a ticket was 10.6 million. SSA provided me with an extract of the data that included all beneficiaries with a diagnosis related to blindness or visual impairment, all beneficiaries who assigned their ticket, and a 10% random sample of the remaining beneficiaries. For the purposes of this study, the population of interest was the first group.

Population

The focus of this study is SSI and SSDI beneficiaries with blindness or low vision who received a ticket under the TTW program. (Note: In the interest of brevity, from this point forward the term “beneficiaries” will be used to describe this population.) This group was identified by either being classified as statutorily blind by SSA or having a primary or secondary impairment code associated with blindness/low vision. Persons are classified as statutorily blind by meeting the definition of legal blindness (i.e., best corrected central visual acuity of 20/200 or less in better eye or visual field limitation of 20 degrees or greater). These are the beneficiaries for whom the “blind rules” apply (e.g., higher SGA levels). The primary SSA impairment codes used to make the second identification were: (a) 3610: Retinal detachments and defects, (b) 3620: Other retinal disorders (diabetic retinopathy), (c) 3621: DDPIS code for 3620 impairment involving body system 02; (d) 3650: Glaucoma, (e) 3660: Cataract, (f) 3680: Visual disturbances, (f) 3690: Blindness and low vision, and (g) 3780: Strabismus and other disorders of eye movement. Because all of the beneficiaries in the target population for the time period represented in the data (i.e., through May 2005) are included in the dataset used for the analyses,

the data represent a population rather than a sample. The number of people in this population is 319,825.

Variables

Demographic/Personal Characteristics. Severity of vision loss, gender, race/ethnicity, education level, age, additional disability, type of benefits received, implementation phase, and amount of benefits were the variables investigated in this category. The statutory blindness variable was used to determine severity of vision loss; the two categories for this variable were legally blind (if identified as statutorily blind by SSA) and less severe vision loss (if not identified as statutorily blind). Race/ethnicity was a pre-existing variable in the dataset. It consists of six categories: Asian American/Pacific Islander, Black (not Hispanic), Hispanic, North American Indian/Alaskan native, White (not Hispanic), and Other. Education level was measured in number of years of education completed. This information is obtained from beneficiaries at the time of application and is updated at each continuing disability review. For the analyses presented here, this variable was categorized into four educational groups (i.e., less than high school, high school, some college, college degree). Age was calculated based on the date the beneficiary was mailed the ticket. Age was categorized into five groups for the purposes of the univariate analyses, while age in years was used for the multivariate analyses. Additional disability was a dichotomous variable that was determined by the presence of a diagnosis unrelated to blindness/low vision listed in the primary or secondary impairment codes. There were three categories for type of benefits received: SSDI, SSI, or Concurrent (receiving both SSDI and SSI). Implementation phase is a variable found in the TRF data that specifies in which phase of the TTW start-up (i.e., 1, 2, or 3) the beneficiary received a ticket. Amount of benefits was calculated based on the average monthly dollar amount of DI and SSI benefits reported in

the year the beneficiary received his or her ticket. These variables served as the independent, or predictor, variables for the first two hypotheses.

Assignment of Tickets. A variable in the TRF dataset which indicates whether a beneficiary ever assigned his or her ticket as of the date of data extract was used to determine assignment of tickets. For those who did assign their tickets, a variable which indicates provider type (i.e., EN vs. SVRA) was used to determine where they assigned their tickets. A small number of beneficiaries in the database assigned a ticket more than once (e.g., assigned to one type of organization, unassigned, and then reassigned to another). For those persons, the second provider type was used in the analyses. These variables served as dependent, or outcome, variables in the first two hypotheses and as the independent variable in the third hypothesis.

Employment Outcomes. MPR developed an algorithm that utilizes multiple variables to identify beneficiaries in the TRF who stopped receiving cash benefits due to earnings. This algorithm was used to create a variable which will be referred to as “stopped cash benefits.” It is relevant to note that the requirements for stopping cash benefits differ based on type of benefit received (i.e., SSDI, SSI, or concurrent). For SSDI beneficiaries, monthly earnings must be above a specific earning level for 12 months (9 months for the trial work period and 3 months for the grace period) before cash benefits fall to zero. For SSI beneficiaries, earnings must be well above the SGA level to completely stop cash benefits, due to the earned income exclusion.¹ For concurrent beneficiaries, both requirements must be met for cash benefits to be stopped. Because of the need to track earnings to calculate the benefit amount, the TRF includes monthly earnings data for SSI beneficiaries. However, this data is not available for SSDI beneficiaries. These monthly earnings were used to determine whether SSI beneficiaries were employed at or above

¹ After the standard earnings disregards - \$65 plus up to \$20 more - benefits are reduced by \$0.50 per every dollar earned for SSI beneficiaries. Assuming that the maximum SSI benefit is received, earnings would have to be greater than \$1,200 per month for cash benefits to fall to zero.

the SGA level. Note that the general SGA level was used, not the SGA level which applies to SSDI beneficiaries who are statutorily blind. This variable will be referred to as “employed at SGA,” and is only available for SSI and concurrent beneficiaries.

Because of these differences, employment outcomes analyses were conducted separately for each beneficiary group. The two variables were calculated monthly, as beneficiaries’ status on these variables can change from month-to-month. The population used for these analyses was limited to those beneficiaries who had assigned their tickets before October 1, 2004 ($n = 4175$), as the data used for the employment outcome analyses was only available through December 2004.

Data Analysis

Because these analyses are based on population data, rather than a sample from a population, statistical significance tests are not necessary. Any differences that are found between the groups are real differences that exist in the population. The question then becomes, how important are the differences that exist? Effect sizes are reported to assist the reader in making a determination of practical significance, or importance, of the findings. Odds ratios were the primary effect size used. Odds ratios allow a comparison between two groups on another dichotomous variable (which in this case will be assignment of ticket or not and assignment to an EN or an SVRA). When there is no relationship between the two variables, the odds ratio will be equal to 1; the strength of association between the variables increases with the odds ratio’s deviation from 1. When the probability of a positive response is small (as is the case for the variables of interest here), values for odds ratios and relative risks are very similar, and the odds ratio can be used to estimate the relative risk (Agresti, 2002). Therefore, the

interpretation for odds ratios and relative risks were used interchangeably in the results and discussion section.

The statistical methods used to evaluate univariate differences between groups were cross-tabulations and comparisons of mean differences. In addition, logistic regression was utilized to determine the relative importance of variables which were found to have substantial univariate group differences. Change in deviance scores was used to determine the relative contribution of predictor variables in the model, while adjusted odds ratio values were used to determine the effect of a variable on the outcome, when all other variables in the logistic regression model were held constant (Hosmer & Lemeshow, 2000).

Results

Hypothesis 1: Assignment of Tickets

Percentages of beneficiaries who assigned their tickets versus those who did not were calculated for each demographic/personal characteristic and these values, along with their associated odds ratios, were evaluated (see Table 1). All variables other than gender had a relationship with ticket assignment. The variables that had the strongest univariate relationship were age, education level, having an additional disability, and race/ethnicity. Mean differences on average dollar amount of benefits received based on ticket assignment were also evaluated. Beneficiaries who did not assign their tickets received a greater average amount of benefits, by a difference of \$41.52 per month (\$763.99 [355.71] vs. \$722.47 [316.63]). However, with the large standard deviations associated with the average amount of benefits, the effect size for this difference is small (i.e., 0.12). When evaluated multivariately, the relationship between some of the variables and assigning a ticket changed (see Table 2). The same four variables identified by the univariate analyses as having the strongest relationship to ticket assignment (i.e., age,

education level, having an additional disability, and race) along with type of benefits received were the most important predictors in the logistic regression model.

Beneficiaries who were younger, with a higher education level, without an additional disability, who received SSDI (or both SSDI and SSI) benefits, and who received a ticket during Phase 1 of ticket implementation were more likely to assign their tickets. As might be expected, age and education level were the two most important determinants of ticket assignment. Race/ethnicity also had an important effect on ticket assignment: African Americans were the most likely to assign (with odds of assigning 1.20 times greater than those of Whites), followed by Whites. All other racial/ethnic minorities were less likely to assign a ticket compared to Whites, with odds of assigning ranging from 1.14 to 1.75² times greater for Whites (see Table 2).

Hypothesis 2: Assignment to ENs versus SVRAs

For those 5,144 beneficiaries with blindness or low vision who assigned their tickets, comparisons of the same variables (used for hypothesis 1) were conducted based on whether they assigned to an SVRA versus an EN (see Table 1). Several variables had a small to moderate relationship to where tickets were assigned when evaluated univariately (i.e., gender, age, education level, additional disability, type of benefits, and implementation phase), while one variable had a large relationship (i.e., race/ethnicity). In terms of dollar amount of benefits, beneficiaries who assigned to ENs received an average of \$34.56 more per month than those who assigned to SVRAs (\$755.03 [312.77] vs. \$720.47 [316.63]), again representing a small effect (i.e., 0.11).

When evaluated multivariately, the most important predictors of assignment to an EN were race/ethnicity, dollar amount of benefits received, and education level. Clearly, the variable with the strongest relationship to where a ticket was assigned was race/ethnicity. Compared to

² Determined by taking the inverse of the adjusted odds ratios presented in Table 2.

Whites, all minority group members were more likely to assign to ENs, with odds ranging from 2.11 (for Asian Americans/Pacific Islanders) to 5.53 (for Hispanics). Beneficiaries who were members of racial/ethnic minority groups, recipients of a greater dollar amount of benefits, college graduates, males, concurrent beneficiaries (receiving SSDI and SSI), in phase 3 of ticket implementation, and who had an additional disability were more likely to assign their tickets to ENs.

Hypothesis 3: Preliminary Employment Outcomes

Employment outcomes were compared for beneficiaries who assigned a ticket to an SVRA versus those who assigned to an EN. Percentages of beneficiaries employed and who had stopped cash benefits in each group were evaluated at three points: January 2002 (immediately prior to the start of Phase I ticket implementation), the month prior to individual ticket assignment (the date differs for each individual), and December 2004 (the last month for which data was available). Because results differed based on type of benefits received, the results are presented separately (see Table 3 for complete results).

SSI Beneficiaries

In January 2002, 7.1% of SSI beneficiaries who eventually assigned a ticket to an EN and 3.5% who eventually assigned to an SVRA were employed at SGA. These percentages were lower the month prior to ticket assignment, then increased substantially in December 2004, when 8.9% assigned to ENs and 6.5% assigned to SVRAs were employed. Few beneficiaries had stopped receiving cash benefits due to earnings in January 2002 or the month prior to ticket assignment: none who eventually assigned to ENs and 0.5% or less who eventually assigned to SVRAs. The percentage of beneficiaries in each group who stopped cash benefits also increased

during the time of ticket assignment: 3.6% assigned to ENs and 2.2% assigned to SVRAs in December 2004.

Concurrent Beneficiaries

In January 2002, an approximately equal percentage of concurrent beneficiaries in each group were employed at SGA. Percentages were also approximately equal in the month prior to ticket assignment, although lower for each group. None in either group had stopped receiving cash benefits in January 2002; this increased to 2% for beneficiaries assigned to ENs the month prior to ticket assignment but remained at none for those assigned to SVRAs. By December 2004, a greater percentage in each group was employed at SGA (6.1% in the EN group and 7.9% in the SVRA group), although none or very few of the beneficiaries had stopped cash benefits (0.0% and 0.4% respectively).

SSDI Beneficiaries

A very small percentage of beneficiaries who eventually assigned their tickets to ENs (1.5%) and to SVRAs (1.0%) had zero cash benefits in January 2002. These percentages remained the same for those assigned to ENs, but decreased to 0.4% for those assigned to SVRAs, the month prior to ticket assignment. The percentages increased during the period of ticket assignment, with 3.7% of beneficiaries assigned to ENs and 1.7% of beneficiaries assigned to SVRAs having stopped cash benefits in December 2004.

Discussion

All hypotheses were supported by the statistical analyses.³ Although percentage differences tended to be small, because such a small percentage of beneficiaries assigned tickets or assigned them to ENs these small differences can be considered meaningful. Odds ratios were

³ It is relevant to note that the results presented here with beneficiaries with blindness or low vision closely parallel the results from MPR's evaluations with the entire population of beneficiaries (C. Thornton, personal communication, July 13, 2006), although not all of the analyses presented here have been published by MPR yet.

used to assist in evaluating importance of the differences exhibited. Using the adjusted odds ratios as an effect size, the variables which best predicted whether a beneficiary assigned a ticket were younger age, higher education level, not having an additional disability, receiving SSDI (or both SSDI and SSI), and race/ethnicity (in particular being White or African American compared to Hispanic or Other). One variable, race/ethnicity, was clearly the most important predictor of whether a beneficiary would assign a ticket to an EN. This represents the most significant finding from the study: all racial/ethnic minority groups were much more likely to assign their tickets to an EN than to an SVRA.

There are several possible alternative explanations for this finding. For example, minority beneficiaries may have received services from an SVRA in the past and had a negative experience, thereby making them more likely to try an alternative provider. Inequities that have been documented in terms of acceptance and outcomes for SVRA minority consumers provide some support for this explanation (e.g., Capella, 2002; Dziekan & Okocha, 1993; Herbert & Martinez, 1992; Wheaton & Herzfeld, 2002; Wilson, 2000). Another possible explanation is cultural differences that may exist between minorities and SVRA counselors or agency policies. Minorities may also be more likely than Whites to avoid large government agencies and prefer a smaller organization such as an EN, or they may prefer to go to minority-owned businesses if given the option. For some persons of Hispanic origin, language may be a barrier, and perhaps some ENs are more capable of accommodating different language preferences than SVRAs. Explanations that do not directly relate to race should also be considered. For example, minorities are more likely to live in urban areas, and ENs may be more likely to be located in urban areas. Therefore there may be a greater availability of ENs to persons in urban areas,

resulting in a higher percentage of minorities *and* Whites living in urban areas to assign tickets to ENs.

Many of these possible explanations could be related to a construct referred to as “cultural mistrust.” Several authors have discussed this phenomenon, primarily in relation to African Americans, although the concept has been applied to other racial/ethnic minority populations as well (e.g., Kohatsu et al., 2000; Simms, 1995; Terrell & Terrell, 1981; Whaley, 2001a). Cultural mistrust can generally be defined as lack of trust in and suspicion of the motives of persons of a different race/ethnicity. Minorities may experience cultural mistrust in several areas, including with the traditional American systems of government, schools, and law enforcement (Terrell & Terrell, 1981). Cultural mistrust has been associated with negative attitudes and behaviors related to counseling and therapy, as well as other social situations (Whaley, 2001b). The concept of cultural mistrust has been applied to the vocational rehabilitation (VR) setting also (Alston & Bell, 1996; Atkins, 1988). Both Atkins and Alston asserted that cultural mistrust may negatively affect perceptions about VR, cause low expectancies for success, and reduce the likelihood that African Americans would seek services from VR. Cultural mistrust may be the primary phenomenon that explains the differences seen in selection of ENs by racial/minority groups compared to Whites.

It is important to note that African Americans were the only racial/ethnic group that was *more* likely than Whites to assign a ticket (20% more likely when other factors were controlled). This, combined with the fact that they were also much more likely to assign to ENs, may indicate difficulties this population perceives with SVRAs. Whether this perception is based on cultural mistrust or actual experiences is unknown, but warrants further attention.

Employment outcomes differed slightly based on assignment to ENs versus SVRAs. Again, these differences were small, but given the small percentage of beneficiaries who stopped receiving cash benefits due to earnings from employment in both groups, the differences may be meaningful. Of particular interest is the change (from the month prior to ticket assignment to December 2004) in percentages in each group who stopped cash benefits. For SSI beneficiaries, the EN group experienced a greater increase in this area than the SVRA group (i.e., a 3.6 percentage point increase versus a 2.1 percentage point increase). However, this result should be evaluated along with the fact that a substantially larger percentage of SSI beneficiaries served by ENs were employed at SGA or above prior to TTW implementation, indicating that more beneficiaries in this group had recent employment experience. For SSDI beneficiaries, the EN group also experienced a slightly greater increase in percentage who stopped cash benefits in December 2004 (i.e., a 2.2 percentage point increase versus a 1.3 percentage point increase). Overall, these results indicate that ENs have initially been slightly more successful at assisting beneficiaries with working at a level that stops cash benefits. When evaluating these results it is important to remember that the total *number* of beneficiaries in both groups who stopped cash benefits as of December 2004 was small (i.e., 69 out of 4,175), indicating that in the early stages of TTW neither provider group has been very successful at helping beneficiaries reach this goal.

The employment outcome results should be considered preliminary and must be interpreted with caution, for several reasons. The primary reason is that the data is available for a short time span, considering that some beneficiaries in Phase 3 states did not receive their tickets until September 2004. This is important as many beneficiaries may go to SVRAs because they need extensive or long-term services that ENs will not provide; therefore it may naturally take longer to see successful results for SVRA beneficiaries. Beneficiaries who go to SVRAs may not

want to completely go off benefits but will still need to be served. ENs have the advantage of being able to refuse services to beneficiaries, should they not want to go off benefits or should they appear to be too difficult to place. Although the only variable in the analysis with a large relationship to where a beneficiary assigned a ticket was race/ethnicity, beneficiaries who go to SVRAs may be different from those who go to ENs in several ways that cannot be identified with SSA data. Also, SVRAs are serving some beneficiaries without having their tickets assigned to them (Thornton et al., 2006); therefore these results do not include some beneficiaries being served by SVRAs.

Implications

The most significant finding of the study – that racial/ethnic minorities are more likely than Whites to assign tickets to ENs – is also the one that provides important implications for SVRAs. Although the total number of racial/ethnic minorities who used a ticket and assigned to ENs is small, this finding indicates a potential problem for SVRAs in serving these populations. SVRAs certainly want to be able to serve all groups equally well, and therefore it is important for individual SVRAs to determine whether a problem exists in serving minority consumers in their agencies. To this end, it would be valuable for SVRAs to do research-based self-assessments in this area. Many researchers have conducted studies with RSA-911 data that have shown discrepancies in outcomes and acceptance rates for minorities (e.g., Capella, 2002; Dziekan & Okocha, 1993; Herbert & Martinez, 1992; Wheaton & Herzfeld, 2002; Wilson, 2000), but do SVRAs know their own records in this area? Agencies should evaluate their own success with minority consumers with similar analyses using 911 case service data. Another important source of self-assessment data would be surveys or interviews, with both counselors and consumers. Through these surveys or interviews these groups could be questioned directly about whether

they perceive or have experienced any biases against racial/ethnic minorities. Counselors may be aware of potential problem areas based on their interactions with consumers, but if not asked about them directly, this information remains unknown to SVRA administrators.

In addition to research-based self-assessment, SVRA administrators should evaluate their agency policies and practices that could potentially result in cultural mistrust. SVRAs need to consider all minority groups in this evaluation. Frequently, the racial/ethnic group focused on when discussing inequities in VR has been African Americans. In this study, Hispanics were far more likely to seek services from ENs compared to Whites than all other minority groups. Agencies should consider whether they are providing an atmosphere that is appropriate to serve this population, in addition to other minority group populations. SVRAs should ask themselves questions such as these: Are bilingual counselors available? Have counselors received the multicultural training that they need, specific to all different types of racial/ethnic minorities? Has their level of cultural competence been evaluated, and is it at an appropriate level?

Given the findings from this study, in addition to the research in the field over the years that has indicated discrepancies in acceptance and outcomes for minority consumers, SVRA administrators should commit themselves to investigate this issue within their own agencies. If a problem is identified through this investigation, SVRA administrators should then commit themselves to addressing the issue so that they are able to serve all racial/ethnic groups equally well. This kind of self-assessment may help them to address any problems that exist and improve services to their minority consumers.

Limitations

The data used for these analyses are administrative data, and do not contain several variables that would be of interest in evaluating differences in ticket assignment and employment

outcomes. Variables such as severity of disability (i.e., taking all disabilities into account, not just vision loss), work history, and whether a beneficiary ever received services from an SVRA would be useful for these analyses. In addition, the data available on outcomes is very limited. The TRF database does contain an indicator for outcome payments under the TTW payment system, but does not contain an indicator for SVRA reimbursement payments or milestone-outcome payments. Data on earnings from employment is available for SSI recipients as discussed, but not for SSDI beneficiaries. The lack of these desirable variables may result in an incomplete picture of differences in ticket assignment or outcomes; therefore, results should be interpreted with caution.

Additionally, the low percentage of ticket use and ticket assignment to ENs make predicting who will assign tickets difficult. The analyses presented here indicate characteristics associated with ticket assignment, but cannot very accurately predict who will assign a ticket. Something to remember when evaluating the results is that only a small number of ENs have accepted tickets and most ticket assignments have been concentrated in only a few ENs; therefore it is possible that a small number of ENs are significantly influencing the results. Finally, although the employment outcome data is longitudinal, the research presented here did not utilize a longitudinal method to analyze the data, nor a method that would allow the determination of whether other variables may account for some of the differences in outcomes seen between beneficiaries served by ENs and beneficiaries served by SVRAs.

Future Research

The most important finding from this study, that racial/ethnic minorities are significantly more likely to go to ENs for rehabilitation services than SVRAs, warrants additional investigation. As discussed in the Implications section, it is important for SVRAs to conduct self-

assessment research in this area to identify and address any problems that exist, allowing for the improvement of services to minority consumers. It would also be valuable for additional cross-agency research to be conducted, which would require interviews or surveys with minority consumers and also may consist of analyses of SVRA counselor and agency attitudes and policies.

As mentioned, the lack of a longitudinal analysis using employment outcomes is a limitation of this study, and is an important direction for future research. A true longitudinal analysis will allow other factors that may influence outcomes to be taken into account. In order to conduct such a longitudinal analysis, an additional year of data would be very helpful, and hopefully this data will become available. Finally, additional research that would be important to the field of blindness rehabilitation is a comparison of results from the TTW program for beneficiaries with blindness or low vision to beneficiaries with other disabilities. Considering that only beneficiaries with statutory blindness have different benefits, groups that could be used for comparison are: statutory blind, other vision loss, and other disability.

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Table 1

Demographic and Personal Characteristics of Beneficiaries Who Assigned Tickets and Who Assigned to ENs

Variable	Assignment of Ticket			Assignment to EN		
	Total N ^a	Percent Assigned	Odds Ratio	Total N ^a	Percent to EN	Odds Ratio
<u>Gender</u>	312003			5120		
Male	167086	1.67	1.04	2788	6.21	1.19
Female	144917	1.61	--	2332	5.27	
<u>Race/ethnicity</u>	302029			4984		
White	188678	1.70	--	3211	3.43	--
African American	72592	1.87	1.10	1359	9.49	2.96
Hispanic	26381	0.96	0.56	252	15.48	5.16
AA/PI	7258	1.28	0.75	93	6.45	1.94
NAI/AN	2427	1.36	0.80	33	9.09	2.82
Other	4693	0.77	0.45	36	8.33	2.56
<u>Age</u>	319825					
Under 25	21259	4.48	9.72	952	2.94	0.39
25 to 34	34245	3.18	6.81	1090	7.34	1.02
35 to 44	59018	2.18	4.62	1289	6.36	0.88
45 to 54	91430	1.39	2.92	1270	5.59	0.77
55 to 64	113873	0.48	--	543	7.18	--
<u>Education level</u>	156424			2634		

Less than HS	56377	0.97	0.53	547	7.13	1.45
High school	68639	1.83	--	1256	5.02	--
Some college	19894	2.59	1.43	516	5.81	1.17
College degree	11514	2.74	1.51	315	7.62	1.56
<u>Severity of vision loss</u>	319825			5144		
Legally blind	197777	1.80	1.40	3568	5.69	0.92
Less severe VL	122048	1.29	--	1576	6.15	--
<u>Additional disability</u>	319825			5144		
Does not have	161059	1.95	1.55	3148	5.46	0.84
Has	158766	1.26	--	1996	6.41	--
<u>Type of benefits</u>	319825			5144		
SSDI	195937	1.52	0.71	2978	5.74	0.85
SSI	80167	1.55	0.73	1240	5.40	0.80
Concurrent	43721	2.12	--	926	6.70	--
<u>Implementation phase</u>	311773			5121		
Phase 1	91111	2.01	1.49	1834	5.62	0.84
Phase 2	99716	1.65	1.22	1645	5.11	0.76
Phase 3	120946	1.36	--	1642	6.64	--

^aRepresents the total sample size available for each variable, and the breakdown within groups of the variable. The maximum sample size for the entire group was 319,825, while the maximum sample size for beneficiaries who assigned tickets was 5,144.

Table 2

Adjusted Odds Ratios for Variables that Demonstrated a Substantial Univariate Effect

Variable	Adjusted Odds Ratio (Assignment of Ticket)	Adjusted Odds Ratio (Assignment to EN)
<u>Gender</u>		
Female	--	0.86
<u>Race/ethnicity</u>		
White	--	--
African American	1.20	3.04
Hispanic	0.59	5.53
AA/PI	0.88	2.11
NAI/AN	0.75	2.90
Other	0.57	2.46
<u>Age</u> (10 year units)	0.53	1.11
<u>Education level</u>		
Less than HS	0.59	1.44
High school	--	--
Some college	1.49	0.98
College degree	1.80	1.59
Unknown ^a	0.86	1.06
<u>Severity of vision loss</u>		
Legally blind	1.08	0.90
<u>Additional disability</u>		

Does not have	1.54	0.85
<u>Type of benefits</u>		
SSDI	1.03	0.80
SSI	0.60	0.80
Concurrent	--	--
<u>Implementation phase</u>		
Phase 1	1.35	0.81
Phase 2	1.12	0.79
Phase 3	--	--
<u>Benefit amount</u> (\$200 units)	1.00	1.09

Note. The dashed line represents the reference group to which the other groups were compared.

^a Because education level was missing for more than 48% of the population used in the analyses, an “unknown” category was added for the multivariate analyses, to allow inclusion of these persons in the analyses.

Table 3

Employment Outcomes of Beneficiaries who Assigned to ENs versus SVRAs: Percentages Who Were Employed at SGA and Who Stopped Cash Benefits Due to Earnings

	Employed		Stopped Cash Benefits	
	<u>EN</u>	<u>SVRA</u>	<u>EN</u>	<u>SVRA</u>
<u>SSI Beneficiaries</u>				
January 2002	7.1 (4)	3.5 (32)	0.0 (0)	0.5 (5)
Month prior to assignment	1.8 (1)	2.2 (20)	0.0 (0)	0.1 (1)
December 2004	8.9 (5)	6.5 (60)	3.6 (2)	2.2 (20)
<u>Concurrent Beneficiaries</u>				
January 2002	4.1 (2)	4.2 (30)	0.0 (0)	0.0 (0)
Month prior to assignment	2.0 (1)	2.5 (18)	2.0 (1)	0.0 (0)
December 2004	6.1 (3)	7.9 (56)	0.0 (0)	0.4 (3)
<u>SSDI Beneficiaries</u>				
January 2002	--	--	1.5 (2)	1.0 (22)
Month prior to assignment	--	--	1.5 (2)	0.4 (10)
December 2004	--	--	3.7 (5)	1.7 (39)

Note. Total *N* for SSI group was 981 (56 EN/928 SVRA); total *N* for Concurrent group was 757 (49 EN/708 SVRA); total *N* for SSDI group was 2433 (137 EN/2296 SVRA); *n* representing each percentage is in parentheses.