Review VR

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Review VR Brief Series on Vocational Rehabilitation Employment Patterns: Occupation Types and Trends (2008–2012)

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INTRODUCTION

The Institute for Community Inclusion at the University of Massachusetts Boston is conducting a series of analyses linking occupational closure data from the Rehabilitation Services Administration's Case Service Report (RSA-911) to labor market trends and needs, as reflected in labor market information (LMI). This effort is funded by the National Institute on Disability and Rehabilitation Research as part of the VR-RRTC on Demand-Side Strategies in Vocational Rehabilitation (VR).

Our research agenda on LMI and occupation trends consists of three phases. In Phase I, we present descriptive reports on the types of occupations at closure, at both national and state levels. During Phase II, we will compare VR's occupational closure patterns to state-level labor market needs. In Phase III, we will answer the question: What factors influence VR closure by occupation? The Review VR Brief Series on VR Employment Patterns presents selected findings from Phase I, exploring the occupation types in which VR clients are most typically employed. This is the first brief in our series, and it describes employment closures according to the Standard Occupational Classification (SOC) system.

METHODS

Occupational information at closure is an important outcome measure in VR. We used RSA-911 to examine patterns of occupational codes at closure over the past five years (2008–2012) across the 80 VR agencies in the United States. The retrospective data from RSA-911 are valuable to show the exact number of VR consumers employed by occupation in each state in a year. Only cases with successful employment closures were included in this study (N=868,695).

The RSA-911 data contains occupation codes at closure as defined in the SOC system (www.bls.gov/soc/). The SOC system classifies together occupations that have similar job duties, skills, education, and/or training. This system is composed of 840 detailed occupations, 461 broad occupations, 97 minor groups, and 23 major groups.

We reclassified six-digit detailed codes that represent specific occupations at closure in the RSA-911 data into 23 major groups defined by the SOC system to examine national and state-level trends and patterns. Demographic and disability variations by occupations, as well as details on wage and educational attainment, will be published in following briefs in this series.

FINDINGS

Which occupations are VR jobseekers placed in?

First, we looked at the overall placement patterns of VR case closures by major occupational categories. Table 1 shows the total percentages (%) and proportions (N) in descending order by occupation type from 2008–2012.

The rank of occupation categories as displayed in Table 2 is mostly consistent across the five years, representing the stability of job placement patterns of VR agencies at the aggregated, national level during this period. The steady decline of the total number of employment closures from 2008 to 2012 could be associated

Table 1. Overview of VR Closure Occupation Patterns, 2008–2012

Major Occupation Categories	2008		2009		2010		2011		2012	
	N	%	N	%	N	%	N	%	N	%
Office and Administrative Support Occupations	31013	15.2	25338	14.8	24663	14.1	24945	13.8	19730	14.3
Food Preparation and Serving Related Occupations	20709	10.1	18405	10.8	18444	10.5	19260	10.7	14536	10.5
Building and Grounds Cleaning and Maintenance Occupations	17457	8.5	15436	9	16194	9.3	17020	9.4	13157	9.5
Sales and Related Occupations	17736	8.7	14734	8.6	15208	8.7	15710	8.7	12003	8.7
Transportation and Material Moving Occupations	16967	8.3	13638	8	14601	8.3	15532	8.6	11800	8.5
Production Occupations	16769	8.2	12441	7.3	13987	8	14996	8.3	11358	8.2
Personal Care and Service Occupations	11084	5.4	9933	5.8	10079	5.8	10164	5.6	7906	5.7
Installation, Maintenance, and Repair Occupations	10125	5	8175	4.8	8882	5.1	9671	5.4	7628	5.5
Healthcare Support Occupations	7956	3.9	7799	4.6	8037	4.6	8130	4.5	6010	4.4
Education, Training, and Library Occupations	7315	3.6	6178	3.6	5883	3.4	5556	3.1	4194	3
Construction and Extraction Occupations	7160	3.5	5417	3.2	5678	3.2	5790	3.2	4117	3
Management Occupations	6617	3.2	5440	3.2	5199	3	4993	2.8	3869	2.8
Community and Social Services Occupations	5977	2.9	5277	3.1	5236	3	4919	2.7	3916	2.8
Healthcare Practitioners and Technical Occupations	5943	2.9	4935	2.9	4913	2.8	4758	2.6	3751	2.7
Others	5149	2.5	4672	2.7	4274	2.4	4256	2.4	3062	2.2
Protective Service Occupations	3458	1.7	2680	1.6	2633	1.5	2803	1.6	2306	1.7
Business and Financial Operations Occupations	3156	1.5	2678	1.6	2839	1.6	2737	1.5	2239	1.6
Computer and Mathematical Occupations	2244	1.1	1782	1	1818	1	1993	1.1	1607	1.2
Arts, Design, Entertainment, Sports, and Media Occupations	2610	1.3	2133	1.2	2168	1.2	2127	1.2	1706	1.2
Architecture and Engineering Occupations	1781	0.9	1258	0.7	1241	0.7	1227	0.7	954	0.7
Farming, Fishing, and Forestry Occupations	1217	0.6	1113	0.7	1151	0.7	1186	0.7	889	0.6
Life, Physical, and Social Science Occupations	1000	0.5	823	0.5	904	0.5	771	0.4	616	0.4
Legal Occupations	637	0.3	511	0.3	560	0.3	473	0.3	424	0.3
Military Specific Occupations	198	0.1	173	0.1	452	0.3	1263	0.7	346	0.3
Total	**204278**		**170969**		**175044**		**180280**		**138124**	

with the shrinkage of job opportunities in the labor market for VR consumers after the 2008 economic crisis. Per the RSA-911 reporting system, closures in the last quarter of 2012 were reported in 2013; hence, the total number of closures in 2012 appears to be significantly lower than in previous years.

What are the most frequent SOC groups for successfully closed VR customers nationwide?

We report the five-year average rate for each major SOC by calculating the mean percentage of VR consumers closed in a certain major occupational category in a given year, relative to all VR consumers with employment closure in that year. Nationwide, as shown in Table 2, the top ten most frequent SOC groups are consistent across the five years.

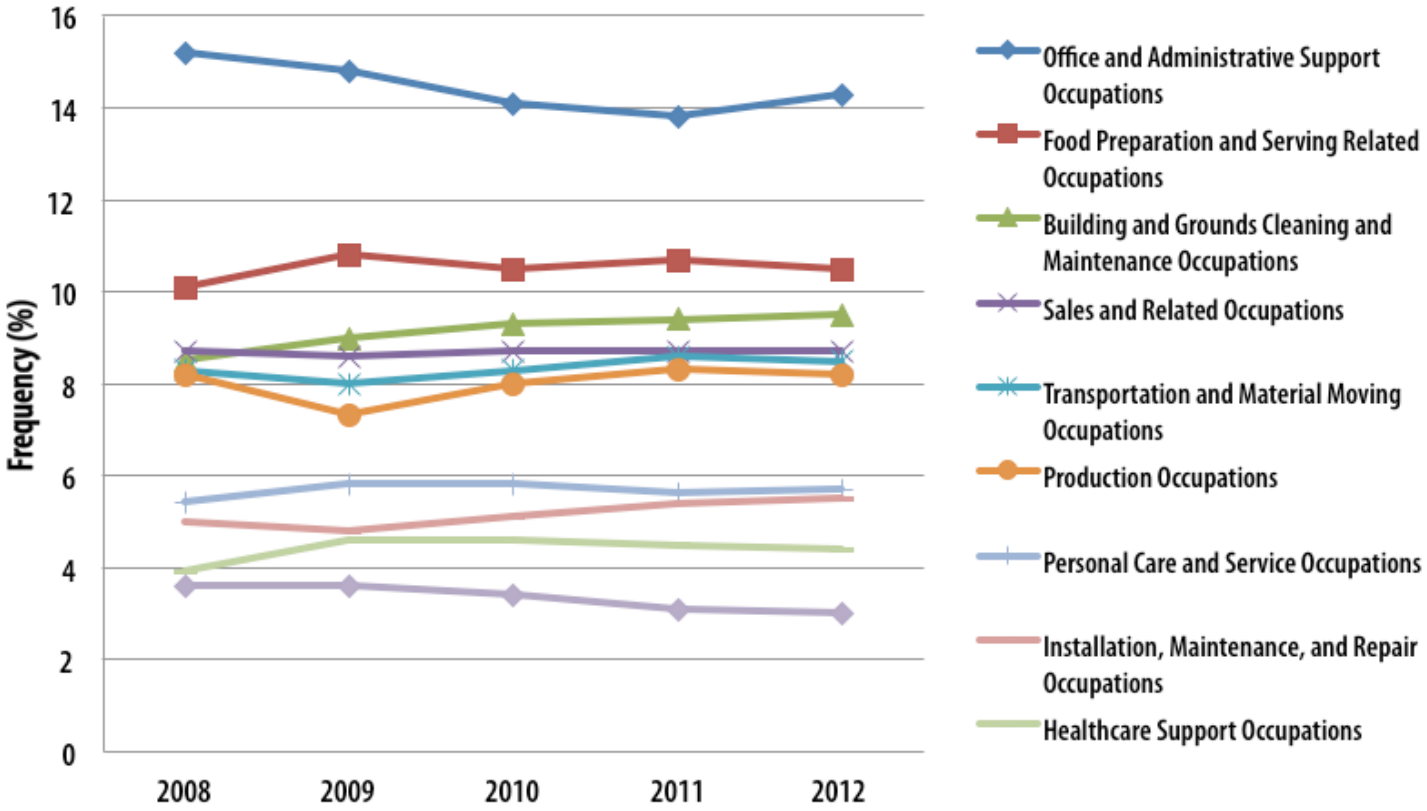
Among these occupations, ten are most common: Office and Administrative Support Occupations (five-year average rate=14.4%, same as below), Food Preparation and Serving Related Occupations (10.5%); Building and Grounds Cleaning and Maintenance Occupations (9.1%); Sales and Related Occupations (8.7%); Transportation and Material Moving Occupations (8.3%), Production Occupations (8.0%), Personal Care and Service Occupations (8.0%), Installation, Maintenance, and Repair Occupations (5.2%), Healthcare Support Occupations (4.4%), and Education, Training, and Library Occupations (3.3%) . A 1% difference between major occupation categories suggests a difference of approximately 1500–2000 jobs.

Table 2. Top 10 Most Frequent Major Occupational Categories at Successful Employment Closure

Rank	Occupation	Five-year average rate
1	Office and Administrative Support Occupations	14.4%
2	Food Preparation and Serving Related Occupations	10.5%
3	Building and Grounds Cleaning and Maintenance Occupations	9.1%
4	Sales and Related Occupations	8.7%
5	Transportation and Material Moving Occupations	8.3%
6	Production Occupations	8.0%
7	Personal Care and Service Occupations	5.7%
8	Installation, Maintenance, and Repair Occupations	5.2%
9	Healthcare Support Occupations	4.4%
10	Education, Training, and Library Occupations	3.3%

Year-to-year employment variability in major occupational categories can suggest broad trends in the overall economy. Figure 1 depicts the variations of the top ten occupation categories at the national level from 2008 to 2012. The placement rate of Office and Administrative Support Occupations declined by 1.4% from 2008 to 2011, but then increased by 0.5% in 2012; the rate of Building and Grounds Cleaning and Maintenance Occupations increased consistently by 1% over the five years. However, the employment rate of Education, Training and Library Occupations decreased by 0.6%; Health Care Support Occupations jumped by 0.7% in 2009, then decreased slightly by 0.2%. The fluctuations of other occupations are small scaled throughout the five years.

Figure 1. Trends of Top 10 Most Frequent Major Occupational Categories at Successful Employment Closure, 2008–2012



What is the degree of state-level variation in SOC categories at successful employment closure?

State-by-state variations of major occupational categories at closure can be measured by two factors: the total number of state-level VR consumers employed in a specific major occupational category, and the total number of employment closures in this state in a given year. By dividing the two numbers, we calculated the closure rate of each major occupational category for all states in all years. Then, we calculated descriptive statistics—minimum, maximum, mean, median, and range—for all major occupational categories across all states from 2008 to 2012. We excluded the territories (Puerto Rico, Virgin Islands, American Samoa, and Northern Mariana Islands) for state-level comparison because their small sample size greatly skews the measures of variation across states.

The results of mean and median, showing the average rate by occupation by year across all states, are largely comparable to the national-level means in Table 1. The range reflects the difference between states reporting the highest vs. lowest employment rate by occupation by year. Such variations across states are depicted in Figure 3. Detailed numbers on the range of employment rates are described in Table 3.

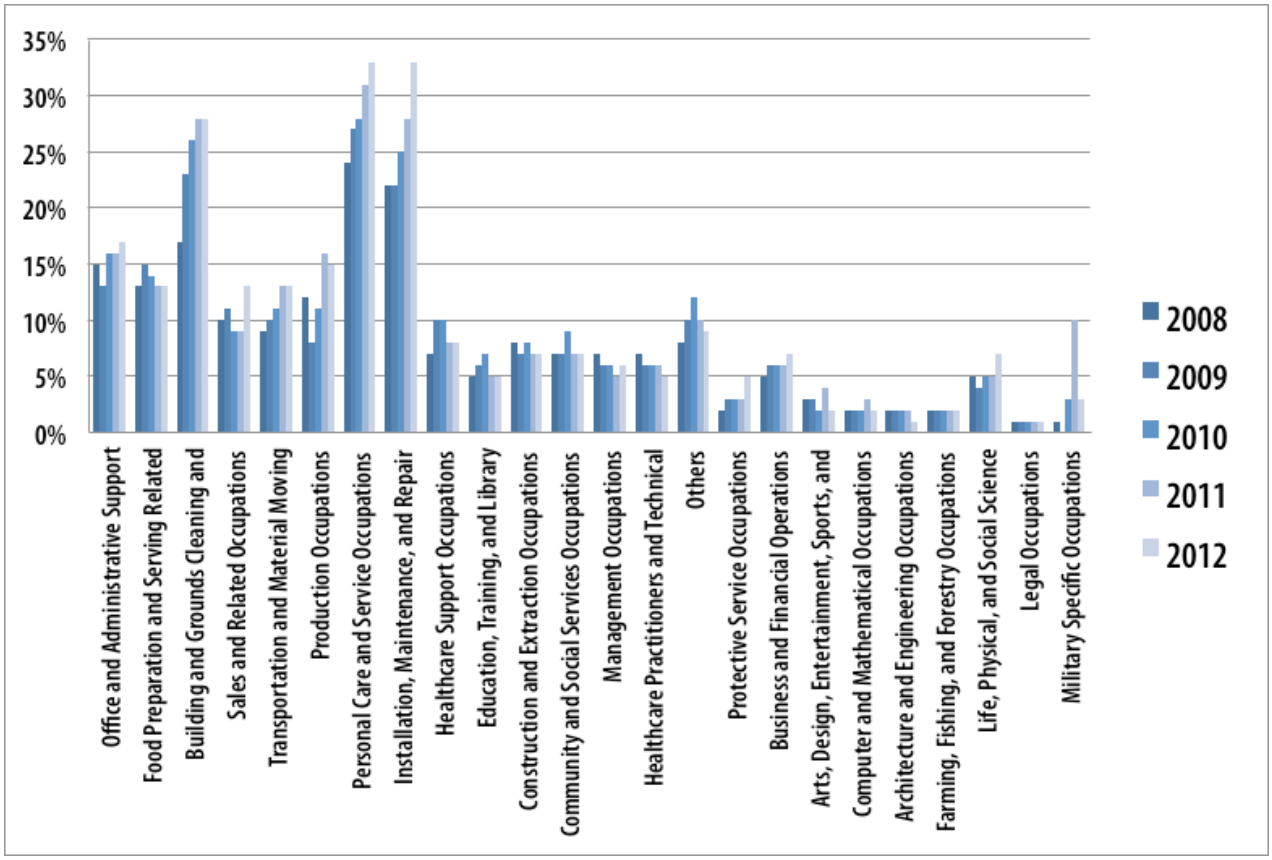
Table 3: Range of Rates by Major Occupational Categories Across States, 2008–2012

	2008	2009	2010	2011	2012
Office and Administrative Support Occupations	0.15	0.13	0.16	0.16	0.17
Food Preparation and Serving Related Occupations	0.13	0.15	0.14	0.13	0.13
Building and Grounds Cleaning and Maintenance	0.17	0.23	0.26	0.28	0.28
Sales and Related Occupations	0.1	0.11	0.09	0.09	0.13
Transportation and Material Moving Occupations	0.09	0.10	0.11	0.13	0.13
Production Occupations	0.12	0.08	0.11	0.16	0.15
Personal Care and Service Occupations	0.24	0.27	0.28	0.31	0.33
Installation, Maintenance, and Repair Occupations	0.22	0.22	0.25	0.28	0.33
Healthcare Support Occupations	0.07	0.10	0.1	0.08	0.08
Education, Training, and Library Occupations	0.05	0.06	0.07	0.05	0.05
Construction and Extraction Occupations	0.08	0.07	0.08	0.07	0.07
Community and Social Services Occupations	0.07	0.07	0.09	0.07	0.07
Management Occupations	0.07	0.06	0.06	0.05	0.06
Healthcare Practitioners and Technical Occupations	0.07	0.06	0.06	0.06	0.05
Others	0.08	0.10	0.12	0.1	0.09
Protective Service Occupations	0.02	0.03	0.03	0.03	0.05
Business and Financial Operations Occupations	0.05	0.06	0.06	0.06	0.07
Arts, Design, Entertainment, Sports, and Media	0.03	0.03	0.02	0.04	0.02
Computer and Mathematical Occupations	0.02	0.02	0.02	0.03	0.02
Architecture and Engineering Occupations	0.02	0.02	0.02	0.02	0.01
Farming, Fishing, and Forestry Occupations	0.02	0.02	0.02	0.02	0.02
Life, Physical, and Social Science Occupations	0.05	0.04	0.05	0.05	0.07
Legal Occupations	0.01	0.01	0.01	0.01	0.01
Military Specific Occupations	0.01	0.00	0.03	0.1	0.03

Across all occupations, we can see that the fluctuations in ranges are most significant for the following major occupational categories, in which the differences between high-placement states and low-placement states can be as high as 30%: Personal Care and Service Occupations (Idaho had the highest placement rateof 33%); Installation, Maintenance, and Repair Occupations (Maryland had the highest placement rate of 30%); and Building and Grounds Cleaning and Maintenance Occupations (Washington, D.C. reported the highest placement rate of 31%).

Other occupations also show significant variations across states over the five-year period. In addition, the variations by year differ by occupations. Further examination of such variability requires understanding discrepancies in the context of the state-level economy and local labor markets and demographic characteristics of VR consumers.

Figure 2: Range of Rates by Major Occupational Categories Across States, 2008–2012



CONCLUSION

This brief summarizes nationwide VR occupational closure patterns and trends, as well as state-level variations, from 2008–2012. Across occupational categories, individuals who exited the VR system with successful employment outcomes have been more clustered in service occupations (such as office and administrative support, food service, and sales) and labor intensive occupations (such as building, cleaning, transportation, and production), but much less in art, science, and technology-related occupations. Particular characteristics of VR consumers (including education, skills, and work experiences) may contribute to these patterns. Future research should examine potential influences of these characteristics of VR consumers on occupational closure outcomes.

In general, cross-year changes in rates of employment among major occupational categories can suggest broad economic trends and changes in labor market demand. We have found that the rates of VR placement into major occupation categories are mostly stable, implying stability of VR placement patterns. However, we are unable to jump to the conclusion that there is a steady demand for related industry sectors at the national level based on these findings. Examination of employment and unemployment statistics from the general population's labor market will be needed.

State-level variations of occupation patterns are embedded in the state-level economy, including labor participation and job openings in general. A deeper understanding of the state-level economy and labor market demands will give VR counselors essential knowledge and information for job development and job matching. In addition, occupation information from RSA-911 data has the potential value of helping VR professionals target specific occupations and industries.

ExploreVR

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The VR-RRTC on Demand-Side Strategies, housed within Explore VR, conducts research, training, and technical assistance activities. Our goal is to engage employers and respond to their needs as customers.

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