

Research & Best Practice Briefs

Repeat Customers: Minnesota Participants Who Return for Multiple Series of Case Services

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A number of vocational rehabilitation (VR) participants return for additional services multiple times, but little is known about these individuals. This study sought to understand better which participants were more likely to return for multiple sequences of service, as well as the length of participation in the VR program and employment outcomes of those that return for additional services. Individuals who are deaf or hard of hearing were substantially more likely to return for services multiple times, although employment outcome rates did not vary significantly based on the number of sequences.

Background and Purpose

While current literature on vocational rehabilitation (VR) has focused on the outcomes of an individual's first case sequence, it is unclear how VR services assist a participant across multiple sequences. 'Multiple sequences' are defined as a return to the program for service multiple times. To address this consideration, Shafer and Huang (1995) identified three measurements to test the effectiveness and productivity of VR service providers. First, they defined *rapidity* as the time it takes from receiving a participant's application to placing them into employment. Second, the *durability* of VR services is determined by the number of months the participant remains employed. Lastly, they measured the *longevity* of services as the time it takes from application to a closed case. These measures can provide insight into the provision of VR services and the reasons for repeated sequences. For example, rapidity is a proxy for VRS productivity. Across multiple sequences, services may reach diminishing returns. Securing additional hiring potential for a participant may eventually come at a substantial cost. Ipsen and colleagues (2019) discuss how counselors may shift their attention away from these more difficult cases due to lower returns for their labor and suggest that case duration may become more rapid as sequences increase and VR shifts resources to maximize employment with other cases. Alternatively, cases may become more rapid as sequences increase because job readiness services have already been provided.

Employment outcomes may not be durable for individuals with repeated case sequences and these individuals may require a more comprehensive support network to successfully achieve long-term employment. Becker et al. (1998) found that 37% of individuals with serious mental illness

participating in VR programs left employment of their own volition. This is compared to 16% who were fired for unsatisfactory work performance, with 58% of these terminations attributed to limited social skills. Individual Placement and Support (IPS) services, which embed employment services and support within mental health treatment services, are significantly more effective in procuring long-term employment for individuals with serious mental illnesses (Drake et al., 1996; Mueser et al., 2004). Research also notes the importance of job search and placement assistance, transportation, maintenance, and rehabilitation technology in successful employment outcomes for those with sensory disabilities who received college or university training (Boutin & Wilson, 2009). Similarly, Rumrill et al. (2017) noted on-the-job support services as the greatest contributor to retaining competitive employment for those with learning disabilities.

The purpose of the study was to understand better VR participants who sequenced through the program multiple times by exploring the following questions:

- Are participants with specific disability types more likely to experience multiple sequences in VR?
- Do individuals with higher sequences spend less time enrolled in VR than those with fewer sequences?
- Do employment outcome rates differ between those with lower and high sequences?

Methods

Minnesota Vocational Rehabilitation Services (VRS) served 16,151 individuals during Program Year 2018 (PY2018), of which 7,090 were adults aged 25 or older. Fifty-seven percent (57%) of adults served were in their first sequence. The participants of specific interest in this study

Table 1. Case Sequences by Disability Type for VR Customers Aged 25 and Above

Disability type	1-3 Sequences	4-10 Sequences	Difference	Percent change
Deaf/hearing loss	3.14%	5.08%	1.93%	61.46%
Learning disabilities	3.98%	4.82%	0.84%	21.11%
Other mental impairments	1.51%	1.78%	0.27%	17.88%
Intellectual disability	6.95%	8.12%	1.17%	16.83%
Autism	4.76%	5.33%	0.57%	11.97%
Chemical dependency	1.27%	1.40%	0.13%	10.24%
Serious mental illness	53.16%	55.46%	2.30%	4.33%
Traumatic brain injury/stroke	5.95%	5.08%	-0.87%	-14.62%
Orthopedic/neurological disorders	8.65%	7.36%	-1.29%	-14.91%
Other physical impairments	9.97%	5.33%	-4.64%	-46.54%
All other impairments	0.67%	0.25%	-0.41%	-61.19%

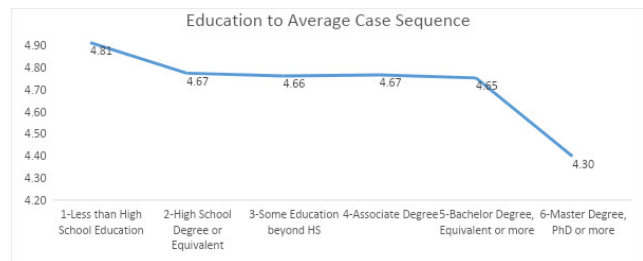
were the 788 individuals (11%) in their fourth or higher sequence. Data was extracted from the Minnesota VR case management database, with a focus on individuals who had four or more repeated case sequences. Using the record IDs, the number of case sequences was populated to see how many times a participant entered and exited the VR program. Participant characteristics included race, ethnicity, age, gender, geography, referral source, receipt of Social Security benefits at application, primary disability type, number of serious functional limitations, level of education, employment status, start date, exit date, and reason for exit. The time in days spent in each case sequence was also calculated. The binary dependent variable was the participants' employment status at exit, previously referred to as a "successful closure". Data was analyzed using Microsoft Excel and R Studio. Analyses focused primarily on examining and summarizing descriptive statistics. The Results section below presents three variables identified as statistically significant.

Results

Consumer Characteristics

Disability Type

Results indicated that individuals who are deaf or hard of hearing were much more likely than other disability types to return repeatedly to VR for services. While these participants make up a small portion (5.08%) of all high sequence participants, they are represented at a 61% higher rate than in low sequences (3.14%). Individuals living with SMI (55.46%) were the largest group of participants who repeatedly returned to VR for services; however, they were only about 4% more likely to return when compared to their prevalence in the low sequence group (53.16%). Participants with intellectual disability (8.12%) had the next highest occurrence and were about 17% more likely to frequently return for services. Individuals with autism (5.33% of high sequence participants) are a group that is of particular interest as we are seeing a rise in application rates, especially among young participants, and a tendency to return for frequent services. See [Table 1](#).

**Figure 1. Educational Level and Case Sequences**

Education

Education played a small part in case sequencing, so long as the participant completed high school. While little difference was observed between those with a high school degree, associate degree, or bachelor's degree, those with degrees from a master's program or higher experienced a considerable drop in average case sequence. While education alone may not inherently predict case sequencing, those without a high school diploma may be at higher risk of increased case sequences. See [Figure 1](#).

Social Security Benefits

High sequence participants were more likely to be receiving Supplemental Security Income (SSI) or Social Security Disability Insurance (SSDI) benefits. For individuals in their first sequence, the ratio of recipients and non-recipients was similar. However, approximately 72% of participants with four or more case sequences received SSI and/or SSDI benefits. On average, those that received SSDI/SSI were 40% more likely to have multiple case sequences. See [Figure 2](#).

Duration and Time Between Sequences

Both the time in between sequences and the duration of each sequence decreased overall for the highest sequences. Overall, results indicated that the length of service delivery decreased with subsequent sequences. The number of days

between the Individual Plan for Employment (IPE) and program exit averaged 765 days at the first sequence to 532 days at the fourth sequence, with a continued downward pattern with each subsequent sequence.

Additionally, the time between case closure and reapplication decreased with each subsequent sequence, with individuals more likely to return sooner each time. The average open case dropped from 179 days between the first and second sequence to 110 days between the third and fourth sequence.

Employment Outcomes

Participant employment outcomes at exit were similar regardless of the number of sequences. To assess employment outcomes, the average employment rate was calculated based on the participant's maximum number of exited cases. For example, someone who was currently enrolled in their 7th sequence was considered a 6th sequencer for the purposes of estimating employment outcomes. Those exiting with one sequence had an average employment rate of 51% compared with a 49% employment rate for those with four sequences and 51% for those with six sequences.

Recommendations and Implications for Practice

Overall, VR participants who are deaf or hard of hearing as their primary disability were substantially more likely to return for multiple sequences. Those with less than a high school diploma and those receiving SSI and/or SSDI were also more likely to have multiple, repeated cases with the state VR program. However, employment outcome rates across groups were similar, indicating that the number of times an individual has an open VR case does not appear to affect employment rates at exit. Furthermore, participant cases with higher sequences tended to experience shorter service periods as the number of sequences increased. Based on findings from this study, the following recommendations are offered:

- Focusing more on reasons for return to the VR program (e.g., maintenance of devices, services for job search or placement, need for different services), future studies may investigate whether there are relationships between consumer characteristics and reasons for return.
- Future evaluation efforts may benefit from using

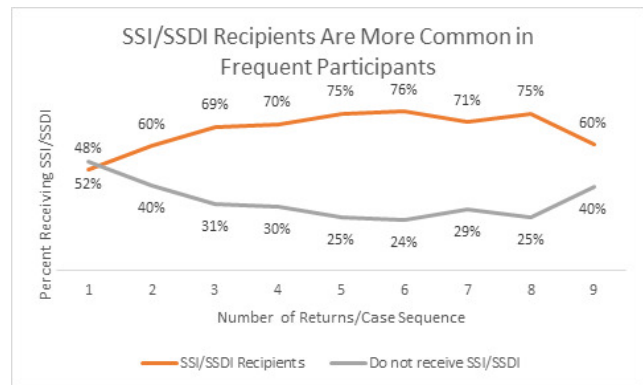


Figure 2. Multiple Case Sequences by Receipt of SSI and/or SSDI Benefits

qualitative approaches, such as case note reviews and interviews, to better understand the context leading to multiple sequences from the counselor and/or participant perspectives.

- In addition to employment outcomes measured by number of sequences, it may be beneficial to study job stability and retention to evaluate the quality of the job placement and match for participants at various sequence points.
- Assessing cost per case and cost across multiple sequences may also be of interest to inform VR programs in identifying where and how best to invest resources that support participant employment outcomes.

Author Note

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