ICI
Institute for Community Inclusion

Research to Practice

June 2005
Issue 38

Diabetes and Vocational Rehabilitation Employment Services and Outcomes

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Introduction

The Vocational Rehabilitation (VR) system provides employment supports to a range of people with various disabilities. This brief report is part of a series examining select populations that fall under the rubric of the National Institute on Disability Rehabilitation and Research's concept of "emerging disability." Certain populations are exhibiting high or changing rates of disability, including people in poverty, single mothers receiving welfare, underserved communities of recent immigrants, and specific cultural and racial groups. Particular chronic health conditions are rising rapidly and differentially among cultural and racial groups. Diabetes is one of those conditions, with about 1.3 million people newly diagnosed each year (American Diabetes Association, 2005).

According to the American Diabetes Association, approximately 18 million people in the U.S. have diabetes *(see www.diabetes.org/diabetes-statistics/national-diabetes-fact-sheet.jsp)*. The prevalence is higher among African-Americans, Latinos, and American Indians and Alaskan Natives, and among subpopulations, particularly Mexicans, Puerto Ricans, and American Indians in the southeastern United States (American Diabetes Association, 2005). Having diabetes in and of itself does not necessarily qualify any given individual for disability services. However, for some individuals, diabetes can be serious enough or can lead to secondary conditions that would qualify a person for VR services. The leading complications of diabetes are heart disease, stroke, high blood pressure, blindness, kidney disease, nervous system disease, and amputations (ADA, 2005). The American Diabetes Association reports that the cost of diabetes is approximately $132 billion per year, with about $40 billion of that amount related to disability, work loss, and premature death.

This report uses the Rehabilitation Services Administration case closure data to provide a picture of people with diabetes using the VR system. It compares individuals with diabetes mellitus listed as the cause of primary impairment closed in year 2003 to those without diabetes listed as the cause of primary impairment.

Demographics: Who Are People with Diabetes Using the VR System?

About 2% of people using VR services have diabetes as the cause of their primary impairment. Demographic differences between people with diabetes and those without are provided in Table 1. *People with diabetes tend to be about nine years older on average and have higher rates of college attendance than the general population of VR consumers.* About one-quarter of both groups are African-American, but the percentage is slightly higher for people with diabetes. Although the majority in both groups are men, a higher percentage of people with diabetes are women.

Table 1: Demographics

	General population (N=607,738)	People with diabetes (N=10,023)
Race (%)		
Non-Hispanic Black	22.5	25.7
Non-Hispanic White	65.5	59.7
Hispanic	9.5	11.8
Native American	1.2	1.6
Asian/Pacific Islander	1.3	1.2
Gender (%)		
% Female	45.3	48.4
Age		
Mean age	36.0	45.5
Education (%)		
Less than high school	31.9	29.5
HS diploma or equivalency	48.3	45.1
Some college	13.9	18.1
College degree or more	5.9	7.4

Primary Impairments

The top five most frequently occurring primary impairments are shown in Table 2. The most frequent impairments in the general population are cognitive, psychosocial, and mental impairments. *For people with diabetes, the impairments listed the most often are physical or sensory in nature.* The top five impairments are known to be secondary conditions related to diabetes. Cognitive and psychosocial impairments did not register in the top five for people with diabetes.

Table 2: Top Five Primary Impairments Listed

Rank order	General population (N = 607,738)		People with diabetes (N = 10,023)	
	Primary impairment	%	Primary impairment	%
1	Cognitive impairments	23.0	Other physical impairments	49.9
2	Psychosocial impairments	20.6	Blindness or other visual impairments	23.8
3	Other mental impairments	11.6	General physical disability	18.7
4	Other orthopedic impairments	6.7	Orthopedic/neurological impairments	3.2
5	Orthopedic/neurological impairments	6.4	Mobility and manipulation impairments	1.6

Economic Indicators

People with diabetes are less likely to receive Supplemental Security Income (SSI), either at application or at closure, and more likely to receive Social Security Disability Insurance (SSDI). People with diabetes are also more likely to receive Medicare than the general group but receive Medicaid somewhat less frequently. Very few people in either group receive either general assistance (GA) or welfare (TANF) benefits.

Table 3: Economic Indicators at Application and Closure (2003)

	General population (N=607,738)	People with diabetes (N=10,023)
Social Security (%)		
SSI at application	16.6	11.2
SSI at closure	16.3	10.9
SSDI at application	12.5	15.0
SSDI at closure	13.4	17.0
Insurance (%)		
Medicare at application	8.6	12.6
Medicare at closure	9.3	13.7
Medicaid at application	23.5	19.7
Medicaid at closure	22.5	19.5
Other public assistance		
TANF at application	3.9	4.2
TANF at closure	2.6	3.0
GA at application	4.3	4.4
GA at closure	2.6	3.3

VR Services Received

The cost of services is about equal between the two groups. However, patterns of use differ by specific types of services funded. *People with diabetes receive the following services more frequently than the non-diabetic population: diagnosis and treatment, disability-related training, and rehabilitation technology.* People with diabetes receive vocational training, on-the-job training, job readiness training, job search service, and on-the-job supports less frequently than the non-diabetic population.

Table 4: Services Received (2003)

	General population (N=607,738)	People with diabetes (N=10,023)
Cost of purchased services		
Mean (standard deviation)	$2,160 ($5,552)	$2,220 ($5,232)
Services provided (%)		
Assessment	59.9	59.2
Rehabilitation counseling and guidance	47.0	49.6
Diagnosis and treatment	29.0	37.3
Transportation	18.0	17.0
Other services	15.1	15.9
Job placement services	17.6	15.4
Job search services	17.0	14.0
Information and referral	10.2	12.1
College/university	8.6	9.9
Disability-related training	2.4	9.6
Miscellaneous training	7.4	9.1
Maintenance	9.1	9.0
Rehabilitation technology	4.7	8.7
Occupational/vocational training	8.7	7.4
On-the-job supports	9.6	5.0
Job readiness training	7.1	4.6
On-the-job training	2.6	1.5

VR Closure Type

Type of closure rates are about identical across the two groups. About one-sixth are closed prior to eligibility determination, and another quarter closed prior to the development of an Individual Plan for Employment. About 40% of all individuals who approach the VR system reach an employment outcome.

Table 5: Distribution of Closure Type (2003)

Type of closure (%)	General population (N=607,738)	People with diabetes (N=10,023)
Employment outcome	35.1	39.5
Services initiated, no employment outcome	25.1	24.2
After eligibility determination, before Individual Plan for Employment	22.8	20.8
Before eligibility determination	13.9	12.9
Other	3.4	2.6

Employment Outcomes: Type of Employment, Mean Weekly Wages, and Mean Weekly Hours

The most striking difference between people with diabetes and those without is in *the rate of closure to homemaker or unpaid family worker status.* About one-fifth of people with diabetes are closed into this status. Upon further analysis, those closed into homemaker or unpaid family worker status are blind or visually impaired (87%); are women (68%); have an average age of 57; and were not working at the time of application (95%).

People with diabetes are closed into integrated employment less often than people without diabetes (74% vs. 85%). Even so, people with diabetes closed into integrated employment earn more. Mean weekly wages are higher for people with diabetes (close to $20), although mean weekly hours are about the same. People with diabetes are much less frequently closed into supported employment than the general population of people receiving VR services (1.6% vs. 8.4% respectively).

Table 6: Employment Outcomes (2003)

Employment outcomes	General population (N=213,616)			People with diabetes (N=3,958)		
	%	Mean weekly earnings ($)	Mean weekly hours	%	Mean weekly earnings ($)	Mean weekly hours
Integrated employment	85.0	332.8	34	74.3	355.7	34
Self-employment (except BEP)	2.3	301.8	28	4.7	228.6	26
Supported employment	8.4	170.8	24	1.6	236.8	27
Other employment outcomes	.1	N/A	N/A	. 3	N/A	N/A
Homemaker and unpaid family worker	4.1	N/A	N/A	19.2	N/A	N/A

Summary

Some of the differences in outcomes and services may be related to the characteristics of the population of people with diabetes receiving VR services. People with diabetes on average tend to be older. More have a college education and a work history. These differences may explain both the higher weekly earnings for some and the greater frequency of homemaker status closures for others. In addition, the higher rates of closure into homemaker status, along with the use of disability-related training, may indicate that about one-fifth of people with diabetes use VR services for independent living goals rather than employment.

Points for further consideration:

- People with adult-onset chronic conditions that lead to impairments may use VR services for independent living services prior to retirement. Are people retiring by choice or opting out of work due to a lack of accommodations or job opportunities? Does homemaker status constitute a successful closure for older workers who acquire a disability due to the onset of a chronic health condition?
- Who are the people with diabetes who would be considered disadvantaged, and how do they fare in the VR system? A portion of the population of people with diabetes who use VR are in poverty programs (i.e., SSI, TANF, GA). For instance, those consumers with SSI, TANF, or GA at application are much more likely to be black or Hispanic and have less education than other individuals with diabetes. Health disparity literature indicates a growth in diabetes among poor, urban, and underserved communities-groups that acquire secondary conditions more frequently. They may face multiple work barriers and be clients in multiple public programs. They may also receive conflicting messages about the goal of employment.
- What predicts successful closure into a competitive job for people with diabetes? A forthcoming paper provides data indicating that the type of vocational service received has a relationship to whether or not a person with diabetes closes into a competitive job. The paper is forthcoming after May 30, 2005. More information is available from the authors of this Data Note.

References and Sources for More Information

American Diabetes Association. (2005). National Diabetes Fact Sheet. *www.diabetes.org/diabetes-statistics/national-diabetes-fact-sheet.jsp*

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Research to Practice series:
Diabetes and Vocational Rehabilitation Employment Services and Outcomes
(Issue No. 38- June 2005)

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The authors would like to thank .....

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This is a publication of the Emerging Disabilities, Employment Outcomes, and Systems Change Project (H133A021503) funded by the National Institute on Disability Rehabilitation and Research at the U.S. Department of Education.