

U.S. Department of Veterans Affairs  
Vocational Rehabilitation and Employment

Longitudinal Study (Public Law 110-389 section 334)  
Annual Report 2019 for Fiscal Year 2018

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# EXECUTIVE SUMMARY

## Overview of the Vocational Rehabilitation and Employment Program

The Vocational Rehabilitation and Employment (VR&E) program, known as the Chapter 31 program, assists Veterans and Servicemembers with service-connected disabilities and an employment barrier to prepare for, obtain, and maintain suitable employment. VR&E provides comprehensive services to include vocational assessment, rehabilitation planning, and employment services. For Veterans with service-connected disabilities (SCD) so severe they cannot immediately consider work, the VR&E program offers services to improve their ability to live as independently as possible in their families and communities. VR&E also administers Chapter 36, Chapter 35, and Chapter 18 benefits under title 38 United States Code (U.S.C.). These programs provide benefits to eligible dependents, spouses, and beneficiaries. However, these participants are not represented in the VR&E longitudinal study.

VR&E administers these benefits through a decentralized service-delivery network comprised of over 350 offices. As of the end of fiscal year (FY) 2018, the field network includes a VR&E workforce of 1,304 staff, including Vocational Rehabilitation Counselors (VRC), Employment Coordinators (EC), support staff, and managers. The network includes 56 Veterans Benefits Administration (VBA) regional offices and the National Capital Regional Benefits Office, over 140 VR&E out-based offices, 71 Integrated Disability Evaluation System (IDES) sites, and 104 VetSuccess on Campus (VSOC) locations. Figure E-1 displays the key features that distinguish the VR&E service-delivery model from the service-delivery strategy of VBA's other lines of business.

Figure E-1. Three Key Features of the VR&E Service-Delivery Model

	<b>Multi-Year Cycle</b> The cycle of an active VR&E case may extend up to and beyond six years. This is necessary to provide adequate training for Veterans so that they can obtain and maintain employment that accommodates their disabilities and provides a career foundation that is appropriate.
	<b>Face-to-face Interactions</b> VR&E requires regular face-to-face interactions with Veterans to deliver benefits and services, in contrast to VBA's other business lines that focus primarily on claims processing. Face-to-face interactions can be conducted in-person or by video teleconferencing.
	<b>Largest Out-Based Network within VBA</b> VR&E has the largest out-based network of any VBA business line with over 350 locations nationwide.

Source: EconSys Study Team

M28R, Vocational Rehabilitation and Employment Service Manual, Part V, Section A, Chapter 2.



## VR&E Longitudinal Study

In 2008, Congress passed the Veterans’ Benefits Improvement Act to improve and enhance benefits for Veterans. A section of this legislation required the Department of Veterans Affairs (VA) to conduct a 20-year longitudinal study of Veterans who applied for and entered a plan of services in the VR&E program in FY 2010, FY 2012, and FY 2014. These three Cohorts will be followed annually for 20 years. Survey data collection started in 2012 for the first two Cohorts and in 2014 for the last Cohort.

The primary goal of the longitudinal study of the VR&E program is to determine the long-term post-program outcomes associated with Chapter 31 Veterans. Section 334 of Public Law (P.L.) 110-389 (see Appendix A) requires VA to report to Congress annually on 16 specific data elements. The specific outcomes of interest in the mandate are as follows:

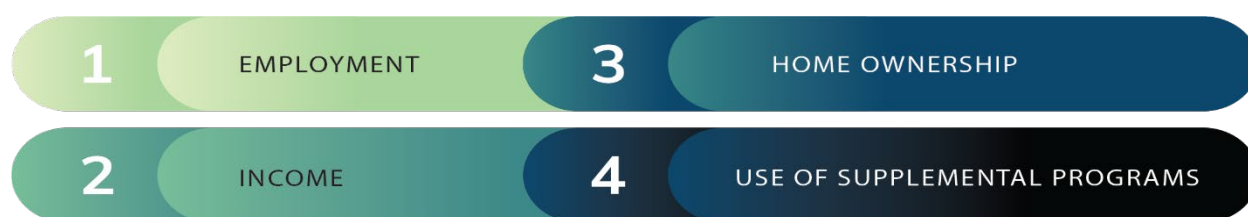


Table E-1 describes the long-term post-program outcomes measured by the VR&E Longitudinal Study. Because the focus of the study is on long-term outcomes experienced by VR&E participants after exiting the program, the findings focus on the outcomes experienced thus far (i.e., as of FY 2018) by Cohort members who have achieved rehabilitation or were discontinued from services.

**Table E-1. Outcomes of Interest Analyzed in this Study**

Employment Outcomes	
Current Employment Rate	Survey report, if currently employed at time of survey.
Extent Current Job Matches Training	Survey report on how closely current job matches VR&E training.
Past Year Employment Rate	Survey report, if worked in the 12 months prior to the survey.
Number of Months Employed During Past Year	Survey report on how many months worked in the 12 months prior to the survey.
Income Outcomes	
Individual Income	Survey report of annual individual income from all sources including salary/wage income and income from other sources such as VA disability benefits.
Household Income	Survey report of annual household income.
Unemployment Compensation Rate	Survey report, if received unemployment benefits in the 12 months prior to the survey.
Homeownership Outcomes	
Homeownership Rate	Survey report on homeownership.

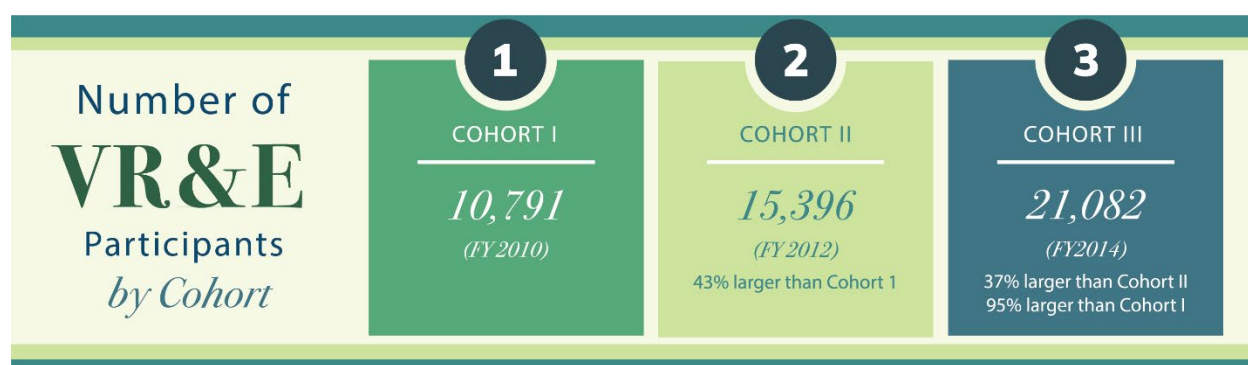
Source: EconSys Study Team

The VR&E Longitudinal Study data sources used for analysis include: (1) self-reported survey data collected from a representative sample of Cohort members; and (2) VBA Administrative Data. Details about the survey methodology are included in Appendix B.

Since most Veterans are either persisting or only recently rehabilitated from the program, post-program findings are still preliminary at this point in the study. The results of the study will be used to enhance the services VR&E provides Veterans.

## Comparison of Cohort Findings

The number of participants in the VR&E program has increased with each Cohort. As shown below, Cohort II is 43 percent larger than Cohort I, whereas Cohort III is 95 percent larger than Cohort I.



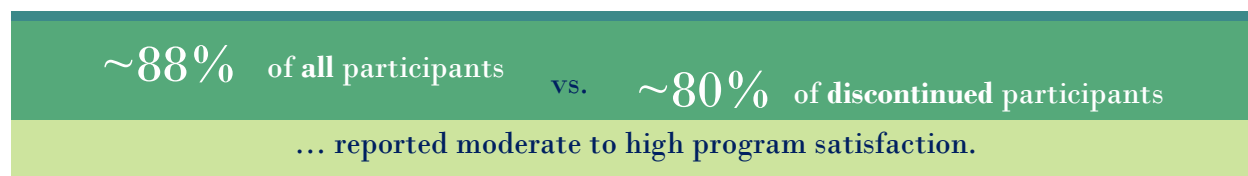
Factors that may have contributed to the increase in Cohort size include, but are not limited to:

- Increased number of recently separated Veterans;
- VA’s efforts to reduce the disability claims backlog with the additional adjudicated claims, therefore, increasing the number of potential eligible Veterans entering the program; and
- Changes in the provision of monthly subsistence allowances for VR&E program participants, who may also qualify for Post-9/11 GI Bill Benefits.

## Veteran Satisfaction

Veteran satisfaction with VR&E is high for all three Cohorts. Nearly 90 percent of all Veterans have moderate to high levels of satisfaction with the program. For all three Cohorts, at least two-thirds of all Veterans rated their overall satisfaction as high. Satisfaction was higher for rehabilitated Veterans compared to those who were either persisting or discontinued.

When compared to satisfaction for FY 2017, Cohort III members who were rehabilitated from the program saw the largest increase in program satisfaction. In FY 2018, 95 percent of members in

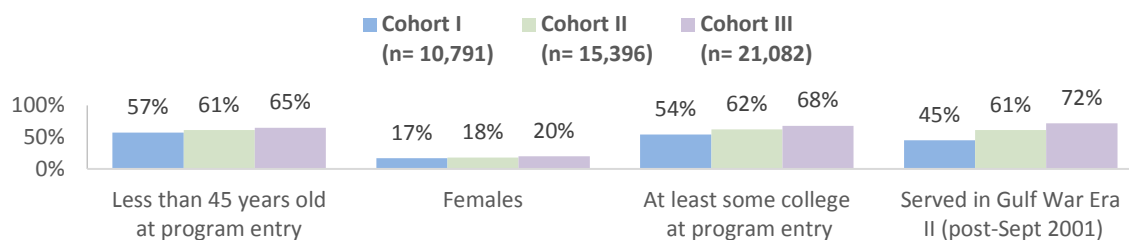


this group rated their satisfaction as moderate or high, compared to 91 percent in FY 2017 - a four percentage point increase.

## Demographics and Participant Characteristics

The three Cohorts are similar demographically; however, as shown in Figure E-2, more recent Cohorts have a slightly larger proportion of female Veterans, are significantly younger, are more likely to have served during the Gulf War Era II, and have more education when starting the program. The Gulf War Era identified in this report is divided into two periods of service: Gulf War Era I (served August 1990-August 2001) and Gulf War Era II (service beginning September 2001-present). In addition, Cohort II and Cohort III have higher percentages of Veterans with a post-traumatic stress disorder (PTSD) disability compared to Cohort I. This study follows the same Cohorts each year. Therefore, the findings of this section on demographics and participant characteristics (such as age, gender, and so on) may only slightly change from year to year.

Figure E-2. Key Demographic Trends of VR&E Participants at Program Entry



Source: Administrative Data, FY 2018

- Approximately three-quarters of members of each Cohort have a Serious Employment Handicap (SEH). An SEH is defined as a significant impairment of an individual's ability to prepare for, obtain, or retain employment consistent with his/her abilities, aptitudes, and interests.
- Female program participation (17-20 percent) is consistent with the overall Veteran population (16-18 percent). The distribution of females among VR&E Cohorts is also consistent with the proportion of females represented among all Gulf War Era Veterans (about 17 percent).
- On average, about two-thirds (70 percent) of Cohort members have an SCD rating of about 60 percent or higher. Comparing SCD ratings for Cohort members with that of the overall Veterans population with an SCD<sup>1</sup> reveals that VR&E participants have a higher SCD than the "average" Veteran with an SCD.
- On average, participants who achieved rehabilitation served more months on active duty.
- Around one-quarter of participants in each Cohort have PTSD as their primary disability code.

The **average age** of VR&E participants at program start has **decreased** over time from 41 years old (Cohort I) to 39 years old (Cohort III).

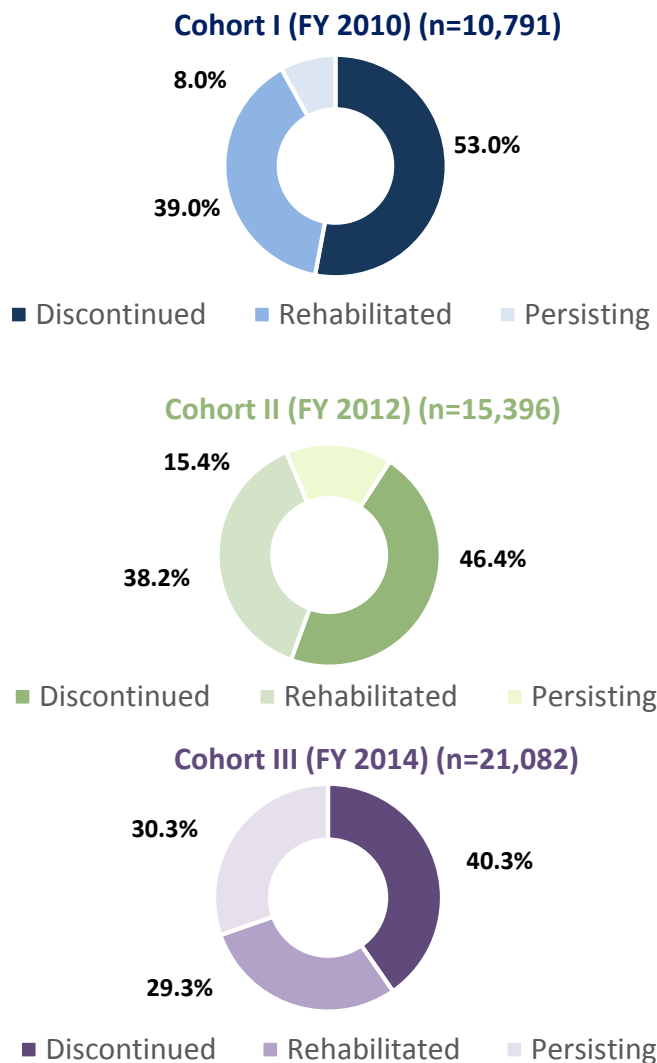
<sup>1</sup> Based on 2018 Bureau of Labor Statistics data available at <http://www.bls.gov/news.release/pdf/vet.pdf>.

- On average, Cohort members used VA provided health care services in FY 2018 more frequently than the overall Veteran population.<sup>2</sup>

## Program Outcomes (Rehabilitation and Discontinuation)

Successful completion of the program takes time, because most participants pursue the Employment through Long-Term Services track to complete education and training programs. Figure E-3 shows that all three Cohorts are at different stages based on the length of time spent in the program.

Figure E-3. Percentage of Participants who are Persisting, Rehabilitated, or Discontinued in FY 2018, by Cohort



Within nine years of starting the VR&E program:

- 39 percent of Cohort I members have achieved rehabilitation.
- 8 percent are still persisting in the steps of their rehabilitation plans.
- 53 percent have discontinued from the program.

Within seven years of starting the VR&E program:

- 38 percent of Cohort II members have achieved rehabilitation.
- 15 percent are still persisting in the steps of their rehabilitation plans.
- 46 percent have discontinued from the program.

Within five years of starting the VR&E program:

- 29 percent of Cohort III members have achieved rehabilitation.
- 30 percent are still persisting in the steps of their rehabilitation plans.
- 40 percent have discontinued from the program.

Source: Administrative Data, FY 2018

Additional findings regarding rehabilitations and discontinuations among the Cohorts include:

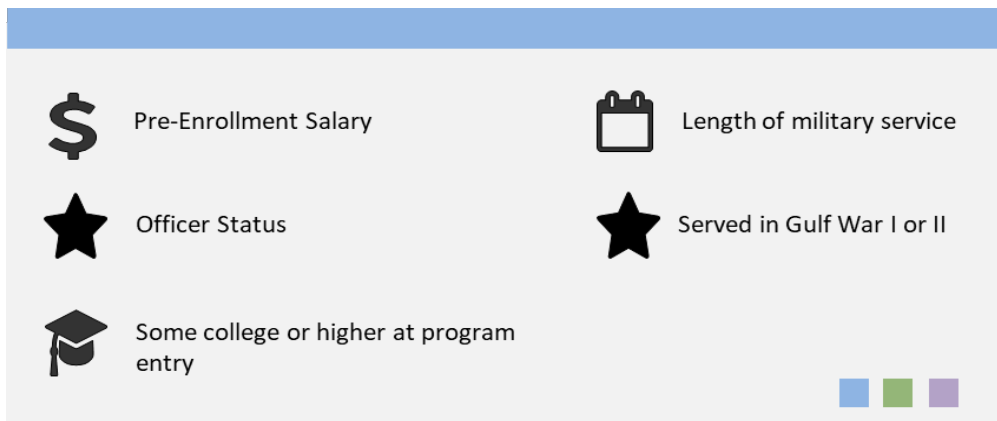
<sup>2</sup> <http://www1.va.gov/health/aboutVHA.asp>.

- Most Veterans pursuing an Independent Living (IL) plan achieve rehabilitation within two or three years after entering the program.
- At year five, 40 percent of Cohort III members have discontinued from the program compared to Cohort I (25 percent) and Cohort II (34 percent).
- At year seven, Cohort II members have seen more outcomes (38 percent of Veterans have achieved rehabilitation and 46 percent have discontinued) than Cohort I (37 percent and 44 percent respectively).
- Comparisons of Cohorts at the five-year mark reveal that the more recent Cohorts have a higher percentage of outcomes. Cohort III has seen 70 percent of Veterans either rehabilitated or discontinued compared to 65 percent for Cohort II and only 53 percent for Cohort I. Cohort I and Cohort II see similar rates of program exits at year seven (81 percent for Cohort I and 85 percent for Cohort II).

A larger percentage of participants in Cohort II and Cohort III exit the program earlier, either through rehabilitation or discontinuation, than participants from Cohort I after five years.

Using regression analysis, factors related to rehabilitation and discontinuation were determined. Factors that are associated with successful completion of the VR&E program by the end of FY 2018 include having at least some college education at program entry, having a higher pre-enrollment salary, having served as an officer, length of service, and having served during one of the Gulf War Eras. Generally, the main factors found to be associated with successful rehabilitation are also related to the mitigation of discontinuation by the end of FY 2018. The factors can be seen in the following Figure E-4.

**Figure E-4. Factors that Increase Likelihood of Rehabilitation and Deter Discontinuation of Vocational Rehabilitation Program**



Source: Regression Analysis of FY 2018 VBA Administrative Data and VR&E Survey Data

### Veteran Class Success and Persistence Metrics

VR&E implemented new program performance measures in FY 2015 that place a greater focus on Veteran outcomes and their accomplishments. These new measures of Veterans’ success are driven by positive outcomes and active participation. Positive outcomes include Employment and IL rehabilitation, rehabilitation for further education, and maximum rehabilitation gains (MRG) as either employed or employable. These new metrics effectively measure Veterans’ outcomes at

every stage of their progression through the program and more accurately account for Veterans' multi-year participation in the VR&E program.

The new model of Veteran success includes two specific measures as described below:

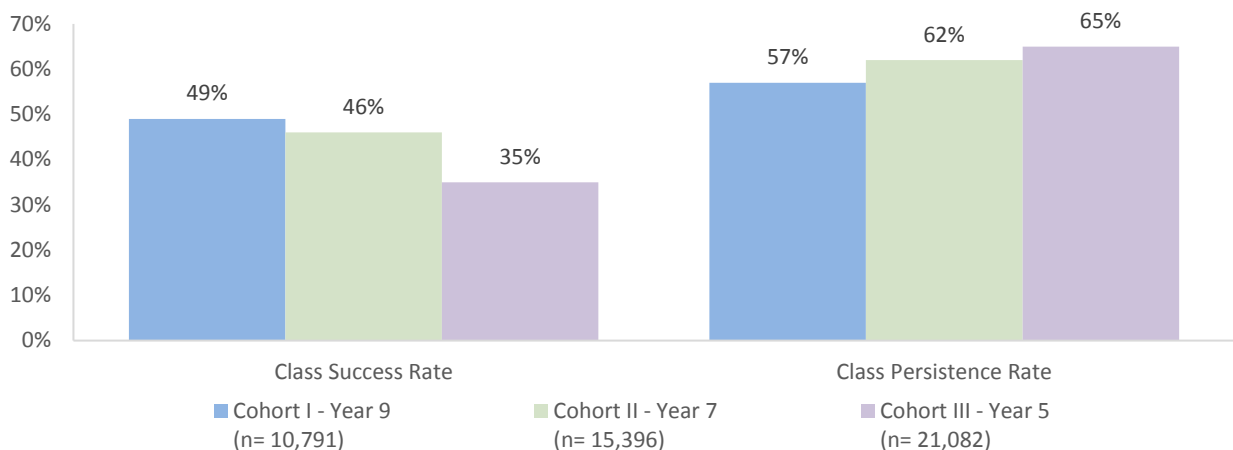
**Class Success Rate:** Percentage of Veterans after six years who obtain a positive outcome measured against all Veterans in their class.

**Class Persistence Rate:** Percentage of Veterans after six years who obtain a positive outcome and the number of Veterans persisting in their enrollment, measured against all Veterans in their class.

Figure E-5 shows the current Class Success and Persistence Rates for all three Cohorts. The FY 2018 performance target is 55 percent for the Class Success Rate and 70 percent for the Class Persistence Rate. The Class Success and Class Persistence Rates for the Cohorts cannot be directly compared to the performance target set by VR&E as the composition of the Class structure slightly differ compared to the Longitudinal Study Cohorts. For example, once a Veteran re-applies, he or she is moved to the fiscal year class that corresponds to their reapplication date whereas for the intent of this study, a Cohort participant will always remain in the same Cohort despite re-application. Also, the numbers cannot be compared until a Cohort has been in the program for at least six years, which was identified by VR&E as the appropriate length of time to reach the goal.

The Class Success Rate for Cohort I may be lower than expected due to re-entries into the program as it is at 49 percent. Class Success Rate for Cohort II (46 percent) are also lower than the goal. Cohort III (35 percent) cannot be evaluated against the performance target as Cohort members have not had sufficient time to complete their rehabilitation goals. The Class Persistence Rate for Cohort III is closest to the expectations of VR&E (65 percent) while Cohort I and Cohort II are below the target (57 and 62 percent respectively).

Figure E-5. Class Success and Persistence Rates by Cohort

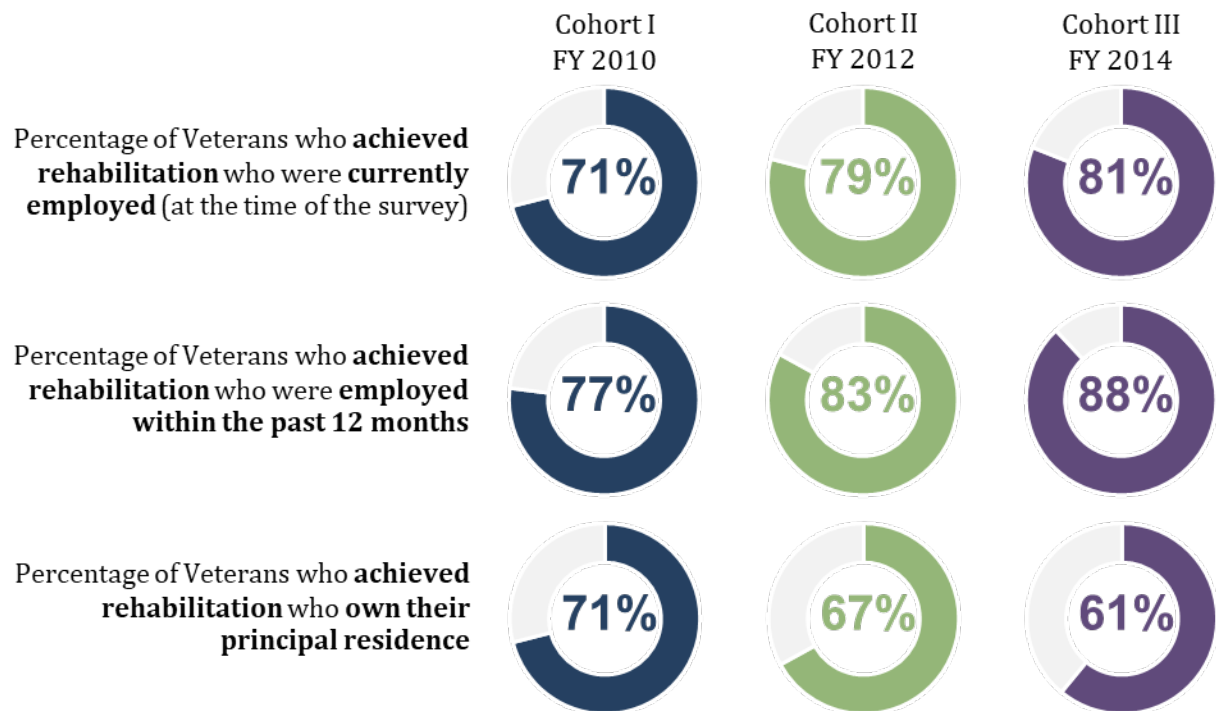


Source: Administrative Data, FY 2018

## Employment and Standard of Living Outcomes

The primary focus of the VR&E Longitudinal Study is on the long-term employment and standard of living outcomes for VR&E participants after they exit the program. Therefore, analyses of employment and standard of living outcomes focus on Veterans who have exited the program, either by successfully achieving rehabilitation or discontinuing services before completing their rehabilitation plans.

Figure E-6. Rehabilitated Veterans have High Levels of Employment and Homeownership



Source: Administrative Data and VR&E Survey Data, FY 2018

Additional outcome-related findings from the study include:

- The rate of homeownership for rehabilitated Veterans in Cohort I (71 percent) and Cohort II (67 percent) is higher than homeownership for the general United States population (64.6 percent).<sup>3</sup> Cohort III has the lowest homeownership rate (61 percent) among the three Cohorts.
- Nearly 90 percent of Veterans who have achieved rehabilitation from an employment plan were employed in the past year for all three Cohorts. Less than half of Veterans in Cohorts I and II who discontinued from an employment plan were employed. The number was slightly higher for discontinued members of Cohort III (52 percent).

<sup>3</sup> U.S. Census Bureau. Quarterly Residential Vacancies and Homeownership, Fourth Quarter 2018. Table 4SA. Accessed April 4, 2019. <https://www.census.gov/housing/hvs/files/currenthvspress.pdf>.

- Veterans who have achieved rehabilitation reported higher annual income amounts than discontinued participants - at least \$20,000 higher for individual income and at least \$23,000 higher for household income.
- Cohort I rehabilitated members have the highest median annual household income (\$72,000) followed by rehabilitated members of Cohort II (\$71,000) and Cohort III (\$70,000). For median annual individual income, Cohort II and Cohort III, both at \$60,000, out earn Cohort I (\$59,000).

Veterans who have achieved rehabilitation reported higher annual income amounts than discontinued participants.

Additional findings for the study, as of the end of FY 2018, are highlighted in Table E-2. It is important to note that the FY 2010 and FY 2012 Cohorts have had more time to complete training and to enhance their economic opportunities compared to the FY 2014 Cohort. The most substantive finding of the study to date is that regardless of the length of time since they began their VR&E program of services, Veterans who have achieved rehabilitation have substantially better employment and standard of living outcomes than those who discontinued services. Rehabilitation remains one of the most dominant variables driving positive financial outcomes (current employment rate, number of months worked, annual earnings, and annual individual and household income) compared to those Veterans who were discontinued.

**Table E-2. Summary of Outcomes for VR&E Participants, by Cohort, as of the end of FY 2018**

<b>Current Observation</b>	<b>Cohort I (FY 2010)</b>	<b>Cohort II (FY 2012)</b>	<b>Cohort III (FY 2014)</b>
Percentage of Veterans persisting in the VR&E program	8%	15%	30%
Percentage of Veterans who achieved rehabilitation from the VR&E program	39%	38%	29%
Percentage of discontinued Veterans who were currently employed (at the time of the survey)	39%	42%	43%
Percentage of discontinued Veterans who were employed within the past 12 months	45%	47%	52%
Average post rehabilitation earnings (during the past 12 months) <sup>1</sup>	\$53K	\$52K	\$48K
Average post discontinued earnings (during the past 12 months) <sup>1</sup>	\$35K	\$38K	\$35K
Percentage of Veterans with moderate or high program satisfaction	88%	88%	87%

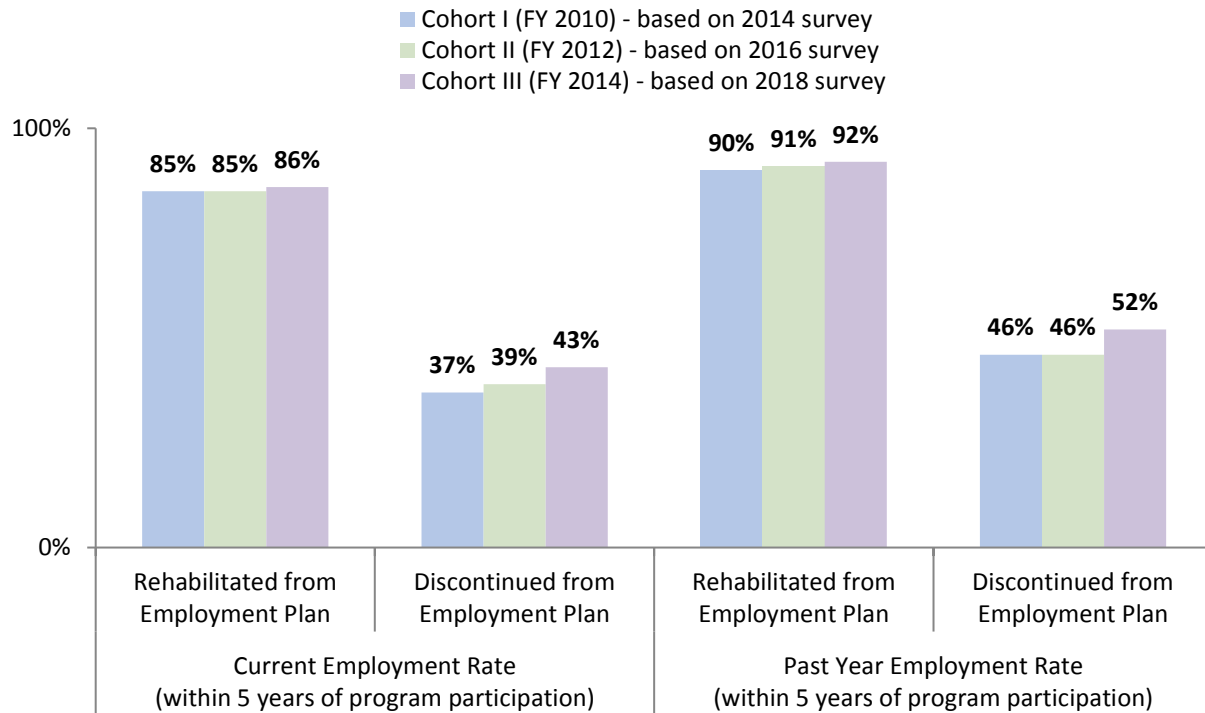
<sup>1</sup> Average earnings reported in the table are based on conditional median earnings, which excludes those with zero earnings. Hence, the conditional median provides an estimate of the average amount of annual earnings among Veterans who reported working.

Source: Administrative Data and VR&E Survey Data, FY 2018



As previously mentioned, Cohort outcomes are highly correlated to employment plans. Figure E-7 indicates that Cohorts I, II, and III had similar rates of employment for those who were rehabilitated from an employment plan within five years of beginning services. Participants who discontinued from an employment plan had, as expected, much lower rates of employment at the five-year period than their counterparts who rehabilitated.

**Figure E-7. Employment Rates Within Five Years of Program Participation for VR&E Participants who Achieved Rehabilitation or Discontinued from an Employment Plan, by Cohort**



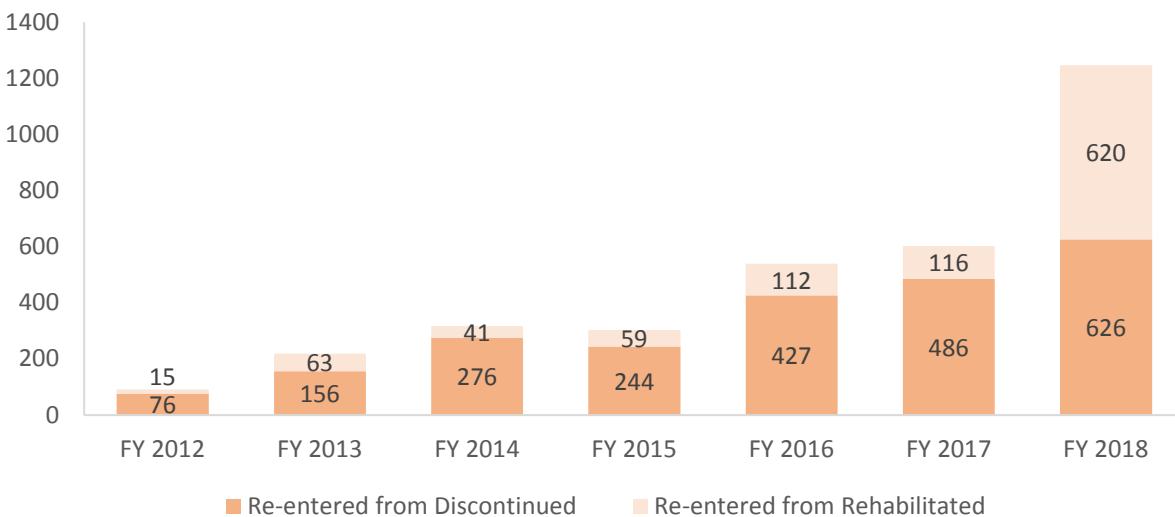
Note: Percentages reported in the figure are based on survey data that has been weighted to reflect the Cohort population. Current employment rate is defined as the percentage of Cohort members who reported being employed as of the survey date. Past year employment rate is defined as the percentage of Cohort members who reported working at any point in the past 12 months (including working currently as of the survey date).

Source: VR&E FY 2018 Survey Data

## Program Re-entries

Veterans can re-enter the VR&E program due to changes in their disability status or life circumstances. Re-entries can occur from either a rehabilitated or discontinued status. As time increases, more Veterans from all three Cohorts are re-entering the program. Figure E-8 shows that roughly 38 percent of all re-entries occurred in FY 2018 when combining all three Cohorts. Most of these Veterans are still persisting in the program at this time. As the study continues, individuals will be tracked to see if re-entering the program leads to more positive outcomes.

Figure E-8. Number of VR&E Participants who Re-entered the Program from a Discontinued or Rehabilitated Status (all Cohorts Combined)



Note: In FY 2011, eight participants Re-entered from Discontinued status and two Re-entered from Rehabilitated status.  
Source: Administrative Data, FY 2018

The demographic profile of Veterans in the Longitudinal Study who re-enter the VR&E program are somewhat different from those who have not re-entered the program. In general, when compared to those who never re-entered the program, Veterans who re-enter the program:

- Are more likely to have a combined disability rating of 60 percent or higher (73 percent versus 68 percent), suggesting that disability conditions have worsened over time, thus impacting ability to remain employed; and
- Have a slightly higher probability of their primary diagnosis being PTSD (32 percent versus 28 percent).

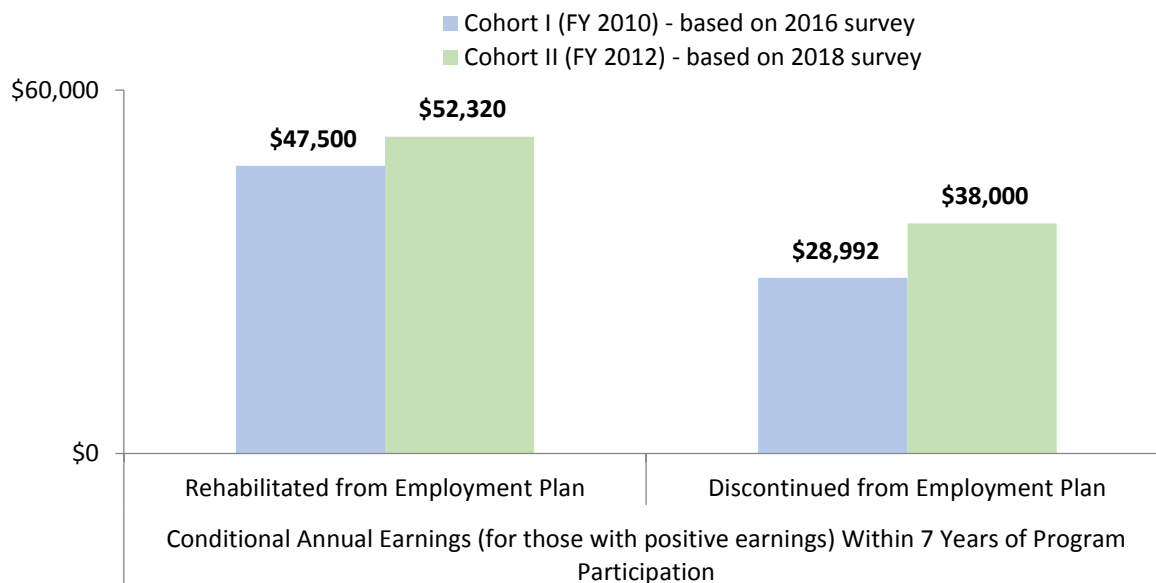
## Cohort Comparisons

For the FY 2018 report, comparisons can be made between Cohorts at two separate time periods. First, Cohorts I and II can be compared at the seven-year mark (FY 2016 and FY 2018, respectively). Next, Cohorts I, II, and III can be compared at the five-year mark (FY 2013, FY 2016, and FY 2018, respectively). In general, Veterans enrolled in an employment or IL track rehabilitate and discontinue from the program at similar rates for all Cohorts. At the five-year mark, Cohort II and Cohort III show higher percentages of Veterans discontinuing as well as being rehabilitated from an IL plan compared with Cohort I. Only 7 percent of Cohort II and 8 percent of Cohort III Veterans are still persisting at the five-year mark compared to 13 percent for Cohort I. The same trend occurs for Veterans in an employment track. Only 36 percent of Cohort II and 31 percent of Cohort III Veterans in an employment track were still persisting. Meanwhile, at the five-year mark, 53 percent of Cohort I Veterans were still persisting.

Cohort III has slightly higher numbers of Veterans that have either rehabilitated or discontinued from the program at the five-year mark when compared to Cohorts I and II.

Veterans in Cohort I and Cohort II who have discontinued from an employment plan have similar median annual earnings within six years. Figure E-9 shows that Veterans in Cohort II who were rehabilitated from an employment plan earn more than Cohort I. The difference in earnings outpaces inflation for the two-year period from 2016 to 2018.

Figure E-9. Conditional Median Earnings from Employment (for those with positive earnings) Within Seven Years of Program Participation for VR&E Participants who Achieved Rehabilitation or Discontinued from an Employment Plan, by Cohort

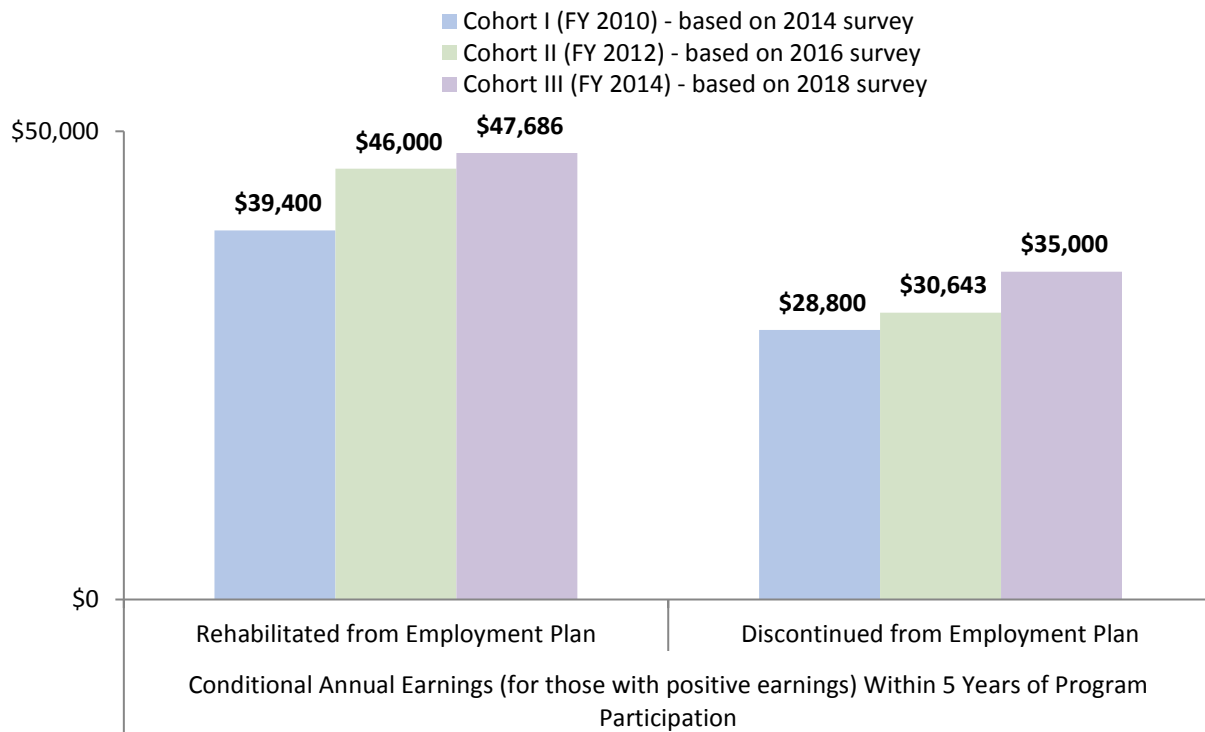


Note: Amounts reported in the figure are based on survey data that has been weighted to reflect the Cohort population. Earnings are defined as the amount earned, before taxes and other deductions, in the past 12 months from all jobs or businesses.

Source: VR&E FY 2018 Survey Data

Figure E-10 compares, for employed Veterans, median annual earnings five years after beginning VR&E services by Cohort. The earnings of Veterans from Cohorts II and III who were rehabilitated from an employment plan are roughly 20 percent higher than their rehabilitated counterparts from Cohort I five years after initial enrollment. The higher earnings among members of Cohorts II and III, for both the rehabilitated and discontinued participants, well outpaces the rate of inflation over the period from Cohort I.<sup>4</sup>

**Figure E-10. Conditional Median Earnings from Employment (for those with positive earnings) Within Five Years of Program Participation for VR&E Participants who Achieved Rehabilitation or Discontinued from an Employment Plan, by Cohort**



Note: Amounts reported in the figure are based on survey data that has been weighted to reflect the Cohort population. Earnings are defined as the amount earned, before taxes and other deductions, in the past 12 months from all jobs or businesses.

Source: VR&E FY 2018 Survey Data

<sup>4</sup> [https://www.bls.gov/data/inflation\\_calculator.htm](https://www.bls.gov/data/inflation_calculator.htm).

## Summary of Findings

While Veterans who achieve rehabilitation have substantially better employment and standard of living outcomes than those who discontinue services, other significant findings from this year's report include the following:

- Nearly 90 percent of all Veterans have moderate to high levels of satisfaction with the program.
- Almost 80 percent of discontinued Veterans in all Cohorts reported moderate to high satisfaction as of FY 2018.
- Approximately three-quarters of members of each Cohort have an SEH.
- On average, 67 percent of Cohort members have an SCD rating of about 60 percent or higher.
- Veterans who have achieved rehabilitation reported higher annual income amounts than discontinued participants - at least \$20,000 higher for individual income and at least \$23,000 higher for household income.
- Around 90 percent of Veterans who have achieved rehabilitation from an employment plan were employed in the past year for all three Cohorts.
- On average, employment rates for Veterans who achieve rehabilitation are 40 to 50 percentage points higher than those of discontinued Veterans.
- A larger percentage of those who have achieved rehabilitation reported owning their principal residence, relative to that of those who discontinued (Cohort I - 71 percent versus 55 percent; Cohort II - 67 percent versus 55 percent; Cohort III - 61 percent versus 49 percent).

# 1. OVERVIEW OF THE VOCATIONAL REHABILITATION AND EMPLOYMENT PROGRAM

The mission of VBA, in partnership with the Veterans Health Administration (VHA) and the National Cemetery Administration (NCA) is to provide benefits and services to Veterans and their families in a responsive, timely, and compassionate manner in recognition of their service to the nation. The VR&E program is one of the benefits VBA provides to those who have served our country in uniform. It is authorized by Congress under Chapter 31 of title 38, U.S.C.

VR&E provides comprehensive services to include vocational assessment, rehabilitation planning, and employment services. For Veterans with an SCD or an SCD so severe that they cannot immediately consider work, the VR&E program offers services to improve their ability to live as independently as possible within their families and communities.

The VR&E program assists eligible Veterans with SCDs and employment barriers to prepare for, obtain, and maintain suitable employment.

VR&E continues to develop and expand methods to assist Servicemembers and Veterans in obtaining and maintaining suitable employment, with a focus on outreach and Servicemembers' early entry into VR&E services during transition from active duty. Included in these outreach efforts are the VSOC and IDES programs. In addition, VR&E expanded services to Servicemembers and Veterans through the implementation of the Veteran Opportunity to Work (VOW) to Hire Heroes Act of 2011, P.L. 112-56.

One of VR&E's outreach efforts is Education and Career Counseling, also known as the Chapter 36 program. Under Chapter 36 of title 38, U.S.C., VR&E has worked to increase access to program services for Veterans in VA education programs, including those Veterans receiving benefits under the Post-9/11 GI Bill. Chapter 36 benefits also provide educational and career counseling to Servicemembers transitioning from the military to civilian life. These services are available to Servicemembers at six months prior to separation, Veterans within one year following discharge from active duty, any Servicemember/Veteran currently eligible for a VA education benefit, and all current VA education beneficiaries.

VR&E also provides outreach and transition services through the VSOC program to the general Veteran population during transition from military to college life and, ultimately, to entry into employment. In the VSOC program, a VRC assigned to participating campuses to provide a wide range of services to Veterans and beneficiaries, including:

- Adjustment counseling to resolve problems interfering with completion of education programs and entrance into employment;
- Vocational Testing;
- Educational and career counseling (Chapter 36);

- Expedited VR&E services; and
- Support and assistance to all Veterans with VA benefits regardless of entitlement, benefit usage, or enrollment status.

VRCs in the VSOC program provide eligible beneficiaries support and assistance to achieve their educational and employment goals. VSOC currently has a presence at 104 college campuses throughout the United States, which includes public and private institutions and community colleges.

Similarly, the VR&E IDES initiative places VRCs at military installations throughout the country to assist select Servicemembers transitioning from active duty. The VR&E IDES initiative derives from authority provided in the Wounded Warrior Act, Title XVI of the National Defense Authorization Act (NDAA) for FY 2008 (P.L. 110-181), section 1631(b), which authorizes eligibility and entitlement to the VR&E program to severely ill or injured Servicemembers. Through this initiative, VR&E provides onsite outreach and other services to Servicemembers as they are transitioning from the military. The range of services VR&E provides under the IDES initiative includes:

- Onsite VRC referral for Servicemembers referred to the Physical Evaluation Board (PEB);
- Comprehensive evaluations;
- Career counseling to identify vocational goals; and
- Rehabilitation planning and services.

The early intervention provided by IDES VRCs can significantly reduce uncertainty among Servicemembers during their recovery process and provides for easier transition into civilian careers. Although the Wounded Warrior Act provided only temporary authority to provide automatic entitlement to VR&E benefits and services to Servicemembers with severe injuries or illnesses, section 126 of the Department of Veterans Affairs Expiring Authorities Act of 2018, P.L. 115-251 (Sept. 29, 2018), made that authority permanent. As a result, automatic entitlement to VR&E benefits and services for Servicemembers with severe injuries or illnesses may be applied continuously from this date forward to Servicemembers who meet the automatic entitlement mentioned above.

Further, section 232 of the VOW to Hire Heroes Act of 2011 authorized VA to pay an incentive to employers to hire or train Veterans participating in a VR&E program, even if a Veteran has not completed a training program under VR&E.

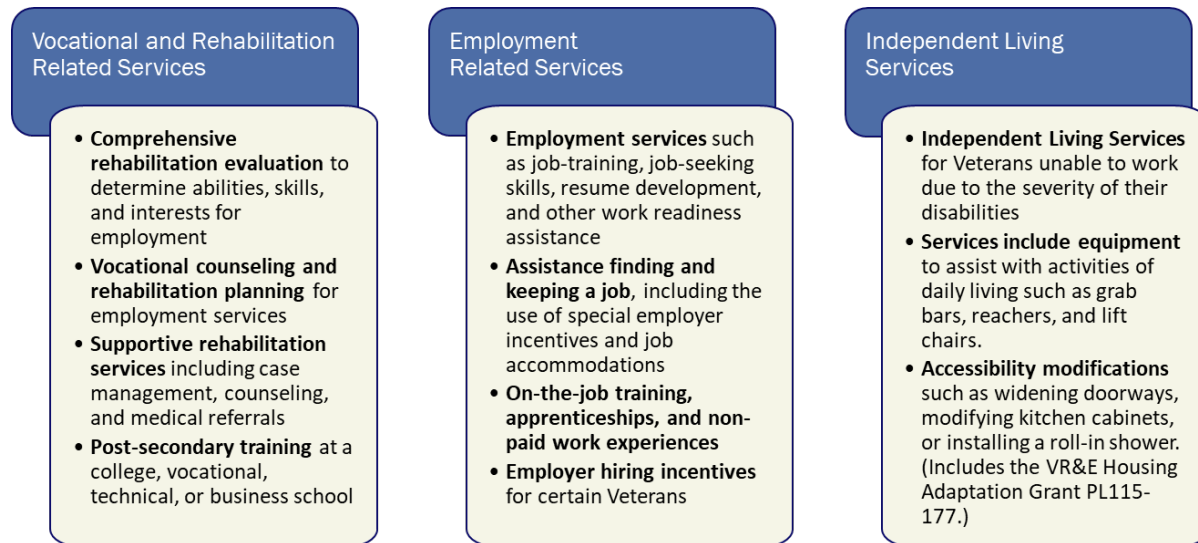
## **1.A. Services Provided by the VR&E Program**

VR&E administers the following services to eligible participants in accordance with the subsequent chapters of title 38, U.S.C.:

**Chapter 31.** VR&E provides comprehensive services to Veterans and Servicemembers who have been determined entitled to the VR&E program (see Figure 1A-1). Services include vocational assessments, training at institutions of higher learning, on-the-job training (OJT) and apprenticeships, and employment services to assist with securing suitable employment. For Veterans with an SCD so severe that they cannot immediately consider work, VR&E offers services

to improve their ability to live as independently as possible within their families and communities.

Figure 1A-1. Services Available under Chapter 31



Source: [http://www.benefits.va.gov/vocrehab/eligibility\\_and\\_entitlement.asp](http://www.benefits.va.gov/vocrehab/eligibility_and_entitlement.asp)

Veterans and Servicemembers receive identified services through one of the Five Tracks to Employment. The tracks include:

- Re-employment (Track 1);
- Rapid Access to Employment (Track 2);
- Self-employment (Track 3);
- Employment through Long Term Services (Track 4); and
- Independent Living Services (Track 5).

The Longitudinal Study Cohorts described in this report are comprised of individuals who applied for the VR&E program, were found entitled, and began a plan of services during FY 2010, FY 2012, or FY 2014. See Figure 1A-2 for specific details of each of the tracks. Information on eligibility and entitlement determination is presented in Section 1C, The VR&E Process.



Figure 1A-2. Five VR&E Tracks of Services



Source: Adapted from <http://www.benefits.va.gov/benefits/factsheets/serviceconnected/5tracks.pdf>.

**Chapter 36.** VR&E provides a wide range of educational and vocational counseling services to Servicemembers separating from active duty, as well as Veterans and dependents who are eligible for one of VA's educational benefit programs. These services are designed to help an individual choose a vocational direction and determine the courses needed to achieve the chosen goal.

Individuals who are eligible for educational and vocational counseling include transitioning Servicemembers who are within six months of discharge from active duty, or within one year following their discharge from active duty. The discharge must be under conditions other than dishonorable. Individuals eligible for or currently using VA education programs such as the Post-9/11 GI Bill are also eligible for educational and vocational counseling from VR&E. Assistance may include interest and aptitude testing, vocational exploration, goal setting, identifying an appropriate training program, VA benefits coaching, adjustment counseling, and exploring educational or training facilities which might be utilized to achieve a vocational goal. Chapter 36 counseling participants are not represented in the Longitudinal Study.

**Chapter 18.** VA provides monetary allowances, vocational training and rehabilitation, and VA-financed health care benefits to certain Korea and Vietnam service Veterans' birth children who have been diagnosed with spina bifida. For the purpose of this program, spina bifida is defined as all forms or manifestations of spina bifida (except spina bifida occulta). Effective October 10, 2008, P.L. 110-387, section 408, made a change to 38 U.S.C. § 1803(a). As a result of this change, medical services and supplies for spina bifida beneficiaries are no longer limited to care for the spina bifida condition. This program now covers comprehensive health care considered medically necessary and appropriate.

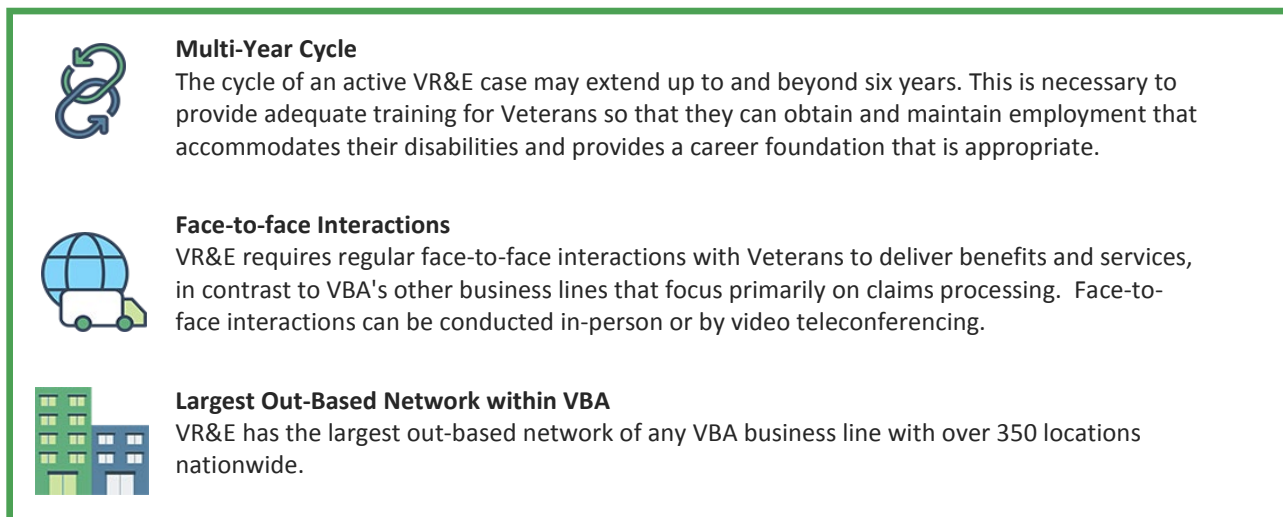
Vocational training and rehabilitation services are available to Chapter 18 participants if it is determined reasonably feasible for the eligible child to achieve a vocational goal. Chapter 18 participants are not represented in the Longitudinal Study.

**Chapter 35.** Under Chapter 35, VR&E can provide a wide range of educational and vocational counseling services to the spouse, son, or daughter of: 1) a Veteran who died or is permanently and totally disabled as a result of an SCD ; 2) a Veteran who died from any cause while rated permanently and totally disabled as a result of an SCD ; 3) a Servicemember missing in action or captured in the line of duty by a hostile force; 4) a Servicemember forcibly detained or interned in line of duty by a foreign government or power; or 5) a Servicemember who is hospitalized or receiving outpatient treatment, has a service-connected permanent and total disability, and is likely to be discharged for that disability. These services are designed to help an individual choose a vocational direction and determine the course needed to achieve the chosen goal. Assistance may include interest and aptitude testing, occupational exploration, setting occupational goals, identifying the appropriate type of training program, and exploring educational or training facilities which might be utilized to achieve an occupational goal. Chapter 35 participants are not represented in the Longitudinal Study.

VR&E administers these four benefits (Chapters 31, 36, 18, and 35) through a decentralized service—delivery network comprised of 56 VBA regional offices and the National Capital Regional Benefits Office, over 140 VR&E out-based offices, 71 IDES sites, and 104 VSOC locations. As of the end of FY 2018, this network was staffed with 1,304 staff, including VRCs, ECs, support staff,

and managers. VR&E also has national service contracts which supplement the delivery of services provided by VRCs and employment staff. Figure 1A-3 displays the key features that distinguish the VR&E service-delivery model from the service-delivery strategy of VBA's other business lines.

Figure 1A-3. Three Key Features of the VR&E Service-Delivery Model



Source: EconSys Study Team

M28R, Vocational Rehabilitation and Employment Service Manual, Part V, Section A, Chapter 2.

VR&E's Chapter 31 workload is predominately driven by five factors: (1) the number of Veterans applying for rehabilitation benefits and services; (2) the number of Veterans who enter into the development and implementation of a rehabilitation plan; (3) the associated growth of disability claims consistent with the ongoing reduction of the claims backlog; (4) changes to total volume of military separations due to military end-strength policy; and (5) frequency/severity of service related injuries/illnesses.

Vocational assessment and evaluation activities help Veterans and their VRCs develop a vocational rehabilitation plan. A vocational rehabilitation plan lists the services that will be provided and identifies the objectives Veterans must pursue to achieve their rehabilitation goals. Every rehabilitation plan is different as the identified objectives and services are based on individual needs. The rehabilitation plan can be re-developed based on new needs or circumstances identified by the Veteran and VRC. The Veteran and VRC continue to meet for supportive services throughout the duration of the plan. Monitoring and support continue as long as the Veteran is a participant in the VR&E program. As Veterans near the completion of the objectives of his/her rehabilitation plan, the VRC must determine if the Veteran is ready to seek employment after receiving the necessary services to become suitably employed as outlined in their rehabilitation plan. This includes documentation of training completion, helping Veterans in overcoming barriers to the greatest extent possible, and the demonstration of responsible and appropriate interaction. When a declaration of job ready has been made, an employment assistance plan is written. An employment assistance plan outlines the employment services that will be provided to assist the Veteran with obtaining a suitable job. Services may include

intensive interview preparation, job development, job placement, job accommodation assistance, job coaching, or any other services necessary to ensure that the Veteran can obtain and maintain suitable employment. While participating in an employment plan, Veterans may work with an EC for assistance through the job-seeking process. Once suitable employment is secured, follow-up services are provided for at least 60 days before the case is closed, and rehabilitation is achieved.

## 1.B. Evolution of Vocational Rehabilitation for Veterans

Vocational rehabilitation began as a government service to war-injured Veterans during the World War I era. In 1917, the War Risk Insurance Act of 1914 was amended to provide rehabilitation and vocational training for Veterans with dismemberment injuries, injuries to their sight or hearing, and other injuries resulting in permanent disability.

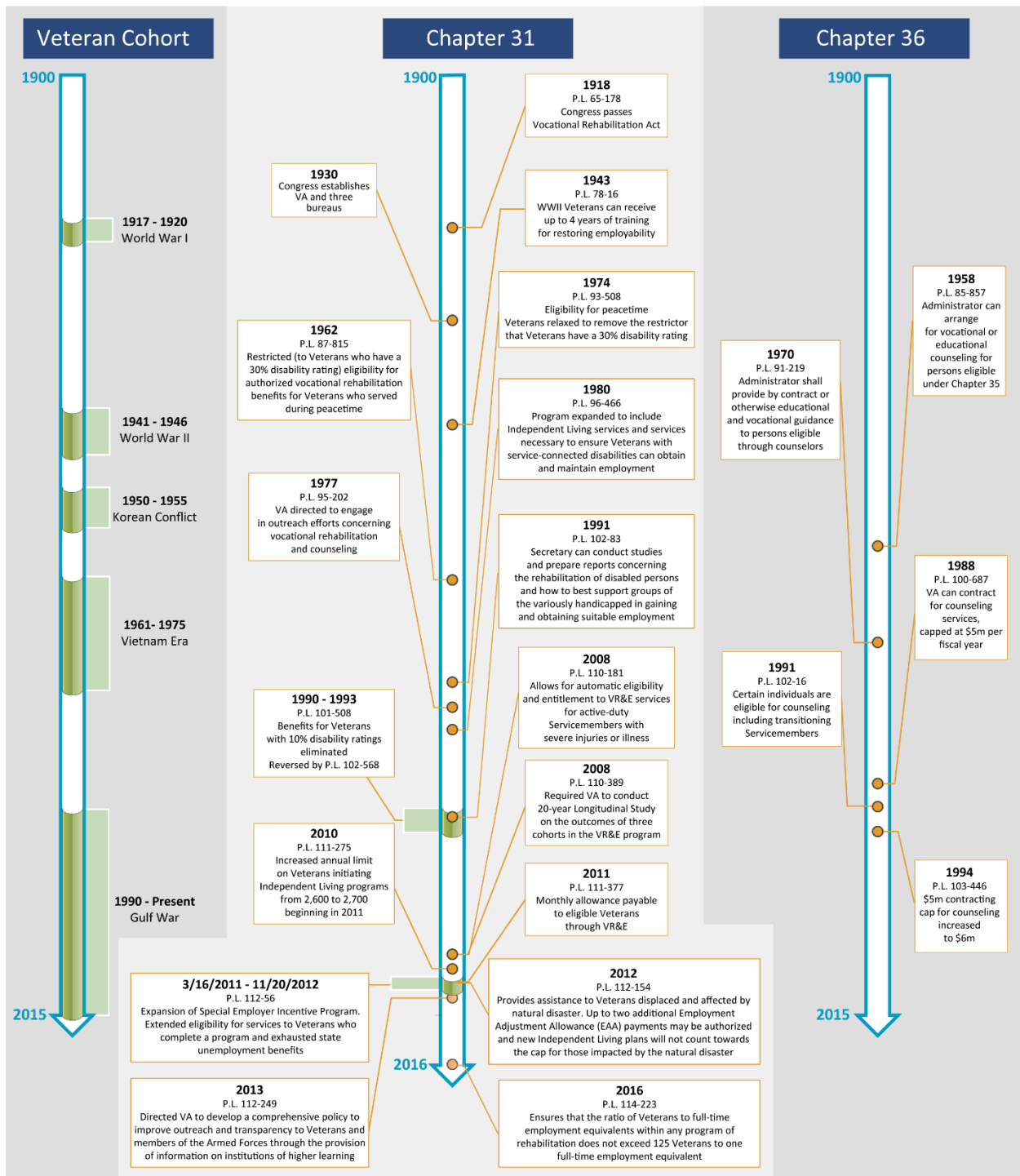
The legislative history noted in the highlighted facts in Figure 1B-1 provides context for understanding the nature and extent of changes that have been made over the years to the VR&E program. Since the original legislation that established the VR&E program, numerous pieces of legislation have passed into law that have shaped the eligibility rules and benefits into the modern program it is today.

The VR&E program has enacted substantive changes since inception to be more reactive to Veteran needs, modernize benefits, and reshape eligibility rules.

Section 334 of the Veterans' Benefits Improvement Act of 2008 (P.L. 110-389) requires VA to conduct a longitudinal study of Veterans who apply for VR&E services and begin rehabilitation plans in FY 2010, FY 2012, and FY 2014. It is also important to note that recent legislative changes concerning the VR&E program have passed into law within the past few years and could impact the findings of the Congressionally-mandated longitudinal study. Recent legislative changes to the program include:

- Automatic entitlement of VR&E benefits for active duty Servicemembers with severe injuries or illnesses.
- Increasing the annual limit on the number of Veterans initiating plans for IL services from 2,600 to 2,700.
- The provision of monthly subsistence allowances similar to those paid under the Post-9/11 GI Bill for those VR&E program participants who would also qualify for Post-9/11 educational benefits.

Figure 1B-1. Chronological History of Legislative Changes to the VR&E Program



Source: Department of Veterans Affairs, VR&E MITRE Study 2015

## 1.C. The VR&E Process

**The application process.** The VR&E process begins when a Servicemember or Veteran completes an application (VA Form 28-1900) for VR&E benefits. The application can be filled out either

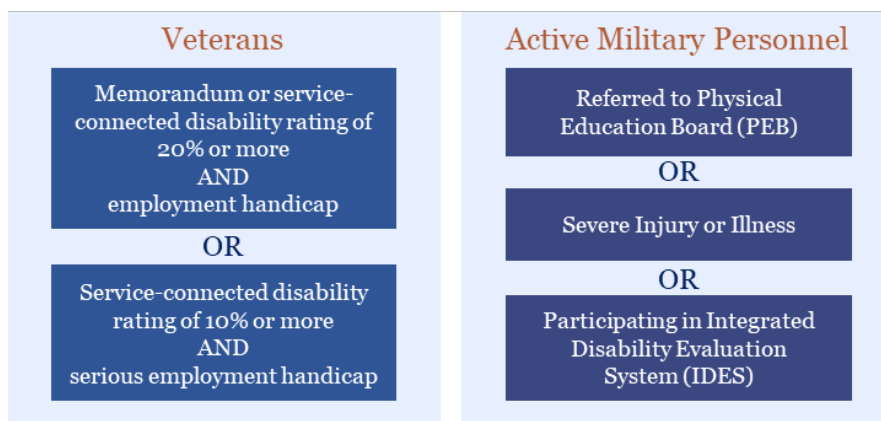
Veterans with a service-connected disability or memorandum rating, and a discharge other than dishonorable are eligible for the VR&E program. In order to be entitled for VR&E services, a Veteran must have an employment handicap.

electronically (as of September 2015, the application is automated through eBenefits) or hard copy. Once VA receives the application and basic eligibility is verified, a VRC meets with the Veteran to complete a vocational, medical, and academic history, including information necessary to determine if the Veteran is entitled to services.

**Basic entitlement criteria.** The basic entitlement criteria require that a Veteran has received or will receive an honorable or other than dishonorable discharge, has an SCD, and is determined by the VRC to have an employment handicap (EH) in substantial part due to their SCD. An EH is an impairment associated with the Veteran’s ability to prepare for, obtain, or retain suitable employment consistent with his or her abilities, aptitudes, and interests. As shown in Figure 1C-1, Servicemembers and Veterans may be found entitled to the program if they have either a memorandum rating or an SCD rating of 20 percent or more and an EH has been established. A memorandum rating is provided when a Veteran has not yet completed a disability compensation evaluation; however, there is sufficient information to determine that a disability rating of 20 percent or more likely will be granted. In addition, active duty military personnel with a severe injury or illness (generally including those referred to a PEB or participating in the IDES program) are automatically entitled to Chapter 31 benefits, under section 1631(b) P.L. 110-181, following submission of an application and meeting with a VRC.

Veterans may also be entitled to VR&E benefits if they have a SCD rating of 10 percent and the VRC determines that they have an SEH. An SEH is defined as a significant impairment of an individual’s ability to prepare for, obtain or retain employment consistent with his or her abilities, aptitudes, and interests.

Figure 1C-1. Entitlement Criteria for the VR&E Program



Source: Adapted from [http://www.benefits.va.gov/vocrehab/eligibility\\_and\\_entitlement.asp](http://www.benefits.va.gov/vocrehab/eligibility_and_entitlement.asp).

**Basic period of eligibility.** The law provides for a 12-year basic period of eligibility in which VR&E services may be used. Veterans whose 12-year basic period of eligibility has expired may still be entitled to VR&E services if the counselor determines that they have a SEH.

**Entitlement process.** The VR&E entitlement process begins with a Group Orientation for Veterans and Servicemembers which explains the goals of the VR&E program, the entitlement process and potential services. Testing is completed during the initial evaluation phase and may include aptitude, ability and interest testing. Additional assessments may be required including psychological testing and functional capacity evaluations (physical and psychological), depending on the needs and disabilities of the Veteran. Also, the VRC may collaborate with a Veteran's VHA treating physician(s) for additional information. If it is determined that a Veteran is entitled to VR&E services and is able to work, the VRC and the Veteran review labor market information for jobs which are within the Veteran's identified aptitude, interests and abilities and will not aggravate the Veteran's SCD.

**Track identification and writing a rehabilitation plan.**

When an appropriate vocational goal is identified, the VRC and the Veteran review the VR&E Five Tracks to identify which track is the most appropriate for service delivery to the Veteran. The VRC and the

The individualized rehabilitation plan:

- Lists the **vocational goal and services** that will be provided;
- Identifies the Veteran's **objectives**; and
- Identifies **milestones of progress** and estimates timeframes for their completion.

Veteran then develop a rehabilitation plan to assist the Veteran with preparing to meet the requirements of the job. For example, if the Employment through Long-Term Services track is identified, then a rehabilitation plan will be written to meet the unique needs of the individual Veteran. Training services may include tuition, fees, books, supplies, and subsistence allowance. Veterans may also receive tutoring, adaptive equipment, referrals to VHA for medical, dental or mental health services, and other services as needed. Rehabilitation plans written for all tracks may be revisited and re-developed as needs or circumstances of a Veteran change. VRCs and Veterans are in regular contact while a Veteran participates in VR&E services. Contact may include face-to-face meetings, tele-counseling, phone calls and email communications.

**Job Ready Services.** As a Veteran nears the completion of the objectives of his/her rehabilitation plan the VRC must determine if the Veteran is ready to seek employment. This process includes documenting the completion of training, verifying that the Veteran has overcome barriers to the greatest extent possible, and the demonstration of responsible and appropriate interaction and behavior. When a declaration of job ready has been made, an employment assistance plan is written, and the Veteran is placed in Job Ready (JR) status.

An employment assistance plan outlines the employment services that will be provided to assist the Veteran with obtaining a suitable job. Services may include intensive interview preparation, job development, job placement, job accommodation assistance, job coaching, or any other services necessary to ensure that the Veteran can obtain and maintain suitable employment. While participating in an employment plan, Veterans work with an EC for assistance through the job seeking process. Once suitable employment is secured follow-up services are provided for at

least 60 days before the case is closed, and rehabilitation achieved. The law provides for a total of 18 months to be utilized for employment services. Although the law provides a total of 18 months of assistance in JR status, a Veteran may not need to exhaust the full 18 months to secure employment.

**Extended evaluation plans and Independent Living Services.** Some Veterans have disabilities so severe that the achievement of a vocational goal is not currently reasonably feasible, or the feasibility of a goal cannot be determined without further evaluation. If the feasibility of the achievement of a vocational goal cannot be determined, then the Veteran may enter a plan for an extended evaluation to participate in additional assessments. A Veteran may participate in an extended evaluation initially for 12 months. An additional two six-month periods may also be approved if there is reasonable certainty that feasibility can be determined. Upon completion of an extended evaluation, a Veteran may either continue with services to pursue a vocational goal or will be assessed for IL services, if pursuing employment is not currently reasonably feasible. If IL needs are identified, then a plan for services may be written. If it is determined that a vocational goal is not feasible, and no IL needs are identified, then the Veteran will exit the program. As circumstances change, a Veteran may re-apply for VR&E benefits. If it is determined that a Veteran or Servicemember is not entitled to VR&E benefits, then the VRC will assist with any necessary referrals for other services such as referrals to state vocational rehabilitation programs, local employment agencies, or other local or state training programs.

On June 1, 2018, P.L. 115-177 created a new grant authority referred to as the VR&E Housing Adaptation Grant. This grant moves the delivery of home adaptations determined necessary to improve the independence of VR&E Program participants to the authority of Loan Guaranty Service, specifically the Specially Adapted Housing (SAH) program. It is anticipated that the resulting partnership will reduce costs, improve timeliness, and increase the participation of VR&E participants in contractor selection. Also, the expertise and experience of SAH agents will help guide and improve the construction and home adaptation process. Use of the VR&E Housing Adaptation Grant counts toward the maximum three-time use rule for traditional SAH grants.

## **1.D. VR&E Program Participants as of FY 2018**

Before the VR&E Longitudinal Study and this year's findings are presented, it is important to consider the description of all the individuals currently in the VR&E population. A review of the entire population of Veterans who participated in some manner in the VR&E program during FY 2018 provides context for the findings of the Longitudinal Study. In FY 2018, VR&E had 125,513 Veterans who participated in a rehabilitation plan, including those who began a plan in that year or previous years. Table 1D-1 shows the number of male and female Veterans who participated in the VR&E program for all or part of FY 2018, as well as the number of participating Veterans who had an EH or an SEH.



Table 1D-1. Veterans who Received VR&E Benefits for all or part of FY 2018

VR&E Program Participants in FY 2018		#	%
Gender	Males	96,881	77.2%
	Females	28,366	22.6%
Serious employment handicap status	Veterans with a serious employment handicap	93,006	74.1%
	Veterans with an employment handicap	32,507	23.7%
Period of service	World War II	21	0.0%
	Korean Conflict	31	0.0%
	Vietnam Era	1,816	1.4%
	Peacetime	6,615	5.3%
	Gulf War Era	92,647	73.8%
	Other	6,907	5.5%
<b>Total Participants</b>		<b>125,513</b>	<b>100.00%</b>

Note: Totals include 266 participants unidentifiable by Gender and 17,476 participants unidentifiable by Period of service.

Source: Department of Veterans Affairs, VBA Annual Benefits Report, 2018

Male Veterans comprised almost four-fifths (77 percent) of the VR&E program in FY 2018, and female Veterans comprised a little over one-fifth (23 percent). The percentage of VR&E participants who are female is consistent with the representation of female

Majority of VR&E program participants follow Employment through Long-Term Services track.

Servicemembers and Veterans who have served since the Gulf War Era. This is also consistent with the percent of female Veterans who have participated in the Post-9/11 GI Bill (29 percent).<sup>5</sup> About three-quarters (74 percent) of the Veterans participating in VR&E have a SEH, which means the significant impairment is associated with the SCD. These Veterans, when participating in the program, may receive additional supportive services, which may include extensions of entitlement, adaptive equipment, IL services, and/or other assistance.

As a Veteran nears completion of his or her rehabilitation plan, he or she enters JR status. While in JR status, the Veteran works with a counselor or employment coordinator to obtain a suitable job, adjust to that new job, and once the job is stable, receive follow-up support for a minimum of 60 days. In certain circumstances, follow-up support may exceed 60 days, in order to

70 percent of overall Veterans in the VR&E program received a **subsistence allowance** for additional education or training in FY 2018.

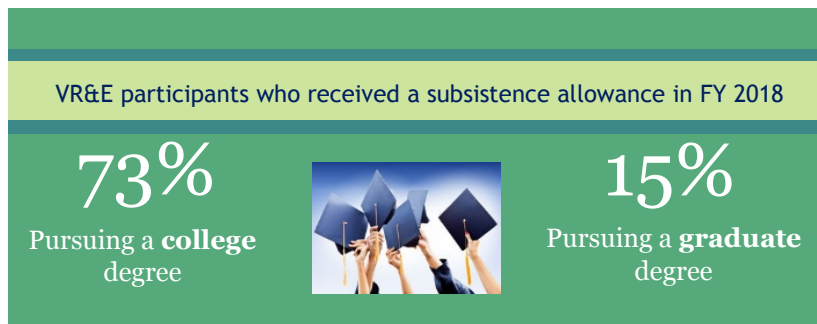
address the needs of a Veteran with severe disabilities or to determine the suitability of a job. In certain circumstances, follow-up support may exceed 60 days, in order to address the needs of a Veteran with severe disabilities or to determine the suitability of a job. At the end of FY 2018, the average number of days that VR&E participants were in JR status was 155.8.

<sup>5</sup> Source: Department of Veterans Affairs, VBA Annual Benefits Report, 2018

Most of the Veterans participating in a plan of services are in the Employment through Long Term Services Track and receive subsistence allowance. Subsistence allowance is paid each month during training and is based on the rate of attendance (e.g., full-time or part-time), the number of dependents, and the type of training. In accordance with 38 U.S.C. § 3108(b)(4), a Veteran participating in the VR&E program who is also entitled to the Chapter 33 Post-9/11 GI Bill may elect to receive the Post-9/11 rate instead of the VR&E rate. The Post-9/11 rate is usually higher than the VR&E subsistence allowance rate and is based on the basic allowance for housing (BAH) rates. Table 1D-2 shows the number of Veterans who received subsistence payments as part of a vocational training program in FY 2018.

Hence, it is not surprising to find that of those participants who received a subsistence allowance in FY 2018, about three-quarters (73 percent) received a subsistence allowance for participating in an educational program at an institution of higher learning to pursue an undergraduate degree (see Table 1D-2). Almost 15 percent received subsistence allowance while pursuing a graduate degree, and 2 percent are taking college courses as part of a non-degree program. The remaining individuals either participated in technical/apprenticeship, OJT, or other training programs (8 percent), or a program of IL services (2 percent).

Veterans who did not receive subsistence allowance during the fiscal year received other forms of rehabilitation services. Veterans who have appropriate training and skills receive job search assistance and job



accommodation services to transition them into the workforce. Other non-subsistence allowance services include IL services, career counseling, medical referrals and non-training evaluation services such as assistive technology evaluations.

Table 1D-2. Veterans who Received Subsistence as part of a Training Program during FY 2018

Training Program	#	%
<b>Subtotal - Educational program at an Institution of Higher Learning</b>	<b>79,908</b>	<b>90.40%</b>
Undergraduate school	64,779	73.29%
Graduate school	13,090	14.81%
College, non-degree	2,039	2.31%
<b>Subtotal - Vocational/Apprenticeship, on-the-job training, or other training program</b>	<b>7,103</b>	<b>8.04%</b>
Vocational or technical	5,156	5.83%
Non-paid work experience in government agency	1,195	1.35%
Paid on-job training	260	0.29%
Apprenticeship	169	0.19%
Improvement of rehab potential	155	0.18%
Farm co-op	114	0.13%
High school	2	0.00%
Non-paid on-job training	52	0.06%
<b>Extended evaluation/Independent living program</b>	<b>1,382</b>	<b>1.56%</b>
<b>Total<sup>1</sup></b>	<b>88,393</b>	<b>100.00%</b>

<sup>1</sup> This number only represents participants during FY 2018 in receipt of a subsistence allowance, a subset of total participants. Source: Department of Veterans Affairs, VBA Annual Benefits Report, 2018. In FY 2018, 88,393 (70 percent) of the Veterans in VR&E received a subsistence allowance for education or training being pursued while in Employment through Long-Term Services track. About 80 percent (not shown) of Veterans participating in VR&E in FY 2018 had less than a four-year college degree prior to beginning services. Among those with less than a four-year degree, about 45 percent (not shown) have taken some college or post-high school courses prior to beginning services.

In FY 2018, the VR&E program used the appropriations listed in Table 1D-3 to support the vocational rehabilitation of Veterans. The total appropriation of \$1,662,749,000 represents a one percent increase over FY 2017.

Table 1D-3. FY 2018 VR&E Appropriations

Appropriation	2018 Actual (dollars in thousands)	
General operating expenses (e.g., salaries, rent, other services, travel, etc.)	\$231,185	
Readjustment benefits	Subsistence allowance paid to Veterans	\$641,140
	Vocational training paid on behalf of Veterans (e.g., tuition, books, supplies, fees, etc.)	\$790,424
<b>Total</b>	<b>\$1,662,749</b>	

Source: Department of Veterans Affairs, President's Budget Request Fiscal Year 2020

## 1.E. VR&E Program Participants with Successful Rehabilitations

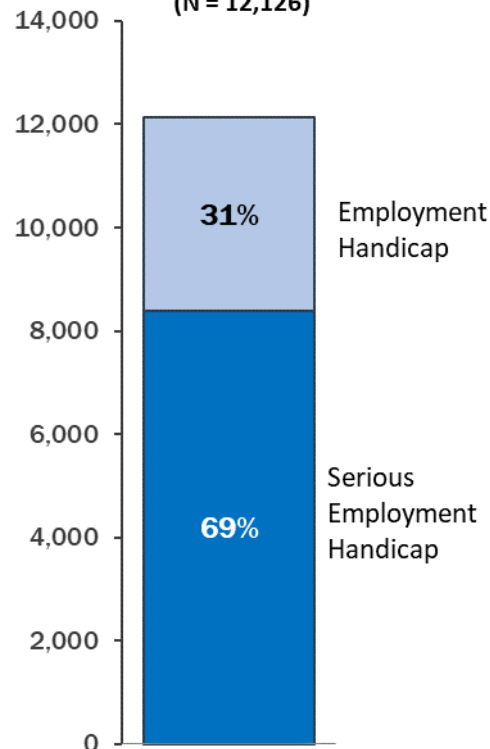
Of the Veterans who participated in the VR&E program in FY 2018, there were 12,126 Veterans who successfully completed their rehabilitation plans at some point during the year. It is important to note that Veterans who have achieved rehabilitation in FY 2018 entered the program at different points in time.

As shown in Figure 1E-1, Veterans who have a SEH represent 69 percent of the successfully rehabilitated closures in FY 2018. Almost 90 (10,735) of the successful rehabilitation closures in FY 2018 included Veterans who obtained and maintained employment (see Figure 1E-2). Another 7 percent of the successful closures that occurred in FY 2018 included Veterans who are employable but elected to pursue continuing education instead of immediate suitable employment. The remaining 597 (5 percent) of rehabilitations were Veterans who received IL services. IL services assist Veterans with disabilities to develop the capacity to live as independently as possible in their homes and communities.

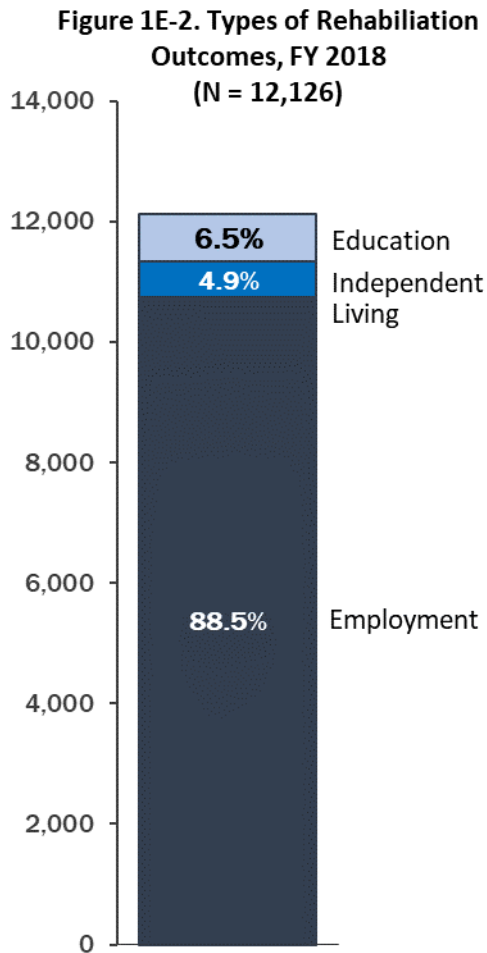
The law provides 24 months to complete an IL plan. If needed, extensions may be provided up to a total of 30 months. For Post-9/11 Veterans, additional extensions may be approved to ensure the most severely injured Veterans are able to achieve successful rehabilitation outcomes.

Of the 11,529 Veterans who successfully completed employment rehabilitation plans, about 93 percent (not shown) began full-time employment. The remaining 7 percent (not shown) pursued part-time employment, volunteer opportunities, or additional education. More than 82 percent of the Veterans who have achieved rehabilitation and who began full-time employment obtained professional, technical, or managerial jobs in FY 2018 (see Table 1E-1). Another 11 percent began a career in the machine trades (4.5 percent), services (3.8 percent), or clerical (3 percent) industries.

**Figure 1E-1. Rehabilitation Outcomes by Employment Handicap, FY 2018**  
(N = 12,126)



Source: Department of Veterans Affairs, Veterans Benefits Administration Annual Benefits Report 2018



Source: Department of Veterans Affairs, Veterans Benefits Administration Annual Benefits Report 2018

As indicated in Table 1E-1, the average annual starting wage among Veterans who successfully completed their rehabilitation plans and began full-time employment in FY 2018 was \$45,180. Of the 82 percent taking a professional, technical, and managerial position, the average annual wage was \$47,009 which is above the average for the entire group. For the remaining 18 percent of Veterans who began full-time employment in service, clerical, machine trades, structural trades, or other occupations, the average annual wage ranged from \$33,746 to \$40,241.

To put these salaries in context, a comparison is made between the average annual post-rehabilitation employment wages of Veterans who have achieved rehabilitation to the average annual wage for all Americans. In May 2018, the average annual wage of Americans<sup>6</sup> in all occupations was \$51,960. Given that Veterans who have achieved rehabilitation are typically newly trained in their field, it is not unexpected that their average wages immediately following rehabilitation are somewhat lower than the average annual wages of the American working population, which includes individuals who have been working in their occupations for many years.

<sup>6</sup> [http://www.bls.gov/oes/current/oes\\_nat.htm](http://www.bls.gov/oes/current/oes_nat.htm).

Table 1E-1. FY 2018 Career Categories of Veterans who Achieved Rehabilitation

FY 2018 Career Categories of Veterans who Achieve Rehabilitation	Veterans		Average Annual Wages at Rehabilitation
	#	%	
Professional, Technical, and Managerial	8,783	82.2%	\$47,009
Machine Trades	486	4.55%	\$36,834
Service	407	3.81%	\$33,746
Clerical	322	3.01%	\$35,175
Miscellaneous	258	2.42%	\$40,241
Structural/Building Trades	246	2.30%	\$39,302
Other (below 2% each category) <sup>1</sup>	180	1.69%	\$37,312
<b>Total and National Average</b>	<b>10,682<sup>2</sup></b>		<b>\$45,180</b>
Rehabilitations without full-time wages		847 <sup>3</sup>	--
<b>Total</b>	<b>11,529</b>		<b>--</b>

<sup>1</sup> Includes careers in sales, benchwork, agriculture, fishery and forestry, and processing (e.g., butcher, meat processor, etc.).

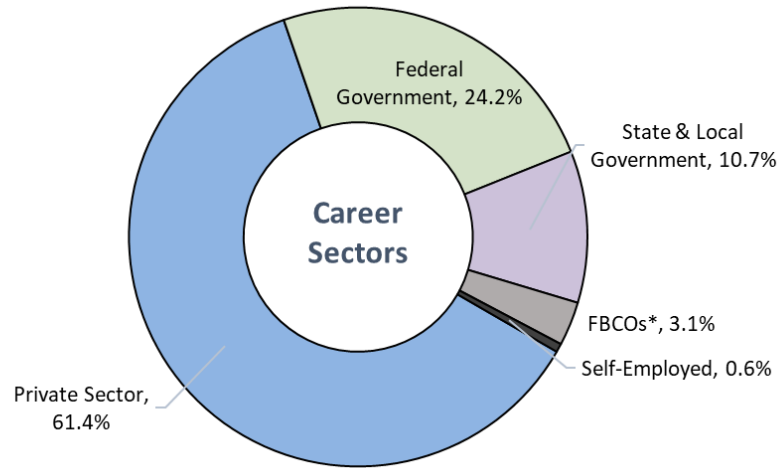
<sup>2</sup> Excludes Veterans in the Independent Living track who have achieved rehabilitation and those Veterans who have achieved rehabilitation from an employment plan but pursued part-time employment, volunteer work, or additional education.

<sup>3</sup> Includes continuing education, part-time employment, volunteer, and unknown.

Source: Department of Veterans Affairs, VR&E Program Management Reports: Career Outcomes by DOT

Veterans who successfully completed employment rehabilitation plans in FY 2018 became employed in a wide variety of career sectors (see Figure 1E-3). More than half were employed in the private sector (61 percent) with the next largest sectors being federal government (24 percent) and state and local government (11 percent). The remaining four percent were employed in other sectors, including faith-based community organizations, or were self-employed.

Figure 1E-3. FY 2018 Career Sectors of Veterans who Achieved Rehabilitation (in percent)



\* Faith-Based Community Organizations

Source: Department of Veterans Affairs, VBA Annual Benefits Report, 2018

In FY 2018, VR&E provided services to 125,513 Veterans, including those who began a plan in that year or previous years. Over 10,000 Veterans were placed in full-time employment this year earning an average annual wage of just over \$45,180. The remainder of this report analyzes the outcomes of VR&E participants that applied for and entered a plan of services in FY 2010, FY 2012, and FY 2014.

## 2. VR&E LONGITUDINAL STUDY

In 2008, Congress passed the Veterans' Benefits Improvement Act of 2008, P.L. 110-389, to improve and enhance compensation and pension, housing, labor and education, and insurance benefits for Veterans. Section 334 of this law amended Chapter 31 by adding a requirement for a 20-year longitudinal study of Veterans who began their vocational rehabilitation program during FY 2010, FY 2012, and FY 2014 (see Figure 2-1). A copy of the law is included in Appendix A.

Figure 2-1. Section 334 of the Veterans' Benefits Improvement Act of 2008 Requiring VA to Conduct a Longitudinal Study of the VR&E Program

### Sec. 3122. Longitudinal study of vocational rehabilitation programs

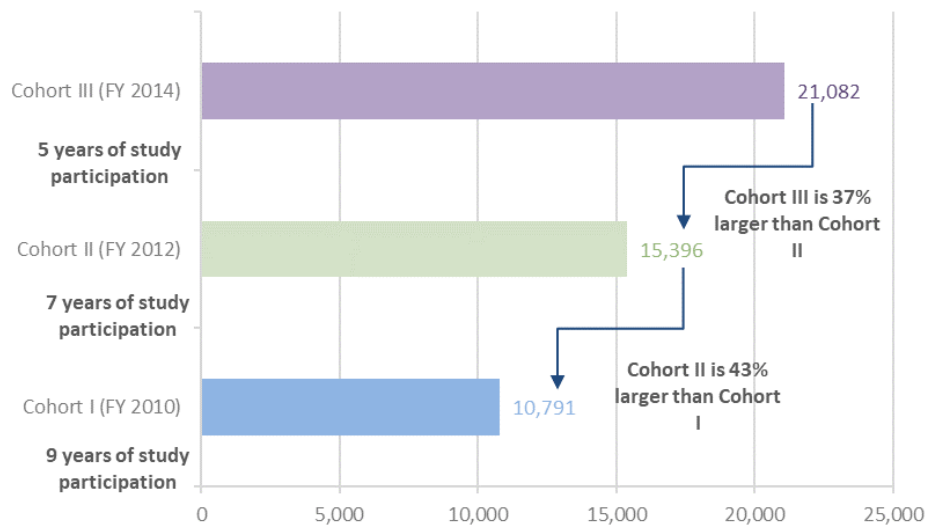
#### (a) Study Required.—

- (1) Subject to the availability of appropriated funds, the Secretary shall conduct a longitudinal study of a statistically valid sample of each of the groups of individuals described in paragraph (2). The Secretary shall study each such group over a period of at least 20 years.
- (2) The groups of individuals described in this paragraph are the following:
  - (A) Individuals who begin participating in a vocational rehabilitation program under this chapter during FY 2010.
  - (B) Individuals who begin participating in such a program during FY 2012.
  - (C) Individuals who begin participating in such a program during FY 2014.

In compliance with the law, VA is conducting the VR&E Longitudinal Study to assess the long-term outcomes of three Cohorts of participants - those who applied for and began a plan of services during FY 2010, FY 2012, or FY 2014. As shown in Figure 2-2, a total of 10,791 Veterans applied for and began a plan of services during FY 2010 (Cohort I), 15,396 Veterans applied for and began a plan of services during FY 2012 (Cohort II), and 21,082 Veterans applied for and began a plan of services during FY 2014 (Cohort III). As of the end of FY 2018, members of Cohort I have been participating in the VR&E Longitudinal Study for almost nine years and Cohort II members have been in the study for almost seven years. Cohort III participants have the shortest study tenure as of the end of FY 2018, with a study participation period of up to five years.



Figure 2-2. Number of VR&E Participants in Each Cohort of the Longitudinal Study



Source: Administrative Data

This current report describes the demographic and program characteristics of each Cohort, and assesses the outcomes-to-date for each Cohort, as of FY 2018.

For each Cohort, some proportion of members have completed their plans (i.e., successfully achieved rehabilitation or achieved their positive outcomes)

while other Cohort members have discontinued their rehabilitation plans. The remaining Cohort members are still pursuing the objectives of their rehabilitation plans. It is expected that Cohort members who have successfully completed the program will achieve better post-program outcomes than Cohort members who are still persisting in their plans or who have requested to discontinue their plans. Findings related to outcomes are presented by program participation status (i.e., persisting, rehabilitated, or discontinued) (see Figure 2-3) as of the end of FY 2018. Before presenting the findings for all three Cohorts as of the end of FY 2018, more details on the study methodology are provided in the next section.

Per the General Accounting Office (GAO) Study 14-61, it often takes Veterans 6 years or more to complete training and obtain suitable employment.

Figure 2-3. Definition of Cohort Subgroups included in the Analysis



Source: VR&E

## 2.A. Introduction to the VR&E Longitudinal Study

The primary objective of the VR&E Longitudinal Study is to determine the long-term post-program outcomes associated with Veterans who establish a plan of services. The long-term post-program outcomes of interest include employment, income, homeownership, and use of supplemental public programs, such as unemployment, Social Security disability, or other public assistance. Results of this study are intended to improve the quality of services that the VR&E program provides to Veterans.

Section 334 of P.L. 110-389 requires VA to report to Congress annually on 16 specific data elements. The 16 data elements include specific outcome measures to be assessed, as well as nine specific measures to be considered as possible covariates to be included in the analyses to explain employment outcomes. Table 2A-1 lists these outcomes and background characteristics along with the data sources that are used to define each measure.

The first step of data analysis includes a descriptive examination of the frequency distributions of various demographic and program characteristics of each Cohort, by participation status (i.e., persisting, rehabilitated, or discontinued). Observed differences among subgroups within each Cohort are examined further for statistical and programmatic significance, and differences across Cohorts are assessed as well. Examination of the cumulative annual rates for Veteran satisfaction, rehabilitation, and discontinuation over time provides insights into program trends. In addition to describing the characteristics of the Cohorts and discussing the trends related to exiting the VR&E program, regression modeling is used to identify the individual and program characteristics associated with program satisfaction and exiting the program.

The study focus – Long-Term Post-Program Outcomes such as:

**Employment** – Months employed and starting and ending salary for the current study year.

**Income** – Average annual and total household income.

**Homeownership** – Percent of Veterans who own their principal residences.

**Use of public programs** – Types of Social Security and unemployment benefits Veterans receive.

Table 2A-1. Data Elements Mandated by Section 334 of Public Law 110-389 to be Collected for the VR&E Longitudinal Study

Domain	Measure	Source of Data
Background characteristics	<ul style="list-style-type: none"> <li>▪ The number of individuals participating in vocational rehabilitation programs under this chapter who suspended participation in such a program during the year;</li> <li>▪ The average number of months such individuals served on active duty;</li> <li>▪ The distribution of disability ratings of such individuals;</li> <li>▪ The types of other benefits administered by the Secretary received by such individuals;</li> <li>▪ The number of such individuals enrolled in an institution of higher learning, as that term is defined in section 3452(f) of this title;</li> <li>▪ The average number of academic credit hours, degrees, and certificates obtained by such individuals during the year;</li> <li>▪ The average number of visits such individuals made to Department medical facilities during the year;</li> <li>▪ The average number of visits such individuals made to non-Department medical facilities during the year; and</li> <li>▪ The average number of dependents of each such Veteran.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Administrative Data</li> <li>▪ Administrative Data</li> <li>▪ Administrative Data</li> <li>▪ Administrative Data</li> <li>▪ Survey</li> <li>▪ Survey</li> <li>▪ Survey</li> <li>▪ Survey</li> <li>▪ Survey</li> </ul>
Employment	<ul style="list-style-type: none"> <li>▪ The average number of months such individuals were employed during the year; and</li> <li>▪ The average annual starting and ending salaries of such individuals who were employed during the year.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Survey</li> <li>▪ Survey, Administrative Data</li> </ul>
Income	<ul style="list-style-type: none"> <li>▪ The average annual income of such individuals; and</li> <li>▪ The average total household income of such individuals for the year.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Survey</li> <li>▪ Survey</li> </ul>
Homeownership	<ul style="list-style-type: none"> <li>▪ The percentage of such individuals who own their principal residences.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Survey</li> </ul>
Use of other public program benefits	<ul style="list-style-type: none"> <li>▪ The types of Social Security benefits received by such individuals; and</li> <li>▪ Any unemployment benefits received by such individuals.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Survey</li> <li>▪ Survey, Administrative Data</li> </ul>

Note: A copy of Section 334 of Public Law 110-389 is included in Appendix A.  
Source: Adapted from section 334 of P.L. 110-389

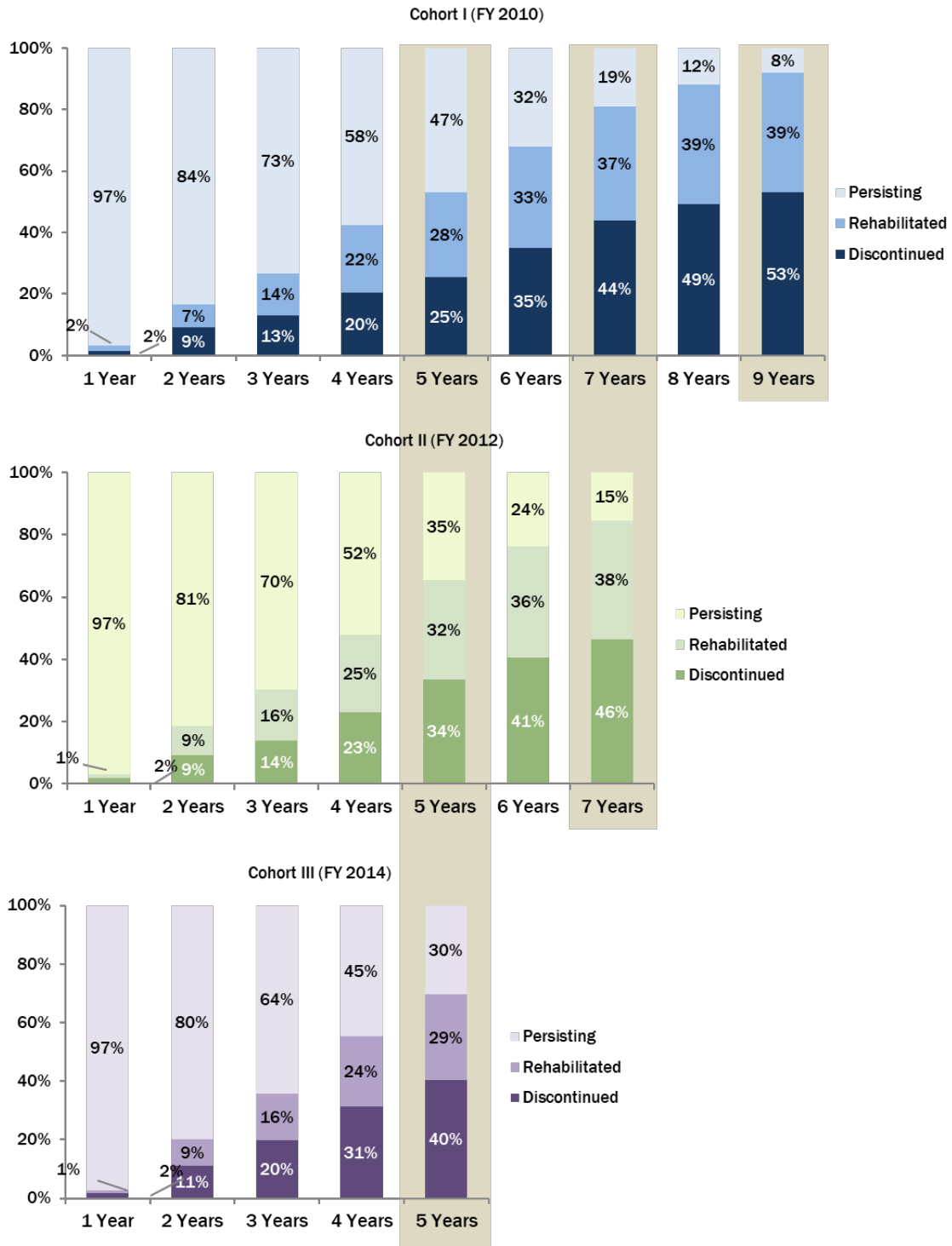
A similar strategy of first conducting descriptive analysis and then using regression analysis to identify key factors associated with the long-term post-program outcomes of interest was followed. Current differences and trends over time in employment, income, homeownership, and receipt of other program benefits were examined and compared for persisting, rehabilitated, and discontinued Cohort members. Differences among subgroups within each Cohort were assessed for statistical significance. In addition to describing the outcomes and discussing observed trends, regression modeling is used to determine the factors that are associated with long-term post-program outcomes.

At the end of FY 2018, Veterans in Cohorts I, II, and III have been pursuing the objectives of their individualized rehabilitation plan for up to nine, seven, and five years, respectively. Because the members of the three Cohorts have entered the study at different points in time and are at various stages of pursuing the objectives of their rehabilitation plans, comparisons across Cohorts cannot be made for end of the year outcomes (e.g., as of end of FY 2018). Instead, Cohort comparisons are examined for similar time frames, specifically where Cohorts have reached the same point in the program since entering the study. Figure 2A-1 shows that because Cohort II (FY 2012) members have been in the program for up to seven years, seven-year outcomes can be compared for Cohort II members with the seven-year outcomes for Cohort I (FY 2010) members. Similarly, five-year outcomes can be compared across all three Cohorts. Five-year outcomes only provide preliminary findings for this study. A detailed comparison of outcomes at these points can be found in Section 3F of this report. These findings are still considered preliminary as Veterans in the program face complex issues and may take longer to achieve rehabilitation. Program success such as rehabilitation is not measured until year six as a study conducted by the U.S. Government Accountability Office (GAO) revealed that it often takes Veterans six years or more to successfully achieve rehabilitation.<sup>7</sup>

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<sup>7</sup> <http://www.gao.gov/assets/670/660160.pdf>.

Figure 2A-1. Cohort Appropriate Comparison Points



Source: Administrative Data

## 2.B. Data Sources used for the VR&E Longitudinal Study

The VR&E Longitudinal Study data sources used for analysis include: (1) self-reported survey data collected from a sample of Cohort members, and (2) administrative data. Details about the survey methodology are included in Appendix B.

Administrative data focuses on information about the participants while they are in the program and their immediate post-program circumstances. Therefore, as Veterans complete their rehabilitation programs, there is limited administrative data available regarding the long-term outcomes of interest. After participants end their programs, available administrative data only provides information on changes in disability status, use of health care assistance, death status, and re-entry into the VR&E program. Information about employment and standard of living outcomes, such as changes in employment status, annual wages from employment, income, and homeownership, come from survey data. A copy of the survey instrument for the VR&E Longitudinal Study is included in Appendix C. Appendix D includes the list of relevant administrative variables used for analysis.

Main data sources for the VR&E Longitudinal Study:

- Survey Data
- Administrative Data

Findings reported in the first two years of the VR&E Longitudinal Study (2010 and 2011 report) were based on available administrative data. The initial survey for the study was administered to Cohort I and Cohort II in the Fall of 2012, and annual follow-up surveys were fielded every subsequent year. For this current report, data collection for the sixth annual follow-up survey began in the winter of 2018 for Cohorts I and II. All Veterans and Servicemembers in Cohorts I and II who completed the initial survey in 2012 were encouraged to participate this year for the sixth annual follow-up unless they had explicitly refused to be included in the survey moving forward.<sup>8</sup> The initial survey for Cohort III was administered early in 2015, and the fourth annual follow-up was administered in the winter of 2018.

The sampling plan for the survey was designed to yield 3,500 completed surveys from each Cohort during the initial year of administration. This was achieved with 3,710 Cohort I members, 3,636 Cohort II members, and 4,102 Cohort III members responding to the initial survey. These same respondents who completed the initial survey were the starting sample for the FY 2018 survey administration, which yielded 1,689 responding from Cohort I, 1,625 responding from Cohort II, and 1,925 responding from Cohort III (see Table 2B-1).<sup>9</sup>

<sup>8</sup> During the first year of survey data collection in 2012, a \$20 incentive was offered to Veterans who completed the initial survey. The incentive was not offered for the first annual follow-up administered in 2013, however a \$20 incentive was reinstated for the 2014 survey. For the 2015 survey year, a \$10 incentive was provided to survey respondents. The incentive was not offered for the 2016, 2017, or this year's survey.

<sup>9</sup> Appendix E includes details on the procedures used for survey non-response weighting.

Table 2B-1. VR&E Longitudinal Survey Completions during FY 2018 Administration

Respondent Type	Sixth Annual Follow-up Survey		Fourth Annual Follow-up Survey
	Cohort I (FY 2010)	Cohort II (FY 2012)	Cohort III (FY 2014)
Cohort population	10,791	15,396	21,080
Total initial survey respondents	3,710	3,636	4,102
Deceased survey sample members	119	87	49
Final refusals from previous survey cycles <sup>3</sup>	145	95	58
Eligible potential respondents for FY 2018 survey	3,446 <sup>1</sup>	3,454 <sup>1</sup>	3,995 <sup>2</sup>
Final refusals from FY 2018 survey <sup>3</sup>	7	9	11
FY 2018 survey non-respondents	1,757	1,819	2,070
FY 2018 survey respondents (completed surveys)	1,689	1,625	1,925
Web survey	921	988	1,143
Mail survey	389	307	320
Telephone survey	379	330	462
Response rate	49.01%	47.05%	48.19%

<sup>1</sup> Eligible potential respondents include Cohort members who completed the initial survey and were still alive at the start of the field period for the third annual follow-up.

<sup>2</sup> Eligible potential respondents include Cohort members who were not deceased and Cohort members who did not refuse to be contacted for follow-up surveys.

<sup>3</sup> Final refusals include those respondents who indicate that they do not want to participate and want no further contact about the study in future years.

Source: VR&E Longitudinal Survey

## 2.C. Policy and Environmental Conditions at Cohort Entry

There are many factors that influence a Veteran’s decision to seek assistance from VR&E. Many of these are personal factors, such as the nature and severity of a disability, level of education, professional skills, length of time employed, and family finances. Once a VRC determines that a Servicemember or Veteran is entitled to VR&E benefits, personal factors, such as their ability, aptitude, and interest, will be assessed to help determine the type of track selection pursued while in the VR&E program, as well as the length of time it takes to complete the program. However, there are often external factors, such as underlying policy and environmental conditions that can affect program participation and subsequent employment outcomes. These conditions interact with the personal factors and may help to explain the decision to enter into a plan of services with VR&E and the outcome of that decision. Some of these external factors are discussed below in more detail to illustrate the conditions that were present at the time of Cohort entry. Note that the information provided in this section is in regard to Veterans at the time of entry into the program and does not provide analysis beyond those years. As such, the

information for this section is not updated beyond FY 2015, as all Cohort Veterans in the study were already enrolled in the VR&E program by that time.

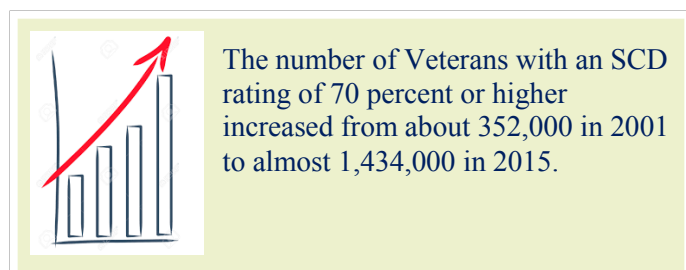
**Changes in number of potential eligible Veterans.** Both the number of Servicemembers separating from the military and the number of Veterans determined to have an SCD rating affect the potential number of Veterans eligible for VR&E services. Military personnel levels are typically expressed in terms of end strength, which is the maximum number of personnel each of the military services is authorized to have on the last day of the fiscal year (September 30). The number of military separations is related to the end strength cap and is dictated by Congress each fiscal year. Table 2C-1 shows the end strength levels authorized in FY 2007 through FY 2015 by the NDAA for each fiscal year. In general, between FY 2007 and FY 2011, end strength levels grew, peaking at just under one and one-half million Servicemembers. Since then, end strength levels have declined, which is likely to continue based on recent Congressional discussions regarding the Federal budget and requisite personnel levels for the military services.

**Table 2C-1. End Strength Levels Authorized in the National Defense Authorization Act, FY 2007 through FY 2015**

Fiscal Year	Army	Navy	Marine Corps	Air Force	Total
2007	512,400	340,700	180,000	334,200	1,367,300
2008	525,400	329,098	189,000	329,563	1,373,061
2009	532,400	326,323	194,000	317,050	1,369,773
2010	562,400	328,800	202,100	331,700	1,425,000
2011	569,400	328,700	202,100	332,200	1,432,400
2012	562,000	325,700	202,100	332,800	1,422,600
2013	552,100	322,700	197,300	329,460	1,401,560
2014	520,000	323,600	190,200	327,600	1,361,400
2015	490,000	323,600	184,100	311,220	1,308,920

Source: NDAA for FY 2007 through FY 2015

The declining active duty end strength numbers stem from military policy and budgetary decisions. The U.S. military completed its withdrawal of troops from Iraq in 2011 and began a drawdown of forces in Afghanistan in 2012. In January 2012, Secretary of Defense Leon Panetta announced that Pentagon spending would be decreased over the next decade by \$487 billion. In general, as end strength declines, the number of military separations increases. Table 2C-2 shows the number of military separations from FY 2007 through FY 2015 for all branches of service combined. Overall, the table shows an increase in separations between FY 2010 and FY 2014, while in FY 2015 there was a sudden decrease.





**Table 2C-2. Number of Military Separations from FY 2007 through FY 2015**

Fiscal Year	Total
2007	210,226
2008	185,101
2009	179,273
2010	176,248
2011	184,484
2012	201,958
2013	206,218
2014	204,556
2015	188,276

Source: Department of Defense, Office of the Deputy Assistant Secretary of Defense for Military Community and Family Policy, *Annual Demographic Profile of the Military Community Reports 2007-2015*. Accessed from [http://www.militaryonesource.mil/search?content\\_id=268828](http://www.militaryonesource.mil/search?content_id=268828).

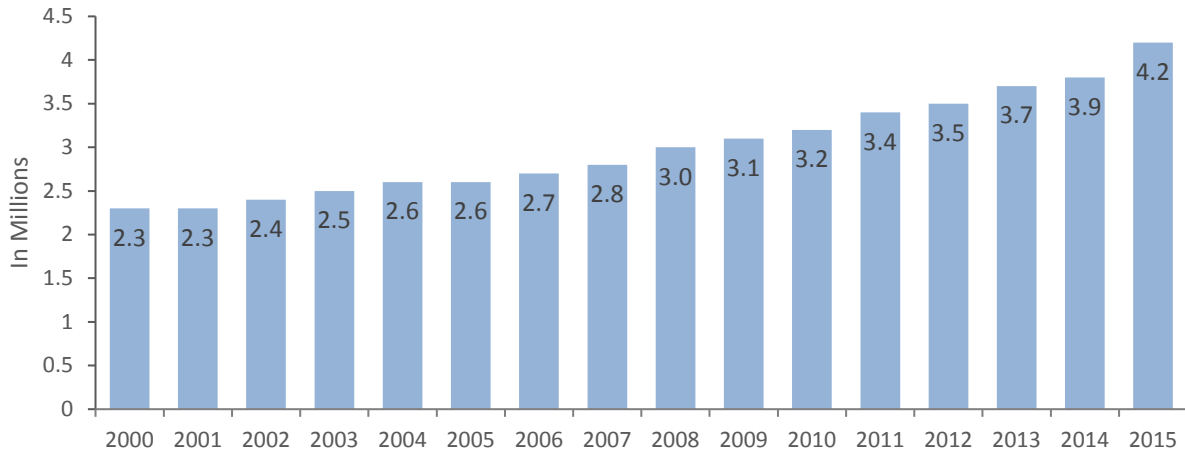
A greater portion of military personnel are transitioning to Veteran status with a disability rating. Due to the improvements and technological advances in military medicine and equipment, more Servicemembers are surviving injuries, compared to previous wars. One research study<sup>10</sup> that examined injuries related to involvement in the Iraq and Afghanistan campaigns reported that, unlike previous wars such as World War II and the Vietnam conflict where only 70 to 75 percent of Servicemembers survived their injuries, more than 90 percent of Operation Enduring Freedom/Operation Iraqi Freedom Servicemembers survived their injuries. However, consequently, some

soldiers separate from active duty with multiple injuries, to include many with “invisible wounds” such as hearing impairments, degenerative vision, PTSD. These injuries can have a significant impact on a Veteran’s ability to obtain and maintain employment.

As Figure 2C-1 shows, the number of Veterans with an SCD has risen substantially since 2000. Further examination of this same data indicates that the growth in the number of Veterans with an SCD is concentrated among those rated 50 percent or higher (see Figure 2C-2). In particular, there has been a marked increase in the number of individuals with disability ratings of 70 percent or higher starting in 2001, coinciding with the beginning of combat operations in Afghanistan.

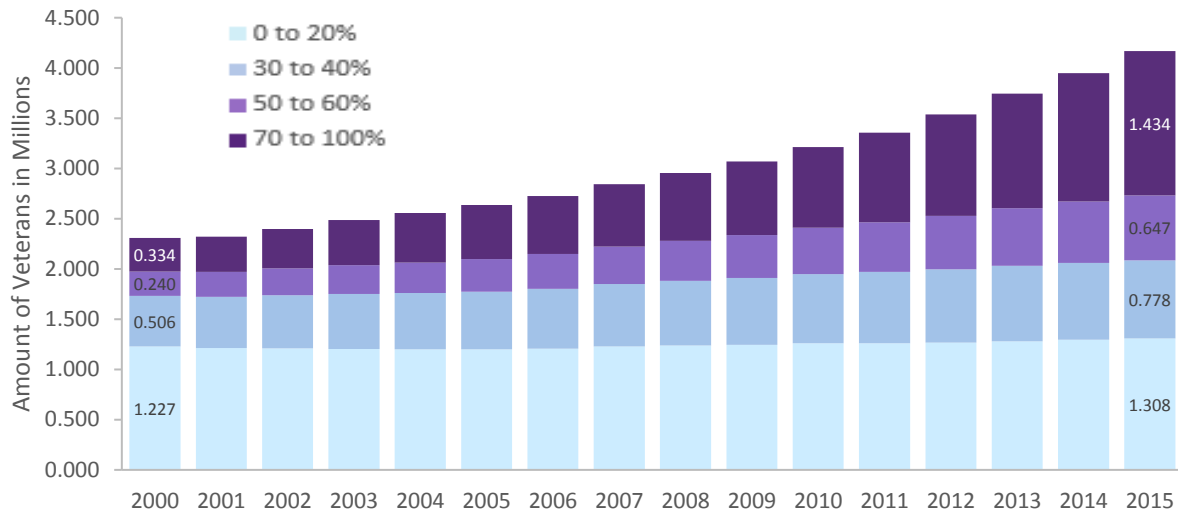
<sup>10</sup>Gawande, Atul, “Casualties of War - Military Care for the Wounded from Iraq and Afghanistan,” *New England Journal of Medicine*, Vol. 351, No. 24, December 2004, pp. 2471-2475.

Figure 2C-1. Number of Veterans with an SCD, FY 2000 - FY 2015



Source: Department of Veterans Affairs, VBA Annual Benefits Reports, 2000-2015

Figure 2C-2. Number of Veterans with an SCD by Disability Rating Groups, FY 2000 - FY 2015



Source: Department of Veterans Affairs, VBA Annual Benefits Reports, 2000-2015

The number of Veterans receiving disability compensation has also steadily grown in recent years, increasing by over one million individuals (~41 percent) between FY 2008 and FY 2015 (see Table 2C-3). In fact, as shown in Table 2C-4, the number of Veterans who began receiving disability compensation increased by more than 60 percent between FY 2008 and FY 2015. This trend is due to increased efforts by VA to reduce the disability claims backlog and the substantial growth in the number of Veterans with an initial disability rating of 50 percent or higher in this time period, indicating more complex or severe disabilities.

**Table 2C-3. Number of Veterans with SCDs Receiving Compensation, FY 2008 through FY 2015**

Fiscal Year	Total
2008	2,952,282
2009	3,069,652
2010	3,210,261
2011	3,354,741
2012	3,536,802
2013	3,743,259
2014	3,949,066
2015	4,168,774

Source: Department of Veterans Affairs, VBA Annual Benefits Reports, 2008-2015

**Table 2C-4. Number of Veterans with SCDs Who Began Receiving Compensation by Disability Rating, FY 2008 through FY 2015**

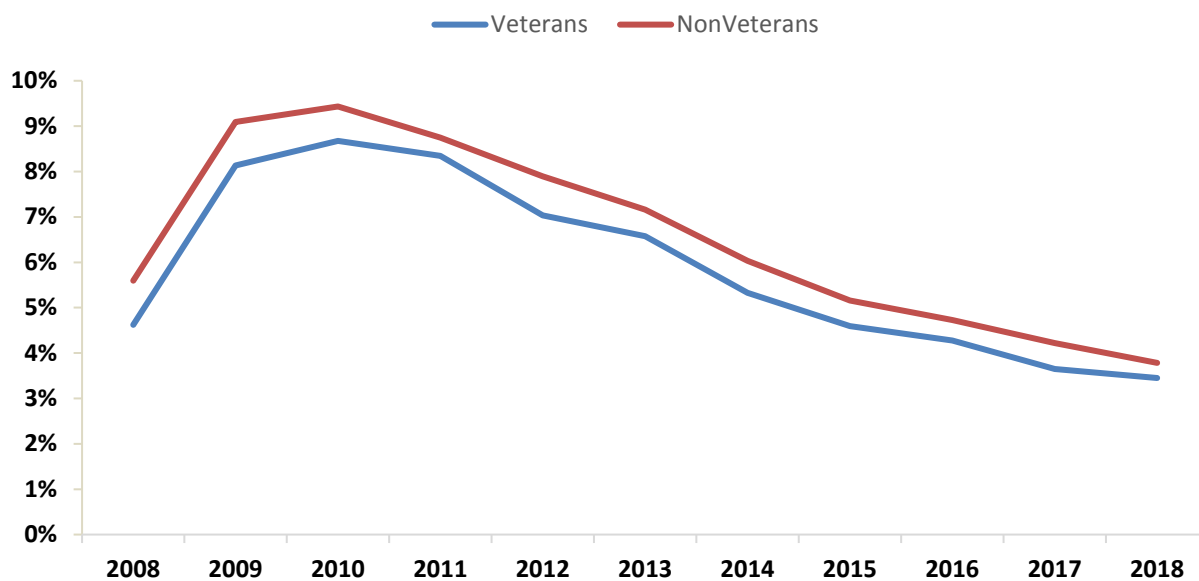
Disability Rating	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	Percent Change: FY 2008 to FY 2015
0%	551	624	635	522	710	781	753	611	11%
10%	53,374	58,949	70,872	68,834	67,541	72,608	72,759	77,773	46%
20%	33,024	34,069	36,763	28,980	31,163	32,248	30,286	29,771	-10%
30%	26,368	27,495	29,078	32,089	30,602	31,549	29,985	30,604	16%
40%	20,539	21,311	21,145	18,576	24,051	26,554	25,436	26,294	28%
< 50%	133,856	142,448	158,493	149,001	154,067	160,740	159,219	165,053	23%
50%	14,513	15,239	16,217	15,989	20,979	23,083	22,727	24,518	69%
60%	13,849	14,873	14,903	18,314	24,477	26,880	26,341	27,697	100%
70%	10,031	10,729	11,457	12,297	21,280	25,410	25,318	27,738	177%
80%	6,233	7,199	7,648	7,808	15,054	19,664	20,799	22,234	257%
90%	2,927	3,475	4,010	4,131	9,070	13,611	16,208	18,439	530%
100%	9,909	11,103	12,175	15,467	16,912	20,287	23,264	27,373	176%
50%-100%	57,462	62,618	66,410	74,006	107,772	128,935	134,657	147,999	158%
<b>Total</b>	<b>191,318</b>	<b>205,066</b>	<b>224,903</b>	<b>223,007</b>	<b>261,839</b>	<b>292,675</b>	<b>293,876</b>	<b>313,052</b>	<b>64%</b>

Source: Department of Veterans Affairs, VBA Annual Benefits Report 2015

## 2.D. Trends in a U.S. Economic and Veteran Employment Context

Over time, it is likely that the U.S. economic and employment climate has a potential impact on the number of Veterans seeking assistance from VR&E. Figure 2D-1 shows that from 2008 through 2018 Veteran unemployment mirrored overall unemployment, with Veterans consistently having roughly one percentage point lower unemployment rates than the overall population. According to the Bureau of Labor Statistics, in August 2018 the unemployment rate for Veterans with an SCD mirrored that of Veterans with no disability.<sup>11</sup>

Figure 2D-1. Annual Unemployment Rates for the Total Population, 18 Years and Older by Veteran Status, FY 2008-FY 2018

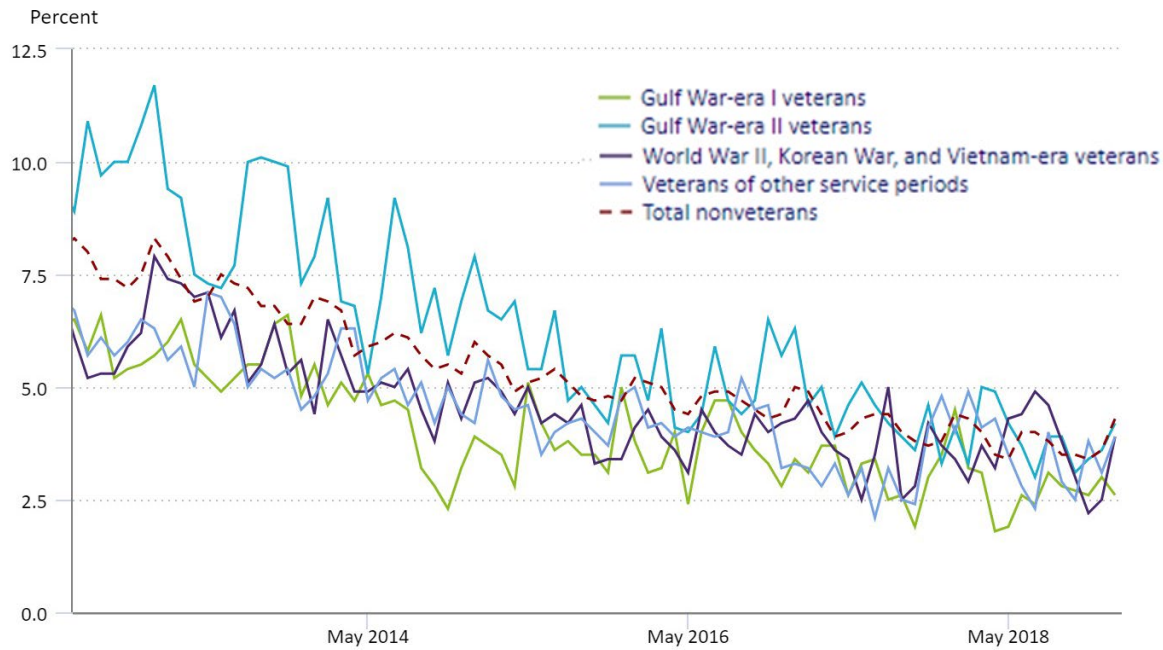


Source: Bureau of Labor Statistics, Labor Force Statistics from the Current Population Survey extracted on February 1, 2019. Accessed from <http://www.bls.gov/webapps/legacy/cpsatab5.htm>.

Although unemployment rates declined from 2010 to 2016, the job market remained relatively competitive. Figure 2D-2 shows that Gulf War Era I Veterans (served August 1990 – August 2001) have generally seen unemployment rates lower than nonveterans, while Gulf War Era II Veterans (service beginning September 2001 - present) still show higher unemployment rates than any other Veteran group. However, the unemployment rate for Gulf War Era II Veterans has dropped by a large margin in recent years declining to a current unemployment rate of 4 percent compared to a high of 12 percent in January 2013.

<sup>11</sup> U.S. Department of Labor, Bureau of Labor Statistics, “Employment Situation of Veterans Summary,” Washington, D.C., March 22, 2019.

Figure 2D-2. Unemployment Rates for Veterans Compared to Non-Veterans, July 2012 through January 2019 (in percent)



Source: Developed from <https://www.bls.gov/charts/employment-situation/unemployment-rates-for-persons-18-years-and-older-by-veteran-status.htm>

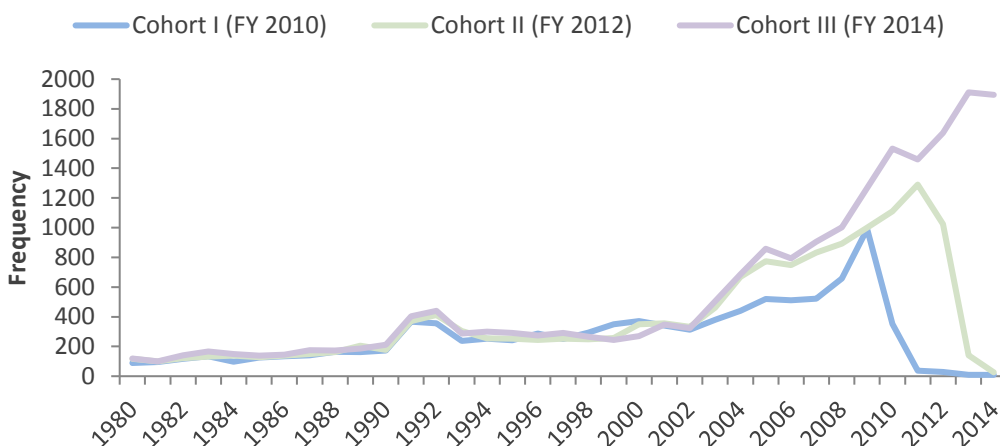
**Legislative changes concerning Veterans returning to work.** In recent years, several pieces of legislation have expanded and enhanced VR&E services for Servicemembers and Veterans. VA conducted extensive outreach to inform Servicemembers and Veterans of recent provisions and the availability of these expanded benefits. In 2011, P.L. 111-377, for example, modified the program so that Veterans eligible for both VR&E training and the Post-9/11 GI Bill could elect to receive the Chapter 33 Post 9/11 training subsistence allowance rate instead of the VR&E subsistence allowance rate. In 2012, Title II of P.L. 112-56 Section 232 removed the requirement that the Veteran must be determined rehabilitated to the point of employability in order to participate in the special employer incentive program; thus, making this option available to more VR&E participants. As the long-term post-program outcomes of the study Cohorts are assessed over time, it will be important to understand the nature and extent of these recent legislative changes to the VR&E program, as they could affect both program participation and long-term outcomes. In fact, the VR&E program has experienced a significant increase in program participation beyond FY 2012.

The number of Veterans and Servicemembers who began a VR&E rehabilitation plan has substantially increased: Cohort III (FY 2014) is 95 percent larger than Cohort I (FY 2010).

**Recent increases in VR&E program participation.** From FY 2012 to FY 2014, there has been a marked increase in the number of Servicemembers and Veterans who began a VR&E rehabilitation plan of services. There are 43 percent (4,605) more members in Cohort II (FY 2012) than in Cohort I (FY 2010) and 37 percent (5,692) more members in Cohort III (FY 2014) than in Cohort II. While the exact reason(s) for this increase is difficult to discern, there are several factors that contribute to this increase over time in the number of Veterans and Servicemembers who apply for and begin a plan of VR&E services as discussed below.

First, increases in the number of Veterans eligible for VR&E services are driven, in part, by increases in military separations and the number of Veterans with an SCD. Second, there has been a marked increase in the number of Veterans with a combined disability rating of 50 percent or more since 2007, which may contribute to the demand for VR&E services. Consistent with these trends, Figure 2D-3 reveals that the increase in the size of the Cohorts from FY 2010 to FY 2014 is largely due to higher numbers of recently separated Veterans seeking VR&E services.

**Figure 2D-3. Distribution of the Year of Military Separation (from 1980 to 2014) for Cohorts I, II, and III**



Source: Administrative Data

Third, in addition to the growth of disability claims in recent years, in the past two years, VBA has increased efforts to reduce the claims backlog. The claims backlog totaling 611,703 on March 25, 2013, was substantially reduced to 83,005 as of February 23, 2019, a reduction of 86 percent.<sup>12</sup> The decreased backlog means an increased number of Veterans who are eligible to apply for VR&E benefits.

Fourth, although the U.S. economic and employment climate is improving, the job market remains competitive, which may be encouraging more individuals to seek VR&E services. Finally,

<sup>12</sup> [http://benefits.va.gov/reports/mmwr\\_va\\_claims\\_backlog.asp](http://benefits.va.gov/reports/mmwr_va_claims_backlog.asp).

recent changes in program eligibility and provisions may have attracted more Veterans with SCDs to the program.

In addition, recent agency-level initiatives such as IDES have focused on increased outreach to Veterans and Servicemembers and may have had an impact on the number of Veterans entering into a plan of services with VR&E. No doubt the cumulative effect of all of these related factors has contributed to the increase in the number of Veterans and Servicemembers who begin a plan of VR&E services.

## 2.E. Interpreting Longitudinal Study Findings

This current report presents findings for the VR&E Longitudinal Study as of FY 2018, the eighth year of the 20-year study period. Summary findings for all three Cohorts are presented in Section 3 of the report. Information on how to interpret the information presented in summary tables and figures is provided in Appendix F. Detailed findings for each Cohort are provided separately in Appendices G, H, and I. As of the end of FY 2018, Cohort I members have been in the VR&E program for at most nine years. Cohort II members who began services very early in FY 2012 have been in the program for at most seven years. Similarly, Cohort III members who began services very early in FY 2014 have been in the program for at most five years. At this early point in the study period, emerging trends related to outcomes can be described. Since many Cohort members have only recently completed their rehabilitation plans, any conclusions drawn at this point in the 20-year study period are preliminary. However, emerging trends for those Cohort members who have exited the VR&E program thus far, especially so for those who successfully completed their rehabilitation plans, appear to be consistent over time and across Cohorts.

Since many Cohort members have just recently exited the program, post-program findings are still preliminary at this point in the study.

**Program outcomes.** As Veterans work to complete the objectives of their rehabilitation plans, the proportion of Cohort members who exit the program increase over time. Since most VR&E participants pursue Employment through Long-Term Services track, which usually takes multiple years to complete, the majority of Veterans are still persisting or have only recently exited the program. In FY 2018, there are a substantial number of Veterans who have exited the program. Hence, this current report describes the characteristics of those Cohort members who are still persisting and have successfully achieved rehabilitation, as well as those who have been discontinued, by the end of FY 2018.

**Long-term employment and standard of living outcomes.** A proportion of Cohort members have now achieved rehabilitation or were discontinued as of FY 2018 allowing analysis of outcome data and description of early trends related to employment and income, particularly for Cohort I. Since those Cohort members have been in the study for up to nine years, a larger proportion of Cohort I members, relative to Cohorts II and III, have achieved rehabilitation (or were discontinued) and more positive outcomes. However, these post-program findings are still preliminary at this point in the study.

It remains important to **track** changes such as **returns** after discontinuation or **re-entering** the program after having successfully completed the program to examine how entering the program more than once may influence outcomes.

**Future reports.** As these three Cohorts are followed over time and as more VR&E participants exit the program, there will be more information on the long-term post-program outcomes and the key programmatic and demographic factors influencing these outcomes. As multiple years of data are collected, it will be possible to examine more noticeable trends in outcomes.

Furthermore, it is reasonable to expect that trends in outcomes across all three Cohorts will become increasingly similar as the majority of Veterans will have exited their program of service.

Section 3E of this report provides a preliminary analysis of program participants who re-enter the program after achieving rehabilitation or being discontinued. As more Veterans re-enter the program, it will be imperative in future reports to examine how entering the program more than once may influence outcomes. Future reports will also include an analysis of administrative data provided to VA from another Federal Agency, such as Social Security Administration or Health and Human Services, through the use of a data sharing agreement, which will provide more accurate estimates on the number and percentage of Cohort members who receive income from various Social Security programs, such as the Disability Insurance program.



### 3. CURRENT FINDINGS AS OF FY 2018

As of FY 2018, Cohort I members have been tracked in the VR&E Longitudinal Study for up to nine years, and Cohort II members have been in the study for up to seven years. VR&E participants in Cohort III have the shortest tenure being in the study for five years. This section of the report presents a summary of findings for all three Cohorts as of FY 2018. Appendix F provides summary information on how to understand and interpret the data presented in the tables and figures. Appendices G, H, and I present more detailed findings for each of the three Cohorts as of FY 2018.

On July 1, 2015, VR&E implemented new program performance measures that place a greater focus on Veteran outcomes and their accomplishments. These new measures of Veterans' success in the VR&E program are driven by positive outcomes and active participation. Positive outcomes include rehabilitation (IL and employment), rehabilitation for further education, and MRG (either employed or employable). These new metrics effectively measure Veterans' outcomes at every stage of their progression through the program and more accurately account for Veterans' multi-year participation in the VR&E program.

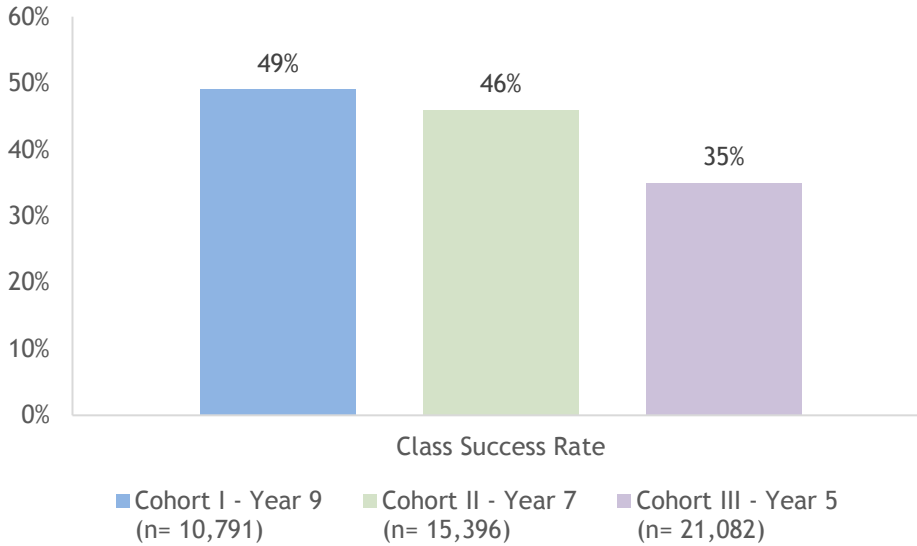
The new model of Veteran success is similar to a college graduation rate and includes two specific outcome measures:

**Class Success Rate:** Percentage of Veterans after six years in the VR&E program who obtain a positive outcome measured against all Veterans in their class.

**Class Persistence Rate:** Percentage of Veterans after six years in the VR&E program who obtain a positive outcome and the number of Veterans persisting in their enrollment, measured against all Veterans in their class.

Figure 3-1 shows the current Class Success Rates for all three Cohorts. VR&E set the Class Success Rate target goal at 55 percent, which is expected to be met at the end of six years. Overall, the Class Success Rate for all Cohorts are lower than the 55 percent goal. Cohort I is at 49 percent, Cohort II is at 46 percent, and Cohort III is at 35 percent. Cohort III's success rate cannot be evaluated yet as the Cohort members are only five years from program entry. The lower than expected success rates for Cohorts I and II might be attributed to re-entries into the program.

Figure 3-1. Class Success Rates by Cohort (to date)



Source: Administrative Data, FY 2018

Table 3-1 provides a more detailed data on successful outcomes. At least 79 percent of Cohort I successful outcomes come from rehabilitations compared to 83 percent for Cohort II and 84 percent for Cohort III. For discontinued Veterans, it is considered a successful outcome if the Veteran is employable in a suitable occupation or is not currently employable, but:

- Has been receiving services toward a vocationally oriented goal;
- Substantially improved his or her circumstances through gain in self-management, self-advocacy, or independence in daily living;
- Does not currently need IL services, or may need IL services but is unable or unwilling to participate, as shown in his or her assessment; or
- The Veteran is employed due to contributions from the VR&E program, but their employment does not meet with criteria for closure as rehabilitated.

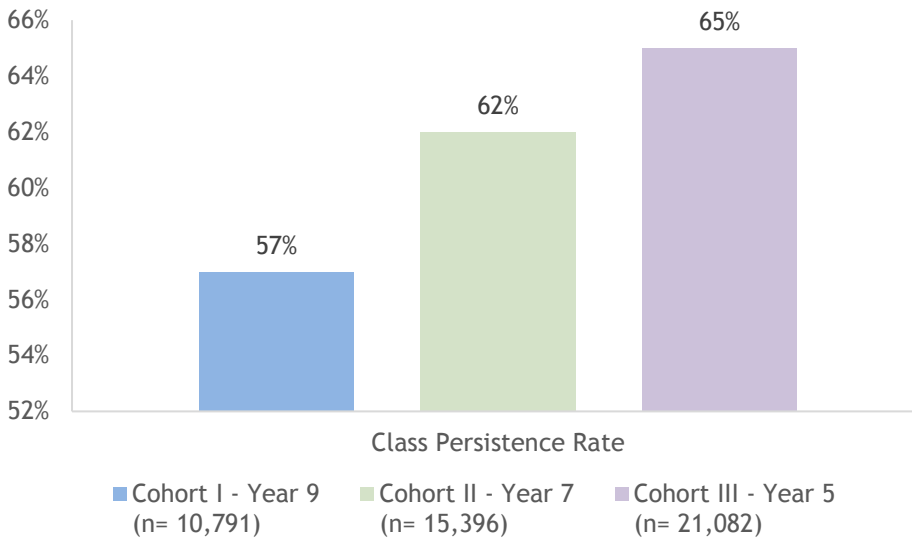
Table 3-1. Successful Outcomes by Code for All Three Cohorts

Current Observation	Cohort I (FY 2010)	Cohort II (FY 2012)	Cohort III (FY 2014)
Rehabilitated from IL	660	554	348
Rehabilitated from Employment	3,511	5,316	5,836
Rehabilitated from Unknown Track	33	7	1
Discontinued and Employable	889	1,025	998
Discontinued and Employed	195	194	213
Total Positive Outcomes	5,288	7,096	7,396

Source: Administrative Data, FY 2018

For the Class Persistence Rate (Figure 3-2), VR&E set a target goal of 70 percent. While none of the Cohorts meet or exceed the class persistence rate, Cohort III is the closest at 65 percent.

Figure 3-2. Class Persistence Rates by Cohort (to date)



Source: Administrative Data, FY 2018

The rest of this chapter explores FY 2018 data in a similar manner as in previous reports. Section 3A details Veteran satisfaction with the VR&E program. Section 3B provides a profile of select demographic characteristics of VR&E participants. Program outcomes, such as rehabilitation and discontinuation, are analyzed in Section 3C. Section 3D reveals findings related to employment and standard of living outcomes. Section 3E provides analysis of Veterans who re-enter the program after rehabilitation or discontinuation. Finally, in Section 3F, findings across Cohorts are compared.

### 3.A. Veteran Satisfaction

Through the survey, Cohort members were asked to rate their overall experience with the VR&E program, using a 1 to 9 scale, where 1 is unacceptable, 5 is average, and 9 is outstanding. Scale scores between 1 and 3 indicate low satisfaction, whereas scale scores between 7 and 9 indicate high satisfaction. Scale scores near the midpoint of the scale (4 to 6) indicate moderate satisfaction. Figure 3A-1 compares the proportion of VR&E participants, across the three Cohorts, who reported moderate or high satisfaction with the program as of FY 2018, separately for persisting, rehabilitated, and discontinued Cohort members. The survey data is weighted and summed to the Cohort population. As shown in the figure, for all three Cohorts, the majority of VR&E participants are satisfied with the program.

**~88%**  
Veterans reporting **moderate to high satisfaction** with the VR&E program.

For all three Cohorts, at least 86 percent of Cohort members who achieved rehabilitation or who

**~80%**  
Of discontinued Veterans in all Cohorts reported **moderate to high satisfaction** as of FY 2018.

are still persisting reported moderate or high satisfaction with the program as of FY 2018. The majority (about two-thirds) of Veterans report high satisfaction. In fact, roughly three-quarters of Veterans who achieved rehabilitation reported high satisfaction across all three Cohorts.

A substantial proportion of discontinued Cohort members also report being satisfied with the program. Roughly 80 percent of discontinued Veterans in all Cohorts reported moderate to high satisfaction as of FY 2018. More detailed findings presented in Appendices G, H, and I indicate that the percentage of discontinued participants reporting high levels of satisfaction with the VR&E program have increased over time for all three Cohorts.

Figure 3A-1. Percentage of VR&E Participants Reporting Moderate or High Overall Satisfaction with the Program by Participation Status as of the end of FY 2018, by Cohort



Note: Percentages (%) reported in figure are based on survey data that has been weighted to reflect the Cohort population.  
 Source: VR&E FY 2018 Survey Data

Multivariate regression analysis is used to identify the factors that affect how satisfied Veterans are with the VR&E program. The regression technique allows estimation of the effect of any given characteristic on Veterans' satisfaction, while holding all other characteristics constant. For example, female Veterans tend to be younger than male Veterans. If differences in outcomes by gender were examined alone, the analysis might also pick up an age effect, since gender and age are correlated in the Veteran population. If both gender and age were included in a regression analysis, the independent effect could be identified for each variable on the outcome of interest.

Table 3A-1 below provides a summary of the results of the regression model for all survey respondents.<sup>13</sup> The table displays the direction of impact (i.e., either a positive or negative association) for all variables that have a statistically significant association with Veteran satisfaction with VR&E.

**Table 3A-1. Factors that Contribute to Overall Program Satisfaction as of the end of FY 2018**

Explanatory Variable	Direction of Effect
Rehabilitated (compared to persisting)	+
Discontinued (compared to persisting)	-
Employment through Long-Term Services track (compared to IL)	+
Months of military service	+
Earned a degree in the past 12 months	+

Note: The effects are based on a linear regression estimation where the dependent variable is a continuous variable based on a 9-point scale where 1 is unacceptable, 5 is average, and 9 is outstanding.

Source: Regression Analysis of FY 2018 VBA Administrative and VR&E Survey Data

Several factors emerge as predictive of Veteran satisfaction with the VR&E program. Specifically, program participation status (persisting, rehabilitated, and discontinued) and being in the Employment through Long-Term Services track are the strongest drivers of program satisfaction. Achievement of rehabilitation is also associated with higher satisfaction, whereas discontinued Veterans provide lower satisfaction ratings. Those who are in the Employment through Long-Term Services track tend to have higher satisfaction ratings than their counterparts in the Independent Living track.

Two other significant predictors of satisfaction are the Veteran’s length of military service, which is measured in months, and whether the Veteran completed a college degree in the past 12 months. On average, the longer a Veteran served, the higher his or her rating of satisfaction with the VR&E program. Completion of a college degree in the past year is associated with higher program satisfaction scores, other things equal.

### **3.B. Select Characteristics of VR&E Participants**

In this section, select characteristics of Cohort members are assessed, including those mandated by Congress, and analysis is conducted to gauge how these characteristics relate to Cohort members’ program participation status as of FY 2018. Table 3B-1 lists the select participant characteristics examined. Descriptive examination of demographic and other background characteristics of participants can provide insight as to if and how these characteristics influence long-term post program outcomes over time.

<sup>13</sup> A single regression model was estimated using the data from all Cohorts, because (1) the data indicate that the strongest predictors of satisfaction are the same regardless of Cohort, and (2) the precision of estimates is improved when capitalizing on the larger sample size available when the Cohorts are combined.

Table 3B-1. Select Characteristics of VR&E Participants Examined in this Study

Characteristic	Description of Variables
Demographics	Serious employment handicap
	Gender
	Age at program entry
	Level of education at program entry
	Era of service
	Length of active duty military service
	Combined disability rating
	Number of dependents
Training selection	Program track
Receipt of other benefits	Visits to a VA medical facility during the past 12 months
	Visits to a non-VA medical facility during the past 12 months
	Receipt of other VA benefits (i.e., VA-insured life insurance and mortgage loans)
Receipt of education or training	Enrollment in an institution of higher learning during the past 12 months
	Number of credits completed during the past 12 months
	Attainment of a degree or certificate during the past 12 months

Source: EconSys Study Team

While Administrative Data allows us to examine certain background characteristics for the entire Cohort population, survey data provides additional information for a sample of the Cohort that is not otherwise available. The survey data have been weighted to reflect the Cohort population.

## Demographics

Table 3B-2 provides a snapshot of select demographic characteristics of the Cohorts, as of the end of FY 2018. About three-quarters of Cohort members have an SEH, which is consistent with the proportion in the overall VR&E population.<sup>14</sup> Determination of an SEH indicates significant impairment in a Veteran's ability to prepare for, obtain, or retain employment consistent with his or her abilities, aptitudes, and interests.

Approximately three out of four Cohort members have an SEH.

**Table 3B-2. Demographic Characteristics of VR&E Participants by Cohort, as of the end of FY 2018**

Demographic Characteristic	Cohort I (FY 2010)		Cohort II (FY 2012)		Cohort III (FY 2014)	
	#	%	#	%	#	%
<b>Total</b>	<b>10,791</b>	<b>100%</b>	<b>15,396</b>	<b>100%</b>	<b>21,082</b>	<b>100%</b>
<b>Serious Employment Handicap</b>						
Yes	8,082	75%	11,814	77%	15,705	74%
No	2,707	25%	3,581	23%	5,377	26%
<b>Gender</b>						
Male	8,952	83%	12,546	81%	16,815	80%
Female	1,839	17%	2,850	19%	4,267	20%
<b>Age at Program Entry</b>						
Less than 30	1,595	15%	2,679	17%	3,875	18%
30 - 44	4,505	42%	6,722	44%	9,847	47%
45 - 54	2,909	27%	3,769	24%	4,844	23%
55 and above	1,783	17%	2,226	14%	2,516	12%

Source: Administrative Data, FY 2018

Note: Due to rounding, not all columns will equal 100%

About one-fifth of Cohort members are female, with more females being represented in the Cohorts over time. The percentage of female Veterans in the VR&E Cohorts ranges from 17 to 20 percent and is greater than the percentage of female Veterans overall (10 percent<sup>15</sup>). However, the percent of females in these Cohorts is consistent with the rate of female Veteran participation in more recent years. As of 2018, females represented about 17 percent of the Gulf War Era II Veterans.<sup>16</sup>

<sup>14</sup> Source: Department of Veterans Affairs, VBA Annual Benefits Report, 2018.

<sup>15</sup> Based on 2018 Bureau of Labor Statistics data available at <http://www.bls.gov/news.release/pdf/vet.pdf>.

<sup>16</sup> Based on 2018 Bureau of Labor Statistics data available at <http://www.bls.gov/news.release/pdf/vet.pdf>.



Overall, Cohort members tend to be younger, with the majority being less than 45 years old when they begin their VR&E rehabilitation plans. When comparing age at program entry across Cohorts, Table 3B-2 indicates that, over time, the average age of VR&E participants has

decreased, from 57 percent of Cohort I members being less than 45 years old to 65 percent in Cohort III.

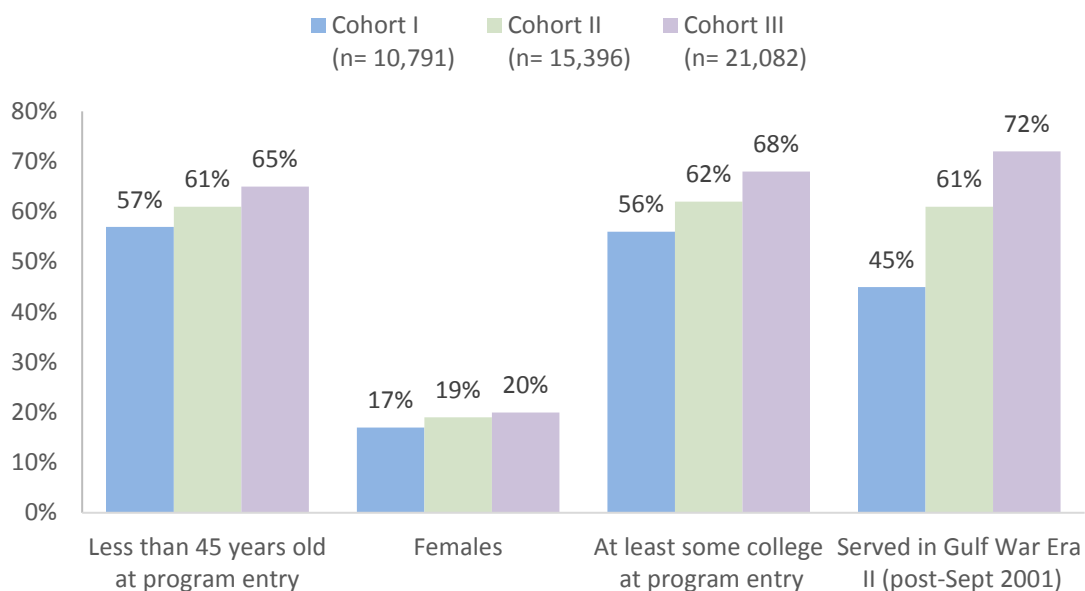
Over time, the **average age** of VR&E participants at program entry has **decreased** from 41 years old (Cohort I) to 39 years old (Cohort III). More participants are reporting **higher levels of prior education** at program entry. More recent Cohorts also have a larger proportion of female Veterans and Veterans who served during the Gulf War era.

decreased, from 57 percent of Cohort I members being less than 45 years old to 65 percent in Cohort III.

In addition to comparing age and gender across Cohorts, Figure 3B-1 presents trends for two other select demographic characteristics at program entry-level of education and era of service. As the figure indicates, over time, Veterans are

reporting higher levels of prior education at program entry and the percentage of female VR&E participants is increasing. Similarly, the percentage of participants who have served in Gulf War Era II is also increasing for more recent Cohorts. The majority of Cohort members are from Gulf War Era I, with most being from Gulf War Era II. In fact, among more recent Cohorts, the proportion who served during Gulf War Era I is decreasing while the proportion who served during Gulf War Era II is increasing.

Figure 3B-1. Key Demographic Trends of VR&E Participants at Program Entry



Source: Administrative Data, FY 2018

As shown in Table 3B-3, a substantially larger proportion of VR&E participants have a primary diagnosis of PTSD than the proportion for overall Gulf War Era I and Gulf War Era II Veterans. In addition, the proportion among Cohort members has increased over time, with almost one-quarter of Cohort I (FY 2010) participants having a PTSD primary diagnosis compared to almost one-third of Cohort III (FY 2014) participants.

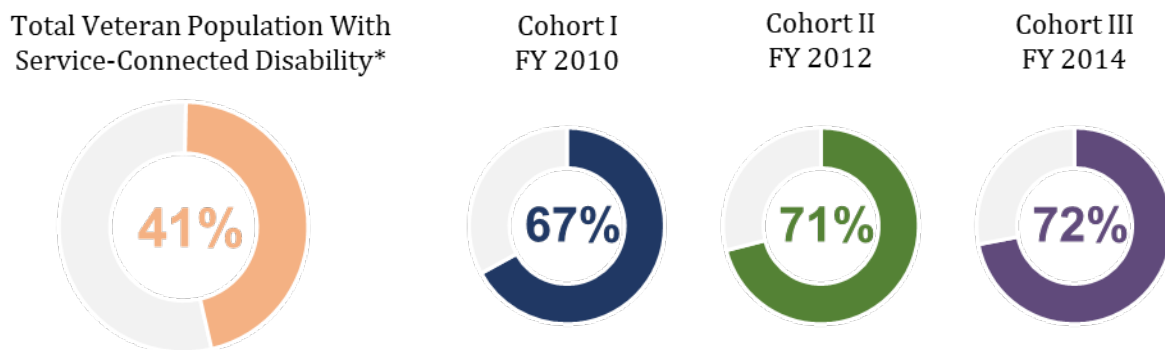
Comparison of the distribution for combined disability rating for each Cohort reveals that VR&E participants have a higher combined disability rating than the average FY 2018 VR&E participant. As shown in Figure 3B-2, on average, about two-thirds of Cohort members (67 percent for Cohort I, 71 percent for Cohort II, and 72 percent for Cohort III) have a combined disability rating of 60 percent or more. Among overall Veterans with an SCD, 41 percent reported a disability rating of 60 percent or higher in the August 2018 Current Population Survey.<sup>17</sup> In recent years, the percent of Veterans with a combined disability rating in all three Cohorts has increased by at least nine percent (Cohort 1 from 58 to 67 percent, Cohort II from 61 to 71 percent, and Cohort III from 61 to 72 percent).

**Table 3B-3. Percentage of VR&E Participants with a Primary Diagnosis of PTSD as of the end of FY 2018**

Cohort	Percentage
Cohort I (FY 2010)	23%
Cohort II (FY 2012)	29%
Cohort III (FY 2014)	30%
Gulf War Era I Veterans (Desert Storm)	10% <sup>1</sup>
Gulf War Era II Veterans (Iraq and Afghanistan)	11-20% <sup>1</sup>

<sup>1</sup> NIH Medline Plus. (2009) PTSD: A Growing Epidemic. 4(1): 10-14.  
Source: VR&E Administrative Data, FY 2018

**Figure 3B-2. Percentage of Veterans with a Combined Disability Rating of 60 Percent or Higher**



\* 4.7 million Veterans had an SCD in 2018, or 25 percent of the total Veteran population  
Source: Administrative Data, FY 2018

<sup>17</sup> Based on 2018 Bureau of Labor Statistics data available at <http://www.bls.gov/news.release/pdf/vet.pdf>.

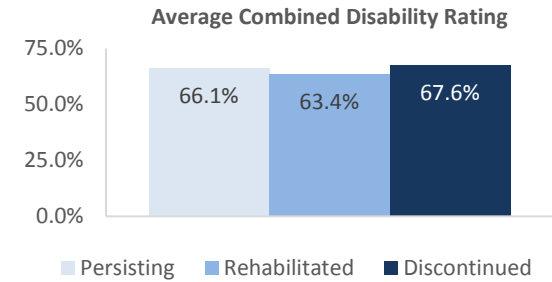
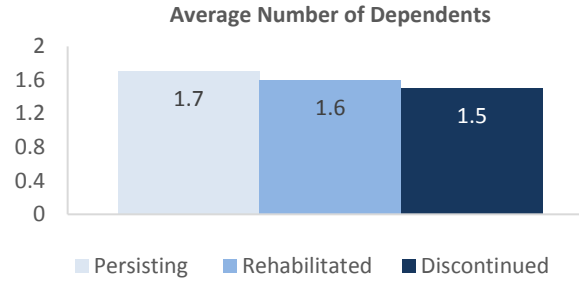
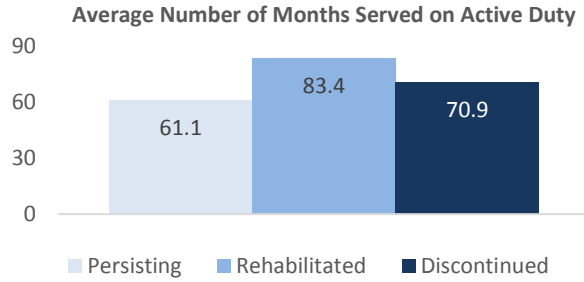
The legislation requiring this study seeks information on specific background characteristics of VR&E participants. Summary statistics on these mandated variables are provided in Figure 3B-3 for each Cohort, by participation status. Examination of the table reveals that VR&E participants in more recent Cohorts have served on active duty longer. Additionally, for all three Cohorts, participants who have achieved rehabilitation have served more months on active duty, relative to persisting and discontinued participants.

The figure also reports the average combined SCD rating for each Cohort. The findings indicate that, on average, VR&E participants have a combined disability rating of 60 percent or higher. Furthermore, the table reveals that, on average, discontinued participants have a higher combined disability rating than persisting participants or those who achieved rehabilitation.

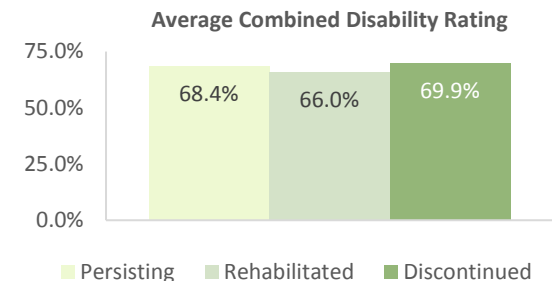
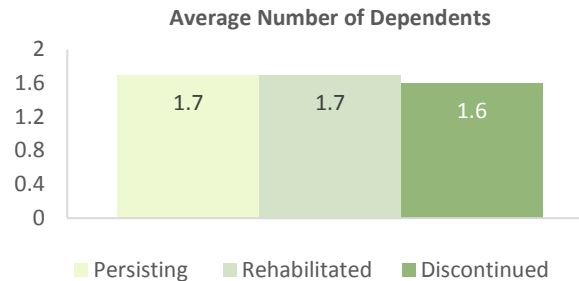
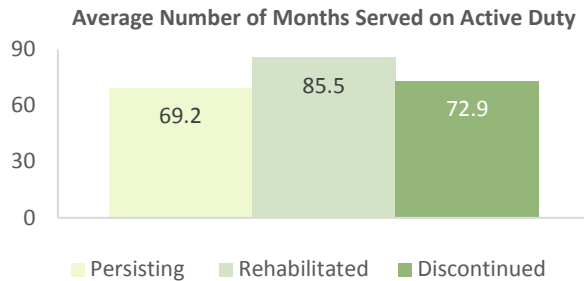
The legislation also requires the study to report the average number of dependents for VR&E participants. Cohort members report an average of slightly less than two dependents.

Figure 3B-3. Mandated Characteristics of VR&E Participants by Participation Status as of the end of FY 2018, by Cohort

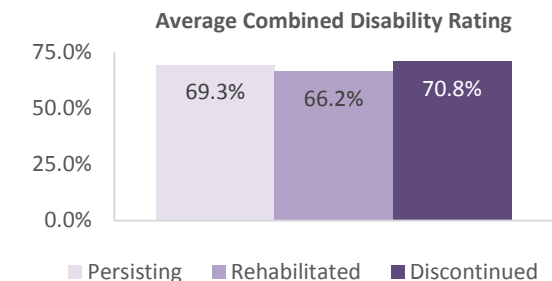
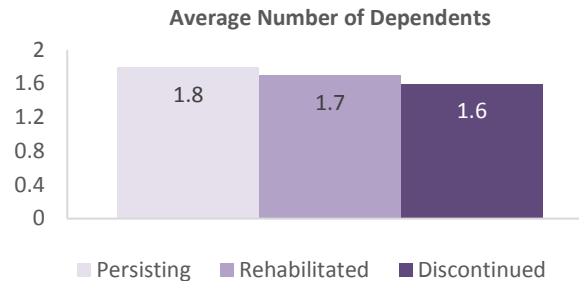
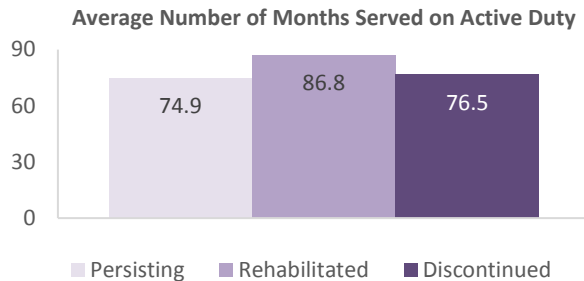
**Cohort 1 FY 2010 (n=10,791)**



**Cohort 2 FY 2012 (n=15,396)**



**Cohort 3 FY 2014 (n=21,082)**



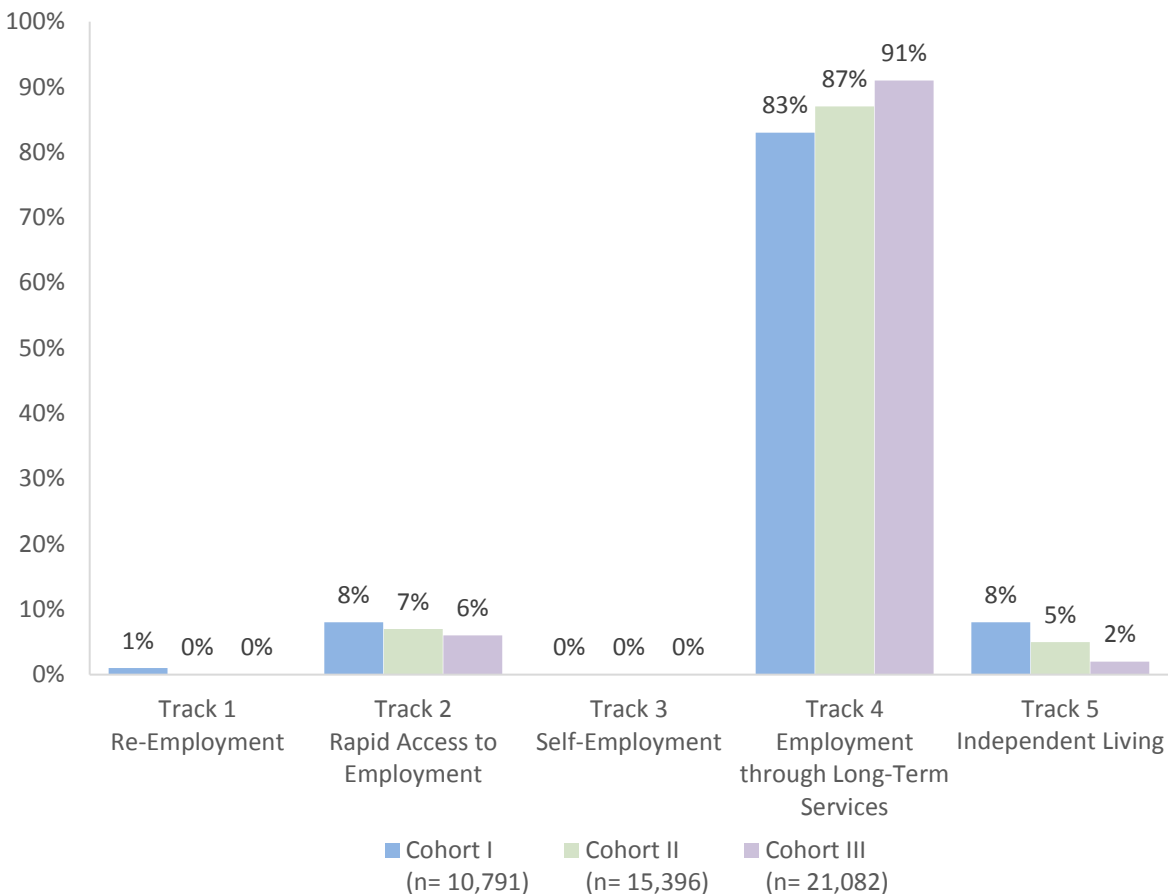
Source: FY 2018 VBA Administrative and VR&E Survey Data

## Training Selection

Figure 3B-4 provides a snapshot of each Cohort by its program track selection as of the end of FY 2018. The figure shows that the majority of participants (i.e., 83 percent for Cohort I, 87 percent for Cohort II, and 91 percent for Cohort III) are in the Employment through Long-Term Services track. Keeping in mind the length of time that has passed since the members of each Cohort began the VR&E program, it is important to note that track selection is one of a few characteristics that can change over time. As a result, a small proportion of Cohort members have changed tracks since entering the VR&E program.

Most Veterans in the VR&E program require significant support and retraining to obtain a suitable job. Not surprisingly, in all three Cohorts, the majority of participants pursue Employment through Long-Term Services Track.

Figure 3B-4. Track Selection of VR&E Participants by Cohort as of the end of FY 2018



Source: Administrative Data, FY 2018

The Employment through Long-Term Services track provides services that include career counseling, case management, employment planning, training or education, VHA-sponsored medical or dental care, job-placement assistance, and other supportive services. Given that most Veterans in the VR&E program require significant support and re-training to obtain a

suitable job, it is not surprising that Employment through Long-Term Services is the most widely used employment track.

The second most common track is Track 2, Rapid Access to Employment. The Rapid Access to Employment track assists disabled Veterans who already have the skills to be competitive in the job market and desire immediate employment. Given the nature of this track and the fact that many Veterans seeking services from VR&E require significant support, including additional training and education, a small proportion, less than 10 percent, of Cohort members pursue this track. However, for those that do pursue this track, it is expected that the majority achieve rehabilitation much earlier than Veterans in Employment through Long-Term Services track.

A small proportion of Cohort members are in an IL program. The goal of the IL program is to assist Veterans with achieving maximum independence in daily living and, whenever possible, to assist with increasing potential to return to work. If it is determined that a Veteran may return to work at the end of an IL program, then an evaluation is completed to determine what services will be provided and which track is appropriate for service delivery. However, for most participants of an IL program, especially so for those with the most serious impairments, the goal is to live as independently as possible. The Re-employment track and Self-Employment track have the smallest percentage of enrollment. The Re-employment track is for Veterans looking to return to their previous job after active duty, which limits the number of eligible Veterans. The Self-Employment track is for Veterans seeking assistance with starting their own business.

## Receipt of Other Benefits

Two additional background characteristics the Congressional legislation requires to be measured are the average number of medical visits VR&E participants make each year to VA medical facilities and non-VA medical facilities. Many Veterans utilize the health care benefits offered by VHA, which manages the largest health care system in the country.<sup>18</sup> Table 3B-5 reveals that, on average, Cohort members visited a VA medical facility almost twice as often as they visited a non-VA medical facility, averaging 13 visits to a VA medical facility during the past 12 months versus only seven

On average, VR&E participants **use VA-provided health care services** more frequently than the overall Veteran population.

A higher proportion of Cohort members who have achieved rehabilitation have **mortgage loans** that are insured by VA, relative to persisting and discontinued Cohort members.

visits to a non-VA medical facility during the same time frame. Examination of these data by participation status also reveals that discontinued participants report a higher number of average visits to a VA medical facility than persisting participants or participants who have achieved rehabilitation across all three Cohorts.

With an average of 13 visits a year, Cohort members appear to use VA-provided health care services more frequently than the overall Veteran population, which is not surprising given they have an SCD. For the Veteran population overall, a total of 9 million enrollees made a total of 95 million outpatient visits to VHA-managed facilities in FY 2015, yielding an average of about 11

<sup>18</sup> <http://www1.va.gov/health/aboutVHA.asp>.

visits for the year.<sup>19</sup> Additionally, all of VR&E participants are eligible to receive VHA health care, services, and treatment in accordance with VA statute 3104 and VHA Directive 1182 as necessary to develop, carry out, and complete their rehabilitation programs.

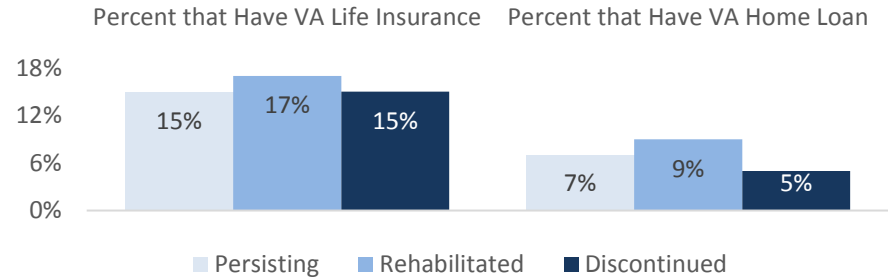
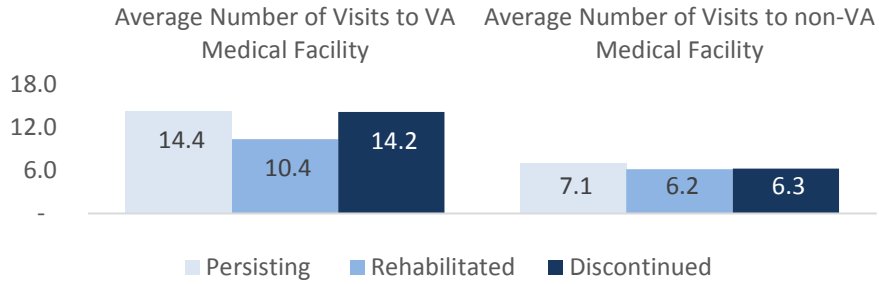
The Congressional legislation asks for information on the types of other VA benefits received by Cohort members. Using administrative data collected by VA, Figure 3B-5 reports the number and percentage of Cohort members who have life insurance through VA and have VA-insured mortgage loans. The table reveals that, for all three Cohorts, less than 20 percent of participants have VA life insurance policies as of FY 2018. The table also indicates a higher proportion of rehabilitated participants have mortgage loans that are insured by VA compared to persisting or discontinued participants.

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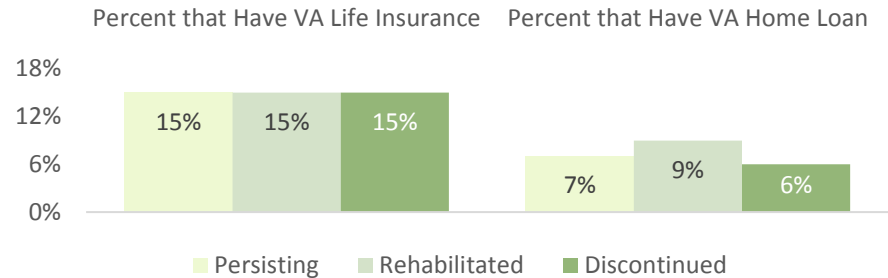
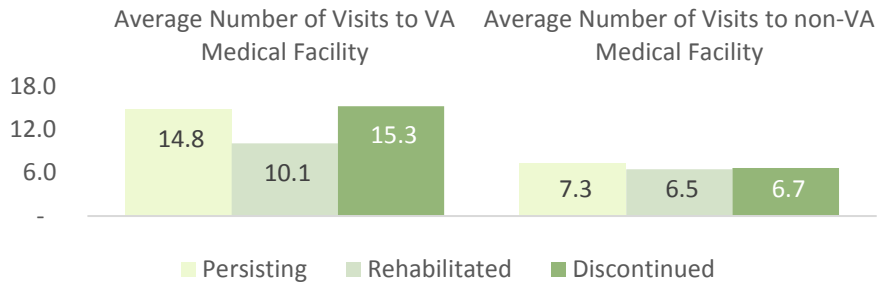
<sup>19</sup> Based on data prepared by the National Center for Veterans Analysis and Statistics available at [http://www1.va.gov/vetdata/docs/Utilization/VHASTats\\_2015.xlsx](http://www1.va.gov/vetdata/docs/Utilization/VHASTats_2015.xlsx).

Figure 3B-5. Receipt of Other Benefits by Participation Status as of the end of FY 2018, by Cohort

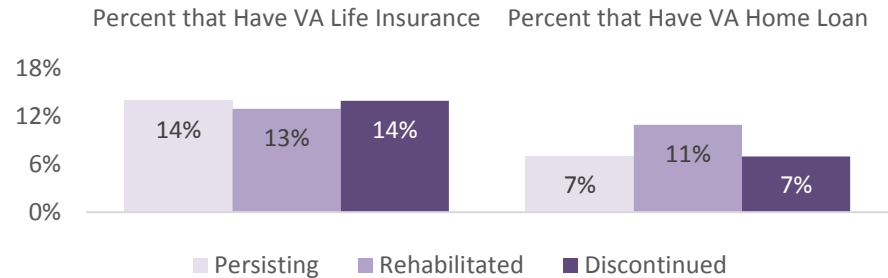
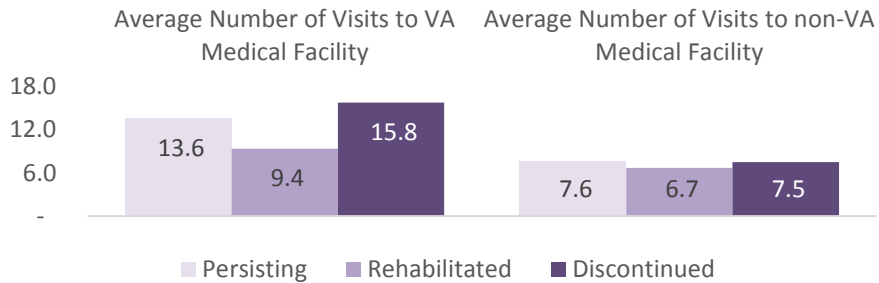
**Cohort 1 FY 2010 (n=10,791)**



**Cohort 2 FY 2012 (n=15,396)**



**Cohort 3 FY 2014 (n=21,082)**



Source: FY 2018 VBA Administrative and VR&E Survey Data



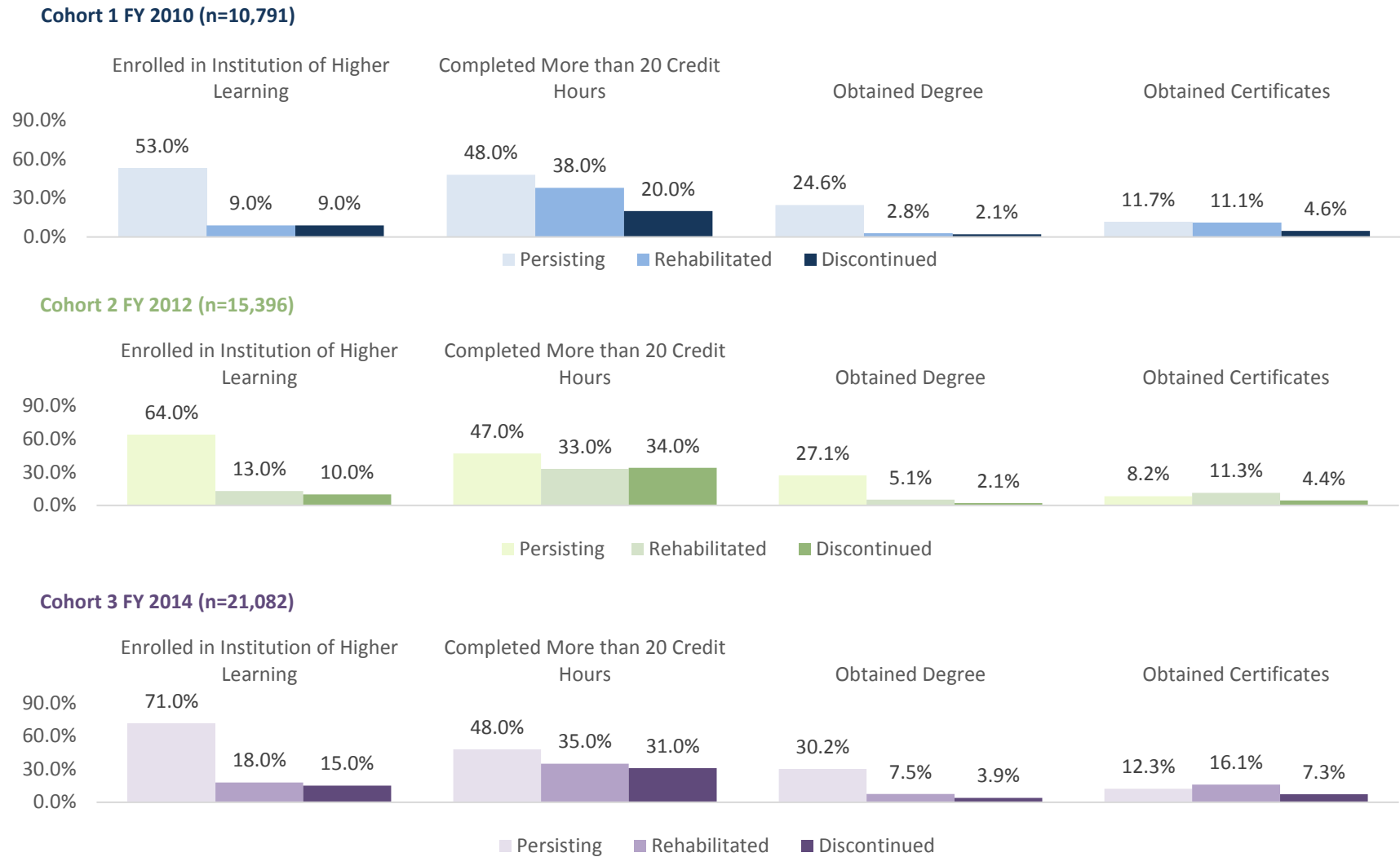
## Receipt of Education and Training

Figure 3B-6 provides information on the educational pursuits and achievements of Cohort members since beginning their rehabilitation plans. For all three Cohorts, a larger percentage of persisting participants are enrolled in an institution of higher learning (IHL) at some point during the past 12 months, relative to participants who have achieved rehabilitation or were discontinued from the program. This finding is not surprising given the fact that the majority of VR&E participants are in an Employment through Long-Term Services track. Subsistence allowance is paid each month when pursuing training or an education program and is based in part by the rate of attendance (e.g., full-time, or part-time). In 2011, P.L. 111-377 introduced an alternate subsistence allowance rate more in line with the monthly allowance paid under the Post-9/11 GI Bill, which in some instances is higher than the traditional subsistence allowance rate. Further examination of Figure 3B-6 indicates that of those Cohort members who were enrolled in an IHL at some point during FY 2018, almost 50 percent of persisting Veterans reported completing more than 20 academic credits in the past year, which likely means these Cohort members were attending school on a full-time basis.

A higher proportion of persisting Veterans were enrolled in an **IHL** in the past 12 months, relative to participants who have achieved rehabilitation and have discontinued.

Figure 3B-6 also reports the proportion of Cohort members who obtained a degree or certificate during the past 12 months. Relative to Cohorts II and III, a smaller percentage of Cohort I members reported obtaining a degree or certificate over the past 12 months. However, this finding is not surprising given that Cohort I members had a longer period of time to complete training pursued through the Employment through Long-Term Services track. The table also reveals that, for all three Cohorts, fewer discontinued participants have obtained a degree or certificate as of FY 2018 relative to persisting or rehabilitated participants.

Figure 3B-6. Education or Training Characteristics of VR&E Participants by Participation Status as of the end of FY 2018, by Cohort



Source: FY 2018 VBA Administrative and VR&E Survey Data

### **3.C. Program Outcomes (Rehabilitation and Discontinuation)**

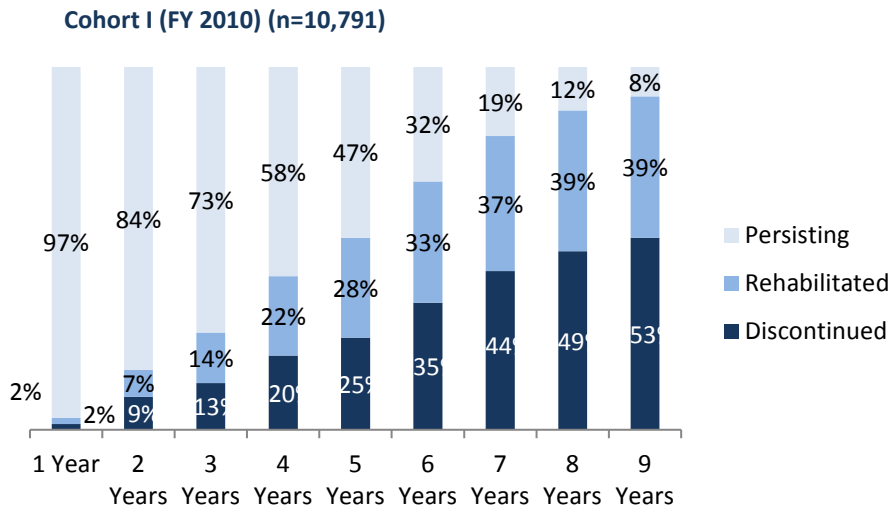
For each Cohort, some members are continuing to pursue the objectives outlined in their rehabilitation plans. Some members have successfully achieved rehabilitation, while other members have discontinued their rehabilitation plans. This section discusses where Veterans are in their rehabilitation plans as of the end of FY 2018. The section also analyzes data to identify the main factors that lead to rehabilitations and discontinuations from the program.

#### **Descriptive Trends**

As Veterans work to complete the objectives of their rehabilitation plans, it is expected that a larger share of Cohort members will successfully achieve rehabilitation over time. Similarly, the number (and thereby the percentage) of persisting participants will decrease over time as well. For each Cohort, Figure 3C-1 presents the yearly percentage of Cohort members who are persisting in their plans, have successfully achieved rehabilitation, or discontinued services. Because Cohort members can reapply for VR&E services after exiting, the annual percentages displayed in the figure were calculated using the program participation status (i.e., rehabilitated, discontinued, and persisting) as of the end of each fiscal year.

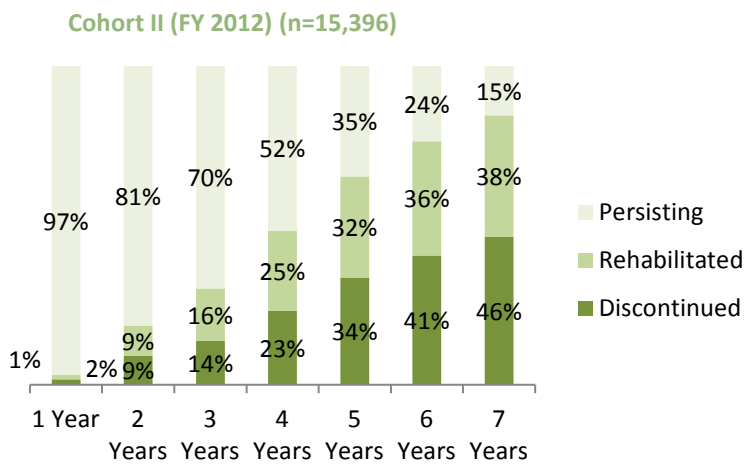
Figure 3C-1 illustrates increases in the number of rehabilitations and discontinuations over time. In the past nine years, 39 percent of Cohort I (FY 2010) Veterans have achieved rehabilitation. Likewise, Cohort I (FY 2010) discontinuations also witnessed a steady increase within this period to 53 percent. As rehabilitation and discontinuation rates increase over time, the percent of Veterans persisting within the program is subject to a steady decrease.

Figure 3C-1. Cumulative Percentage of VR&E Participants Rehabilitated, Discontinued, or Still Persisting by Cohort as of each Study Year



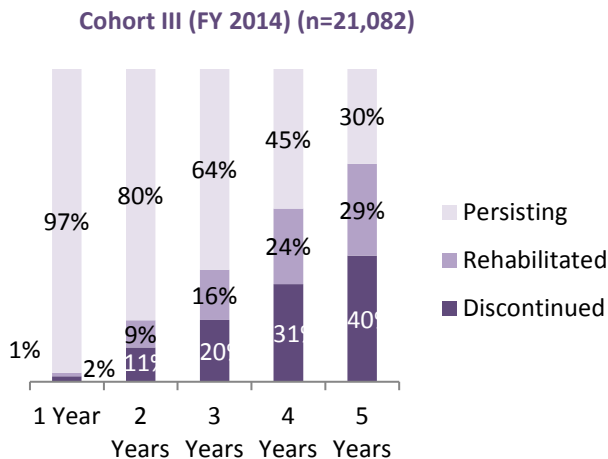
Within nine years of beginning the VR&E program:

- 39 percent of Cohort I members have achieved rehabilitation.
- 8 percent are still persisting in the steps of their rehabilitation plans.
- 53 percent have discontinued from the program.



Within seven years of beginning the VR&E program:

- 38 percent of Cohort II members have achieved rehabilitation.
- 15 percent are still persisting in the steps of their rehabilitation plans.
- 46 percent have discontinued from the program.



Within five years of beginning the VR&E program:

- 29 percent of Cohort III members have achieved rehabilitation.
- 30 percent are still persisting in the steps of their rehabilitation plans.
- 40 percent have discontinued from the program.

Note: Percentages may not sum to 100 percent due to rounding.  
Source: Administrative Data, FY 2018

When comparing Cohort I and Cohort II at the seven-year mark, Cohort II reflects more outcomes than Cohort I. The proportion of Cohort II members pursuing the objectives of their rehabilitation plans has decreased from 97 percent during year 1 to about 15 percent of the Cohort by the end of year seven compared to 19 percent of Cohort I in the same time period. Meanwhile, the percentage of Cohort II members who have successfully achieved rehabilitation increased from 1 percent to 38 percent over the same seven-year period compared to 37 percent of Cohort I. Similar to the increase observed among those who have achieved rehabilitation, the proportion of Cohort II members who discontinued also increased from 2 percent in year 1 to 46 percent in year seven. Cohort I only saw 44 percent of Veterans discontinue from the program in the first seven years.

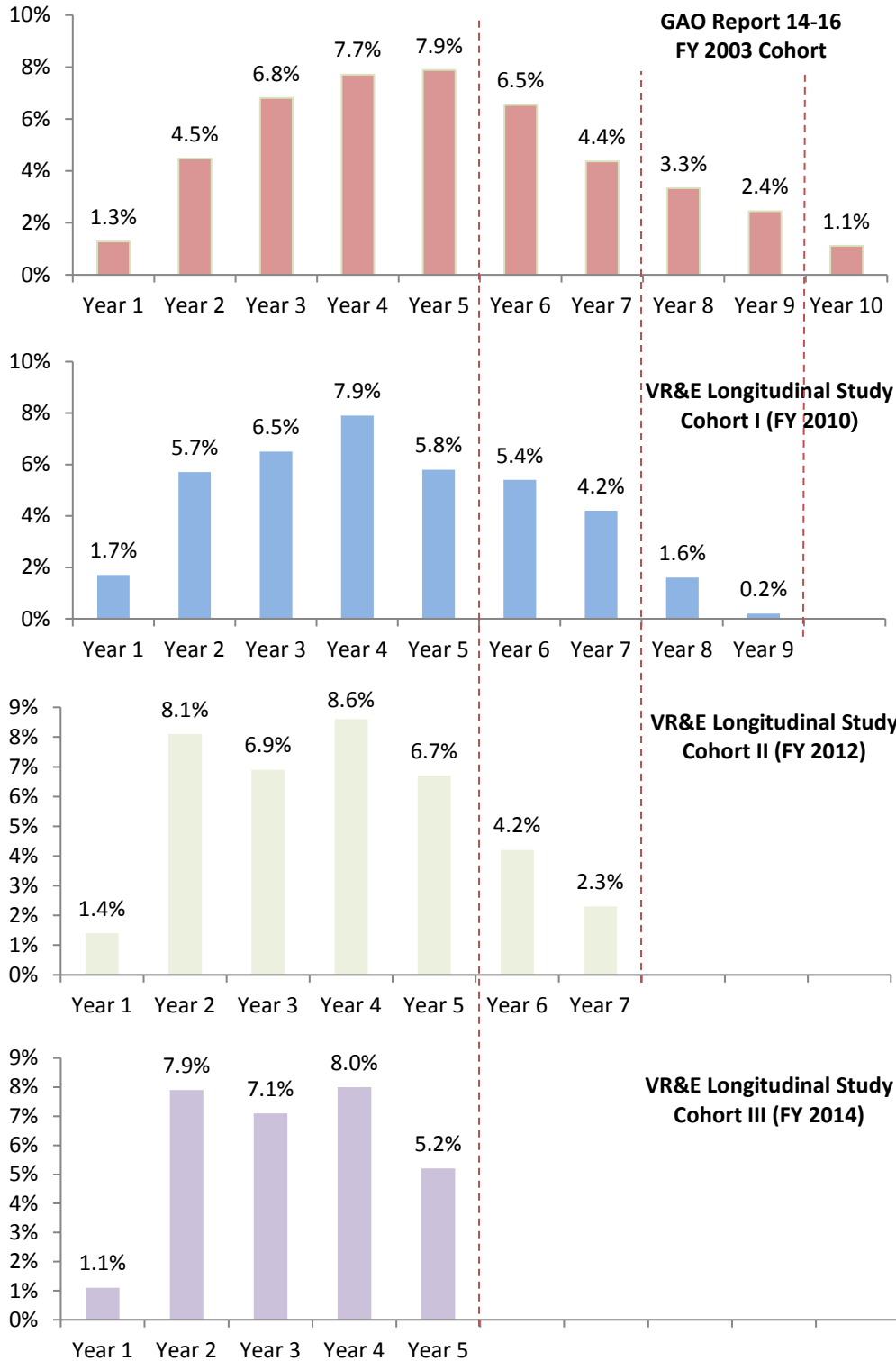
Veterans in all three Cohorts exit the VR&E program at similar rates over time.

Further examination of Figure 3C-1 reveals similar rates of change over time across the Cohort groups. For all three Cohorts, with 97 percent of Cohort members still persisting in their plans within the first year of receiving services, only a very small percentage exited the program within the first year. However, the percentage exiting the program grew by the end of year five. Cohort III had the largest number of Veterans leave the program by year five at 69 percent (29 percent rehabilitated and 40 percent discontinued). Cohort I (53 percent) and Cohort II (66 percent) had lower percentages of Veterans exiting the program at year five. The rehabilitation and discontinuation outcomes at year seven indicate that Cohort II members have more outcomes (38 percent of Veterans have rehabilitated and 46 percent have discontinued) than Cohort I (37 percent and 44 percent respectively). Over 71 percent of discontinued Veterans (not shown) did not pursue VR&E services after becoming eligible or completing an application. The next largest group of discontinuances (8 percent) is from Veterans who are considered employable, but discontinued from the program.

The experience of Cohort I, as illustrated in Figure 3C-1, indicates that it takes between four and five years for one-half of the Cohort to exit the VR&E program, and that within eight years of program entry, less than 15 percent of participants are still persisting in the program. A study of the VR&E program, conducted by the GAO revealed that, on average, it took Veterans who began an employment plan of services in 2003, four years and seven months to successfully rehabilitate.<sup>20</sup> The GAO study further reported that while almost one-half of those who have successfully achieved rehabilitation did so within three to five years of applying for services, about one-third (37 percent) of those who achieve rehabilitation took six to 10 years. As indicated in Figure 3C-2, current findings from the three Cohorts closely parallel the GAO findings.

<sup>20</sup> <http://www.gao.gov/assets/670/660160.pdf>.

Figure 3C-2. Annual Percentage of VR&E Longitudinal Study Participants and GAO 14-61 Study Participants who Achieved Rehabilitation within Five Years of Program Start



Source: <http://www.gao.gov/assets/670/660160.pdf> and Administrative Data

## Factors that Contribute to Rehabilitation

Multivariate regression analysis is used to identify the factors that affect program outcomes of rehabilitation and discontinuation. Detailed results of the regression analyses are presented in Appendix K. Summary results listing the significant factors that contribute to achieving rehabilitation and the time to rehabilitation are presented in Table 3C-1.

Program track assignment is the primary factor associated with achieving rehabilitation, as well as the time required to rehabilitate.

Several factors are associated with achieving rehabilitation by the end of FY 2018 (first panel of Table 3C-1). Veterans in one of the employment tracks are less likely to achieve rehabilitation due to the length of time needed to complete their education or training programs. Other factors that decrease the probability of rehabilitation include having an SEH and having a higher disability rating, an indication that Veterans with complex disabilities, multiple disabilities, or other significant barriers to employment are not reaching rehabilitation as quickly as their counterparts. On average, older Veterans and those with a mental health issue as a primary diagnosis are less likely to achieve rehabilitation. Compared to their counterparts in other Cohorts, Veterans in the 2014 Cohort are also less likely to have achieved rehabilitation, which we would expect, given that they have spent less time in the program.

Factors associated with successful completion of the VR&E program by the end of FY 2018 include having at least some college education at program entry, having a higher pre-enrollment salary, having served as an officer, length of service, and having served during one of the Gulf War periods.

The results of the regression analyses indicate that the primary factors associated with successful rehabilitation by the end of FY 2018 are also the strongest predictors of the amount of time it takes to achieve rehabilitation (second panel of Table 3C-1). As expected, Veterans take longer to achieve rehabilitation if they are in the Employment through Long-Term Services track or one of the other employment tracks (Re-employment, Rapid Access to Employment, or Self-employment). Having an SEH and having a higher disability rating are also predictive of a longer rehabilitation period. Factors that predict a reduced time to rehabilitation include having at least some college education at program entry, having served as an officer, length of service, and serving in the Gulf War Era II. Among those who have achieved rehabilitated status by FY 2018, older Veterans and male Veterans experienced less time, on average.

Table 3C-1. Factors that Contribute to Achieving Rehabilitation and Time to Rehabilitation as of the end of FY 2018

Explanatory Variable	Achieving Rehabilitation <sup>1,2</sup>	Time to Rehabilitation <sup>3,4</sup>
Employment through Long-Term Services track (compared to IL)	-	+
Other employment tracks (compared to IL)	-	+
SEH	-	+
Disability rating	-	+
Age	-	-
Male	N.S.	-
Officer status	+	-
Pre-rehabilitation salary	+	N.S.
Primary mental health diagnosis	-	-
Served in Gulf War Era I	+	N.S.
Served in Gulf War Era II	+	-
Length of military service	+	-
Some college or higher at program entry	+	-
2014 Cohort	-	N.S.

Note:

<sup>1</sup> The effects are based on a logistic regression estimation where the dependent variable is a dichotomous variable in which one indicates rehabilitation and zero indicates persisting program participation or discontinuation.

<sup>2</sup> Achieving Rehabilitation: a negative symbol (-) indicates the Veteran is least likely to successfully complete the program, while a positive symbol (+) indicates the Veteran is more likely to successfully complete the program.

<sup>3</sup> The effects are based on a survival regression estimation where the dependent variable is number of days between the date of Cohort entry and the date of rehabilitation (Cohort members are removed from the risk set once they discontinue). Because Cohort is a measure of time spent in the program, it was not included as an explanatory variable in the survival analysis.

<sup>4</sup> Time to Rehabilitation: a positive symbol (+) indicates a Veteran may take longer to achieve rehabilitation, whereas a negative symbol (-) indicates a greater chance of achieving rehabilitation in less time.

N.S = not significant

Source: Regression Analysis of FY 2018 VBA Administrative and VR&E Survey Data



## Factors that Contribute to Discontinuation

Table 3C-2 summarizes the significant factors that contribute to discontinuation. Discontinuation is most strongly associated with participation in an employment track. Veterans in the Employment through Long-Term Services track or one of the three other employment tracks (Re-Employment, Rapid Access to Employment, and Self-Employment tracks) are much more likely to discontinue their plans than those in the IL track.

Compared to Veterans participating in an IL plan, Veterans in employment tracks are more likely to discontinue their plans. This may be because it takes longer, on average, to achieve the goals of an employment plan.

Factors associated with a higher likelihood of discontinuation include the Veteran’s disability rating, having a mental health condition as the primary diagnosis, being older and being male. Veterans in the 2010 Cohort are also more likely to have discontinued by FY 2018 than their counterparts in other Cohorts.

Factors associated with a reduced likelihood of discontinuing include the Veteran’s pre-rehabilitation salary, having at least some college education at program entry, having served a greater number of months on active duty, service as an officer, and serving in either of the Gulf War Eras. Notably, Veterans with an SEH were significantly less likely to have discontinued than their counterparts, all other factors held constant.

Table 3C-2. Factors that Contribute to Discontinuation as of the end of FY 2018

Explanatory Variable	Likelihood of Discontinuation <sup>1,2</sup>
Employment through Long-Term Services track (compared to IL)	+
Other employment tracks (compared to IL)	+
SEH	-
Male	+
Age	+
Disability rating	+
Some college or higher at program entry	-
Pre-rehabilitation salary	-
Primary mental health diagnosis	+
Length of military service	-
Served in Gulf War Era I	-
Served in Gulf War Era II	-
Officer status	-
2010 Cohort	+
2014 Cohort	-

Note:

<sup>1</sup> The effects are based on a logistic regression estimation where the dependent variable is a dichotomous variable, where one indicates discontinuation and zero indicates persisting program participation.

<sup>2</sup> Positive factors (+) in the table indicate a lower likelihood of the Veteran discontinuing from the program, while negative (-) factors are those that lead to a higher likelihood of discontinuation.

Source: Regression Analysis of FY 2018 VBA Administrative and VR&E Survey Data

### 3.D. Employment and Standard of Living Outcomes

In this section, descriptive information about the employment and standard of living outcomes experienced by Cohort members is presented. Because only a limited amount of information on post-program outcomes is available through VBA administrative files, the main source of data used to measure outcomes is the survey.

The primary objective of the longitudinal study of the VR&E program is to determine the long-term post-program outcomes associated with Veterans who establish a plan of services. Because the focus of the longitudinal study is on long-term outcomes experienced by VR&E participants after exiting the program, the discussion primarily concentrates on the outcomes experienced thus far by Cohort members who have achieved rehabilitation and who have been discontinued.

#### Employment and Standard of Living Outcomes:

- Current and past year employment rate
- Annual earnings
- Annual individual and household income
- Unemployment compensation rate
- Homeownership

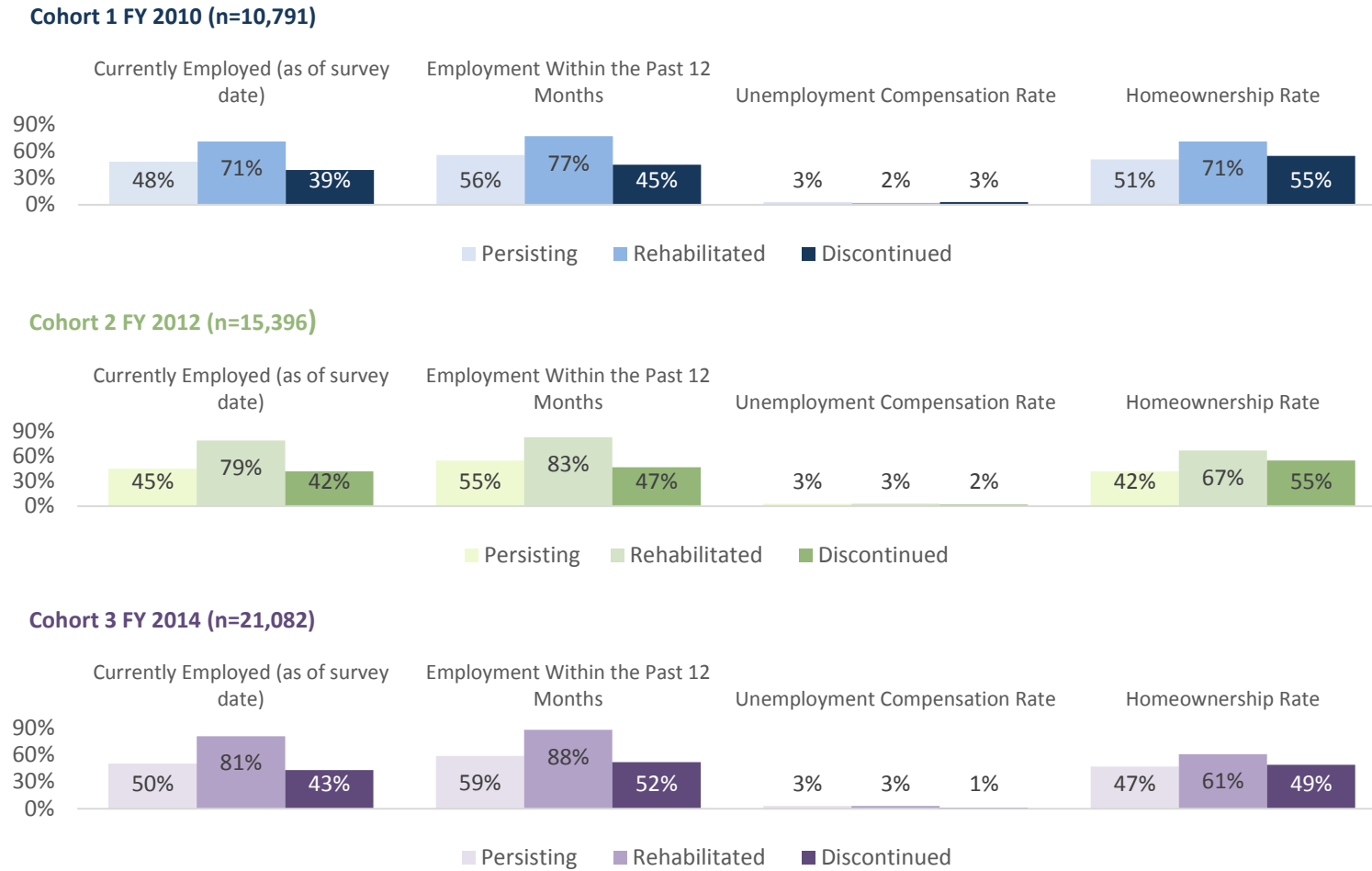
Figure 3D-1 presents summary statistics for employment and standard of living outcomes of interest for all three Cohorts. When interpreting the findings presented in this section, it is important to note that data across Cohorts are not comparable given the three Cohorts began a rehabilitation plan at different points in time. Hence, a larger proportion of Cohort members for the earlier Cohorts have exited the program. As such, one would expect employment and standard of living outcomes to be better for earlier Cohorts versus newer Cohorts. The data presented in this section does in fact confirm that Cohort outcomes improve over time. Cohort I has had more time to complete training and enhance their economic opportunities, relative to Cohorts II and III, and similarly Cohort II has had more time than Cohort III. While in the past Cohort I has reported higher employment rates, annual earnings, annual income amounts, and homeownership rates than Cohorts II and III, and that Cohort II has reported better outcomes than Cohort III, the difference in outcomes is becoming smaller as members continue through the program.

Employment and standard of living outcomes among Cohorts improve over time as VR&E participants have more time to complete training and enhance their economic opportunities.

#### Employment and Standard of Living Outcomes

Examination of the findings in Figure 3D-1 reveals participants who have achieved rehabilitation have substantially better employment and standard of living outcomes than those who discontinued and those who are still persisting in their plans. For all three Cohorts, Veterans who have achieved rehabilitation are significantly more likely to be employed than discontinued Veterans. In fact, the employment rates for rehabilitated Veterans are almost double that of Veterans who were discontinued from the program.

Figure 3D-1. Employment and Standard of Living Outcomes by Cohort (in percent)



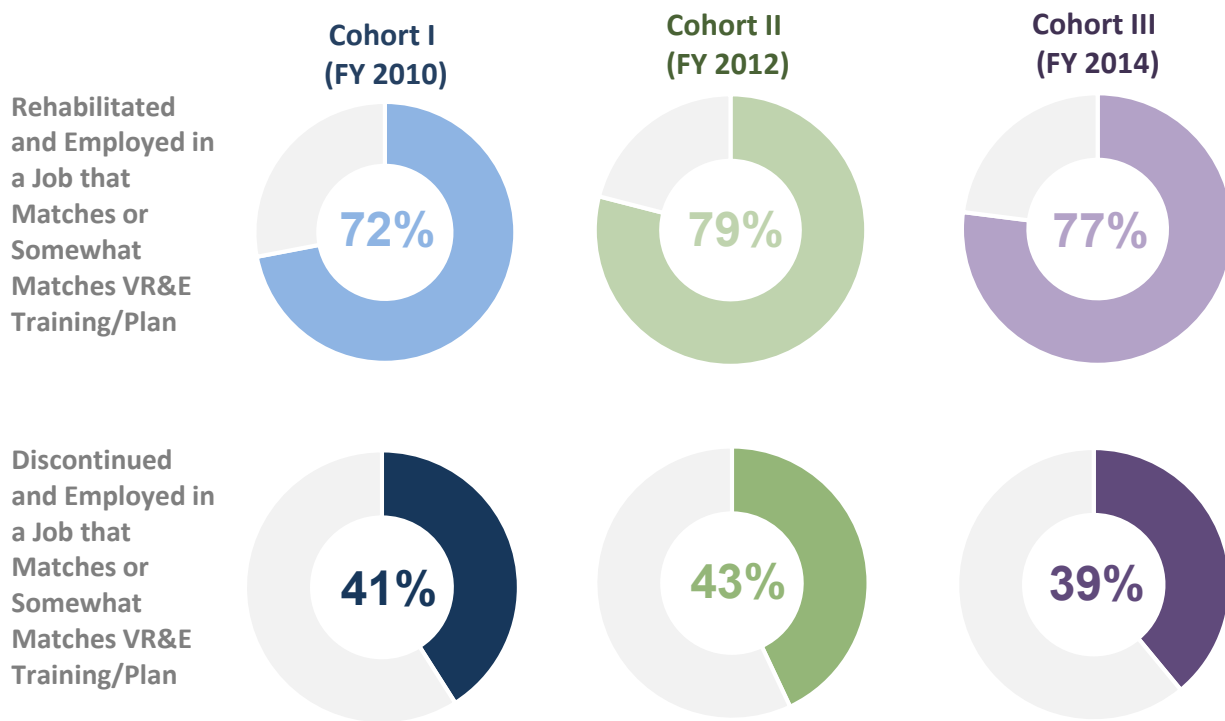
Note: Averages and percentages are based on survey data that has been weighted up to reflect the Cohort population.

<sup>1</sup> Past employment rate is defined as the percentage of Cohort members who reported working at any point in the past 12 months (including working currently as of the survey date).

Source: VR&E FY 2018 Survey Data

Only slightly more than one-third of discontinued participants in all three Cohorts reported being currently employed at the time of the survey, and 45 percent (Cohort I), 47 percent (Cohort II), and 52 percent (Cohort III) reported being employed during the past 12 months. However, among participants who have achieved rehabilitation in all three Cohorts, nearly three-quarters reported being currently employed. Almost four-fifths (~80 percent) reported employment during the past 12 months. Furthermore, Figure 3D-2 shows that among Veterans who reported being currently employed, about three-quarters of those who achieved rehabilitation indicated they were employed in a job that matches or somewhat matches their training/plan provided by VR&E, compared to roughly 40 percent of those who were discontinued.

**Figure 3D-2. Percentage of VR&E Participants who Achieved Rehabilitation or Discontinued and are Employed in a Job that Matches or Somewhat Matches VR&E Training/Plan, as of end of FY 2018**

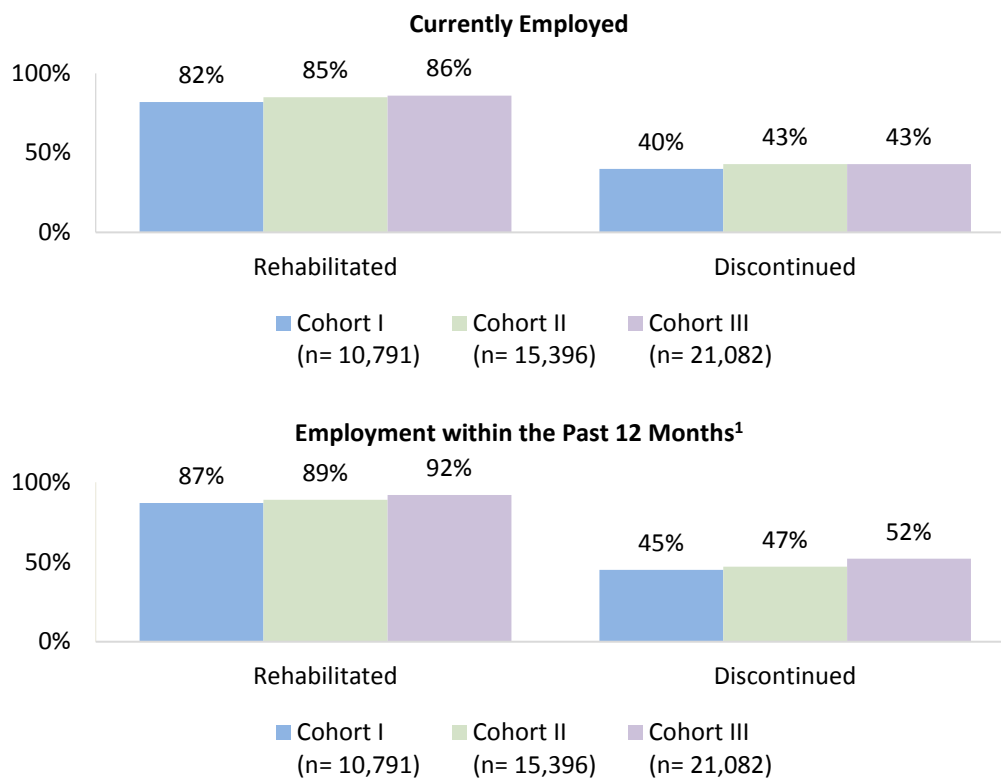


Source: FY 2018 VBA Administrative and VR&E Survey Data

It is expected that not all rehabilitated participants will report being employed. Participants that successfully complete the program include Veterans who have achieved rehabilitation from the IL track. Since the goal of the IL track is to live independently in their home and community and not to necessarily obtain employment.

As expected, employment rates among Veterans who exit from an employment plan are higher than employment rates among all Veterans who achieve rehabilitation. As shown in Figure 3D-3, more than four-fifths of Veterans who achieved rehabilitation from an employment plan were currently employed at the time of the survey and close to 90 percent were employed within the past 12 months. It is not expected that all participants who achieve rehabilitation from an employment plan will report being employed given some employable Veterans elect to pursue further education after successfully completing their rehabilitation plans instead of immediate employment.

**Figure 3D-3. Employment Rates for VR&E Participants who Achieved Rehabilitation or Discontinued from an Employment Plan, as of the end of FY 2018**



Note: Averages and percentages are based on survey data that has been weighted to reflect the Cohort population.

<sup>1</sup> Past employment rate is defined as the percentage of Cohort members who reported working at any point in the past 12 months (including working currently as of the survey date).

Source: VR&E FY 2018 Survey Data

Figure 3D-1 also shows a larger percentage of those who have successfully completed the program reported owning their principal residence, relative to those who discontinued. For rehabilitated Veterans in Cohort I (71 percent) and Cohort II (67 percent), the rate of homeownership is higher than the United States population (65 percent).<sup>21</sup> Cohort III is slightly

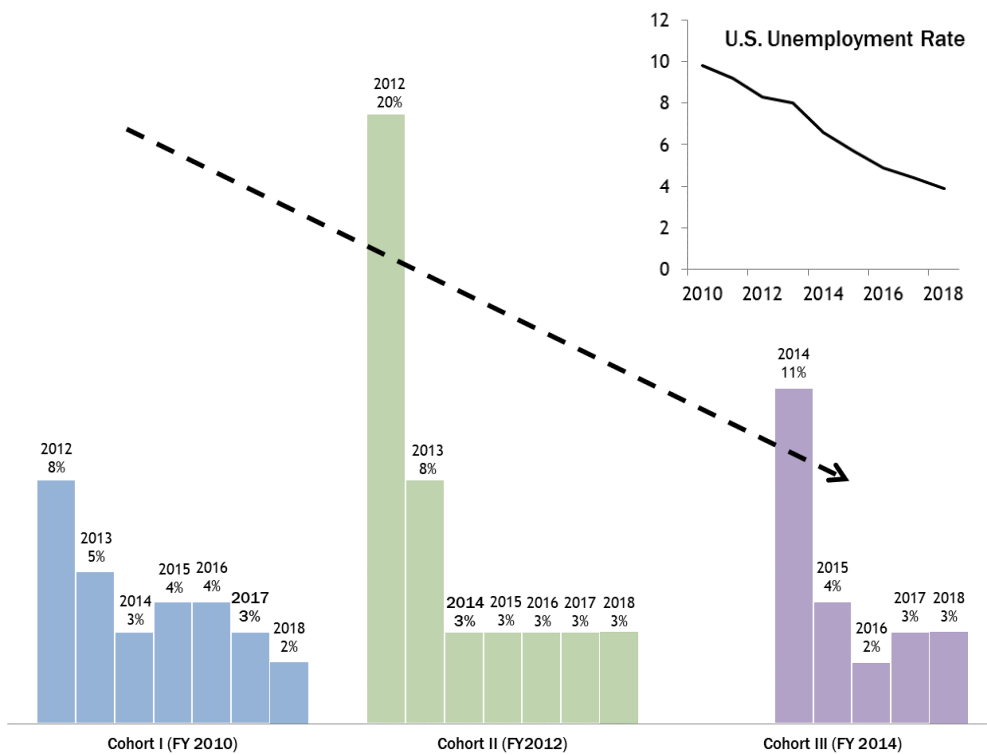
<sup>21</sup> U.S. Census Bureau. Quarterly Residential Vacancies and Homeownership, Fourth Quarter 2018. Table 4SA. Accessed April 4, 2019. <https://www.census.gov/housing/hvs/files/currenthvspress.pdf>

Labor Force Statistics from the Current Population Survey, Accessed April 4, 2019. <https://data.bls.gov/timeseries/LNS14000000>

less (61 percent) however those Veterans have had less time in a rehabilitated status, meaning they may not yet have earned enough to cover the costs of purchasing a home.

Figure 3D-1 also indicates that only a small percentage of Cohort members reported receiving unemployment benefits at some point during the past 12 months. Further examination of the unemployment benefits usage rate over time reveals a pattern of less dependence as participants have more time to complete the VR&E program and improve their employment opportunities. As shown in Figure 3D-4, the decline in this rate over time may also be affected by the fact that the overall U.S. economy has improved in recent years, as evidenced by the decline in the overall U.S. unemployment rate since 2010.

Figure 3D-4. Unemployment Benefits Usage Rate of VR&E Participants Over Time, by Cohort



Source: FY 2018 VBA Administrative and VR&E Survey Data and 2018 and Department of Labor, Labor Force Statistics from the Current Population Survey 2018

## Earnings and Income Outcomes

Given that participants who have achieved rehabilitation have substantially higher earnings than discontinued participants, it is not surprising to find that those participants also report higher individual and household annual incomes for the past 12 months, for all three Cohorts. The median individual income for Veterans who have achieved rehabilitation is at least \$20,000 higher than that of discontinued Veterans. The median household income for participants who have achieved rehabilitation is at least \$23,000 higher than that of discontinued participants. Additionally, the median annual earnings of Veterans who have achieved rehabilitation in all three Cohorts are higher than that of Veterans overall and the average American, based on data from the 2010 U.S. Census.<sup>22</sup>

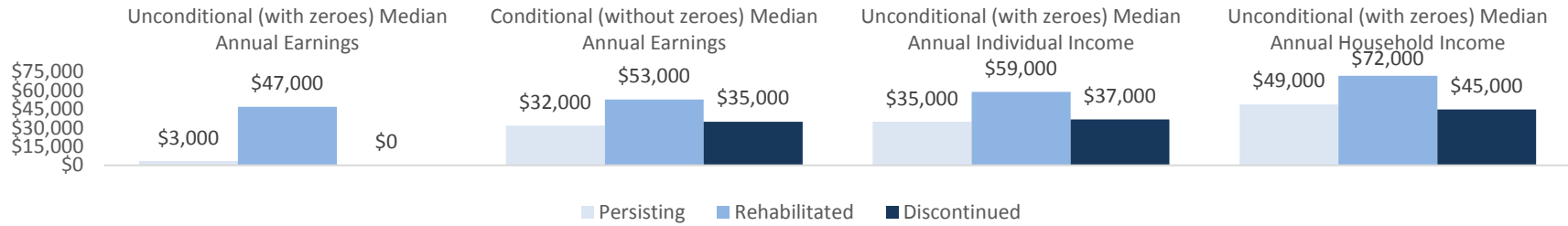
Participants who have achieved rehabilitation reported higher annual income amounts than discontinued participants – at least \$20,000 higher for individual income and at least \$23,000 higher for household income.

Participants who have achieved rehabilitation also earn substantially higher earnings over the past 12 months, relative to discontinued participants, which is largely due to more participants who have completed the program are working. However, further examination of Figure 3D-5 indicates that when comparing the average annual earnings of only those Cohort members who reported working, rehabilitated participants earned, on average, \$15,000 more than discontinued participants, for all three Cohorts.

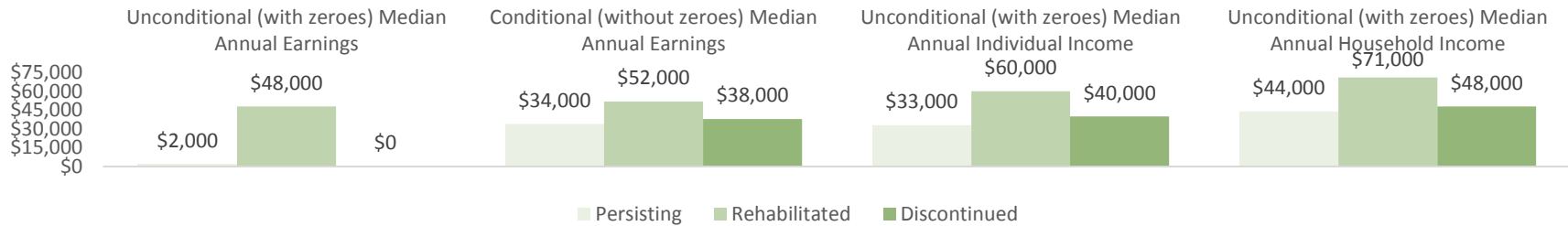
<sup>22</sup> [https://www.census.gov/how/pdf/census\\_veterans.pdf](https://www.census.gov/how/pdf/census_veterans.pdf).

Figure 3D-5. Earnings and Income Outcomes by Cohort

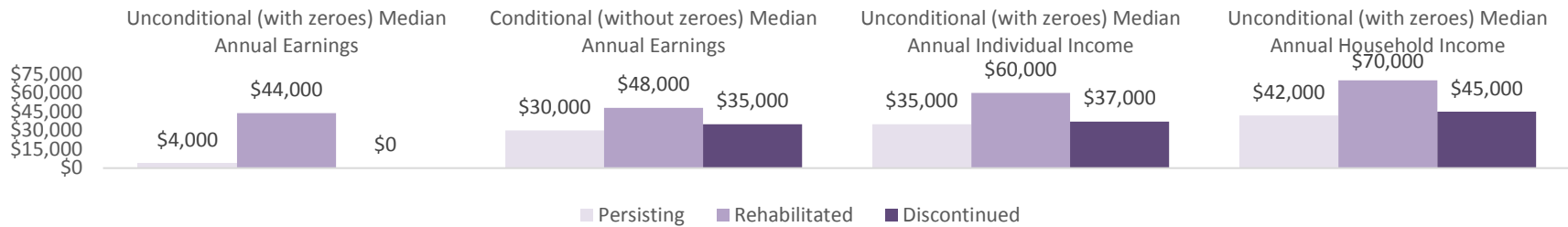
**Cohort 1 FY 2010 (n=10,791)**



**Cohort 2 FY 2012 (n=15,396)**



**Cohort 3 FY 2014 (n=21,082)**



Annual earnings is defined as the amount earned, before taxes and other deductions, in the past 12 months from all jobs or businesses. Hence, median annual earnings are reported only for Veterans in an employment plan. Veterans in an Independent Living plan or an extended evaluation plan are not included in the average earnings calculations given that employment is not a goal of those programs.

Annual income is defined as income received from all sources, before taxes, in the past 12 months, including earnings from a job, benefits received from government programs, and any retirement, pension, investing, or savings income from which regular payments are received.

Source: VR&E FY 2018 Survey Data



## Factors that Contribute to Employment and Earnings

Regression analyses are used to identify the factors that affect employment outcomes for those who have exited the program. Detailed results of the regression analyses are presented in Appendix K. It is important to note that the regression analyses related to employment outcomes (i.e., current employment and annual earnings) only include those Veterans who exited from an employment plan. Few Veterans who exit from an IL plan report they are employed, since the goal of the plan is for participants to live as independently as possible within their home and community. To enter an IL plan, it must be determined that a vocational goal is not currently reasonably feasible. For similar reasons, Veterans who exit VR&E from an extended evaluation plan are also excluded from the regression analyses. The purpose of an extended evaluation plan is to provide assessments to determine if the achievement of a vocational goal is feasible, and to improve a Veteran's rehabilitation potential. If it is determined that a vocational goal is feasible, a goal will be identified and training provided to achieve the identified goal. Individuals who exit an extended evaluation plan and are not ready to return to work, are provided IL assessments to determine if IL needs are to be addressed.

Table 3D-1 presents the factors significantly associated with employment as of FY 2018. Factors associated with Veterans' annual earnings are shown in Table 3D-2.

**Table 3D-1. Factors that Contribute to Employment Outcomes as of the end of FY 2018**

Explanatory Variable	Currently Employed <sup>1</sup>
Rehabilitation status (compared to discontinued)	+
SEH	-
Male	+
Age	-
Disability rating	-
Primary mental health diagnosis	-
Served in Gulf War Era I	+
Served in Gulf War Era II	+
Length of military service	+
Pre-rehabilitation salary	+
Number of dependents	+

Note: Models include only Veterans who exited the program from an employment track. We excluded Veterans who exited from the IL track or from an extended evaluation plan because few were employed.

<sup>1</sup> The effects are based on a logistic regression estimation where the dependent variable is a numeric variable falling between zero and one.

Source: *Regression Analysis of FY 2018 VBA Administrative and VR&E Survey Data*

As shown in Table 3D-1, several factors are associated with employment among VR&E participants, including program status, disability rating, having an SEH, age, being male, and period of service.

Achieving rehabilitation is the dominant factor associated with employment. Veterans who achieve rehabilitation are much more likely to be employed than those who discontinue. Severity of injury is significantly related to Veterans not being employed.

As of FY 2018, Veterans who successfully rehabilitated from an employment plan were much more likely to be employed than those who discontinued their employment plan. Disability rating is negatively associated with employment, meaning that the higher the disability rating of the Veteran, the less likely he or she is to be employed. Similarly, having an SEH reduces the likelihood of employment. Older Veterans, and those with a mental health issue as their primary diagnosis, were

also less likely to be employed in FY 2018.

Multiple factors related to the Veteran’s military service are positively associated with employment, including service in either of the Gulf War Eras and length of military service. Also, positively associated with employment are the number of dependents reported by the Veteran, being male, and the Veteran’s pre-rehabilitation salary.

Table 3D-2 presents the significant factors that contribute to annual earnings among those Veterans who exited the program from an employment plan.

**Table 3D-2. Factors that Contribute to Annual Earnings as of the end of FY 2018**

Explanatory Variable	Annual Earnings <sup>1</sup>
Rehabilitation status (compared to discontinued)	+
Officer	+
Male	+
Served in Gulf War Era II	+
Primary mental health diagnosis	-
Member of 2014 Cohort	-
SEH	-
Age	-
Disability rating	-
Some college	+
Number of Dependents	+
Pre-rehabilitation salary	+
Length of military service	+

Note: Models include only Veterans who exited the program from an employment track. We excluded Veterans who exited from the IL track or from an extended evaluation plan because few were employed.

The effects are based on a linear regression estimation where the dependent variable is a continuous variable.

Source: *Regression Analysis of FY 2018 VBA Administrative and VR&E Survey Data*

Veterans who successfully rehabilitated from an employment plan earned much more over the past 12 months than those who discontinued their employment plans, and those who served as

officers tend to report higher annual earnings than those who served in the enlisted ranks. Being male and serving during the Gulf War Era II each have a strong association with higher annual earnings. Having a mental health condition as the primary diagnosis is a strong predictor of lower earnings, as is having an SEH and being a member of the 2014 Cohort, other things being equal. Lower earnings for members of the 2014 Cohort could be expected, given they have spent the least amount of time in the VR&E program compared to their counterparts. Older Veterans also tend to report lower earnings, on average. Several additional factors have a modest positive relationship with earnings, including having completed some college, having dependents, length of military service and the Veteran's pre-rehabilitation salary.

## Factors that Contribute to Income

Multivariate regression is used to identify the factors that influence annual income for those who have exited the program. Detailed results of the regression analyses can be found in Appendix K. Individual income was defined in the survey as the gross income VR&E participants received from all sources before taxes. These sources include earnings from a job, benefits received from government programs, and retirement, pension, investing, or savings income from which Veterans receive regular payments. Because income includes funds from all sources, not just earnings from a job, and because Veterans with an SCD may be eligible to receive disability compensation, the majority of those who exit are expected to report positive income amounts regardless of their employment status. For this reason, all Veterans who exit from the VR&E program are included in the income regression analyses, including those who exit from an IL plan or an extended evaluation plan. Table 3D-3 summarizes the factors that are significantly related to annual individual and household income, as of FY 2018.

Prior service in the officer corps and program status are the two most important factors associated with individual income. As of FY 2018, former officers in the sample had much higher individual incomes over the past 12 months than those who served in the enlisted ranks. Similarly, Veterans who achieved rehabilitation reported higher annual individual incomes relative to those who discontinued. Other characteristics with a strong positive association with individual income include being in an employment track, having at least some college experience, service in the Gulf War Era II, and being male.

Prior service in the officer corps and program status are the two dominant factors related to both individual income and household income.

Several factors were negatively associated with individual income, including having a mental health condition as a primary diagnosis, age, having an SEH, and being a member of the 2014 Cohort. Lower average incomes for the 2014 Cohort compared to the 2010 and 2012 Cohorts might be expected, given 2014 Cohort Veterans have spent less time enrolled in the program.

Table 3D-3. Factors that Contribute to Income as of the end of FY 2018

Explanatory Variable	Individual Income	Household Income
Officer status	+	+
Rehabilitation status (compared to discontinued)	+	+
Employment through Long Term Services Track (compared to IL)	+	+
Other employment tracks (compared to IL)	+	+
Male	+	+
Service in Gulf War Era II	+	N.S.
2014 Cohort (compared to other Cohorts)	-	-
Primary mental health diagnosis	-	-
Pre-rehabilitation salary	+	+
Some college or higher	+	+
SEH	-	N.S.
Age	-	-
Disability rating	+	+
Number of dependents	+	+
Length of military service	+	+
Earned Degree	N.S.	-

Note: Models include only Veterans who exited the program. The effects are based on a linear regression estimation where the dependent variable is a continuous variable.

N.S. = not significant

Source: Regression Analysis of FY 2018 VBA Administrative and VR&E Survey Data

Like the findings for individual income, the strongest predictors of household income are prior service as an officer, program status (i.e., successful rehabilitation), and participation in an employment track. Having a mental health condition as a primary diagnosis, being a member of the 2014 Cohort, and Veteran age are each predictive of lower household income, on average. Having earned a degree was also negatively associated with household income, but not individual income. This outcome is unexpected and counterintuitive, given that the economic returns to a college degree are well-established. However, it is important to note that having “some college” is already captured in the model, as is former service in the officer corps is a proxy for holding a degree. Because these variables are also in the model, the negative effect associated with the earned degree variable may simply reflect lower household earnings among Veterans who only recently completed a degree but have not entered the full-time labor force. Household earnings among this subgroup can be expected to increase over time.

Several additional factors are positively associated with both individual and household income for VR&E participants. The salary participants earned prior to enrollment, and Veterans’ length of service, are both predictive of higher income at the individual and household levels. That length of service is predictive of higher incomes is not surprising, given that Veterans who served longer would be more likely to be eligible for military retirement pay. Finally, disability rating has a positive relationship with both individual and household income, although it is negatively

associated with earnings (annual salary). As noted earlier, income is defined in this study as the cumulative amount received from all sources including any disability compensation.

### 3.E. Participant Re-entries

Veterans may re-enter the VR&E program because of changes in their situations. The nature of the VR&E program allows Veterans to reapply for VR&E and complete a new evaluation. Based on the results of this evaluation, the Veteran may re-enter the VR&E program and develop a plan of service designed to meet their new circumstances.

A proportion of VR&E participants from each of the three Cohorts have re-entered the program after a previous discontinuation or rehabilitation. Table 3E-1 displays the number of Veterans who have re-entered, by Cohort and by prior status. The table shows that many more Veterans re-enter the program after having been previously discontinued, relative to those who re-enter after having been previously rehabilitated. The table also shows that Cohort I has the largest number of Veterans who have re-entered after a previous discontinuation. However, the number of Veterans who have re-entered after a successful rehabilitation is distributed evenly across all three Cohorts.

**Table 3E-1. Number of Veterans who Re-entered the VR&E Program after Discontinuation or Rehabilitation, by Cohort**

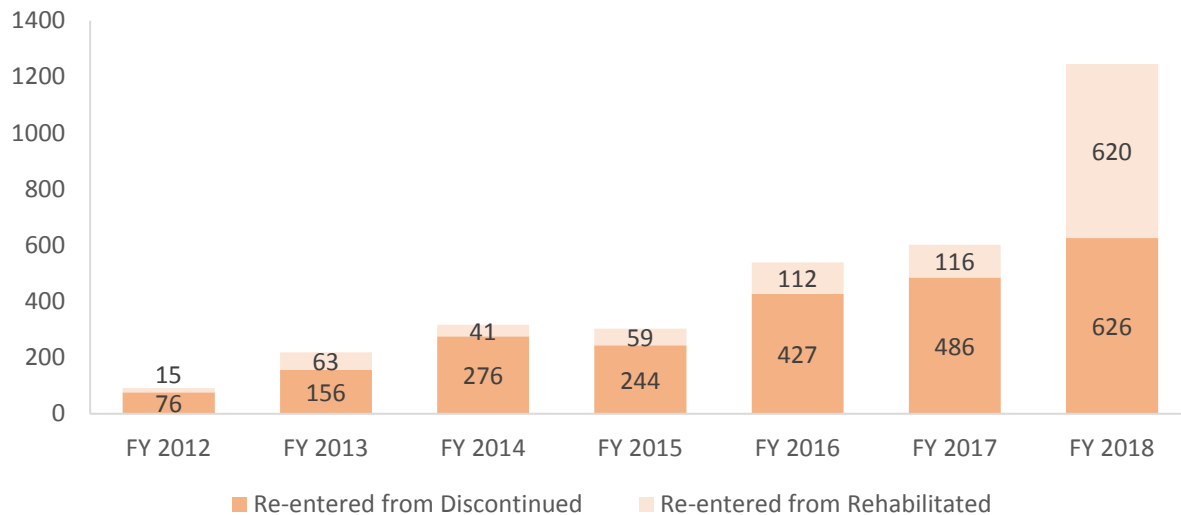
Cohort	Re-entered after Discontinuation	Re-entered after Rehabilitation
FY 2010 Cohort I	652	327
FY 2012 Cohort II	586	353
FY 2014 Cohort III	507	344
<b>Total</b>	<b>1,745</b>	<b>1,024</b>

Source: Administrative Data, FY 2018

Figure 3E-1 displays the annual number of re-entries over time. The largest number of re-entries into the VR&E program occurred in FY 2018. Since FY 2012, Veterans have re-entered the program after a discontinuation or rehabilitation a total of 3,317 times. As seen in Figure 3E-1, the number of re-entries has increased each year, except for FY 2015, with the largest proportion of re-entries to date in FY 2018 (38 percent). This increase may be attributed to a recent procedural change for processing reapplications that requires processing of all applications including cases previously rehabilitated or discontinued with MRG. Previously, applications were only processed if a determination for the previous rehabilitation decision was determined to meet the criteria for reentrance into a rehabilitation program under 38 CFR 21.284, or if a determination for previous discontinuance decision was overturned because the reasons for discontinuance were removed and the Veteran was in need of additional vocational rehabilitation services. The demographic profile of Veterans who re-enter the VR&E program are somewhat different from the overall Cohort population. Veterans who re-enter training are 73 percent more likely to have a higher combined disability rating. While Veterans who do not re-enter

training are only 68 percent more likely to have a higher combined disability rating. This difference suggests that Veterans who need additional training generally have disabilities that have become more severe over time impacting their ability to remain employed. In addition, a higher proportion of Veterans who re-enter the program have a primary diagnosis of PTSD compared to those who have not yet re-entered the program (32 percent versus 28 percent).

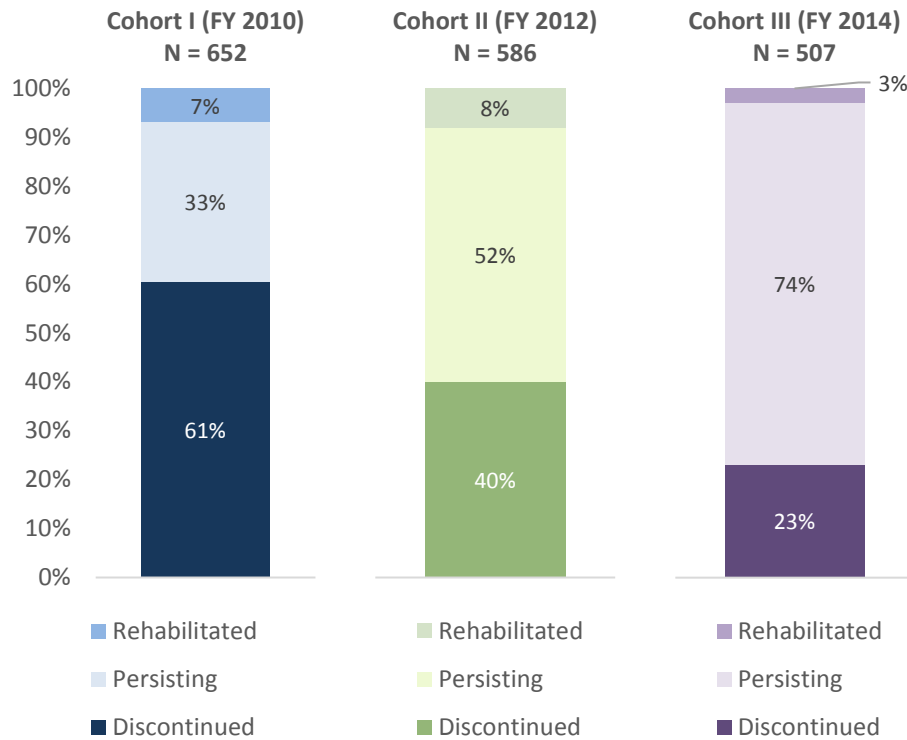
**Figure 3E-1. Number of Re-entries from a Discontinued or Rehabilitated Status (all Cohorts Combined)**



Note: In FY 2011, eight participants re-entered from a discontinuation and two re-entered from a rehabilitation.  
 Source: Administrative Data, FY 2018

Figure 3E-2 provides the FY 2018 participation status of Veterans who re-entered the program after being discontinued. Among these Veterans who re-entered the program after a previous discontinuation, a larger proportion in the more recent Cohorts are still persisting in their new plan of service as of FY 2018. Only one-third of Cohort I Veterans who re-entered a plan of service after a previous discontinuation were still persisting as of FY 2018, compared to only one-half (52 percent) of Cohort II and three-quarters (74 percent) of Cohort III Veterans. As shown in Figure 3E-2, for those Veterans who re-entered the program after discontinuation, the vast majority have discontinued again as of FY 2018. A relatively small proportion of Veterans from each Cohort rehabilitated after re-entering from a previous discontinuation. The pattern observed in Figure 3E-3 suggests that it is more likely that Veterans who exit the program a second time after a previous discontinuation will discontinue the program again as opposed to a successful rehabilitation.

Figure 3E-2. FY 2018 Status of Veterans who Re-entered the VR&E Program after Discontinuation, by Cohort



Source: Administrative Data, FY 2018

Figure 3E-3 displays the participation status, as of FY 2018, of Veterans who re-entered the program after a previous rehabilitation. Veterans can re-enter the program after a successful rehabilitation for several reasons.

Veterans who are rehabilitated from an employment plan can re-enter the program if they have an SCD and either the:

- SCD has worsened and it is determined that the effects of the SCD precludes the Veteran from performing the duties of the occupation for which he or she previously was found rehabilitated; or
- Occupation for which the Veteran previously was found rehabilitated under Chapter 31 is found to be unsuitable based on the Veteran’s specific employment handicap and capabilities.

Veterans who are rehabilitated from an IL plan can re-enter the program if:

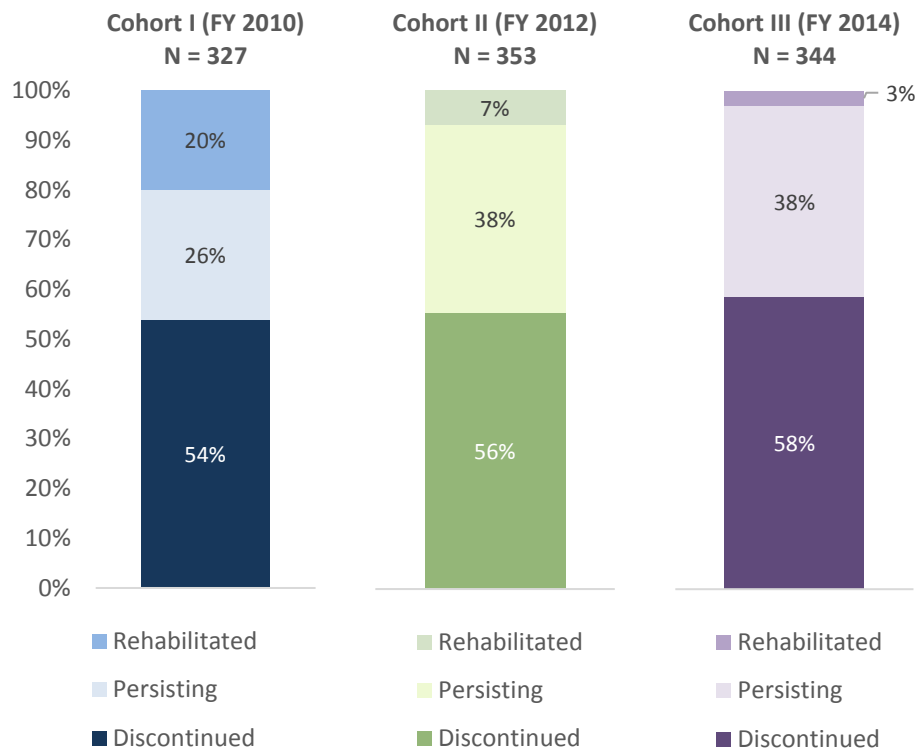
- The Veteran’s condition has worsened and as a result the Veteran has sustained a substantial loss of independence; or
- Other changes in the Veteran’s circumstances have caused a substantial loss of independence.

A finding of rehabilitation to the point of employability by VA may be set aside during a period of employment services if any of the following are met:

- The rehabilitation services originally provided to the Veteran are now inadequate and will not assist the Veteran with becoming employed in the occupation he or she pursued.
- It has been demonstrated that employment in the selected vocational goal may not currently be appropriate.
- The Veteran, because of technological change is no longer able to perform the duties of the occupation for which he or she was trained.

For Veterans in Cohort I who were previously rehabilitated, as of FY 2018, one-fifth achieved rehabilitation again, one-quarter (26 percent) were persisting, and a little more than one-half (54 percent) discontinued. Among the more recent Cohorts, over one-third (38 percent) of Veterans who re-entered after rehabilitation were still persisting as of FY 2018. The pattern observed in Figure 3E-2 suggests that the likelihood of rehabilitation increases over time among Veterans who have re-entered the program after a previous rehabilitation.

**Figure 3E-3. FY 2018 Status of Veterans who Re-entered the VR&E Program after Rehabilitation, by Cohort**



Source: Administrative Data, FY 2018



### 3.F. Cohort Comparisons

The previous sections of the report present Cohort findings as of FY 2018. However, these findings are affected by the differing lengths of time that each Cohort has been in the study. As such, this section compares findings for the Cohorts using a common elapsed time, specifically within five years of beginning a rehabilitation plan for all three Cohorts. This section also compares findings for Cohort I and Cohort II within seven years of beginning a rehabilitation plan. Within this section, comparisons of program-related outcomes based on administrative data are presented, such as the proportion of Cohort members who have exited the program within the first five years of program entry. This section also presents employment and standard of living outcomes, based on survey data, using the same periodicity when comparing Cohorts. Specifically, this section compares the employment rate, annual earnings, and annual income across Cohorts.

Within seven years of beginning an employment plan, 34 percent of Cohort I members and 40 percent of Cohort II members achieved rehabilitation. It is important to remember that the majority of VR&E participants are in the Employment through Long-Term Services track, and many in this track are pursuing additional training or education that may take several years to complete.

As of the end of FY 2018, six to seven years had passed since Cohort II (FY 2012) members first began a VR&E plan of services, while Cohort I (FY 2010) members reached this time benchmark in FY 2016. Hence, the most recently collected survey data for the VR&E Longitudinal Study allows for comparisons of seven-year outcomes for those two Cohorts. As of FY 2018, five years have passed since members of Cohorts III (FY 2014) first began a VR&E plan of service. Using data as of FY 2014, FY 2016, and FY 2018 for Cohort I, II, and III respectively, outcomes within five years of beginning a VR&E program can be compared for all three Cohorts. However, when comparing these data, it is important to recognize that the five-year outcomes reported for Cohort I are for outcomes achieved as of FY 2014, the five-year outcomes reported for Cohort II are for outcomes achieved two years later, as of FY 2016, and the five-year outcomes reported for Cohort III are as of FY 2018.

#### Comparison of Program Outcomes

**Rehabilitation and discontinuation outcomes.** Comparisons of the cumulative proportion of Cohort members who have achieved rehabilitation or discontinued services each year, within seven years of beginning services, reveal that VR&E participants are exiting the program at similar rates over time. Figure 3C-1, presented earlier, shows that within one year of beginning services only about one or two percent of VR&E participants successfully achieve rehabilitation. Less than 10 percent achieve rehabilitation within two years of program entry. The number of participants who achieved rehabilitation continued to increase over time, with approximately one-quarter who were rehabilitated within four years of beginning services (22 percent for Cohort I, 25 percent for Cohort II, and 24 percent for Cohort III), and more than one-third who achieved rehabilitation within seven years of participation (37 percent for Cohort I and 38 percent for Cohort II). Figures 3F-1 and 3F-2 indicate that the proportion of VR&E participants who were rehabilitated or discontinued differ substantially depending on if the Veteran pursued an

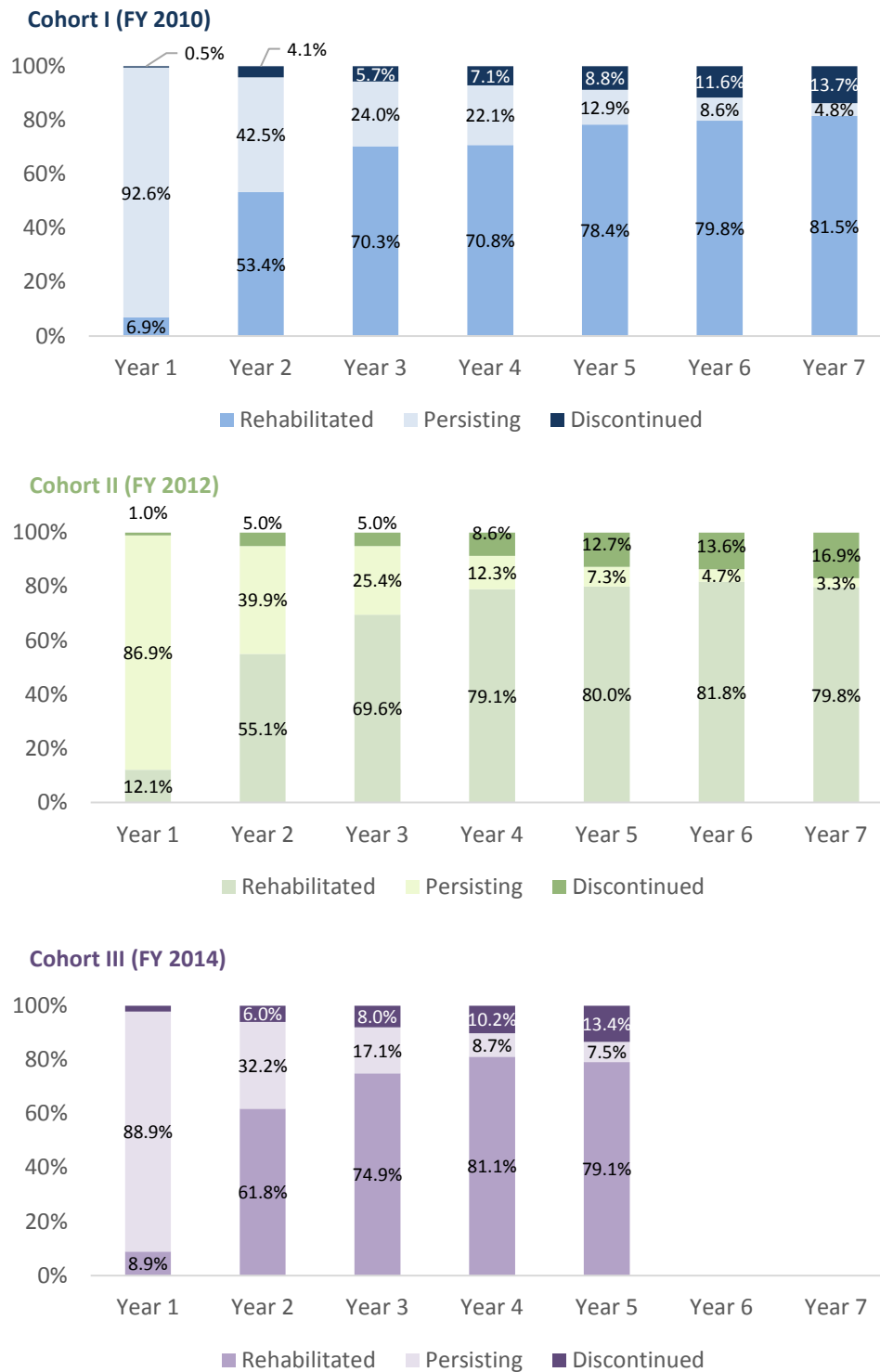
employment plan of services or an IL plan. The vast majority of participants pursue an employment plan, particularly the Employment through the Long-Term services track to complete education and training programs which may take several years to complete.

Figure 3F-1 indicates that for those pursuing an IL plan, about four-fifths (82 percent for Cohort I and 80 percent for Cohort II) successfully complete the program within seven years of beginning services. As indicated in the figure, the largest increases in the proportion of Veterans in an IL program who achieve rehabilitation occurs within two and three years of beginning the program, given that the program generally lasts 24 months, with an additional six-month extension if needed. Extensions beyond 30 months may be granted under certain circumstances for Post-9/11 Veterans who served on active duty and have a severe disability incurred or aggravated by that service.

As shown in Figure 3F-2, among participants in an employment plan, the vast majority have exited the program through rehabilitation or discontinuation within seven years of program participation. Among Cohort members in an employment plan, only one-fifth (21 percent) of Cohort I and 16 percent of Cohort II are still persisting in their plans of service within seven years of beginning those plans. More than one-third of VR&E participants in an employment plan have achieved rehabilitation within seven years (34 percent of Cohort I and 40 percent of Cohort II). For both Cohorts, the proportion of Veterans who discontinued from an employment plan within seven years was larger than the proportion who rehabilitated, especially so for Cohort I.

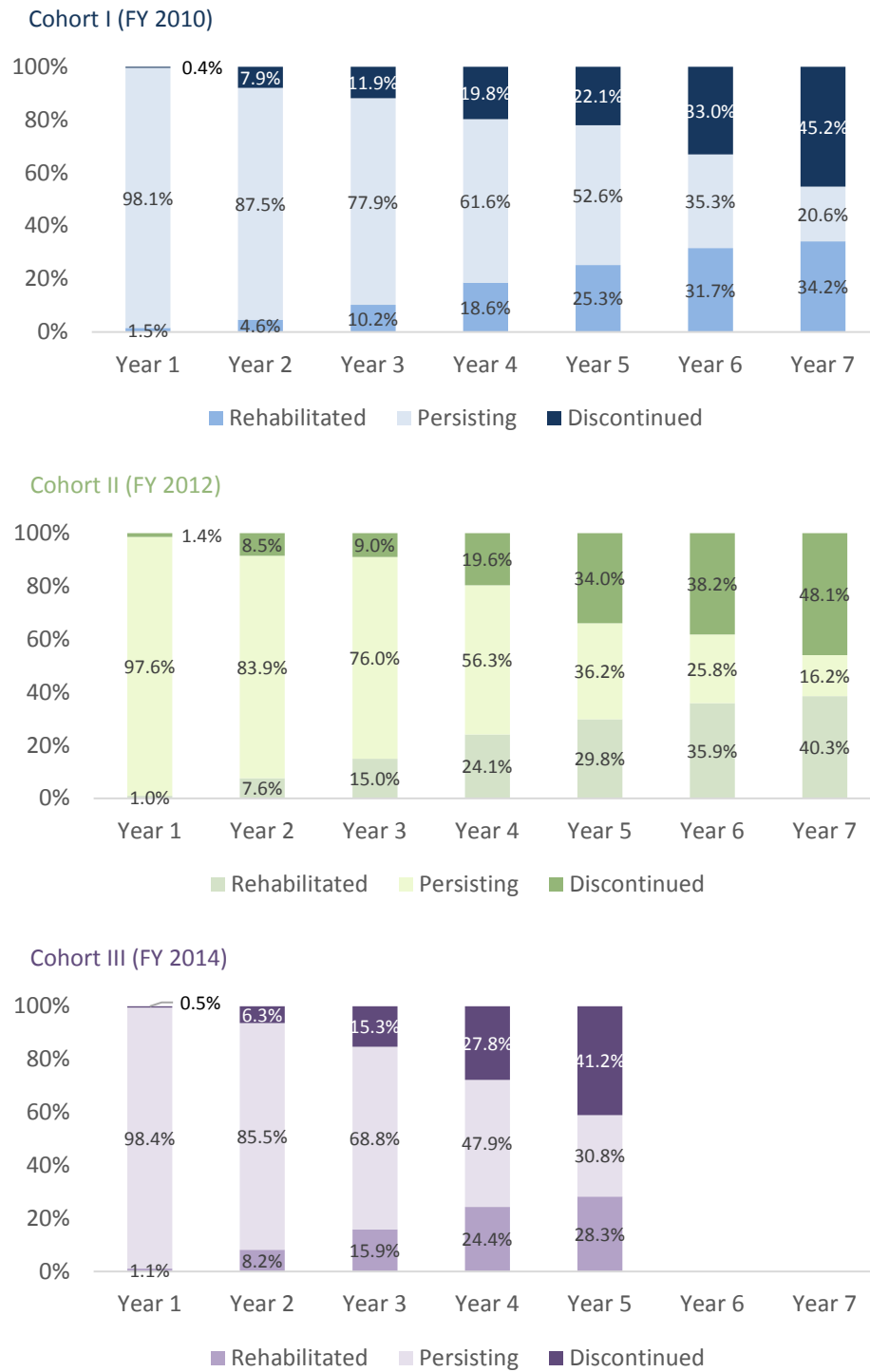
Comparing results among VR&E participants in an employment plan for all three Cohorts at the five-year mark indicates that the percentage of participants who achieve rehabilitation within five years of beginning a plan of service is between 25 and 30 percent. The proportion of Cohort members who discontinue from an employment plan by the five-year benchmark is higher among more recent Cohorts (22 percent for Cohort I, 34 percent for Cohort II, and 41 percent for Cohort III).

Figure 3F-1. Cumulative Percentage of VR&E Participants in an IL Track who Achieved Rehabilitation, Discontinued, or are Still Persisting as of each Study Year, by Cohort



Source: Administrative Data, FY 2018

Figure 3F-2. Cumulative Percentage of VR&E Participants in an **Employment Track** who Achieved Rehabilitation, Discontinued, or are Still Persisting as of each Study Year, by Cohort



Source: Administrative Data, FY 2018

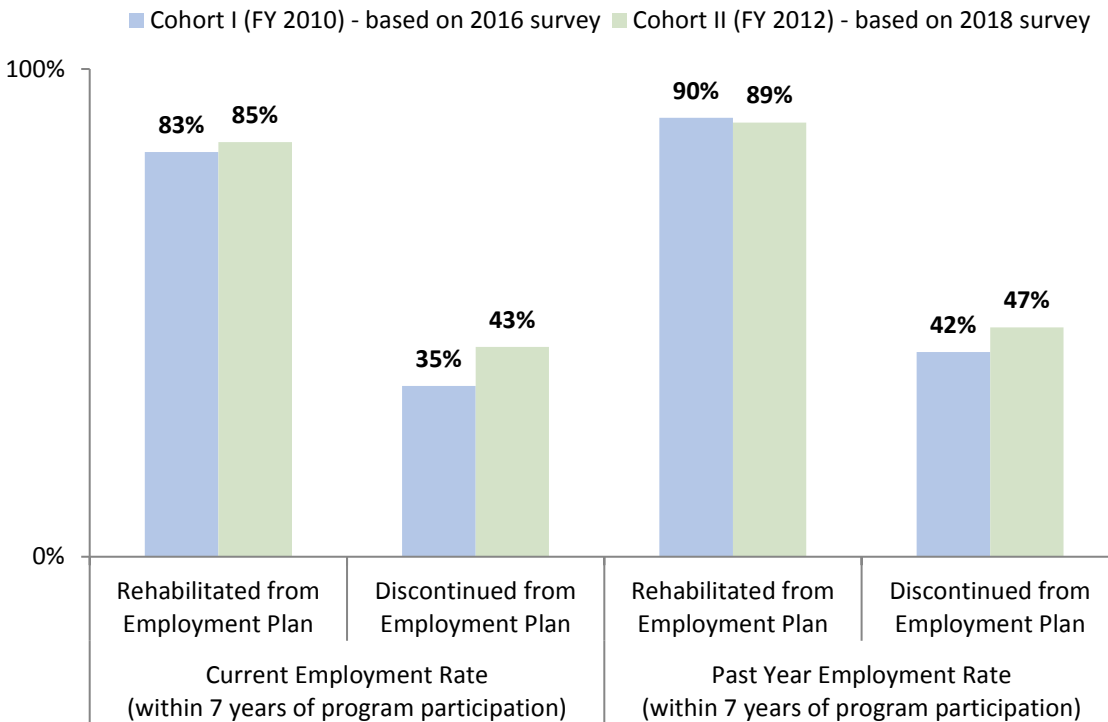
## Comparison of Employment and Standard of Living Outcomes

When comparing employment outcomes for participants who exit the program, it is important to examine these measures separately for those who exit from an employment plan versus an IL plan. The primary goal of IL is to assist Veterans with achieving maximum independence in daily living within their family and community versus employment. Conversely, individuals pursuing an employment plan obtain the skills and training necessary to be competitively employed in their field. VR&E evaluates each participant as he or she nears the completion of the rehabilitation goal and determines that new training and skill development has made each individual competitive in his or her chosen field. VR&E also assesses and assists with their job seeking skills such as resume development and interview skills. Once a Veteran has all the necessary training and skills, they are declared job ready.

The final set of findings in this section compares the employment rate, annual earnings, and annual income for Cohorts I and II within seven years of beginning a plan of services. However, when comparing these data, it is important to recognize that the seven-year outcomes reported for Cohort I are for outcomes achieved as of FY 2016 and the seven-year outcomes reported for Cohort II are for outcomes achieved two years later, as of FY 2018. Similarly, when comparing these outcomes using a five-year benchmark, the outcomes reported for Cohorts I, II, and III are as of FY 2014, FY 2016, and FY 2018, respectively. Given that the U.S. economy has improved in recent years, one would expect the economic outcomes for Cohort members to improve over time as well.

Figure 3F-3 indicates that both Cohorts I and II experienced similar rates of employment for those who exited the VR&E program from an employment plan within seven years of beginning services. As expected, however, Veterans who have achieved rehabilitation from an employment plan have much higher rates of employment, between 40 and 50 percentage points higher, compared to Veterans who discontinued from an employment plan. Interestingly, the figure also suggests that the employment rate was about the same or higher in more recent years, likely due, in part, to improved U.S. economic conditions and the availability of jobs in recent years.

**Figure 3F-3. Employment Rates Within Seven Years of Program Participation for VR&E Participants who Achieved Rehabilitation or Discontinued from an Employment Plan, by Cohort**

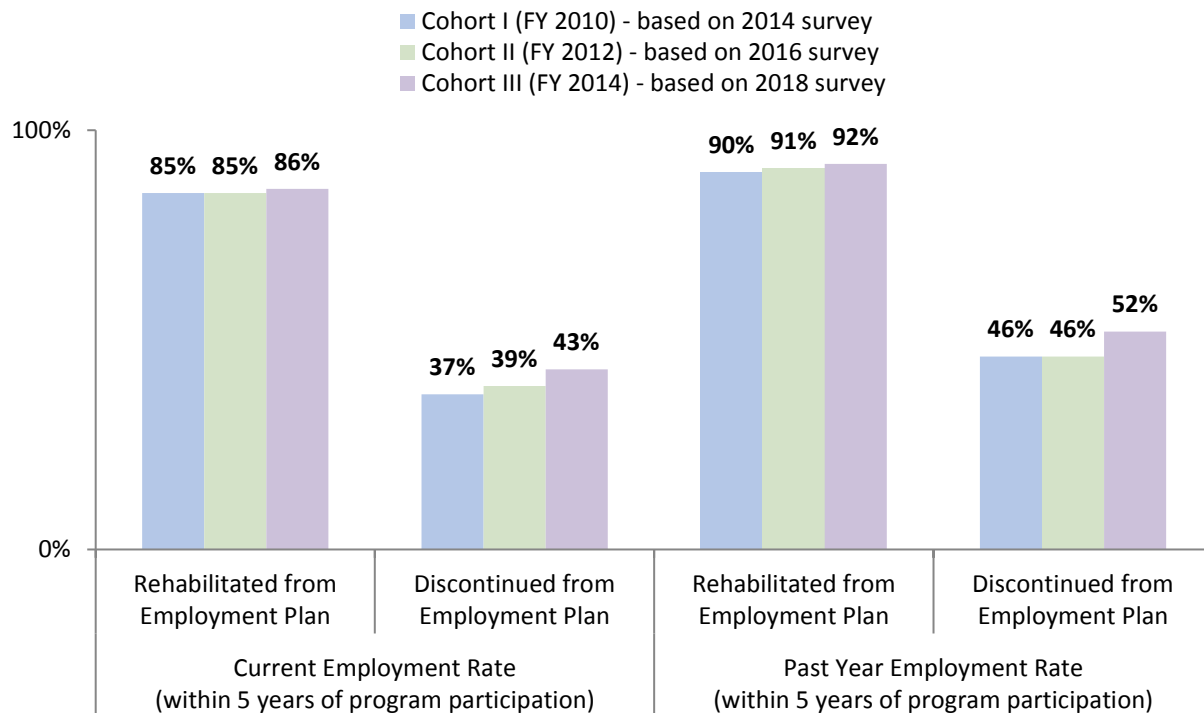


Note: Percentages (%) reported in the figure are based on survey data that has been weighted to reflect the Cohort population. Current employment rate is defined as the percentage of Cohort members who reported being employed as of the survey date. Past year employment rate is defined as the percentage of Cohort members who reported working at any point in the past 12 months (including working currently as of the survey date).

Source: VR&E FY 2018 Survey Data

Figure 3F-4 indicates that Cohorts I, II, and III had similar rates of employment for those who rehabilitated from an employment plan within five years of beginning services. Participants who discontinued from an employment plan had, as expected, much lower rates of employment at the five-year period than their counterparts who rehabilitated. Similar to the findings presented in Figure 3F-3, the gap in rates of employment observed at the five-year mark between discontinued and rehabilitated participants was considerably smaller in 2018 compared to 2016, likely due to improved U.S. economic conditions and the availability of jobs in recent years.

Figure 3F-4. Employment Rates Within Five Years of Program Participation for VR&E Participants who Achieved Rehabilitation or Discontinued from an Employment Plan, by Cohort



Note: Percentages (%) reported in the figure are based on survey data that has been weighted to reflect the Cohort population. Current employment rate is defined as the percentage of Cohort members who reported being employed as of the survey date. Past year employment rate is defined as the percentage of Cohort members who reported working at any point in the past 12 months (including working currently as of the survey date).

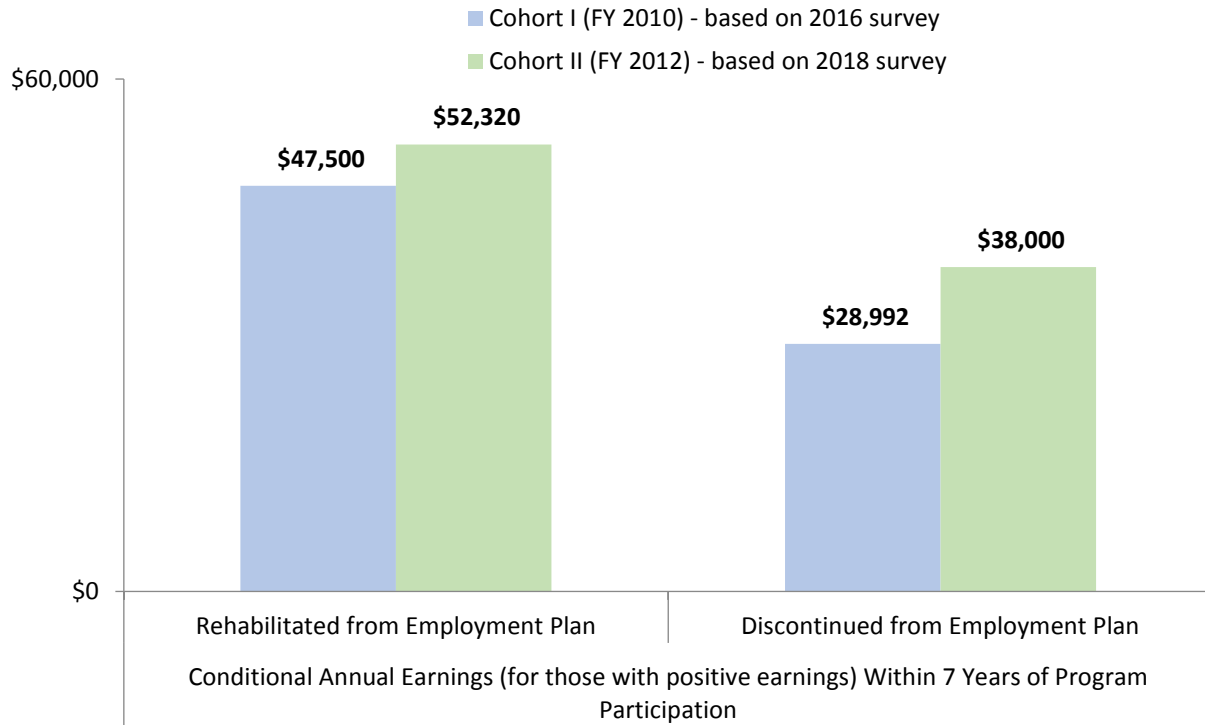
Source: VR&E FY 2018 Survey Data

Because the distribution of some measures is so heavily skewed toward zero (e.g., annual earnings), and thus, the data are not normally distributed, figures report either the unconditional (includes zero values) or conditional (excludes zero values) median. Given earnings are a function of employment status, Figure 3F-5 reports the conditional median earnings from employment. In other words, Figure 3F-5 provides an estimate of the average amount of annual earnings *among Veterans who reported working*. When comparing the annual earnings amounts for participants who were employed within seven years of beginning their program, the earnings of those who achieved rehabilitation from an employment plan are substantially higher than those who were discontinued, as shown in Figure 3F-5. Furthermore, the figure indicates that within seven years of starting VR&E services, Cohort II members reported higher earnings in FY 2018 compared to the reports of Cohort I members in FY 2016. The median earnings of Cohort II Veterans who rehabilitated from an employment plan are 10 percent higher after seven years than their Cohort I counterparts, a rate that well outpaces inflation over the period.<sup>23</sup>

<sup>23</sup> [https://www.bls.gov/data/inflation\\_calculator.htm](https://www.bls.gov/data/inflation_calculator.htm)

For Veterans who discontinued from an employment plan, the earnings difference between the two Cohorts seven years after beginning services is even larger (31 percentage points).

**Figure 3F-5. Conditional Median Earnings from Employment (for those with positive earnings) Within Seven Years of Program Participation for VR&E Participants who Achieved Rehabilitation or Discontinued from an Employment Plan, by Cohort**



Note: Amounts reported in the figure are based on survey data that has been weighted to reflect the Cohort population. Earnings are defined as the amount earned, before taxes and other deductions, in the past 12 months from all jobs or businesses.

Source: VR&E FY 2018 Survey Data

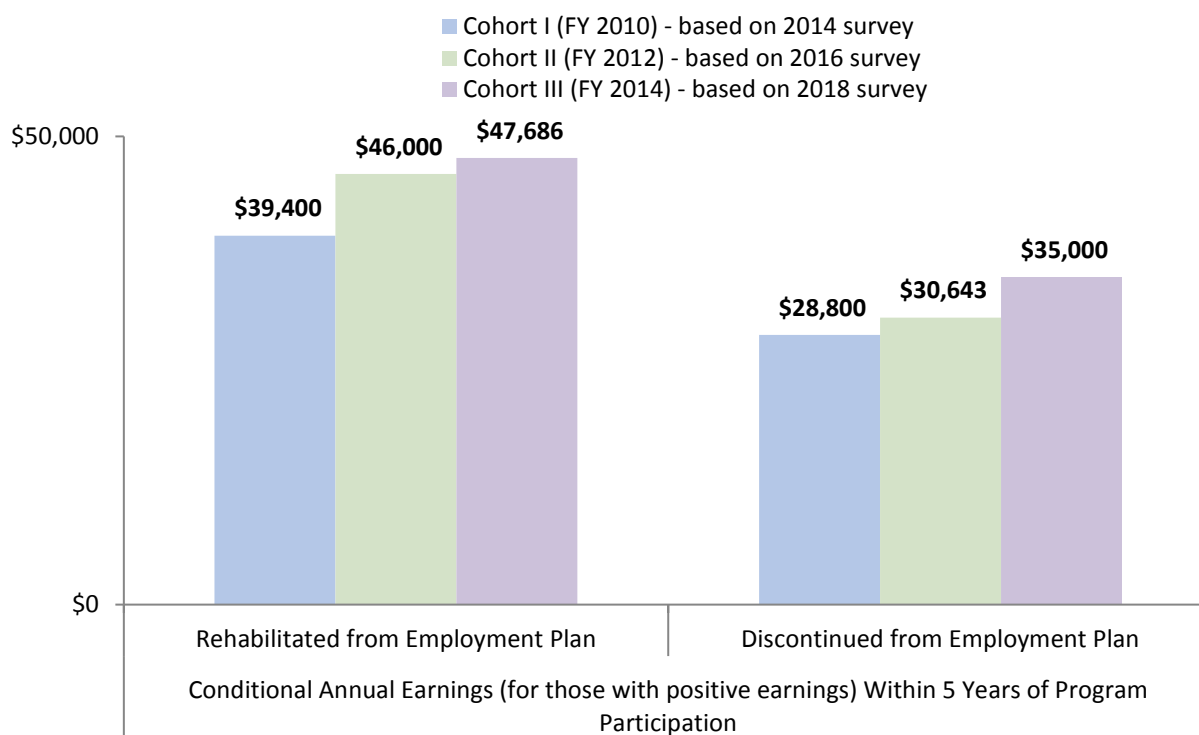


Figure 3F-6 compares, for employed Veterans, median annual earnings within five years of beginning VR&E services for those who rehabilitated from an employment plan with their counterparts who were discontinued from an employment plan. As expected, among all three Cohorts, earnings for rehabilitated participants are higher within five years compared to Veterans who were discontinued.

Annual earnings are substantially higher among Veterans who were rehabilitated from an employment plan, relative to those who discontinued services. Furthermore, Veterans reported higher annual earnings in more recent years, likely due, in part, to improved U.S. economic conditions.

VR&E participants who were rehabilitated from an employment plan reported earning, on average, approximately \$10K to \$15K more than those who were discontinued from an employment plan, within five years of starting the program. Figure 3F-6 also indicates that Cohort members reported higher earnings over time.

**Figure 3F-6. Conditional Median Earnings from Employment (for those with positive earnings) Within Five Years of Program Participation for VR&E Participants who Achieved Rehabilitation or Discontinued from an Employment Plan, by Cohort**



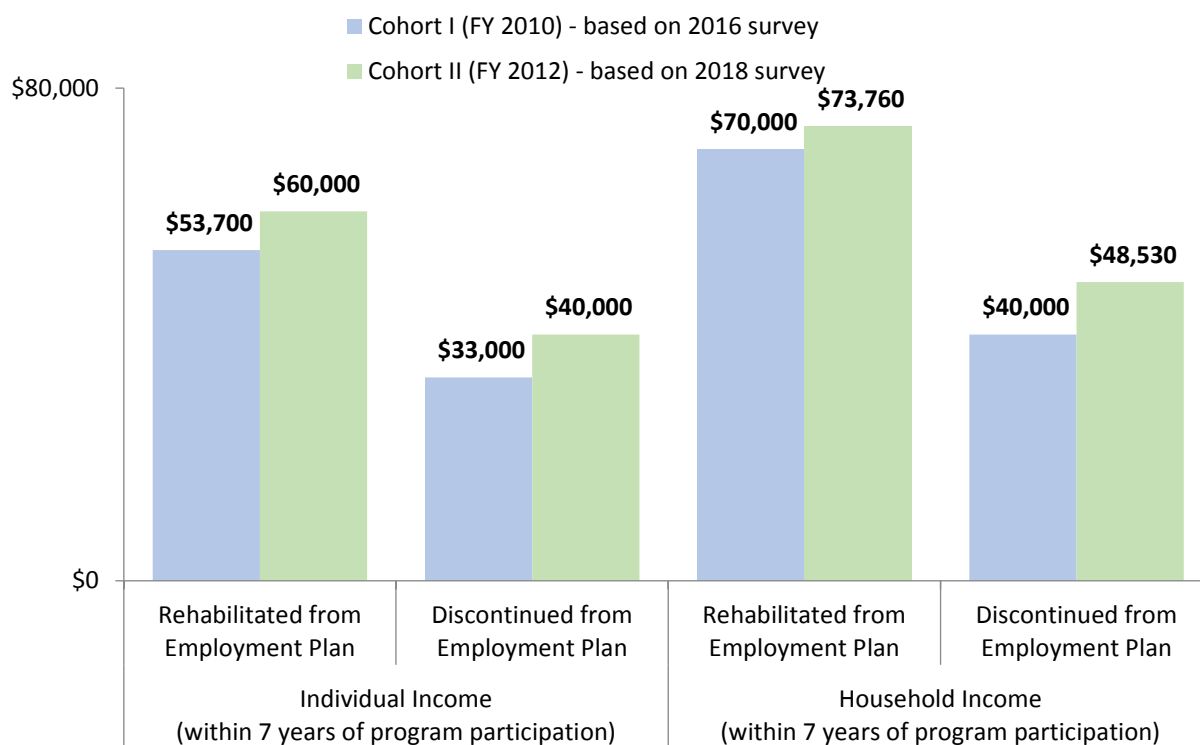
Note: Amounts reported in the figure are based on survey data that has been weighted to reflect the Cohort population. Earnings are defined as the amount earned, before taxes and other deductions, in the past 12 months from all jobs or businesses.

Source: VR&E FY 2018 Survey Data

Figure 3F-7 presents the annual income amounts reported by those who exited from an employment plan within seven years of beginning services. As expected, participants who achieved rehabilitation from an employment plan report annual individual and household income

amounts substantially higher than the income amounts of those who discontinued from an employment plan. Given that Veterans who achieved rehabilitation from an employment plan report higher annual earnings from employment, it is not surprising that reported income amounts (which include earnings from employment) are also higher. Figure 3F-7 also reveals that the income of VR&E participants has increased over time. Cohort II members reported higher income amounts in the 2018 survey compared to the income amounts reported by Cohort I members in the 2016 survey. These differences outpace the inflation rate between 2014 and 2016.

**Figure 3F-7. Unconditional Median Annual Income Within Seven Years of Program Participation for VR&E Participants who Achieved Rehabilitation or Discontinued from an Employment Plan, by Cohort**



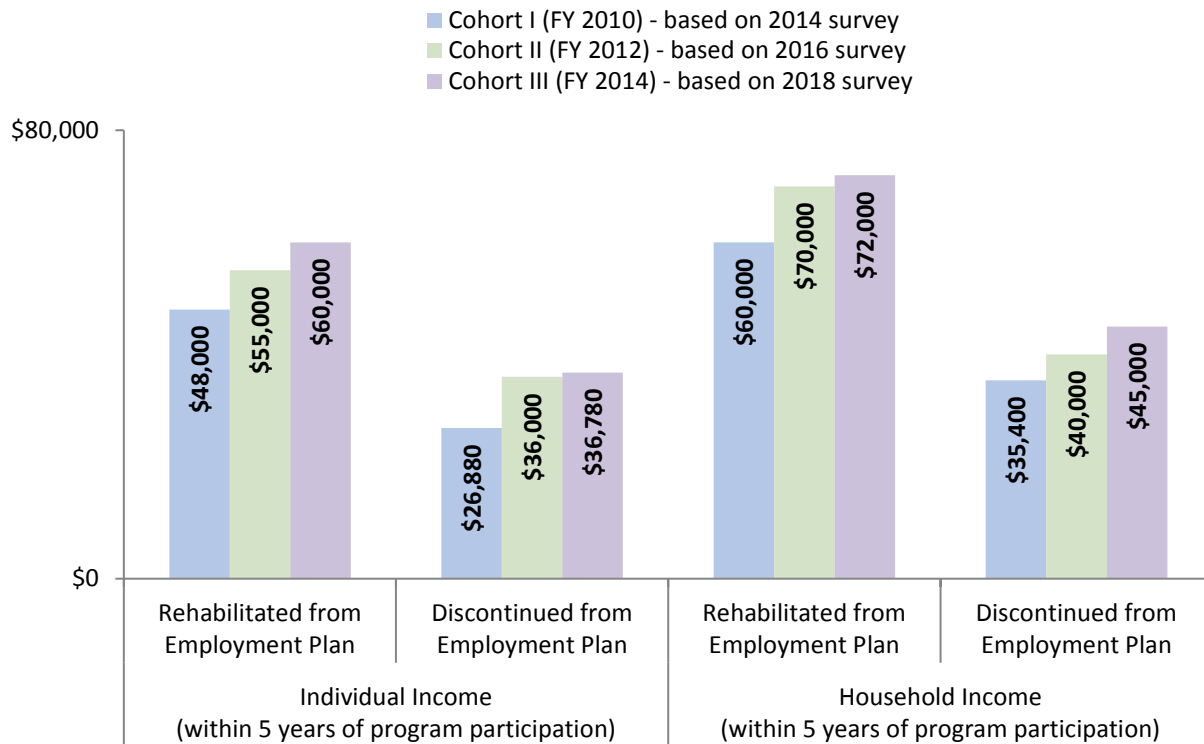
Note: Amounts reported in the figure are based on survey data that has been weighted to reflect the Cohort population. Income is defined as income received from all sources, before taxes, in the past 12 months, including earnings from a job, benefits received from government programs, and any retirement, pension, investing, or savings income from which regular payments are received.

Source: VR&E FY 2018 Survey Data

Figure 3F-8 presents, for all three Cohorts, the annual income amounts reported by those who exited from an employment plan within five years of beginning services. The data show that each Cohort had higher income, at both the individual and household levels, than the preceding Cohort. That is, members of Cohort III reported higher income at the five-year mark than members of Cohort II, and members of Cohort II had higher income than Cohort I after the same time span. In general, the successive increases between each Cohort (i.e., each “step”) shown in the figure are greater than the corresponding rates of inflation during each two-year reference

period. As expected, those who discontinued from an employment plan had lower individual and household income than those who successfully rehabilitated.

**Figure 3F-8. Unconditional Median Annual Income Within Five Years of Program Participation for VR&E Participants who Achieved Rehabilitation or Discontinued from an Employment Plan, by Cohort**



Note: Amounts reported in the figure are based on survey data that has been weighted to reflect the Cohort population. Income is defined as income received from all sources, before taxes, in the past 12 months, including earnings from a job, benefits received from government programs, and any retirement, pension, investing, or savings income from which regular payments are received.

Source: VR&E FY 2018 Survey Data

The findings presented in this section indicate that, in general, Cohorts II and III have outcomes similar to those seen in Cohort I for the same time period. The most substantive finding of the VR&E Longitudinal Study to date is that Veterans who achieve rehabilitation have substantially better employment and standard of living outcomes than those who discontinued services, regardless of the length of time since they began their VR&E program of services. Successful rehabilitation remains one of the most dominant factors associated with positive financial outcomes (employment rate, months worked, annual earnings, and annual individual and household income) compared to those Veterans who discontinued program participation.

# 4. SUMMARY OF FINDINGS AND EARLY CONCLUSIONS

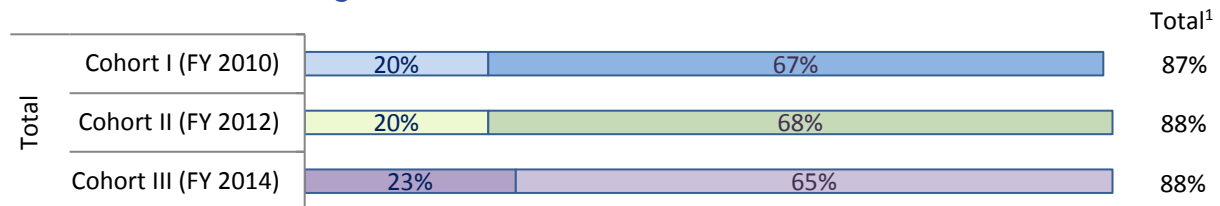
The data analyzed for Cohorts I, II, and III during these early years of the VR&E Longitudinal Study reveal some common patterns across the three Cohorts as well as a few differences. The main findings are summarized below.

Most participants for all Cohorts reported moderate to high program satisfaction (~88 percent).

## 4.A. Veteran Satisfaction

For all Cohorts, almost 90 percent of Veterans reported moderate to high satisfaction with the VR&E program (see Figure 4-1). Participants who achieved rehabilitation and those still persisting in their plans reported higher program satisfaction relative to those who were discontinued, for all Cohorts. Multivariate regression analysis reveals that, for all three Cohorts, in addition to program participation status, earning a degree in the past 12 months is associated with higher satisfaction.

Figure 4-1. Percentage of VR&E Participants Reporting Moderate or High Overall Satisfaction with the Program as of the end of FY 2018



Source: VR&E FY 2018 Survey Data

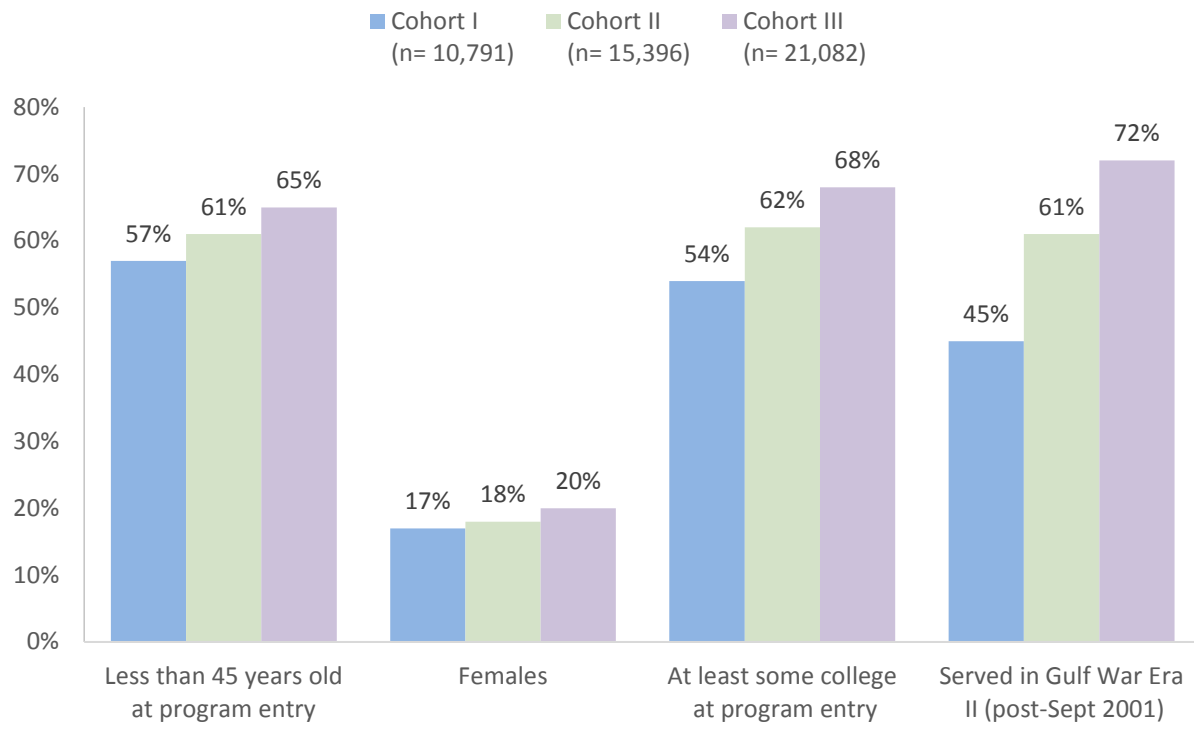
## 4.B. Demographic Differences at Program Entry

Figure 4-2 reveals that recent Cohorts of VR&E participants are younger, have a slightly larger proportion of female Veterans, are more educated, and have a higher proportion of Veterans that served in the Gulf War Era than the overall Veteran population. Females make up a larger percentage of VR&E program participants (17 to 20 percent) than the percentage of females in the overall Veteran population (10 percent).<sup>24</sup> However, the distribution of females among the VR&E Cohorts is consistent with the proportion of females represented among all Gulf War Era Veterans (17 percent).<sup>25</sup>

<sup>24</sup> Based on 2018 Bureau of Labor Statistics data available at <http://www.bls.gov/news.release/pdf/vet.pdf>.

<sup>25</sup> Ibid.

Figure 4-2. Key Demographic Trends of VR&E Participants at Program Entry



Note: Percentages (%) reported in the figure are based on Administrative Data available for the Cohort population.  
 Source: VBA FY 2018 Administrative Data

The Cohorts grew substantially in size over time as more Veterans became eligible and sought VR&E services. There are several likely contributing factors to this increase in participation including increases in the number of recently separated Veterans, increases in the number of Veterans with an SCD, and changes in program eligibility and provisions which may have attracted more Veterans with an SCD to the program.

**Characteristics of Recent (Cohorts II and III) VR&E Participants Compared to Cohort I:**

- Younger
- Higher percentage of female Veterans
- More educated prior to program entry
- Longer period of active duty military service
- Higher percentage of Veterans that served in the Gulf War Era II.

### 4.C. Program Outcomes (Rehabilitation and Discontinuation)

Cohort I Veterans have had more time to complete their rehabilitation plans. They have experienced larger increases in the number and proportion of Veterans who have successfully completed their program or who have discontinued program services. Comparisons of Cohorts for the same period of program tenure reveal that participants exit the program at similar rates.

Only about three percent of Cohort members exit the program within the first year of receiving services.

Comparisons of Cohorts for the same period of program tenure reveal that participants exit the program at similar rates

Examination of program outcomes by track selection reveals different patterns. The varying program outcomes are primarily dependent upon the duration of service delivery in the various tracks. The largest increase in the cumulative proportion of Cohort members who achieve rehabilitation from an IL plan occurs within 30 months of entering the IL plan. Among Cohort members pursuing an IL plan, slightly more than one-half achieve rehabilitation within 24 months. This is expected, given that plans of IL services must be completed within 24 months. A six-month extension may be approved for Veterans who incurred an SCD before September 11, 2001. Specific criteria for extensions beyond 30 months are possible, but rare, for Veterans who incurred a severe SCD after September 11, 2001.

The majority of Cohort members pursuing an IL plan achieve rehabilitation within 30 months of entering an IL plan.

Less than 30 percent of participants pursuing an employment plan achieve rehabilitation within five years of the time their program started. This finding is not surprising, as the majority of Cohort members are in the Employment through the Long-Term Services track pursuing additional training or education, which may take years to complete. In fact, a study conducted by GAO reveals it often takes Veterans six years or more to successfully achieve rehabilitation.<sup>26</sup>

Similarly, for all Cohorts, multivariate regression analyses reveal that the most dominant variable driving rehabilitation, as well as the amount of time it takes to rehabilitate, is program track selection. Veterans in any of the Employment Services tracks are less likely to successfully achieve rehabilitation by the end of FY 2018, and generally take longer to rehabilitate due to the nature of these programs. In addition, having an SEH and a higher disability rating decreases the probability of successful rehabilitation (and increases the time it takes to be rehabilitated). This indicates that Veterans with more complex disabilities, multiple disabilities, or more significant barriers to employment are not reaching rehabilitation as quickly as those Veterans with fewer barriers. Conversely, having at least some college education at program entry, a higher pre-rehabilitation salary, serving a greater number of months on active duty, and having served in the Gulf War Era II are associated with an increased likelihood of achieving rehabilitation (and earlier rehabilitation) by the end of FY 2018.

As of FY 2018, factors found to lead to discontinuation include employment track selection and a high combined disability rating. Whereas, factors that mitigate Veterans from discontinuation include at least some college education at program entry, a greater number of months served on active duty, and service in the Gulf War Eras I or II.

<sup>26</sup> <http://www.go.gov/assets/670/660160.pdf>

## 4.D. Employment and Standard of Living Outcomes

Table 4-1 describes the long-term post-program outcomes measured by the VR&E Longitudinal Study. Since the main focus of the study is on long-term outcomes experienced by VR&E participants after exiting the program, the findings focus on the outcomes experienced thus far (i.e., as of FY 2018) by Cohort members who have achieved rehabilitation or were discontinued from services.

Table 4-1. Employment and Standard of Living Outcome Measures Analyzed in this Study

Employment Outcomes	
Current Employment Rate	Survey report on if currently employed at time of survey
Extent Current Job Matches Training	Survey report on how closely current job matches VR&E training
Past Year Employment Rate	Survey report on if worked in the 12 months prior to the survey
Number of Months Employed During Past Year	Survey report on how many months worked in the 12 months prior to the survey
Earnings	
Annual Earnings	Survey report on how much earned in the 12 months prior to the survey
Pre-Rehabilitation and Post-Rehabilitation Salaries	VA administrative data collected at the beginning of the program and at the point of rehabilitation
Income	
Individual Income	Survey report of annual individual income from all sources including salary/wage income and income from other sources such as VA disability benefits
Household Income	Survey report of annual household income
Unemployment Compensation Rate	Survey report of receipt of unemployment benefits in the 12 months prior to the survey
Homeownership	
Homeownership Rate	Survey report of home ownership

Source: EconSys Study Team

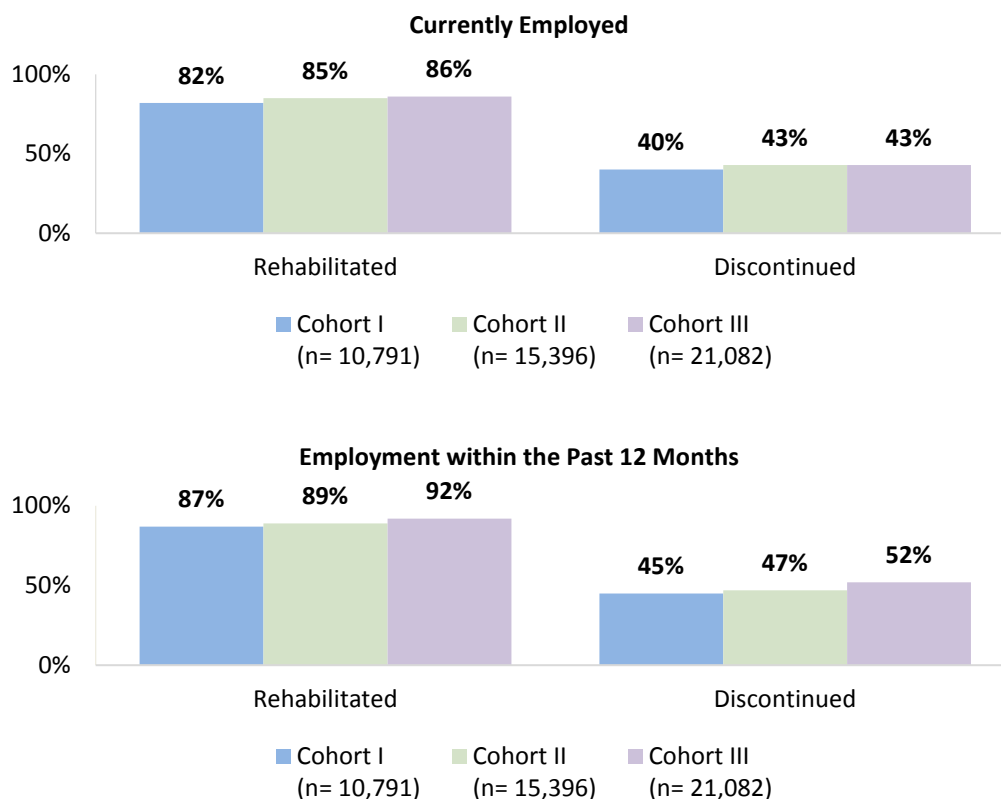
The FY 2018 VR&E Longitudinal Study findings reveal that regardless of program tenure, Veterans who have achieved rehabilitation have substantially better employment and standard of living circumstances than those who discontinued. In fact, successful completion of the program (i.e., rehabilitation) was one of the most dominant factors driving positive financial outcomes compared to those who discontinued program services. Participants who have achieved rehabilitation experience higher rates of employment, and consequently higher earnings from employment. However, when comparing earnings for only those Cohort members who report working, those who have achieved rehabilitation report higher earnings amounts than those who discontinued, suggesting

Almost 90 percent of all participants who have achieved rehabilitation have been employed within the last 12 months.

that Veterans who achieve rehabilitation both work more, and earn more, than Veterans who have discontinued from the program.

**Employment Outcomes.** For Veterans who have achieved rehabilitation from an employment plan, around 90 percent reported employment in the past 12 months (see Figure 4-3). On average, employment rates for Veterans who achieve rehabilitation are 40 to 50 percentage points higher than those of discontinued Veterans.

Figure 4-3. Past Year Employment Rate for VR&E Participants Who Achieved Rehabilitation or Discontinued from an Employment Plan as of the end of FY 2018



Source: FY 2018 VBA Administrative and VR&E Survey Data

Approximately three-quarters of participants who achieved rehabilitation were employed in a job that matches or nearly matches their training provided by VR&E, compared to less than 50 percent of participants who did not complete their rehabilitation plans.



**Earnings.** Participants who have achieved rehabilitation also have substantially higher earnings over the past 12 months, relative to discontinued participants, which is largely due to more participants that have completed the program and are working. However, when comparing the median annual earnings of only those Cohort members who reported working, discontinued participants earned, on average, 25 to 35 percent less than rehabilitated participants. Furthermore, over time, each Cohort has experienced increases in annual earnings that have substantially outpaced the annual inflation rate. These increases are heavily influenced by Veterans having completed the program, being employed longer, and earning promotions and raises. Veterans who did not reach their rehabilitation goals are seeing increases in incomes over time as well, but still make substantially less than those who successfully completed the program.

For Cohort I, the median annual individual income of participants who achieved rehabilitation is 59 percent greater than that of discontinued participants. The median annual household income of Cohort I participants who achieved rehabilitation is 60 percent greater than that of discontinued participants.

**Income.** In addition to higher earnings levels, participants who have achieved rehabilitation reported substantially higher income levels relative to discontinued participants.

Specifically, for Cohort I, the median annual income for Veterans who achieved rehabilitation was 59 percent larger than that of Veterans who did not complete the program (\$59K versus \$37K), as of FY 2018. For the median annual household income, the amount was 60 percent higher for Cohort I members who achieved rehabilitation compared to those who were discontinued (\$72K versus \$45K).

Cohort II has similar income and earnings as Cohort I. Median annual income for Veterans who achieved rehabilitation was 50 percent larger than that of Veterans who did not complete the program (\$60K versus \$40K), as of FY 2018. For the median annual household income, the amount was 48 percent higher for Cohort II members who achieved rehabilitation compared to those who were discontinued (\$71K versus \$48K).

Over time, fewer Veterans reported receiving unemployment benefits. Although the exact reason for this trend cannot be determined, the decline in the unemployment compensation rate may be partially explained by the fact that some participants may not need unemployment benefits or may have exhausted unemployment benefits at the time of the survey.

**Homeownership.** A larger percentage of those who have achieved rehabilitation reported owning their principal residence, relative to that of those who discontinued (Cohort I - 71 percent versus 55 percent; Cohort II - 67 percent versus 55 percent; Cohort III - 61 percent versus 49 percent). Additionally, for rehabilitated Veterans, home ownership has increased annually for each Cohort.

## 4.E. Future Reports

As these Cohorts are followed over the remaining 12 years of the study and as more VR&E participants exit the program, more data will be available on the long-term outcomes of Veterans and the key programmatic and demographic factors influencing these outcomes. Moreover, as multiple years of data are collected, it will be possible to examine more substantive trends in

outcomes. In addition, over time, more robust comparisons can be made across all three Cohorts using the same time benchmark. Finally, as the Cohorts mature, and more participants re-enter the program after discontinuation, or after having achieved rehabilitation, analysis can assess how entering the program more than once may influence long-term outcomes.