

VCU-RRTC on Employment of People with Physical Disabilities

Research Study #1: Identifying What People with Physical Disabilities Want and Need to Know About Employment: A Mixed Methods Research Study



EMPLOYMENT OUTCOMES FOR PEOPLE WITH MULTIPLE SCLEROSIS: VOCATIONAL REHABILITATION RSA 911 CLOSURE DATA FY 2011, 2012, & 2013

Introduction

The intent of this research brief is to profile participation, services received, and outcomes achieved by individuals with multiple sclerosis (MS) who were participants in State Vocational Rehabilitation (VR) programs. Annually, each Vocational Rehabilitation Agency funded by the Rehabilitation Act of 1973, as amended, submits to the Federal Rehabilitation Services Administration (RSA) a report, The RSA 911 Closure Report¹. Each 911 Report contains information on individuals who terminated Vocational Rehabilitation (VR) services during an identified Fiscal Year. Termination of VR Services is reported as one of four Case Closure codes by a VR agency to include the following:

- **Status 08:** An individual was found to be not eligible for services
- **Status 28:** Unsuccessful, case closed after implementing an Individualized Plan for Employment (IPE)
- **Status 30:** Unsuccessful, case closed after eligibility determination but before implementing an IPE
- **Status 26:** Successful rehabilitation.

This brief utilizes data reported from the RSA 911 Closure Reports for Federal Fiscal Years 2011, 2012, and 2013 for individuals whose primary disability is spinal cord injury. The primary focus of this brief is on those individuals with SCI whose cases were closed in Status 26 and Status 28. Additional information on the VR Case Closure data for individuals with SCI for FY 2011, 2012, and 2013 can be obtained by contacting the RRTC on Employment of People with Physical Disabilities.

¹Detail on the RSA 911 Closure Report format for the Fiscal Years covered by this Research Brief can be viewed at <http://www2.ed.gov/policy/speced/guid/rsa/pd/2012/pd-12-05.pdf>



Demographic Information on VR Participants with MS for FY 2011, 2012, and 2013

From 2011 to 2013, a total of 1,758,487 individuals with disabilities had their cases officially closed by VR agencies. Of this number, 6,865 were participants with MS: 2,381 in 2011, 2,201 in 2012, and 2,283 in 2013. The demographic characteristics of these individuals at time of application for VR services are presented in Table 1. The number of cases VR closed for males versus females remained fairly consistent across the three years. More cases were closed for females than males with approximately two thirds of the cases closed were female during each of the three years. The age range of the individuals were 25 to 64 at the time of application with a mean age of 44 for FY 2011, 2012, and 2013. The majority of the individuals whose cases were closed during this time period were white/Caucasian with 78.7% in FY 2011, 76.2% in FY 2012, and 74.6% in FY 2013. This was followed by individuals who were African American: 20.0% in FY 2011, 22.6% in FY 2012, and 24.8% in FY 2013. Very few cases were closed for individuals reported as Native American, Asian, or Pacific Islander during this time period. Approximately five percent of the sample for each of the three years was identified as Hispanic or Latino.

TABLE 1

Demographic Information on VR Participants with MS

Demographic Data Categories	FY 2011	FY 2012	FY 2013
Number of Applicants Closed in FY	n=2,381	n=2,201	n=2,283
Male	34.8%	31.3%	34.8%
Female	65.2%	68.7%	65.2%
White/Caucasian	78.7%	76.2%	74.6%
African American	20.0%	22.6%	24.8%
Native American	1.5%	1.6%	1.6%
Asian	0.7%	0.5%	0.8%
Pacific Islander	0.2%	0.3%	0.4%
Hispanic or Latino	4.7%	5.0%	4.9%
Percent with Secondary Disabilities	41.0%	43.0%	44.3%
Mean Age at Application	44.2%	44.3%	44.2%
Standard Deviation: Age at Application	9.3%	9.4%	9.6%

Status of Participants at Point of Closure by VR

Table 2 presents information on participants with MS whose cases were closed in all closure categories during the time period reported in this brief. A small percentage of the individuals with MS who applied for services exited as an applicant, exited during or after a trial work experience, or exited from an order of selection waiting list. Slightly more than one in every four VR applicants terminated after being found eligible for services but before an IPE was signed. VR case closures for individuals who had been found

TABLE 2

Summary of Exit Categories of VR Case Closures

Reasons for Case Closure	FY 2011	FY 2012	FY 2013
Number of individuals closed by VR (All Closure Categories)	n=2,381	n=2,201	n=2,283
Exited as an applicant	7.0%	6.5%	5.8%
Exited during or after a trial work experience	1.0%	1.8%	1.7%
Exited from an order of selection waiting list	0.5%	0.9%	0.9%

eligible for services but did not sign an IPE were 28.9% in FY 2011, 29.8% in FY 2012, and 29.6% in FY 2013. The percentage for individuals who had a signed IPE but exited before receiving services was very small.

Approximately 60% of the participants with MS whose cases were closed in FY 2011, 2012, and 2013 were closed after a signed IPE was implemented. This includes individuals who exited without an employment outcome, Status 28; and those who exited with an employment outcome, Status 26. In FY 2011, 683 (28.7%) of the 2,381 total VR Case Closures were for individuals whose cases were closed in Status 26. The number of individuals whose cases were closed without an employment outcome, Status 28, during FY 2011 was 736 or 30.9% of the total case closures. The figures for Status 26 in FY 2012 were 654 (29.7%) of the 2,201 case closures; and in FY 2013, 669 (29.3%) of the 2,283 case closures were closed in Status 26. Those individuals closed in Status 28 for FY 2012 were 635 (28.8%); and for FY 2013, 703 (30.8%) participants were closed in Status 28.

RSA calculates a “Rehabilitation Rate” to measure outcome performance for VR Agencies. The Rehabilitation Rate is calculated by dividing the total number of Status 26 Closures (individuals closed with an employment outcome) by the sum total of the Status 26 and Status 28 closures (individuals closed without an employment outcome after signing an IPE). Table 3 presents the information on the Rehabilitation Rate for individuals with MS for the study time period. The Rehabilitation Rate for individuals with a primary disability of multiple sclerosis was 48.2% in FY 2011; 50.8% in FY 2012, and 48.8% in FY 2013. Table 3 also presents information on the overall success rate of the Vocational Rehabilitation Program in achieving employment

Reasons for Case Closure	FY 2011	FY 2012	FY 2013
Exited without an employment outcome, after eligibility, but before an IPE was signed	28.9%	29.8%	29.6%
Exited without an employment outcome, after a signed IPE but before receiving services	2.4%	2.0%	2.1%
Exited without an employment outcome, after signing an IPE and receiving services (Status 28)	30.9%	28.8%	30.8%
Successfully exited with an employment outcome (Status 26)	28.6%	29.7%	29.5%

TABLE 3

Status at Case Closure for Participants Who Had an IPE Implemented

Status at Case Closure for Individuals with MS	FY 2011	FY 2012	FY 2013
Exited without an employment outcome, after signing an IPE and receiving services (Status 28)	n=736	n=634	n=703
Successfully Exited with an Employment Outcome (Status 26)	n=683	n=654	n=669
Rehabilitation Rate (Status 26 divided by the sum of Status 26+28)	48.2%	50.8%	48.8%
Success Rate of All Closed Applicants (% of all applicants closed who were closed in employment)	28.7%	29.7%	29.3%

outcomes with individuals with multiple sclerosis who apply for services. For all three years, approximately three out of ten individuals with a primary disability of MS who applied for VR services exited the VR system with an employment outcome consistent with their IPE. Conversely, approximately seven out of ten individuals with MS who applied for VR services exited the VR system without an employment outcome.

Demographic Information for VR Participants with MS Closed in Employment (Status 26)

The demographic characteristics of individuals with MS whose cases were closed in Status 26 during FY 2011, 2012, and 2013 are presented in Table 4. The total number of cases closed in Status 26 for FY 2011 was 683; 654 in FY 2012; and 669 in FY 2013. The percentage who successfully achieved an employment outcome was higher for females than males during all three years. In FY 2011, 66.9% were female versus 33.1% male; 69.4% in FY 2012 were female versus 30.4% male; and 63.8% were female versus 36.2% male in FY 2013. This is consistent with the information presented in Table 1, since approximately two thirds the total number of cases closed during this time period were women. In addition, the majority of the individuals whose cases were closed in Status 26 during this time period were white/Caucasian. For 2011, 84.5% were white Caucasian; 81.3% in FY 2012; and 79.5% in 2013. Consequently, the percentages were low for Status 26 closures in all other groups to include African American, Native American, Asian, Pacific Islander, and Hispanic or Latino. This is consistent with the fact that the majority of individuals for all case closure codes during this time period were white/Caucasian. As seen in Table 1, 78.7% were white/Caucasian in FY 2011, 76.2% in FY 2012, and 74.6% in FY 2013.

TABLE 4

Demographic Data Categories

Demographic Data	FY 2011 (n=683)	FY 2012 (n=654)	FY 2013 (n=669)
Male	33.1%	30.6%	36.2%
Female	66.9%	69.4%	63.8%
White/Caucasian	84.5%	81.3%	79.5%
African American	14.3%	17.8%	19.9%
Native American	0.9%	1.5%	1.3%
Asian	0.9%	0.5%	1.0%
Pacific Islander	0.4%	0.2%	0.1%
Hispanic or Latino	2.9%	2.9%	4.5%

Services for Participants Closed in Status 26 or 2

Table 5 presents the primary services received through VR for participants whose cases were closed in Status 26 during FY 2011, 2012, or 2013. Table 6 presents the services received by participants closed unsuccessfully in Status 28 for this same time period. Assessment, VR counseling and guidance, diagnosis and treatment, rehabilitation technology, and job placement assistance were the five most frequently received services for individuals whose cases were closed successfully in Status 26. Assessment, VR counseling and guidance, diagnosis and treatment, transportation and job placement assistance were the five most frequent services received for individuals whose cases were closed unsuccessfully after initiating an IPE during the same time period.

A larger percentage of individuals whose cases were closed in Status 26 received rehabilitation technology services than those whose cases were closed unsuccessfully. The rehabilitation technology service category includes rehabilitation engineering, assistive technology devices, and assistive technology services. In FY 2011, 36.3% of the individuals closed in Status 26 in employment received this service as compared to 16.6% whose cases were closed in Status 28. This finding remained consistent across the time period with 36.6% of successful cases receiving rehabilitation technology services in 2012 versus 14.8% who were unsuccessful. In 2013, 35.0% of those cases closed successfully received rehabilitation technology services as compared to 16.1% whose cases were closed unsuccessfully. In other words, over one third of all successful case closures received rehabilitation technology services during FY 2011, 2012, and 2013.

Only small differences were noted in the percentages of individuals receiving most of the services

TABLE 5

Services Received by Participants Closed Successfully in Status 26

VR Services Received	FY 2011 (n=683)	FY 2012 (n=654)	FY 2013 (n=669)
Assessment	70.1%	67.4%	65.9%
VR Counseling and Guidance	67.6%	68.9%	65.9%
Diagnosis and Treatment	36.7%	39.1%	33.2%
Rehabilitation Technology	36.3%	36.6%	35.0%
Job Placement Assistance	35.6%	37.5%	38.6%
Other Services	32.5%	32.3%	28.9%
Transportation	24.9%	27.1%	26.2%
Job Search Assistance	22.7%	24.5%	25.0%
Information and Referral	22.7%	22.1%	22.1%
On-the-Job Supports	13.0%	17.9%	15.7%
Maintenance	12.4%	14.1%	10.9%
Misc. Training	12.0%	13.3%	11.2%
College or University Training	10.0%	10.9%	9.7%
Occupational/Vocational Training	10.0%	9.3%	8.8%
Job Readiness Training	7.6%	10.4%	4.9%
Technical Assistance	6.1%	4.6%	4.9%
Disability Related Augmentative Training	4.2%	5.1%	5.4%
On-the-Job Training	4.1%	2.8%	4.2%
Supported Employment	1.8%	2.5%	1.8%
Personal Attendant	1.0%	1.1%	0.1%

TABLE 6

Services Received by Participants Closed Unsuccessfully in Status 28

VR Services Received	FY 2011 (n=736)	FY 2012 (n=634)	FY 2013 (n=703)
Assessment	63.1%	64.1%	61.0%
VR Counseling and Guidance	64.1%	66.4%	62.3%
Diagnosis and Treatment	36.5%	34.4%	34.7%
Transportation	27.3%	29.1%	31.2%
Job Placement Assistance	27.6%	33.6%	29.3%
Other Services	26.7%	25.1%	24.8%

received by individuals with MS closed in either Status 26 or Status 28. The percentage of individuals who were closed successfully in employment and those closed unsuccessfully received VR counseling and guidance services was very similar as were the percentages of those who received diagnosis and treatment services. However, this data does not provide information on the severity of the individuals' disabilities or need for the specific services in either of these two case closure categories.

VR Services Received	FY 2011 (n=736)	FY 2012 (n=634)	FY 2013 (n=703)
Job Search Assistance	18.9%	24.2%	25.3%
Information and Referral	18.8%	19.0%	20.1%
College or University Training	17.8%	18.6%	17.4%
Rehabilitation Technology	16.6%	14.8%	16.1%
Misc. Training	11.3%	10.0%	9.5%
Maintenance	10.9%	8.8%	10.5%
Job Readiness Training	9.7%	7.9%	9.2%
Occupational/Vocational Training	9.3%	9.6%	9.4%
On-the-Job Supports	5.6%	7.7%	6.5%
Supported Employment	3.9%	4.7%	4.0%
Technical Assistance	1.8%	2.1%	2.0%
On-the-Job Training	2.0%	0.5%	1.3%
Disability Related Augmentative Training	2.0%	0.9%	1.0%
Personal Attendant	1.3%	1.0%	1.3%

Employment Outcomes for Individuals Closed in Status 26

Table 7 presents information on hours worked per week and weekly earnings for individuals with MS who terminated VR services in employment. The average number of hours worked per week by individuals with MS was consistent across the three year time period: 26.7 hours during FY 2011, 26.4 hours in 2012, and 26.4 hours in 2013. Weekly earnings also showed minimal difference averaging \$440.49 in FY 2011, \$441.14 in FY 2012, and \$434.32 in FY 2013. Table 8 shows the percentage of participants closed with an employment outcome who worked full time (35 or more hours per week) versus part time with part time employment defined as less than 35 hours per week. A larger percentage of the individuals closed in Status 26 during this time period worked part time. In 2011, 57.8% worked part time as opposed to 42.2% that worked full time. In FY 2012, 61.4% work part time versus 39% that worked full time. Finally in FY 2013, 60.4% worked part time versus 39.6% that worked full time.

TABLE 7

Earnings and Average Number of Hours Worked by Individuals Closed Successfully in Status 26

Employment Outcomes	FY 2011 (n=683)	FY 2012 (n=654)	FY 2013 (n=669)
Hours Worked per Week	26.7	26.4	26.4
Weekly Earnings	\$440.49	\$441.14	\$434.32

TABLE 8

Full versus Part-time Employment Outcomes for Individuals Closed Successfully in Status 26

Hours Worked at Closure	FY 2011 (n=683)	FY 2012 (n=654)	FY 2013 (n=669)
< 35 hours per week	57.8%	61.4%	60.4%
35+ hours per week	42.2%	39.0%	39.6%

Discussion

More than 2.3 million people in the world are estimated to have Multiple Sclerosis (MS), with approximately 450,000 of these individuals living in the United States (National Multiple Sclerosis society [NMSS], 2015). In America, the national incidence rate of new MS cases has increased steadily over the past 50 years (NMSS, 2015). Because of the wide range of symptoms and the unpredictable nature of the MS, the disability has a significant impact on employment. Although 98 percent of people with MS have employment histories and 82 percent were still working at the time of diagnosis (Roessler, Rumrill, Li, & Leslie, 2015), the vast majority of workers with MS disengage from the workforce before retirement age. One source estimated that the current rate of unemployment for people with MS in the United States is between 55% and 70% (Rumrill, 2014). The result is a disproportionately high level of unemployment among a group of both qualified and experienced workers.

These findings could inform VR planning and service delivery efforts with these experienced, well-educated, and yet often disenfranchised workers. The first observation that derives from the present findings is the overall characteristic similarity between this sample and known population parameters of people with MS. Like Americans with MS in general, VR consumers with MS were predominantly female, of European lineage, and well-educated (Minden, Frankel, Hadden, Perloff, Srinath, & Hoaglin, 2006). African Americans, who comprise approximately five percent of Americans with MS, were overrepresented in the present sample, whereas the five percent proportion of Hispanics/Latinos in this sample was consistent with their five percent representation in the general MS population (Amezcuca, 2014). Given that African Americans and Hispanics/Latinos had lower Status 26 closure rates than did Caucasians (as evidenced by the fact that higher proportions of these individuals were observed at application for VR services than in the successfully employed [Status 26] outcome group), VR counselors must endeavor to provide culturally and linguistically authentic services to help overcome the double disadvantage that is often faced by people with MS who are of minority heritage (Amezcuca, 2014).

One difference between VR clients with MS and the general population of people with MS lies in the rate of part-time versus full-time employment. Across this study's three-year observation period, a decided majority of the Status 26 closure group reported working fewer than 35 hours per week, with the mean number of hours worked per week hovering around 26. A 2015 investigation of people with MS conducted by Roessler and colleagues revealed that approximately 80 percent of employed people with MS across the United States worked full-time, and Rumrill et al. (in press) noted that the vast majority of unemployed job-seekers with MS desired full-time employment. Promoting full-time employment opportunities with benefits is an essential element of VR planning with people with MS, because of their expressed wishes. It enables society to fully benefit from the valuable labor resource that exists within this talented, seasoned, and well-trained population.

At perhaps the most basic level, the reader has to ask whether the approximately 30 percent success rate for people with MS whose cases were closed in Status 26 for VR services is an acceptable figure. The answer is: probably not. More than 95 percent of Americans with MS have employment histories, some 82 percent were still working at the time of diagnosis, and 46 percent are college graduates (Roessler et al., 2015). Nevertheless, only approximately 40 percent of this experienced, highly trained group of workers

is presently employed for pay (Bishop et al., 2013; Roessler et al., 2015). Discouragingly, the rate of labor force participation among people with MS has declined over the past 20 years despite significant advances in medical treatment that find many people with MS leading healthier, more functional lives than ever before (Fraser, Clemmons, Gibbons, & Koepnick, 2009). We must do better. Targeted job retention efforts early in the diagnosis that help people with MS address disability-related work limitations before they threaten their ability to continue working have long been described as the preferred vocational intervention for people with MS (Antao et al., 2014; Fraser et al., 2009). Preventing job loss must be a priority for VR counselors working with people with MS if the current disappointing trends in labor force participation are to be reversed.

References

- Amezcuca, L. (2014). *Multiple sclerosis in the Latino/Hispanic American*. Los Angeles, CA: Keck Medical School, University of Southern California.
- Antao, L., Shaw, L., Ollson, K., Reen, K., To, F., Bossers, A., & Cooper, L. (2013). Chronic pain in episodic illness and its influence in work occupations. *Work: A Journal of Prevention, Assessment, and Rehabilitation*, 44, 11-36.
- Bishop, M., Roessler, R., Rumrill, P., Frain, M., Waletich, B., & Umeasiegbu, B. (2013). The relationship between housing accessibility variables and employment status among adults with multiple sclerosis. *Journal of Rehabilitation*, 79(4), 4-14.
- Fraser, R., Clemmons, D., Gibbons, L., & Koepnick, D. (2009). Predictors of vocational stability in multiple sclerosis. *Journal of Vocational Rehabilitation*, 31, 129-135.
- Minden, S., Frankel, D., Hadden, L., Perloff, J., Srinath, K., & Hoaglin, D. (2006). The Sonya Slifka Longitudinal Multiple Sclerosis Study: Methods and sample characteristics. *Multiple Sclerosis*, 12, 24-38.
- National Multiple Sclerosis Society (2015). MS prevalence. New York: National Multiple Sclerosis Society. Retrieved from: <http://www.nationalmssociety.org/About-the-Society/MS-Prevalence>.
- Roessler, R. T., Rumrill, P. D., Li, J., & Leslie, M. J. (2015). Predictors of differential employment statuses of adults with multiple sclerosis. *Journal of Vocational Rehabilitation*, 42(2), 141-152. doi:10.3233/JVR-150731
- Rumrill, P., Roessler, R., Li, J., Daly, K., & Leslie, M. (in press). Surveying the employment concerns of Americans with multiple sclerosis using a participatory action research approach: Results from a national stratified random sample. *Work: A Journal of Prevention, Assessment, and Rehabilitation*.

Information for this research brief was developed by the VCU-RRTC on Employment of People with Physical Disabilities. The authors are Katherine J. Inge, Ph.D., O.T.R., Phillip D. Rumrill, Jr., Ph.D., CRC, Rob E. Cimera, Ph.D., and William G. Revell, M.S., M.Ed. For more information on the VCU-RRTC or if accommodations are needed, you may contact Dr. Inge, Project Director at kinge@vcu.edu or (804)-828-5956.

Please visit us at:
<http://www.vcurrtc.org>.

Virginia Commonwealth University, Rehabilitation search Training Center on Employment of People with Physical Disabilities (VCU-RRTC) is an equal opportunity/affirmative action institution providing access to education and employment without regard to age, race, color, national origin, gender, religion, sexual orientation, veteran's status, political affiliation, or disability. The VCU-RRTC is funded by the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR grant number #90RT503502). NIDILRR is a Center within the Administration for Community Living (ACL), Department of Health and Human Services (HHS). However, these contents do not necessarily represent the policy of NIDILRR, and you should not assume endorsement by the Federal Government. If special accommodations are needed, please contact Katherine Inge at (804) 828-1851 VOICE or (804) 828-2494 TTY.