I. SUMMARY

This chapter provides a summary of Volume III, which evaluates the current system of compensation payments for veterans with service-connected disabilities. The evaluation includes an analysis of the loss of earnings capacity experienced by service-connected disabled (SCD) veterans and the extent to which the compensation benefits replace the average loss of earnings. The evaluation also assesses the consequences of service-connected disabilities with respect to loss of quality of life (QOL), apart from the effects on earnings.

Methodology

The EconSys Study Team employed a variety of methodological techniques to complete this study. Administrative data was obtained from the Department of Veterans Affairs (VA) on recipients of the disability compensation program. Literature reviews on disability, rehabilitation, and quality of life were conducted and interviews with representatives of foreign veterans programs were conducted to further understanding of these programs.

Earnings data were obtained from the Social Security Administration (SSA) on all recipients of disability compensation and on a representative sample of veterans discharged after 1980 without service-connected disabilities for comparison purposes. Analysis of earnings was limited by restrictions imposed on SSA that allows only aggregate information on groups of at least five veterans to be provided. This limitation prevents more in-depth analysis of earnings. For example, analysis of veterans with the same primary disability was conducted but analysis of the impact of multiple disabilities could not be performed.

The study team strongly urges that statutory authority be granted to SSA and VA that would enable future exchange of earnings data on individual veterans for analysis purposes only and with safeguards to ensure that veterans' privacy is protected. The EconSys study team notes that this recommendation was also made by the Veterans' Disability Benefits Commission. This authority would greatly enhance the capability to thoroughly analyze the impact of disability on veterans' earnings capacity.

A useful distinction is to separate the temporary disability period from the permanent disability period. The temporary disability period begins when the veteran is initially affected by a service-connected disability and ends on the date when the veteran reaches maximum medical improvement (MMI). During this period, the veteran would receive transition benefits (examined in Volume II), medical benefits (not within the scope of this report), and rehabilitation benefits (examined in this volume). Veterans currently do not receive transition benefits but may receive vocational rehabilitation if otherwise eligible. The permanent disability period begins at the date of MMI and is expected to continue for the rest of the veteran's life. During this period, the veteran receives disability compensation based on average impairment of earnings capacity,

may be entitled to a Special Monthly Compensation (SMC), and may receive rehabilitation services and medical benefits. The focus of Volume III is benefits paid during the permanent disability period.

VA Rating System

The VA Disability Compensation Program provides monthly benefit payments to veterans who become disabled as a result of or coincident with their military service. Payments generally are authorized based on an evaluation of the disabling effects of veterans' service-connected physical and/or mental health impairments. Monthly payments are authorized in ten increments from 10% to 100% (in 2008 the awards were $117 and $2527, respectively). Veterans with disabilities rated 30% or higher receive additional benefits for dependents.

The core process for determining ratings for disability compensation benefits uses the VA Schedule for Rating Disabilities (VASRD) to assign the level of severity of the disability. The rating process determines a veteran's entitlement to disability compensation. We refer to the overall process as the *VA Rating System*.

There are two circumstances that entitle a veteran to compensation beyond that authorized in the VASRD. The first is a determination that a claimant is unemployable due to service-connected disability, referred to as Individual Unemployability (IU). Claimants who are rated at 60% to 90% and determined to be entitled to IU qualify for the same benefit payment amount as those rated at the 100% disability level. Conditions or circumstances that result in the claimant not being employable override the medical impairment rating. The second is the SMC benefit. SMC is a benefit that is paid in addition to or instead of the VASRD-based benefits and is not specifically intended to replace loss of earnings as is the regular rating schedule. Examples include: loss of or loss of use of organs, sensory functions, or limbs; disabilities that confine the veteran to his/her residence or require regular aid and attendance services; a combination of severe disabilities that significantly affect mobility; and existence of multiple, independent disabilities each rated 50% or higher.

The VASRD contains a list of approximately 800 diagnoses or disability conditions, each of which may have up to 11 levels of medical impairment. The lowest level of impairment starts at 0% then increases in 10% increments up to a maximum of 100%. Not all diagnoses have levels of severity up to 100%, and they are not all ratable at all levels. Disability compensation as determined by the VASRD is intended to compensate for average loss of earnings capacity.

Eligibility for disability compensation generally requires a medical examination to establish the presence of a particular disabling condition and its associated level of impairment. Eligibility also requires that a determination be made whether the condition is a service-connected disability. Service-connected means that the condition occurred during or was aggravated by military service or, for certain chronic conditions, became evident within applicable time limits following discharge from the military. It does not require that the disability be work-related or be caused by conditions in the

work environment. For example, a military member who becomes permanently disabled from a car accident while in the service but not engaged in an official military duty could qualify for disability compensation after discharge from the military. In this regard the VA Disability Compensation Program combines elements of both disability insurance voluntarily provided by employers and workers' compensation programs mandated by government.

Another critical element of VA's rating system is the determination of the combined degree of disability (CDD) for claimants who have more than one disability. Most compensation beneficiaries—59 percent—have multiple disabilities. A claimant who has three disabilities with each disability rated at 10% receives a combined rating of 30%. At higher rating levels multiple disabilities are not additive. For example, a veteran with two service-connected disabilities, one rated 60% and one rated 10%, receives compensation only at the 60% rate. The combined rating is provided in a table that applies a formula that is the same in all cases regardless of the claimant's service-connected disabilities (see Appendix A).

The effect of combining additional ratings gives greater weight to multiple 10% ratings at the low end of the scale. The effect of additional 10% ratings is diminished when the primary diagnosis has a high rating. Having multiple low ratings increases the payment dramatically for a veteran who has a low rating for the primary diagnosis; it has a negligible or much smaller effect for veterans who have a single condition with a high rating such as 80% or more. Co-morbidities associated with a severe injury or disease could be compensated at a lower level than multiple unrelated diagnoses at low ratings.

Profile of Beneficiaries

Approximately 2.6 million veterans were receiving disability compensation in September 2007, which was about a 13 percent increase from 2.3 million in September 2001. About one-quarter of the veterans had a CDD rating of 10% (which is the most frequent rating) in both 2001 and 2007. (A CDD rating considers all of a veteran's service-connected disabilities.) In 2007, 9.1 percent of veterans receiving disability compensation had CDD ratings of 100%, up from 7.5 percent in 2001.

Most veterans receive compensation benefits because their medical condition is considered severe enough to achieve a CDD rating of at least 10 percent, which means that their medical condition is presumed to have resulted in a 10-percent impairment in average earnings capacity. Approximately 190 thousand veterans received Individual Unemployability benefits in 2007 because their actual loss of earnings was much greater than expected if based solely on their medical condition. In addition, about 260 thousand veterans received Special Monthly Compensation benefits in 2007.

In 2007, the largest group of disabled veterans, overall, had a 10% CDD rating (27.5 percent). The second and third largest groups were rated at 20% CDD (15 percent) and 30% CDD (12.1 percent), respectively. However, the overall percentage of veterans with a 10%, 20%, and 30% CDD decreased between 2001 and 2007.

For veterans receiving disability compensation benefits, conditions affecting the musculoskeletal body system are the most prevalent. The primary diagnostic code is musculoskeletal for approximately 45 percent of the conditions reported in 2007. Mental disorders comprise about 15 percent of SCD conditions (PTSD 9.5 percent and other mental disorders 5.8 percent). None of the other 13 body systems individually constitutes more than 10 percent of the SCD veterans.

Between 2001 and 2007 about 776,500 new enrollees started receiving disability compensation (excluding those veterans who joined the rolls during that time but were withdrawn as of September 2007). Tinnitus was the most prevalent condition for new enrollees, with about 215 thousand new cases or 8.3 percent of the total number of conditions for the new enrollees. Defective hearing was the next most prevalent condition with about 171 thousand new cases.

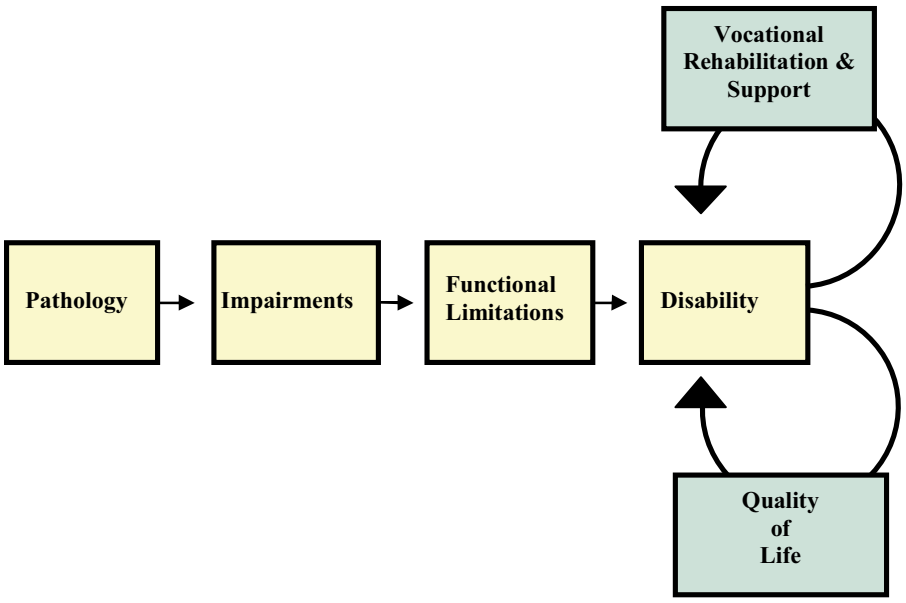
The third most prevalent condition for new enrollees between 2001 and 2007 was diabetes, which constituted 5.5 percent of the new enrollees or about 143 thousand cases. The fourth most prevalent condition for new enrollees was post-traumatic stress disorder (PTSD), which constituted 4.4 percent of the new enrollees or about 113 thousand cases.

Major increases also occurred in the number of veterans receiving SMC and IU. Of the new enrollees between 2001 and 2007, about 90,000 were awarded SMC, and 41,000 were awarded IU status. The number of recipients of SMC increased 77 percent from about 147 thousand to 260 thousand. SMC (K) made up nearly three-fourths of all the SMC cases in 2007. The number of veterans with IU status increased 74 percent from about 109 thousand to 190 thousand. Nearly one-half of these cases were veterans who have PTSD as their primary disability whereas about 11 percent of them are veterans with other mental disorders as their primary disability.

Models of Disability

An important starting point for any disability compensation program is a disability model that relies on clear, consistently used definitions for concepts used in the model. While several models of disability are discussed in this chapter, the Abridged Verbrugge and Jette Model of Disability, shown in Figure I-1, is useful in providing the key definitions used by compensation specialists and the relationships among the concepts in these models.

Figure I-1. Abridged Verbrugge and Jette Model of Disability



Source: Jette, AM Physical Disablement Concepts for Physical Therapy, 1994; 74:380-86.

Definitions of Disability

Pathology is the disease, injury, or other medical condition that is identified or classified by a medical diagnosis. Impairment involves damage or loss of a particular body function or ability or a worsening of and diminished capacity for a particular body function or ability. An impairment may be anatomical (loss of a leg), physiological (tinnitus), or be of a mental or emotional nature (major depressive disorder).

Functional Limitations typically refers to the effects of the impairment on Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL). ADLs are those activities and daily functions required for a person to take care of him or herself and to remain independent. These activities include eating, bathing, dressing, toileting, and transferring (from a chair to a bed). The IADLs go beyond basic self-care tasks and include such activities as shopping for groceries, preparing meals, managing money, performing housework, or using a telephone.

Disability refers to the effects of physical or mental impairments and of the resulting functional limitations on the roles and responsibilities an individual may perform in society. A work disability limits an individual in his or her work role because of a physical or mental impairment that impacts work performance and has two aspects. Loss of earnings capacity is the difference between an individual's capacity to earn income before disability and his or her capacity to earn income into the future after the disability. Actual loss of earnings is the difference between the wages a person would have earned if he or she had not been injured and the earnings the person actually earns after being injured.

Loss in quality of life normally refers to all of the consequences of an injury or disease, including impairments, functional limitations, and disability. Sometimes loss in quality of life refers to all the consequences other than work disability.

Features of Models of Disabilities

Two features of the models of disability are important. One characteristic of all of the models examined in Chapter III of this volume is that they implicitly or explicitly assume that the consequences of injuries occur in stages: impairments lead to functional limitations that lead to disability. The models recognize that not all impairments lead to functional loss, and not all functional losses result in disability. Moreover, the same impairment in different individuals may result in different functional losses, and the same functional losses may result in different amounts of disability. The models of disability examine the various personal and environmental factors that confound the relationships among impairments, functional limitations, and disability. However, the assumption is that there is a general relationship among the concepts – so that, for example, the severity of an individual's impairment can be used to predict the extent of that individual's work disability. This assumption is the foundation of most disability compensation programs. The impairment rating is used as a proxy or predictor of the resultant loss of earnings capacity or loss of actual wages.

Another feature of some models of disability is that work disability is distinguished from the other consequences of injuries or diseases. This distinction is the basic premise for the actual design of most disability compensation programs. Many disability compensation programs indicate their only purpose is to compensate for work disability. Other disability programs have two basic types of benefits: those that compensate for work disability and those that compensate for the other consequences of injuries and diseases. This distinction between the two types of benefits is reflected in the following discussion.

VA Compensation for Work Disability

The Veterans Disability Compensation Program provides benefits that are intended to compensate for the average impairment in earnings capacity resulting from service-connected diseases and injuries. The Program also provides Individual Unemployability benefits for veterans whose actual loss of earnings greatly exceeds the losses expected on the basis of their injuries. The basis for IU benefits corresponds to the actual loss of wages.

Regular Schedule Benefits

The VASRD and CDD Ratings

The operational approach for regular schedule benefits, which compensates for impairment in average earnings capacity, relies on the VA Schedule for Rating Disabilities (VASRD). The general guidance for the VASRD is that disability ratings are to

be based on certain consequences of injuries that result from impairments (namely, limitations in activities of daily living and loss of earnings capacity). The instructions for determining ratings of specific injuries contained in the VASRD generally base the disability ratings on the degree of medical impairment.

The VASRD assigns disability ratings between 0 and 100 percent depending on the medical diagnosis and the severity of the symptoms. Many veterans have multiple medical conditions, and the rater uses a table to establish the combined degree of disability based on mathematical rules for aggregating the individual medical conditions.

This use of impairment ratings to produce ratings of the average impairment in earnings capacity is similar to the operational approaches used in many disability benefit programs. The rating of the impairment or other initial consequences of the injury or diseases is used to predict the extent of the resulting work disability. A significant issue is whether the predictions of work disability using the CDD ratings are accurate.

Loss of Earnings Methodology

The accuracy of the predictions of work disability using CDD ratings is assessed by an analysis of the loss of earnings by veterans with different types of medical conditions and CDD ratings.

One crucial part of the loss of earnings analysis is determining the wages the veteran would have received if he or she had not experienced a service-connected disability. The estimates of these potential earnings depend on tracking the actual earnings of individuals in a comparison group who did not have SCDs but who were otherwise equivalent to the veterans with disabilities on personal characteristics. The personal characteristics used to match the veterans with disabilities and the veterans without SCDs were age, gender, education at the time of entry into service, and status as an officer or enlisted person when discharged from active duty.

The comparison group includes veterans with and without non-SCD disabilities. Veterans with non-SCD disabilities *should* be in the comparison group as they reflect the general population of veterans who acquire disabilities as they age. Examples are arthritis and diabetes, which are very prevalent among the general population as well as veterans receiving VA disability compensation. There is no compelling reason to exclude non-SCD veterans who have acquired these conditions from our comparison group, nor do we have the data to do so. Yet these conditions among non-SCD veterans may impact their earnings capacity.

Still another aspect of our comparison group is that it includes veterans who were released from active duty in 1980 and later but not before 1980. One reason for this is that the records of the Defense Manpower Data Center (DMDC) are not reliable prior to 1980 discharge and, therefore, the study team could not obtain reliable data for the earnings of non-SCD veterans released before 1980. Also, most pre-1980 veterans are past the age of retirement. For those who are retired, we would not be able to assess the impact of specific disabilities on earnings capacity.

The results of our analysis differ significantly from the results of the 2007 analysis of earnings loss conducted by the CNA Corporation (CNAC) for the Veterans' Disability Benefits Commission. CNAC found that, in general, earnings loss occurred at all levels of disability ratings and that, in general, VA disability compensation paid to veterans is adequate to offset average loss of earnings. As will be discussed in detail, our analysis found that veterans with CDD ratings of 30% or less had actual earnings that were within 2 percent of what they could have expected to earn if they had not experienced a SCD and that earnings plus VA disability compensation exceeds expected earnings of veterans without service-connected disabilities except at the 100% disability level.

There are several reasons for the differing results including the fact that CNAC's analysis used earnings in 2004 and ours used more recent earnings in 2006. But the most important reason for the difference is that we compared earnings for SCD veterans and veterans without SCD who were discharged from 1980 and later; CNAC compared earnings for all veterans currently receiving disability compensation and used both earnings from the same large sample of veterans discharged since 1980 that we used and also data from the Current Population Survey (CPS) for veterans without SCD who were discharged prior to 1980. After thorough analysis of the CPS data, we concluded that use of the survey data would not be appropriate. CPS data includes earnings of 14,084 veterans who reported that they did not receive disability compensation (12,115 of whom were 40 years of age or over). Self reported information is thought to be inaccurate for both whether the respondent has a service-connected disability and for amount of earnings. Another reason is that mixing earnings data from two different data sources may provide inaccurate results. It is possible that self-reported CPS earnings, on average, could be higher or lower than the earnings reports to SSA. We also concluded that the purpose of our analysis should be to frame compensation payments for the future and not look toward the distant past. We describe in depth the reasons for our decision not to use CPS data in Chapter VI of Volume III.

Another crucial aspect of the loss of earnings analysis is determining which measure of earnings to use in the comparisons of disabled and nondisabled veterans. One measure with readily available data is the wages reported to the Social Security Administration. However, these data do not include benefits provided by employers, which are a substantial proportion of total compensation for most workers. There are also options concerning the time period over which earnings should be evaluated, including earnings in 2006 or an average of earnings in 2006 plus earlier years. After careful consideration of these options, the study team based the analysis of loss of earnings primarily on comparisons of the earnings in 2006 of veterans with SCDs and without SCDs as provided to the study team by the Social Security Administration. Estimated benefits paid by employers were added to the 2006 earnings.

The Relationship between Different Levels of CDD Ratings and Earnings Losses (or Gains)

The relationship between combined degree of disability ratings and earnings losses is shown in Table I-1. The average earnings in 2006 for veterans without SCDs (non-SCD) were $42,719 (including employer-provided benefits). A statistical analysis of these non-

SCD veterans was conducted to determine the effects of age, gender, education, and former officer status[1] on earnings. The statistical relationships between these personal characteristics and earnings were then used to generate the expected earnings for the veterans with SCDs. For example, given the personal characteristics of the veterans with SCD ratings of 10%, these veterans could have been expected to earn $46,792 in 2006 if they had not experienced SCDs. The actual earnings in 2006 of the veterans with 10% SCD ratings was $47,483, which meant these veterans actually earned slightly more ($691 or 1%) than was projected based on their personal characteristics.

The results in Table I-1 suggest that veterans who received disability compensation benefits with CDD ratings of 30% or less had actual earnings that were within 2 percent of what they could have expected to earn if they had not experienced an SCD. The earnings losses for veterans with CDD ratings between 40% and 90% reflected significant wage losses, but much less than their CDD ratings might have suggested. The closest correspondence between CDD ratings and earnings losses was for veterans with 100% CDD ratings, whose actual earnings were 84 percent less than the earnings they could have expected to earn if they had not experienced an SCD. The average CDD rating for all veterans who received average impairment of earnings capacity benefits was 30%, which is considerably higher than their average earnings losses of 6 percent.

Table I-1. Overall Rating Equity for Veterans without IU or SMC Status (All Ages Included)[i]

Combined Disability Rating	Actual Earnings	Expected Earnings	Earnings Loss (or Gain)	Percent Earnings Loss (or Gain)
10%	$47,483	$46,792	($691)	(1%)
20%	$46,777	$46,769	($8)	0%
30%	$45,832	$46,568	$736	2%
40%	$44,271	$46,623	$2,352	5%
50%	$40,981	$46,985	$6,004	13%
60%	$39,665	$46,807	$7,142	15%
70%	$37,221	$46,602	$9,381	20%
80%	$35,521	$45,948	$10,427	23%
90%	$32,335	$43,194	$10,859	25%
100%	$7,087	$45,021	$37,934	84%
Average for All SCDs	$43,950	$46,647	$2,696	6%
Non-SCD	$42,719			

Source: EconSys Study Team analysis of December 2005 C&P Master Record data and SSA earnings match.

[i] VA disability compensation is not included in this table.

[1] Former officer status was used as a proxy for otherwise unmeasured human capital.

The Relationship between Combining Disabilities and Earnings Losses

In our analysis of earnings data, we obtained an unexpected result that has a profound effect on ratings and comparison of earnings. We found that within each CDD level, earnings were positively correlated with the number of rated service-connected disabilities that veterans have. That is, earnings were higher with more disabilities. This is illustrated in Table I-2 for all post-1980 non-IU and non-SMC veterans in our database (regardless of age). With few exceptions, there is a clear pattern of increasing earnings by number of service-connected disabilities.

Table I-2. Average 2006 Earnings by CDD and Average Number of Service-Connected Disabilities, Veterans of All Ages

CDD	Average Number of Rated Service-Connected Disabilities					
	One	Two	Three	Four	Five	Six
10%	$36,194					
20%	$34,547	$35,912				
30%	$30,105	$33,878	$37,393			
40%	$29,132	$30,649	$33,539	$39,142		
50%	$15,400	$25,336	$27,618	$33,244	$38,912	$40,357
60%	$23,623	$28,747	$30,015	$28,891	$34,934	$37,451
70%	$10,626	$16,130	$20,297	$26,480	$33,905	$35,480
80%		$30,008	$24,989	$21,186	$28,216	$35,660
90%				$21,568	$26,774	$31,391
100%	$1,573	$6,676	$5,480	$6,223	$12,287	$12,240

Source: EconSys Study Team analysis of December 2005 C&P Master Record data and 2006 earnings data provided by SSA.

While the pattern is not perfect, within most CDD rating levels, the earnings increased with the number of medical conditions used to produce that rating. For example, for veterans with a 40% CDD rating, earnings consistently increased as the number of rated service-connected medical conditions increased. This paradoxical result suggests that on average the rating for the primary disability captures most of the impact of the veteran's overall medical condition on his or her potential earnings, and that the ratings for the second, third, or additional medical condition increase the CDD rating but do not further affect the veteran's earnings capacity. Thus, a veteran with a 40% CDD resulting from a 20% rating for the first medical condition (and additional medical conditions that explain the overall 40% rating) on average is no worse off in terms of lost earnings than a veteran with only a single medical condition that is rated at 20%.

This result can be traced to the effects of combining the ratings for individual medical conditions based on the VASRD into final CDD ratings for veterans with multiple conditions. The current system assumes that all disabilities are mostly additive and that they do not overlap, especially at lower rating levels. However, based on the empirical evidence, this is not an accurate assessment or premise. Ultimately, it is not that having more disabilities causes veterans to earn more money or to be more successful in

finding jobs. Rather, it appears that having more disabilities causes veterans to be misclassified and placed into higher CDD rating groups that are not consistent with observed earnings and employment levels. In effect, the system for combining multiple ratings produces CDD rating inflation that otherwise distorts the attempt to analyze the relationship between earnings and CDD rating levels.

Vertical Equity and the VASRD

Vertical equity for a disability rating system requires that actual losses of earnings increase in proportion to the increases in disability ratings. The VASRD clearly has a problem of vertical equity as reflected in Table I-1. Between CDD ratings of 10% and 90%, the percentage of actual losses of earnings is only 25 percent at most (at the 90% CDD level) and at each level, percentages are consistently below the nominal CDD ratings. For example, at the 80% CDD level, one might rationally expect for earnings losses to be 80 percent also. However, earning losses are only 23 percent. The observed differences between adjacent steps are also less than one might expect based on the nominal CDD levels. For example, we would expect increments in earnings losses to be in steps of about 10 percent, matching those of the nominal CDD levels. Instead, moving from 20% to 90% CDD, we observe earnings increases of 2%, 3%, 8%, 2%, 5%, 3%, and 2% (for example, moving from 20% to 30% CDD, we see only a 2 percent increase in earnings losses; moving from 30% to 40% CDD, we see only a 3 percent increase in earnings losses). The only interruption to this pattern of non-correlation between CDD level and observed earnings loss occurs between the 90% and 100% CDD levels. The CDD rating increases only by 10%, but earnings losses increase by 59 percent (84 percent minus 25 percent).

The Relationship between Different CDD Ratings for Different Body Systems and Earnings Losses

The relationships between combined degree of disability ratings and percentage earnings losses for veterans with injuries to different body systems are shown in Table I-3. There are considerable differences among body systems in the extent of earnings losses at a particular CDD rating. For example, among veterans with CDD ratings of 50%, the range was from basically no earnings losses for veterans with Genitourinary or Endocrine medical conditions to over 40 percent earnings losses for veterans with Other Mental Disorders (that is, other than PTSD). In general, veterans with primary diagnoses of PTSD, Other Mental, and Infectious Diseases experience greater earnings losses than veterans with other medical conditions at the same CDD ratings. Gray shaded sections indicate earnings that are higher than expected.

Table I-3. Percent Earnings Losses by CDD by Major Body System of Primary Diagnosis

	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Musculoskeletal	-1%	0%	0%	4%	8%	13%	15%	18%	16%	68%
Eye	-7%	-6%	-4%	-1%	2%	5%	14%	18%	46%	96%
Ear & Other Senses	-7%	-5%	-6%	-1%	4%	9%	24%	20%	12%	79%
Respiratory	-4%	-3%	3%	2%	6%	6%	9%	14%	18%	72%
Cardiovascular	-7%	-6%	-7%	-3%	3%	11%	12%	15%	23%	75%
Digestive	-3%	-1%	-1%	3%	10%	13%	21%	21%	27%	56%
Genitourinary	-2%	-5%	-3%	0%	-1%	10%	23%	23%	34%	64%
Gynecological & Breast	2%	7%	9%	-4%	11%	8%	22%	24%	48%	49%
Hemic & Lymphatic	13%	5%	3%	2%	4%	16%	16%	16%		41%
Infectious Disease	19%	17%	27%	20%	26%	26%	23%	30%	30%	76%
Skin	-1%	-2%	2%	3%	10%	13%	18%	21%	32%	68%
Endocrine	-5%	-4%	-6%	-1%	1%	12%	15%	13%	24%	66%
Neurological	3%	6%	7%	9%	16%	17%	18%	26%	30%	86%
Traumatic Brain Injury[i]	13%	12%	6%	20%	26%	22%	26%	25%	51%	91%
Dental	6%	6%	4%	4%	5%	8%	5%	47%		100%
PTSD	12%	11%	22%	15%	32%	26%	32%	29%	23%	92%
Other Mental	14%	13%	26%	26%	43%	36%	46%	43%	41%	96%

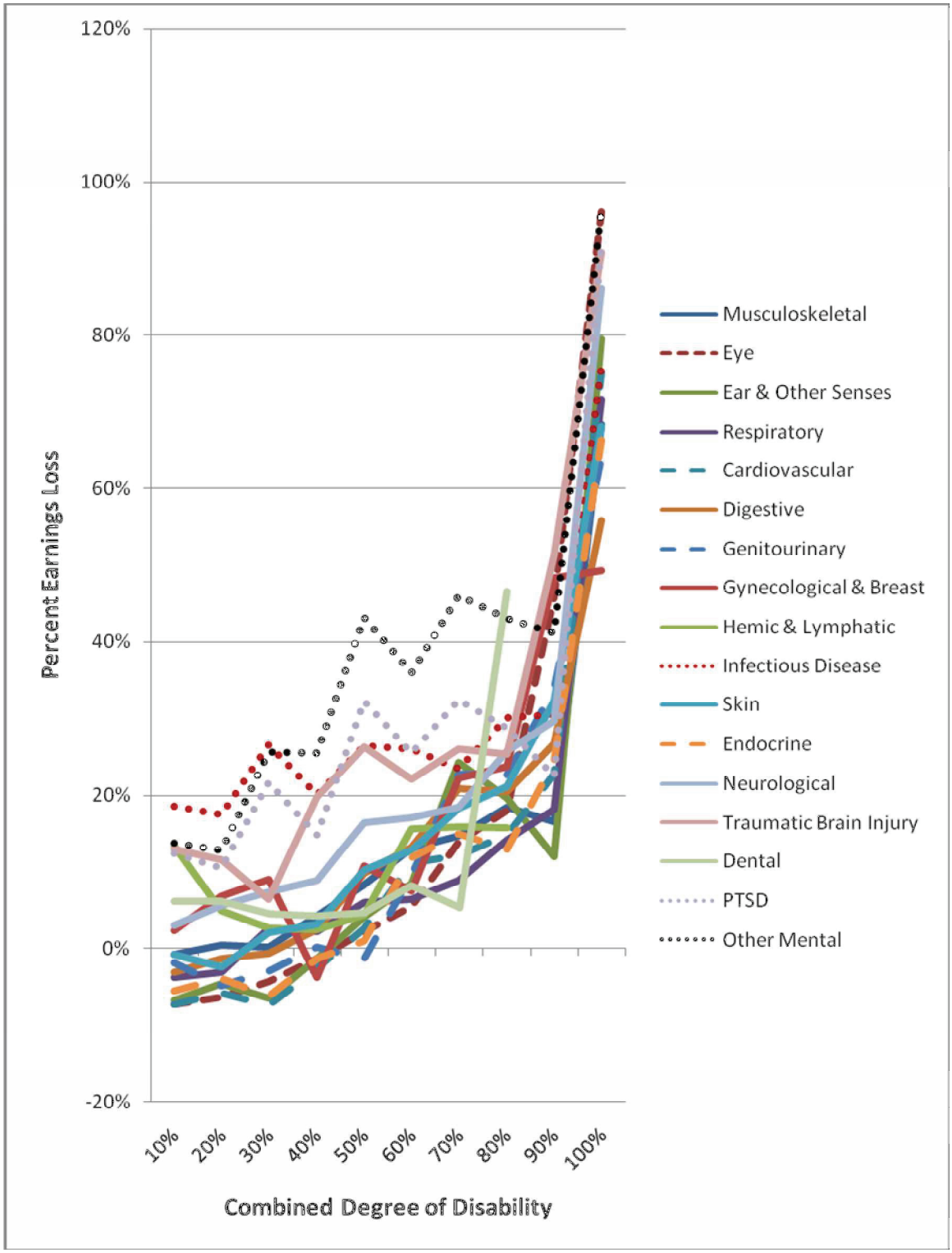
Source: EconSys Study Team analysis of December 2005 C&P Master Record data and 2006 earnings data provided by SSA.

[i] Traumatic Brain Injury is not a body system but is included due to interest in this diagnosis.

Horizontal Equity and the VASRD

The VASRD also clearly has a problem with horizontal equity. Inter-injury horizontal equity for disability ratings requires that the actual wage losses for workers with the same disability ratings, but different types of injuries, should be the same or similar. However, the results in Table I-2 indicate that there are significant differences among the types of medical conditions in the relationships between disability ratings and loss of earnings. This is indicated by the wide disparity in observed earnings losses at each rating level. For example at the 30% CDD level, veterans with Other Mental as the primary diagnosis experience earnings losses of 26 percent, while those with Cardiovascular experience earnings that are 7 percent *higher* than expected. At the 90% CDD level, those with TBI have earnings losses of 51 percent, while those with Ear and Other Senses have earnings losses that average only 12 percent.

Figure I-2. Percent Earnings Loss by Major Body System[i]



Source: EconSys Study Team analysis of December 2005 C&P Master Record data and 2006 earnings data provided by SSA.

[i] Traumatic Brain Injury is not a body system but is included due to interest in this diagnosis.

VA Disability Compensation and CDD Ratings

The annual disability benefits compensation payments in 2006 (the year of the earnings data) is shown in Table I-4. The benefit formula provides benefits that increase steadily between CDD ratings of 10% and 90% and then sharply increase for CDD ratings of 100%.

Table I-4. Annual VA Compensation by CDD Rating Level

CDD	Average 2006 Disability Compensation	VA Compensation as a Percentage of 100% CDD Level
10%	$1,344	4.5%
20%	$2,616	8.8%
30%	$4,589	15.5%
40%	$6,608	22.3%
50%	$9,294	31.4%
60%	$11,720	39.6%
70%	$14,512	49.0%
80%	$16,700	56.4%
90%	$18,572	62.7%
100%	$29,600	100.0%

Source: EconSys Study Team analysis of December 2005 C&P Master Record data and 2006 earnings data provided by SSA.

Evaluating VA Disability Compensation

The previous analysis indicates that the VASRD has serious problems of vertical equity and horizontal equity because of the disparity between the CDD ratings and the extent of earnings losses. VA disability compensation is evaluated separately to determine if the compensation meets the tests of equity and adequacy. It is possible, for example, that the rating system has serious vertical equity problems that do not translate into vertical equity problems for loss of earnings benefits. As shown in Table I-1, the earnings losses of veterans increase sharply as CDD ratings increase from 90% to 100%. However, disability compensation also increases disproportionately as the CDD ratings increase from 90% to 100%, as shown in Table I-3.

Adequacy of VA Disability Compensation

One possible standard of adequacy for the Veterans Disability Compensation Program is that the Disabled Veterans' Indemnification (DVI) rate should equal or exceed 100 percent. DVI is the disabled veteran's actual earnings after experiencing a service-connected disability plus VA disability compensation divided by the expected earnings

for the veteran if she or he had not experienced a SCD.[2] We also refer to this calculation as the parity ratio or earnings loss (or gain) after VA compensation percentage.

The data in Table I-5 can be used to evaluate the adequacy of VA disability compensation. For all veterans with SCDs, the average expected earnings were $43,889, which represents what these veterans were expected to earn if they had not experienced SCDs. The actual earnings of these veterans plus their veterans' compensation were $43,693, which almost exactly matched their expected earnings. The difference between the two figures was $196, which means the difference (or deviation) was 0%. Alternatively stated, the Disabled Veterans' Indemnification rate for all veterans in the study who received VA disability compensation was 100%. If the definition of adequacy adopted by policymakers is that overall average DVI should be *at least* 100%, then VA disability compensation is adequate. However, the overall average does not address issues of vertical and horizontal equity.

Table I-5. Average Annual VA Compensation and Earnings for SCD Veterans for 2006

Combined Disability Rating	Expected Earnings	Actual Earnings Plus VA Compensation[3]	Percent Deviation	Difference
10%	$46,792	$49,042	5%	$2,250
20%	$46,769	$49,811	6%	$3,042
30%	$46,568	$51,155	9%	$4,587
40%	$46,623	$51,937	10%	$5,314
50%	$46,985	$51,762	9%	$4,777
60%	$46,807	$53,260	12%	$6,454
70%	$46,602	$54,055	14%	$7,453
80%	$45,948	$54,893	16%	$8,946
90%	$43,194	$53,879	20%	$10,685
100%	$45,021	$41,423	-9%	-$3,598
All SCDs	$43,889	$43,693	0%	-$196
Non-SCD	$42,719			

Source: EconSys Study Team analysis of December 2005 C&P Master Record data and 2006 earnings data provided by SSA.

Vertical Equity of VA Disability Compensation

The data in Table I-6 can also be used to evaluate the vertical equity of VA disability compensation. Vertical equity of benefits has two possible meanings. A narrow view is that all levels of severity should have the same Disabled Veteran's Indemnification rate. An alternative view is that more severe illnesses or injuries should have higher DVI rates. VA disability compensation has mixed results with respect to vertical equity. Between CDD ratings of 10% and 90%, the DVI generally increases with higher CDD ratings, which means that the deviations between actual earnings plus disability compensation and expected earnings is increasing, although an interruption to the pattern occurs for veterans with a CDD of 50%. The major failing of VA disability compensation is that the

[2] DVI = (actual earnings after the SCD plus+ VA disability compensation) divided by expected earnings.

[3] VA compensation amount adjusted to reflect tax-free status.

veterans with SCDs that are rated at 100% have the lowest DVI by far, with actual earnings plus VA compensation deviating 9 percent below expected earnings. As previously discussed, there is a disproportionate increase in VA compensation between 90% and 100% CDD ratings. However, the higher VA compensation still does not make up for the earnings shortfall.

Horizontal Equity of VA Disability Compensation

Horizontal equity for benefits requires that the Disabled Veterans' Indemnification rates for veterans with the same disability rating and different types of illnesses or injuries should be the same or similar. However, as shown in Table I-6, the DVI rates vary significantly among veterans with different injuries but the same CDD ratings. For example, for veterans with 100% CDD ratings, the DVI was 140 percent for hemic & lymphatic conditions, 104 percent for musculoskeletal conditions, 84 percent for neurological conditions, 71 percent for other mental disorders, and 57 percent for dental conditions. Rates below 100 percent are shaded for ease of identification.

Table I-6. Rate of Earnings Losses (or Gains) After Compensation by Major Body System of Primary Diagnosis[i]

Body System	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Dental	97%	100%	106%	112%	119%	122%	133%	91%		57%
Other Mental	90%	94%	85%	91%	79%	92%	88%	97%	103%	71%
TBI	90%	94%	104%	95%	95%	104%	108%	113%	92%	77%
Neurological	100%	101%	104%	107%	106%	111%	117%	115%	116%	84%
PTSD	91%	96%	90%	103%	92%	106%	105%	116%	128%	87%
Eye	111%	113%	115%	118%	121%	125%	122%	132%	110%	87%
Infectious Disease	84%	88%	83%	95%	94%	99%	110%	110%	114%	92%
Ear & Other Senses	110%	111%	118%	118%	120%	122%	113%	125%	162%	92%
Skin	104%	109%	109%	112%	112%	115%	116%	118%	116%	96%
Musculoskeletal	104%	106%	111%	111%	114%	115%	120%	123%	133%	104%
Endocrine	109%	111%	119%	119%	124%	118%	124%	132%	124%	109%
Respiratory	107%	109%	109%	114%	116%	120%	124%	123%	125%	111%
Genitourinary	105%	112%	114%	116%	125%	119%	113%	119%	118%	113%
Cardiovascular	111%	113%	120%	120%	122%	120%	128%	131%	131%	115%
Digestive	106%	108%	112%	113%	113%	115%	115%	123%	122%	117%
Gynecological & Breast	101%	100%	104%	123%	116%	125%	120%	115%	101%	137%
Hemic & Lymphatic	90%	101%	108%	114%	119%	116%	122%	133%		140%

Source: EconSys Study Team analysis of December 2005 C&P Master Record data and 2006 earnings data provided by SSA.

[i] Traumatic Brain Injury is not a body system but is included due to interest in this diagnosis.

Individual Unemployability Benefits

The Veterans Disability Compensation Program provided Individual Unemployability benefits in 2007 for 189,838 veterans whose actual loss of earnings greatly exceeded the losses expected on the basis of their CDD ratings. Eligibility for IU benefits requires the veteran to (1) have a CDD rating of less than 100%, (2) have a single disability with at least a 60% rating or two or more disabilities that in combination bring the CDD rating to at least 70% with one disability evaluated at least 40%, and (3) demonstrate that he or she is unable to secure or maintain gainful employment as a result of service-connected disabilities. Thus, two forms of benefits for work disability are: (1) regular schedule benefits, which compensate for loss of earnings capacity based on the general relationship between medical conditions and loss of earnings and (2) IU benefits, which compensate an individual veteran for extraordinary losses of actual earnings far in excess of the amounts expected on the basis of the veteran's CDD rating.

The value of the IU benefit is demonstrated by the study's analysis of the loss of earnings experienced by the veteran who qualified for the benefit. Among all IU veterans who received the benefit in 2006, their expected average earnings were $44,285 based on their personal characteristics and the earnings of veterans without SCDs, while their actual average earnings were only $528. This 99 percent earnings loss of $43,730 indicates that the IU system approves applications only for veterans with extraordinary losses of earnings.

The veteran who qualifies for IU benefits receives compensation equivalent to the amount received by a veteran receiving the regular schedule benefits at a 100% CDD rating. In 2006 the average IU benefit with tax advantage was $34,336, which means that the total of actual earnings and IU benefits was $34,864, and the Veterans Disability Indemnification rate was 79 percent. This level of compensation plus earnings is much lower than the average DVI rate for all non-IU veterans receiving VA compensation, suggesting that the IU benefits were not adequate. Moreover, the DVI for the veterans who had a 100% CDD rating because of the IU provision (79 percent) was much lower than the non-IU veterans who were rated at 100% CDD (91 percent), indicating a problem of horizontal equity between these two groups of severely disabled veterans.

Benefits for Loss of Quality of Life

Special Monthly Compensation Benefits

The earlier discussion indicated that some models for disability and some disability compensation programs distinguish between work disability and the other consequences of injuries and diseases, which we refer to as loss of quality of life. With very limited exceptions, the two largest disability compensation programs in the U.S.—Social Security Disability Insurance and workers' compensation—do not provide two tracks of benefits for the two types of consequences. Arguably the Veterans Disability Compensation Program already has a two-track system of benefits. One track of benefits compensates for work disability and includes average impairment of earnings

capacity and IU benefits. The other track compensates some veterans for other consequences by providing Special Monthly Compensation benefits, which are recognized in this study as QOL. Although SMCs currently are not recognized as QOL benefit payments, SMCs serve as a proxy payment for loss of QOL.

SMC benefits are authorized by §1114 of Title 38 of the US Code and provide compensation for anatomical losses and loss of functional independence. The SMC benefits have two characteristics that suggest they are designed to compensate for QOL and not for work disability: (1) the SMC benefits (such as SMC (K)) are paid in addition to or at higher rates (such as SMC (L), (M), (N), (O), or (P)) than those benefits for work disability (such as Activities of Daily Living and IU) and (2) the amounts of the SMC benefits are not related to the veteran's actual or potential earnings but instead depend on the nature of the veteran's anatomical losses or, in the case of SMC (L), (S), (R.1), or (R.2), the veteran's need for aid and attendance in independent living.

Even if SMC benefits are an example of QOL benefits, there remain a series of issues.

First, the SMC benefits are confined to a narrow set of medical conditions such as complete loss, or loss of use, of both buttocks, or an inability to communicate by speech (complete organic aphonia), or to a rather dire set of limitations in activities of daily living such as being housebound or permanently bedridden or so helpless as to need regular aid and attendance. There are no SMC benefits for mental disorders. Should the scope of medical conditions eligible for SMC benefits or a new variant of QOL benefits be expanded? This issue in part depends on whether veterans receiving disability compensation and/or IU benefits who do not quality for SMC benefits nonetheless experience losses in QOL.

Second, if the Veterans Disability Compensation Program wants to expand the benefits for the loss of QOL, how should the loss of QOL be measured? This issue is examined at length in this volume.

Third, is there a close correlation between the extent of work disability for various medical conditions as measured by the VASRD and the extent of loss of QOL for the same conditions? If there is a close relationship, then compensation for the loss of QOL could be a supplemental benefit tied to the CDD ratings produced by the VASRD. If the extent of work disability and the extent of loss of QOL are not closely related, then separate measures for work disability and QOL as well as separate benefits for the two types of consequences of SCD are appropriate. This issue is also examined in this volume.

Measuring Losses of QOL

The study examined definitions and measures of quality of life that are appropriate for veterans. Based on reviewing the literature, the EconSys Study Team's suggested definition of quality of life for veterans is: an overall sense of well-being based on physical and psychological health, social relationships, and economic factors.

This definition was derived from a review of the domains and definitions put forth by authoritative organizations that address quality of life issues, including the World Health Organization, the Centers for Disease Control, the Institute of Medicine, and others.

Among tools to assess quality of life that are most prominent are the WHOQOL assessment tool developed by the World Health Organization, the RAND Short Form 12 and 36 developed by the RAND Corporation and modified for use with veterans (VR-12 and VR-36), the Center for Disease Control's Healthy Days assessment tool, and assessment tools developed and used in other countries, including the EuroQOL developed in The Netherlands, the Health Utilities Index developed in Canada, and the Assessment of Quality of Life Measure (AQOL) developed in Australia. In addition to these measures of overall quality of life and health-related quality of life, there are thousands of measures that are specific to diseases or body systems.

None of the assessment tools that exist were developed for the specific purpose of compensating disabled veterans. Existing instruments are used for two primary purposes—to make comparisons and to measure improvement in QOL as a result of an intervention. For example, researchers compared the QOL of cancer patients to the QOL of diabetes patients and patients with Alzheimer's Disease. They also compared the QOL in the United States to African countries and changes in QOL over time. They tested whether a particular treatment or medical intervention improved quality of life for patients. In general, users of existing QOL instruments are answering the question of whether there was an increase or decrease in QOL, but they are not trying to attach a dollar value to these differences.

Four options are offered to VA for measuring QOL using the recommended definition. Each option uses an established measure or combination of assessment tools plus a worksheet that addresses topics not covered in the established measurement tool. The existing measurement tools that are recommended with a supplemental worksheet are the (1) WHOQOL BREF (brief version of the WHOQOL), (2) the VR-36, and (3) CLAMES (an instrument that uses items from EuroQOL, VR-12, and HUI).[4] A fourth option is that VA develop its own QOL assessment tool specific to disabled veterans. The advantage of an SCD veteran measurement tool is that it would be tailored to the issues of most importance to disabled veterans, and it could be developed for the purpose of determining QOL payments. None of the three other measurement tools were developed from the vantage of disabled veterans, although they are widely used by health and social researchers and policymakers and results can be compared to results in the general population.

Adapting these instruments to a payment schedule requires the use of assumptions and the application of measured judgment. While numeric, the scores produced by QOL assessment tools do not readily lend themselves to payment determinations. The meaning of the difference in QOL scores of 50 and 60 is subject to interpretation, just as the meaning of the difference between IQ scores of 120 and 130 is. We know that 130 is

[4] Health Utilities Index (HUI) is a generic, preference-scored, comprehensive system for measuring health status, health-related quality of life, and producing utility scores for related measures.

higher, but how much is this 10 point difference worth, and how does it compare to a difference between 90 and 100? The QOL assessment tools produce scores with units that are equal, but the meaning of differences between scores are subject to interpretation.

One technique that places a value on QOL developed by health researchers is called preference-based scores. A preference-based score represents how much society values quality of life and applies a weight to the score derived from a QOL measurement tool. This weight transforms the scale into percentages of quality of life, where zero percent is death and 100 percent is the best life possible. Preference scores incorporate society's judgment as to the value of life quality and provide a way to quantify the value of loss of quality of life. Another approach is to weight responses on the basis of statistical analysis that determines the degree to which each item is related to the overall concept of QOL being measured. Using this method in this study produced results very similar to those obtained through preference weights.

A concern voiced about QOL measurement is whether it is subjective or objective. Quality of life itself is a subjective concept. Objective measures are things that can be observed and validated. If QOL was limited to such items, only physical dimensions would be included. Concepts such as pain, negative emotion, and social difficulties would be excluded and the result would not be a fully faceted measure of quality of life. Quality of life measurement requires both subjective and objective items, and well-implemented procedures can help to control for individuals who choose to "game" the subjective items. Procedures that would limit misrepresentation of QOL to obtain a more favorable score include in-person administration by medical personnel rather than self-administration, comparisons to norms, and rater adjustment when QOL responses are inconsistent with the medical examination. Excluding subjectivity in QOL assessment is not advisable because it would leave out dimensions of importance to quality of life.

Is Loss of QOL Different than Work Disability?

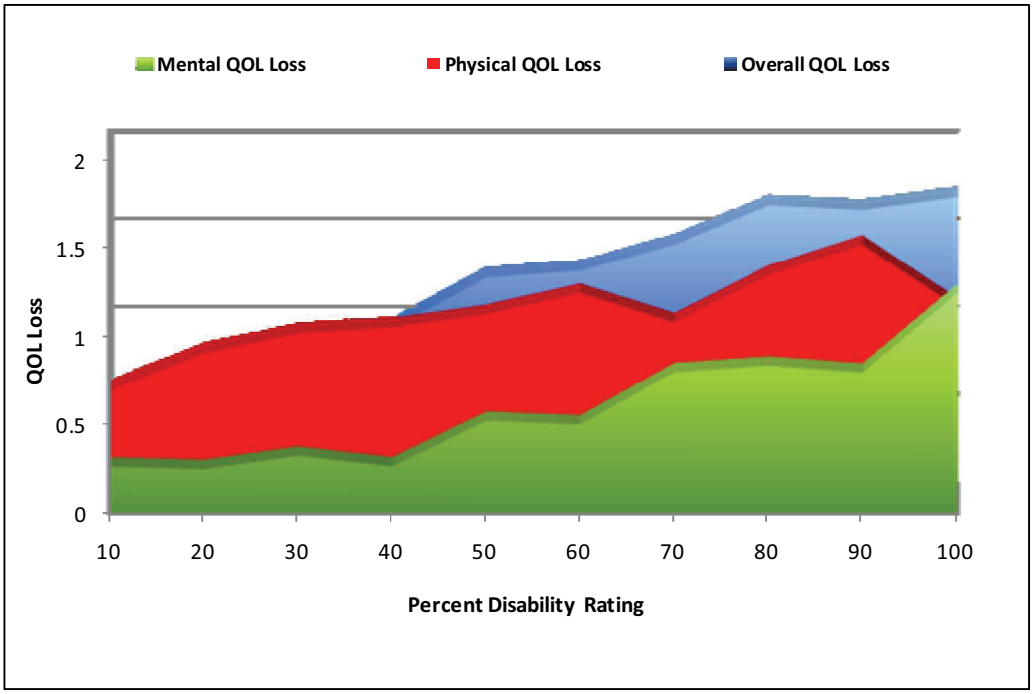
The domains that QOL cover typically address topics that also relate to work. For instance, they measure an individual's level of mobility, negative emotion, concentration or ability to focus on a task, and relationships with other people. Some QOL assessment tools specifically ask about ability or satisfaction with work and similar activities. QOL measurement tools typically include items that relate to work and work disability because the broader concepts involved in QOL also apply to work as well as every aspect of an individual's life. For instance, not being able to concentrate not only affects work, but it also affects one's personal life, just as do negative emotions, difficulties in social relationships, and difficulties with mobility. While there may be a desire to separate the criteria used to establish work disability from the criteria used to assess quality of life, the same criteria apply to both work and non-work activities. There is a temptation to consider QOL to be overall life satisfaction, but overall life satisfaction is completely subjective and is strongly linked to age.

Loss of QOL Among Veterans Receiving VA Disability Compensation

The 2007 Survey of Disabled Veterans, conducted for the Veterans' Disability Benefits Commission (VDBC), was analyzed to assess loss of quality of life among veterans with disabilities receiving VA disability compensation. Using non-SCD veterans as the norm, loss of quality of life was established through a VR-12 measure enhanced with 28 additional QOL items and with preference scores.

The study team's analysis found loss of quality of life at every rating level and every body system, indicating that impairment to the body or the person produces loss of quality of life. Figure I-3 shows the increase in overall, mental and physical QOL loss as the VA Schedule for Rating Disabilities (VASRD) ratings increase from 10% to 100%, using the enhanced QOL measure developed for this study. The amount of mental loss of quality of life and physical loss of quality of life is not equivalent at each rating, because veterans with mental diagnoses are not evenly distributed at each rating level. Higher mental QOL loss is found in those ratings that have a higher proportion of veterans with mental health diagnoses.

Figure I-3: Loss of Quality of Life by Disability Ratings for SCD Veterans without IU and without SMC



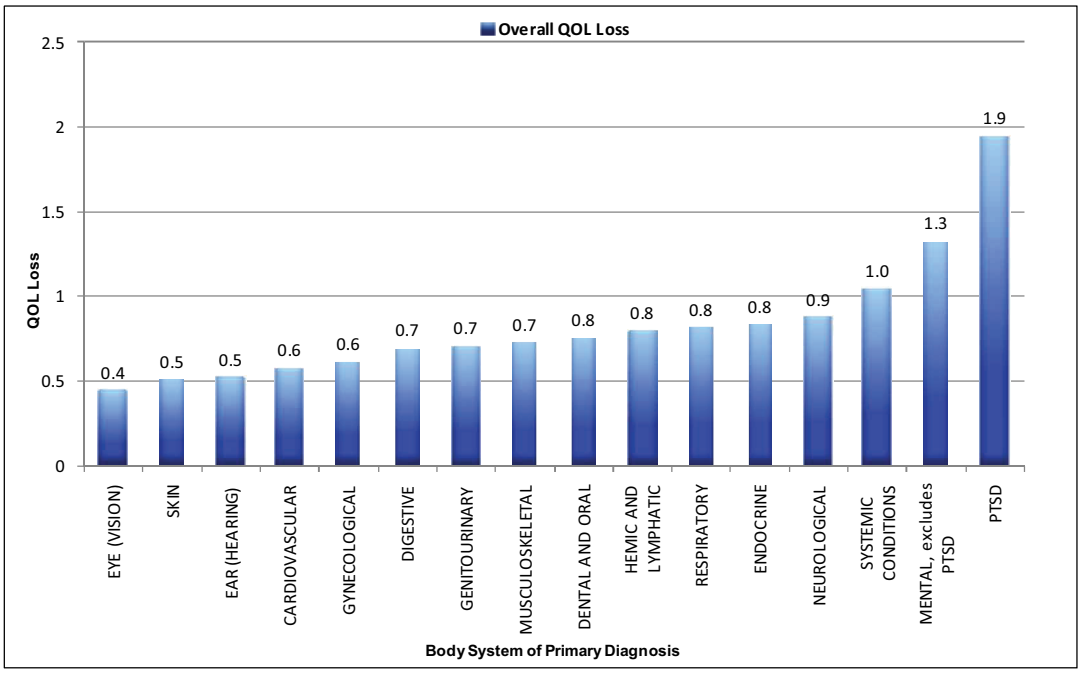
Source: Analysis of 15,906 veterans without IU and without SMC from the 2007 Survey of Disabled Veterans compared to norms from the 2001 National Survey of Veterans. QOL estimated between -2 and +4, with 0 = no loss of quality of life; means are national estimates.

In general, the loss of QOL increases as disability increases, but it does not increase so sharply as degree of disability. That is because QOL loss and disability ratings have a low

correlation (less than 0.4). If the correlation were perfect (1.0), QOL loss at 100% CDD would be 10 times that of QOL loss at 10%. The preference-based scores (described in Chapter IX of this volume) show that loss of QOL for veterans rated at 10% CDD is 10 percent and loss of QOL for veterans rated at 100% CDD is 30 percent. Another phenomenon is that veterans with the same disability can have very different levels of life quality. QOL itself is subjective, and it is influenced by the context of the veteran's life including how the veteran adapts to the disabling condition. Part of the adaptation is a result of the services and assistive devices that VA provides as well as the compensation provided through the disability benefits program.

Quality of life loss varies by body system. Figure I-4 illustrates the relationship between overall QOL loss and body system. The greatest loss of quality of life was found in the mental body system and in particular for PTSD. The lowest levels of QOL loss were in the skin, ear, and eye body systems. The literature cautions that QOL loss in these systems is more difficult to capture with general measures of QOL such as those used here. Neurological, systemic conditions, and mental body systems produce the highest loss of quality of life. Other body systems show a lesser loss of quality of life. Loss of quality of life for the body system with the greatest number of disabled veterans, musculoskeletal, is in the middle range of quality of life loss.

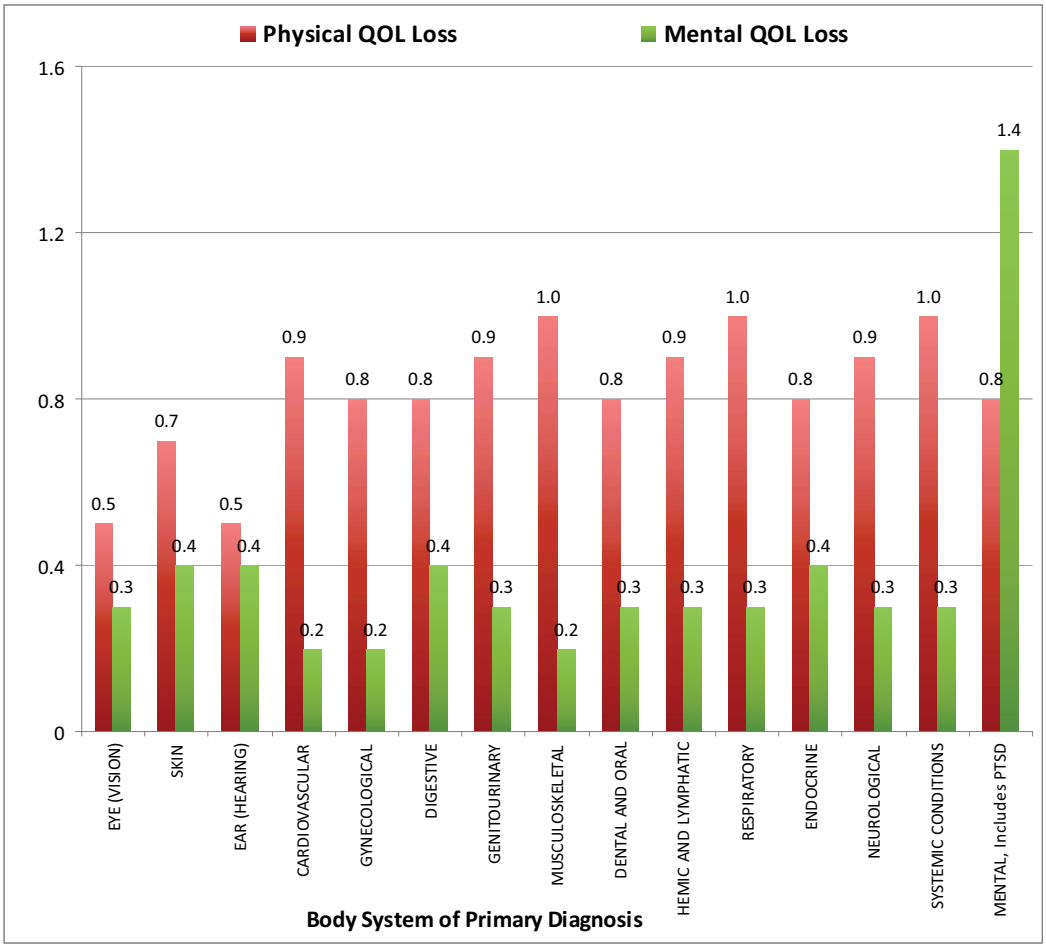
Figure I-4 : Quality of Life Loss by Body System for SCD Veterans without IU and without SMC



Source: Analysis of 15,906 veterans without IU and without SMC from the 2007 Survey of Disabled Veterans compared to norms from the 2001 National Survey of Veterans. QOL estimated between -2 and +4, with 0 = no loss of quality of life; means are national estimates.

Figure I-5 illustrates the mental and physical QOL loss by body system. Mental QOL loss is more pronounced in the mental body system, and mental health disabilities also produce a substantial physical QOL loss, indicating that mental health conditions also have a physical effect.

Figure I-5. Loss of Mental and Physical Quality of Life by Body System for SCD Veterans without IU and without SMC



Source: Analysis of 15,906 veterans without IU and without SMC from the 2007 Survey of Disabled Veterans compared to norms from the 2001 National Survey of Veterans. QOL estimated between -2 and +4, with 0 = no loss of quality of life; means are national estimates.

In general veterans who receive VA disability compensation experience losses in quality of life, while the current disability compensation system pays only for earnings loss and not QOL loss for these veterans.

Loss of QOL Among Veterans with IU Awards

As of September 2007, Veterans with 60% to 90% CDD rating levels make up 20 percent of SCD veterans. About 7.2 percent of SCD veterans are awarded IU. About 44 percent of veterans with an IU rating have mental disorders as their primary disability. Although IU benefits focus on compensation for work disability, the QOL analysis shows that IU is strongly associated with greater QOL loss. Veterans awarded IU have higher overall, physical, and mental QOL loss than veterans at the same disability ratings without IU. Overall QOL loss for veterans with IU is approximately equivalent at the 60%, 70%, 80% and 90% disability rating levels, and the overall QOL loss is approximately equivalent to the QOL loss experienced by veterans rated at the 100% disability rating level without IU and without SMCs. Since IU equates to a 100% disability rating level, this finding supports the assessment that the IU rating is being properly applied with respect to QOL loss.

Loss of QOL Among Veterans with SMC Benefits

About 10 percent of SCD veterans receive SMC payments for physical conditions. As of September 2007, about 190,000 veterans received SMC (K) and about 14,000 veterans received SMC (L), (M), (N), (O), or (P) for loss of or loss of use of multiple limbs or organs. Another 46,000 veterans received SMC (S), (L), (R.1) or (R.2) for aid and attendance or housebound status. SMC (K) can be awarded to veterans at all levels of disability, while all other SMCs require a CDD rating level of 100%. Veterans receiving SMC exhibit higher QOL loss (1.26) than veterans who do not receive SMC payments (0.88), as as shown in Chapter VIII. For veterans receiving SMC payments, mental and physical QOL loss is greater than for veterans not receiving SMC payments.

No SMC payments are made explicitly for mental conditions. However, a veteran with a 100% evaluation for a mental disorder who is in need of aid and attendance because of the mental disorder would be entitled to the regular aid and attendance rate under SMC (L). Additionally, a veteran with a mental disorder in addition to having a physical disorder would be entitled to SMC (S) if either one of the disorders was 100% and the other was 60% or more.

Designing a Comprehensive QOL Benefit

QOL loss was calculated using two methods (enhanced measure and preference scores), and QOL payments were calculated using five benchmarks. The five benchmarks include three that come from VA (disability compensation received by veterans over age 65, average SMC payments, and VA death benefits) and two external benchmarks (the Canadian veteran disability system and median U.S. jury awards). The outcome of the analysis is that payments parallel QOL loss; that is, there is a threshold payment for veterans rated at 10%, and the maximum payment at 100% is three to four times the payment for veterans rated at the 10% level. Specific results of the benchmarks used in the study are shown for the enhanced measure and for the preference measure in Table I-7.

Table I-7. Average Loss of Quality of Life Payments Based on 5 Benchmarks for Enhanced Measure and Preference-Based Measure

Benchmark	Combined Degree Of Disability										Average Payment
	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
Loss of QOL Payments Based on 5 Benchmarks--Enhanced Measure											
QOL Loss Payment Based on VA Disability Compensation for Veterans over Age 65	$143	$176	$209	$242	$275	$308	$342	$375	$408	$509	$317
QOL Loss Payment based on Average SMC amount	$463	$560	$657	$754	$850	$947	$1,044	$1,141	$1,238	$1,335	$899
QOL Loss Payment based on VA Death Benefit	$264	$326	$387	$448	$509	$570	$632	$693	$754	$941	$587
QOL Loss Payment based on Average Disability Awards for Veterans in Canada	$ 290	$ 354	$ 418	$ 481	$ 545	$ 608	$ 673	$ 736	$ 800	$ 928	$ 540
QOL Loss Payment based on U.S. Jury Median Awards for Pain and Suffering	$ 290	$ 354	$ 418	$ 481	$ 545	$ 608	$ 673	$ 736	$ 800	$ 928	$ 540
Loss of QOL Payments Based on 5 Benchmarks—Preference-Based Scores											
QOL Loss Payment Based on VA Disability Compensation for Veterans over Age 65	$141	$168	$194	$221	$247	$273	$300	$326	$352	$471	$286
QOL Loss Payment based on Average SMC amount	$321	$380	$440	$500	$560	$620	$679	$739	$799	$1,068	$649
QOL Loss Payment based on VA Death Benefit	$321	$380	$440	$500	$560	$619	$679	$739	$799	$1,068	$649
QOL Loss Payment based on Average Disability Awards for Veterans in Canada	$ 261	$ 309	$ 358	$ 407	$ 456	$ 504	$ 553	$ 601	$ 650	$ 869	$ 540
QOL Loss Payment based on U.S. Jury Median Awards for Pain and Suffering	$ 261	$ 309	$ 358	$ 407	$ 456	$ 504	$ 553	$ 601	$ 650	$ 869	$ 540

Source: EconSys Study Team analysis of 2007 Survey of Disabled Veterans and 2001 NSV non-SCD veterans.

Payment options that are based on QOL measurement are provided as well as a hybrid that uses payments made to veterans over age 65 and payments for SMC. It uses the QOL payment for veterans over age 65 at 60% CDD and lower and phases in the SMC QOL payment beginning with veterans rated at 70% CDD and higher. The hybrid option produces a payment schedule that is based heavily on VA precedent, and it could be paid at a percentage selected by Congress and applied as the loss of quality of life is distributed among disabled veterans. Table I-8 presents options for payments by a QOL rating schedule. The QOL rating schedule would be a 10 point system like the VASRD, except that ratings would be based on VR-12 scores rather than level of impairment. The 10 ratings would reflect increasing QOL loss as opposed to increasing levels of medical impairment in the current VASRD. The payments based on the QOL rating schedule require VA to obtain a completed VR-12 from each veteran, and the veteran's payment would be based on that score.

Table I-9 presents options for the hybrid approach, which is linked to the CDD ratings.

Table I-8. Loss of QOL Payment Based on Payment Options Using QOL Schedule, Including Negative QOL Scores

Benchmark	VR-12 Rating										AVERAGE PAYMENT
	1	2	3	4	5	6	7	8	9	10	
Loss of Quality of Life Schedule Based on Average Special Monthly Compensation Amount	($34)	$130	$293	$456	$620	$783	$946	$1,109	$1,273	$1,477	$752
Loss of Quality of Life Schedule Derived from VA Death Benefit Payments	($34)	$130	$293	$456	$620	$783	$946	$1,109	$1,273	$1,477	$752
Quality of Life Payment Schedule Based on Net Award Payment for Veterans Over Age 65	($15)	$57	$129	$201	$273	$346	$418	$490	$562	$652	$332

Source: EconSys Study Team analysis of 2007 Survey of Disabled Veterans and 2001 NSV non-SCD veterans. Negative scores indicate a higher quality of life than non-SCD comparison group veterans of the same age and gender. Negative payments are shown for illustrative purposes and would be set to zero for payment.

Table I-9. QOL Payment Options Based on Hybrid Schedule for Veterans Over the Age of 65 Receiving SMC

Benchmark	Combined Degree of Disability										AVERAGE PAYMENT
	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
Hybrid Payment Options Based on QOL Loss Distribution and Over Age 65 and SMC Benchmarks											
Hybrid Payment Schedule with 15% Factor	$15	$20	$25	$29	$36	$38	$370	$390	$401	$466	$99
Hybrid Payment Schedule with 25% Factor	$37	$47	$61	$70	$86	$91	$554	$584	$601	$698	$165
Hybrid Payment Schedule with 30% Factor	$59	$75	$96	$111	$136	$144	$678	$716	$736	$855	$218
Hybrid Payment Options Based on Net Award Distribution and Over Age 65 and SMC Benchmarks											
Hybrid Payment Schedule with 15% Factor	$17	$33	$50	$72	$102	$128	$193	$221	$245	$387	$99
Hybrid Payment Schedule with 25% Factor	$30	$56	$86	$121	$171	$214	$320	$365	$404	$638	$165
Hybrid Payment Schedule with 33% Factor	$41	$76	$115	$162	$227	$284	$419	$478	$529	$835	$218

Source: EconSys Study Team analysis of 2007 Survey of Disabled Veterans and 2001 NSV non-SCD veterans.

Since the earnings loss analysis indicates that veterans at low disability ratings have little earnings loss, should VA pay QOL payments in addition to earnings loss for these veterans? It appears that their earnings loss overpayments more than compensate for loss of quality of life. For veterans at higher rating levels, QOL payments are justified, but subtracting earnings loss overpayments from QOL payments could be considered.

There are numerous QOL payment levels that could be justified by referencing payment values to the benchmarks included in this study. If VA continues its practice of compensating for SMCs, the rating schedule should be adjusted to add SMC-type payments for severe disabilities in mental and in body systems other than those currently included.

Assistive Technology

In a 2003 report, GAO stated that the VASRD does not account for advances in medicine and technology when determining compensation for veterans with SCDs.[5] GAO also argued that inclusion of these advancements would result in a financial benefit to VA because veterans with SCDs now are able to more easily participate in the workforce.

In recent decades, the number of assistive technology devices has grown significantly. ABLEDATA,[6] a website that provides information and resources on assistive technology

[5] U.S. Government Accountability Office. (2003). *Military and veterans' benefits: Observations on the concurrent receipt of military retirement and VA disability compensation: GAO-03575T* (p. 10). Retrieved August 4, 2008, from http://www.gao.gov/new.items/d03575t.pdf

[6] ABLEDATA. (n.d.). *About ABLEDATA: What is ABLEDATA?* Retrieved August 4, 2008, from http://www.abledata.com/abledata.cfm?pageid=19332&ksectionid=19329

products, maintains a database of over 22,000 AT products. These products include personal care devices (for example, long-handled sponges and zipper pulls) and mobility devices (for example, wheelchairs and Segways).

Benefits of Assistive Technology

When a veteran is properly provided with an assistive technology device and appropriate training is provided, the benefits for users can outweigh the costs of said technology. A potential benefit of assistive technology is an improved quality of life for some individuals. The introduction of assistive technology may allow the veteran to perform tasks which were previously not possible and also increase the individual's functional independence. The second potential benefit is an increase in the number of available job opportunities and an increase in earnings capacity. With the aid of assistive technology, individuals with disabilities can perform on-the-job tasks that were once too difficult or tiring. Similarly, assistive technology allows the user to save time and energy on other tasks such as bathing and mobility. This gives the individual more time and energy to spend working and enjoying life.

Issues with Assistive Technology

The study team identified two main issues/problems surrounding assistive technology. The first issue is device abandonment. While assistive technology may aid users in performing tasks, there is still an alarming high rate of abandonment (between 30 and 50 percent).[7] Three factors were determined to be the cause of abandonment. They are:

- Psychosocial – The appearance of the assistive technology effects the user's self-esteem and sense of control.
- Physical/functional – The device does not perform as expected, causes discomfort when using, or is difficult to use.
- Financial/economic – The device may have maintenance and replacement costs which the user is unable to pay.
- The second issue surrounding assistive technology is the lack of outcomes research. While there is currently some outcomes research on assistive technology, more research needs to be conducted in these areas:
- Effective measurement tools – Very few measurement tools being used look at functionality and performance. Tools which would take into account functionality and performance would allow occupational therapists and raters to gain a better understanding of the benefits of assistive technology.
- Selection – Occupational therapists currently assign assistive technology in a clinical setting with limited choices. More testing of devices in a "real world"

[7] Fuhrer, M. J. (2001). Assistive technology outcomes research: Challenges met and yet unmet (p. 529). *American Journal of Physical Medicine and Rehabilitation, 80*(7), 528-535.

setting would allow for more understanding surrounding how much better off patients are with assistive technology devices.

- Costs of assistive technology – While current research can easily quantify the upfront cost of an assistive technology device, the study team has found that little research has been conducted on long-term costs. More research is needed on the fiscal (maintenance and replacement), physiological (labor intensity and wear and tear on other parts of the body), and social (societal acceptability and perception) costs.

Policy Options

Assistive technology can allow veterans with SCDs to become more functionally independent, gain useful employment, and also improve their quality of life. As stated above, the current disability rating assessment does not take into account the use of these devices. The study team recommends that decisionmakers:

- Reassess veterans who use assistive technology devices to determine if secondary functions are affected by the technology devices.
- Research new measurement tools which would aid raters with analyzing the functional impact of assistive technology devices on the capacity of veterans with SCDs to participate in the workplace.
- Fund research directed towards quantifying the fiscal, physiologic, and social costs of assistive technology which would allow a more complete determination of the net benefits of assistive technology and allow determination of degree of disability and proper interventions.

Rehabilitation Benefits (VR)

The study team conducted an analysis of current peer-reviewed literature focusing on the definition of successful VR, the conditions most amenable to successful vocational outcomes, and personal characteristics associated with successful vocational rehabilitation.[8] There is a paucity of published literature on the subject of successful outcomes of VR in the veteran population. This is true, to a lesser degree, in the civilian population. Successful VR is usually represented only by outcomes with employment relevance.

In general, strengths and weaknesses exist in outcomes that are currently used to determine successful VR. The strengths are achieved because (1) outcomes are tied to economic consequences and (2) outcomes are objective measures. Weaknesses suggest that the outcomes currently being measured may not encompass a comprehensive definition of “successful” VR. The expectations and goals of VR participants may be key elements for predicting and defining successful VR. To the extent VA wishes to evaluate the effectiveness of VR, outcomes of VR will need to be developed. In addition, studies

[8] The reader is referred to Chapter 13 for numerous literature citations.

of VR effectiveness need to incorporate controls over selection bias to enhance credibility of results.

In expanding the definition of successful VR to include outcomes in addition to employment-related ones, VA could consider measurements which incorporate personal characteristics such as motivation and general evaluations of functional assessments during the baseline evaluation of potential VR participants. The participants' goals upon entering VR are pertinent to the outcomes used to define successful VR.

The current state of the literature is organized by medical diagnosis (for example, diabetes mellitus, heart disease, and schizophrenia). It is rare for more than one diagnosis to be included in the same VR study, and the participants are not selected or stratified by severity of disability. Therefore, it is not feasible to determine which conditions are likely to be most responsive to VR because work-related disability is usually the result of co-morbidities and their impact on performance in a variety of life roles and functions (that is, disabilities). Conditions that respond most favorably to VR are not likely to be strictly bound by medical diagnosis (as used in the medical model of VR) and likely would be more closely related to the individualized needs of the VR participant. VA's Vocational Rehabilitation and Employment (VR&E) Program is in a unique position to add to the VR literature chiefly because VA has access to the diagnoses of all clients who enter its VR&E Program.

The ability to predict which participants in VR are most likely to have successful outcomes would be useful. First, it would serve as risk stratification on entry into VR programs. Individuals who are older, single, experiencing more symptoms, who have had little education, and who do not have access to social support, would be the most likely to withdraw from VR or not attain employment at the conclusion of VR.

Special attention could be given to individuals who are less likely to obtain successful outcomes. In addition, if characteristics are identified as predictive of outcome, and these characteristics are modifiable, then the predictors would provide points of intervention for VR. Personal characteristics such as motivation have received little attention in the VR literature and may be extremely important in determining successful VR outcomes.

An option for VA would be to look at the success rates of individuals participating in VR&E. This effort should measure VR success with respect to demographic indicators, co-morbidities, function, and disability.

The diagnosis of PTSD was selected as an example of how VR is applied to a complex, chronic disorder. It illustrates some of the limitations of the literature and the nature of the evaluations and outcomes used in VR.

There are data that support the view that improved work outcomes in individuals with PTSD occur in those who have received early intervention and ongoing treatment to reduce severity of PTSD. It has been shown that work-related environmental factors, support systems, and organizational structure conducive to reducing stress are all

beneficial for successful VR outcomes. These factors may need to be assessed to determine causes of good/poor vocational outcomes. VA may want to assess whether early intervention, within months of diagnosis (when possible), and whether ongoing treatment improves success in VR programs.

An option for VA to consider is to re-evaluate the definitions of successful vocational rehabilitation to permit a wider and more varied range of employment outcomes and possible work trajectories. For example, VR success might include restricted work assignments, light duty, and job modification as well as work structured to provide longer lead-in time and gradual introduction to independent work place activity. Outcomes are likely to change over time. Therefore, the time selected to assess outcomes itself becomes an element that determines apparent success.

Policy Options for the VA Disability Compensation Program

According to the authority for the VA Schedule for Rating Disabilities (VASRD) in Title 38, Section 1155, a readjustment in the rating schedule cannot result in a reduction of a veteran's disability rating previously in effect. Hence, the focus of readjustments must be on new enrollees.

It is also recognized that VA provides compensation for more than earnings loss. In addition to payment for SMC, the rating process itself *may* take into consideration functional loss, for some diagnostic codes. VA ratings do not always strictly adhere to medical impairment criteria for making the rating determination. Currently, the process for taking into account loss of quality of life is not formal. This study addresses the possibility of incorporating a quality of life payment scheme into formal rating procedures. The goal is to improve the adequacy and equity of the disability compensation program.

Policy Options for Improving the VASRD

Policy options for decisionmakers to consider to improve the VASRD include:

- Reduce the increases in ratings when combining multiple disabilities to the point where earnings loss does not decrease as the number of disabilities increases
- Increase benefits for 100% CDD to improve vertical equity
- Reduce the ratings for individual diagnoses where earnings loss does not occur
- Increase the ratings for individual diagnoses where VA disability compensation does not adequately compensate for earnings loss
- Utilize ICD-9-CM classification codes augmented by International Classification of Functioning, Disability and Health codes and Diagnostic and Statistical Manual of Mental Disorders codes alongside the current VASRD diagnostic codes for purposes of keeping the classification system more up-to-date and standardized.

Revise Formula for Combining Disabilities

The current method for combining disabilities results in a rating inflation by treating the disabilities as basically additive with respect to earnings losses. In analyzing veterans with multiple disability ratings, we discovered that a positive correlation exists between the number of service-connected disabilities and earnings within a given CDD rating level; that is, earnings increase as the number of disabilities increase. The correction for this would be to reduce the CDD rating downward one to three rating levels depending on the number of disabilities and the CDD level currently calculated when combining multiple disabilities. This study has developed a rough guide for how to do this as an interim stop-gap measure.

However, for the longer term, instead of rating each disability separately and then combining the ratings, an alternative approach would be to have a single rating for a given combination of disabilities. This recognizes that certain conditions co-occur, often referred to by medical practitioners as co-morbidities. When conditions co-occur, they produce an effect that is different from multiple unrelated conditions.

In order to accomplish this, what is needed is a diagnosis-level analysis for multiple disabilities, not just for the primary diagnosis. Given the study's time constraint, availability of pertinent data, and the lack of statutory authority to acquire individual level earnings data, the study team was not able to perform this task. This task would require the careful analysis of specific combinations of co-morbidities. The result of the needed disaggregated analysis would not be a single look-up table but more likely a series of look-up tables designed to handle specific conditions and combinations of conditions.

Adjust the CDD Ratings to Improve Accuracy

The earnings loss analysis has identified serious problems in the ability of the current VASRD to predict earnings losses for veterans. For example, veterans with 100% CDD ratings on average experience much greater earnings loss than expected. Moreover among veterans with the same CDD ratings, systematic differences occur in their loss of earnings depending on the nature of their injuries. For example, among veterans with the same CDD ratings, those with PTSD or other mental health disorders generally have greater earnings losses than veterans with other medical conditions.

The evidence on the misalignment of the VASRD could be used in two ways to improve the ability of the CDD ratings to predict average impairment in earnings capacity. First, the CDD ratings for given conditions could be revised within the VASRD. For example, the CDD rating for a PTSD previously rated 10% in a revised VASRD would be rated 30%.

Several of the most prevalent diagnostic conditions would require adjustment. For example, the study's earnings loss analysis leads us to adjust the 10% rating to zero for the following conditions in cases with only one disability:

- Arthritis – VASRD code 5003
- Arthritis – VASRD code 5010

- Lumbosacral strain – VASRD code 5237
- Tinnitus – VASRD code 6260
- Arteriosclerotic heart disease – VASRD code 7005
- Hypertensive vascular disease – VASRD code 7101
- Hemorrhoids – VASRD code 7336
- Diabetes mellitus – VASRD code 7913

Increase Payment Amount at the 100 Percent CDD Rating Level

Increasing the compensation amount for 100% CDD would improve the adequacy objective for veterans at this level of disability and improve vertical equity in the system overall. For veterans rated at the 100% CDD level without an IU determination, an increase of approximately 9 percent above the 100% level regular schedule payment amount would achieve approximate parity to compensate 100 percent for average earnings loss.

The Medical Components of the VASRD

The starting point for most CDD ratings produced by the VASRD is an assessment of the medical impairments resulting from the service-connected injury or diseases. However, the medical information incorporated into the VASRD is not current for many conditions. In addition, some medical conditions that are widely recognized in the medical profession are not included in the VASRD. Updating and expanding the scope of the VASRD would improve the ability of the rating system to produce accurate assessments of the consequences of injuries and diseases.

One way to help achieve the goal of a more comprehensive and current set of medical criteria in the VASRD is to add ICD-9-CM codes to all diagnoses. In conducting its own mapping exercise, the study team found that it is feasible to match ICD-9-CM codes to nearly every VASRD code.

The study team’s effort to map to ICD-9-CM codes also revealed that VA's actual use of its diagnostic codes often does not correspond to the verbal descriptions attached to those codes. Approximately half of the 7,500 cases reviewed for this study have diagnostic text that does not match the official diagnostic description. In addition, some cases used obsolete diagnostic codes although VA has indicated that system edits do prevent use of obsolete codes. In addition, for conditions not listed in VASRD, raters often assign inappropriate codes rather than use analogous codes, used when VASRD codes are not available. The mapping effort also revealed that documentation of cases is not consistent.

Decisionmakers could consider the option of using the ICD-9-CM codes as part of the VASRD diagnosis description when applicable. It would not disrupt the VA's current practice, but it would allow the VA raters (as well as researchers and others at VA) to cross-reference the VASRD with patient medical information, especially when a

condition goes by different names or when the VASRD's name for the condition is out of date. In cases where the VASRD diagnostic description is itself unclear, the ICD-9-CM code would provide clarity.

In cases where a VASRD code is intended to correspond to a condition that is not coded well in the ICD-9-CM, it could be matched to a code in another standard coding system, for example, the International Classification of Functioning, Disability and Health (ICF) that better captures that condition than does the VASRD. This would allow VA to maintain a list of diagnoses tailored to its own purposes, and it would tether the VA's system to what is happening in the broader medical community. That might obviate the difficulties resulting from obsolete diagnostic descriptions or medical conditions not listed in the VASRD that are routinely evaluated by VA rating specialists while providing both the impetus and the basis for future updates of the system. As a practical matter of switching to a hybrid coding system, the only essential difference would be that an ICD-9-CM code would be added to many of the VASRD diagnostic descriptions. This would allow the VA rater and other subject matter professionals to easily cross-reference medical materials on that condition. The mapping of VASRD diagnostic codes to ICD-9-CM codes would also be useful for statistical reporting and comparison purposes.

In addition to mapping VASRD codes to ICD-9, the study team mapped a sample of 1,094 cases in which analogous codes were used because appropriate VASRD codes are not available. Analogous codes use the first two digits of the body system followed by 99 to indicate that the diagnosis is an analogous code. Analogous codes are used for about nine percent of the 7.7 million service-connected disability conditions. The purpose of the mapping was to identify codes that could be added to the VASRD. The effort identified thirty-four ICD-9 diagnoses with at least five cases that could be added to the VASRD.

Evaluate Consequences in Addition to Impairment

The Revised Verbrugge and Jette Model of Disability shown in Figure I-1 assumes that the consequences of injuries and diseases occur in stages. Impairments lead to functional limitations that lead to disability. The current VASRD primarily relies on assessments of the extent of impairment to determine CDD ratings on the assumption that the CDD rating serves as a good proxy or predictor of average impairment of earnings capacity. A possible refinement would be to incorporate information in addition to an assessment of the severity of the impairment into the CDD rating. For example, the effects of the injury or disease on ADLs could be systematically incorporated into the VASRD. This possible expansion of the rating system to include consequences other than impairments should be based on empirical studies; however, there is limited evidence from studies of other disability benefit systems suggesting that the predictions of the extent of loss of earnings do not improve when information in addition to the impairment rating is incorporated into the disability rating.

Policy Options for IU Benefits

The number of IU cases has grown from about 109 thousand in September 2001 to 190 thousand cases in September 2007, an increase of 81 thousand. About one-half of the increase was a result of new enrollees receiving disability compensation, and one-half was a result of reclassifications. PTSD cases constituted about one-third of the IU cases in 2007 and one-half of new IU cases between 2001 and 2007. Other mental disorders constituted 12.5 percent of IU cases; other mental disorders combined with PTSD made up 44 percent in 2007. Thirty-eight percent of the IU cases in 2007 were for veterans age 65 and older and 80 percent for veterans age 55 and older.

Although age is clearly related to employment, it is not considered in IU determinations. While IU is not intended for veterans who voluntarily withdraw from the labor market because of retirement, new awards can be made to veterans who are near or past normal retirement age for Social Security.

In light of these circumstances, it appears that IU determinations made for veterans approaching or past retirement age are made more in implicit recognition of loss of quality of life than for employment loss. As such, decisionmakers may wish to consider compensating veterans in these circumstances explicitly for loss of quality of life rather than with IU whose purpose is to replace loss of earnings.

IU determinations depend on decisions about marginal employment[9] and substantially gainful employment. In order to further facilitate the decision-making process for IU determinations, a work-related disability set of measures would be worth assessing.

An option for decisionmakers to consider would be to adopt a patient-centered, work disability measure for IU evaluations as an extension of the clinical and patient-centered research promoted by the Chief Research and Development Officer, Office of Veterans Affairs.[10] As with the current IU evaluation, assessments would address the individual's work history but also consider other factors including motivation and interests. Since veterans with disabilities are also eligible for Social Security Disability Insurance, consideration should be given to using the same income threshold for both SSDI and IU.

Evaluators would select questionnaire instruments from a prescribed battery that measure multiple domains relevant to health-related work disability (that is, impairments, functional limitations, and work-related disability) that relate to the areas of concern and the level of specificity required by the individual's unique circumstances. The instruments should meet certain criteria such as having been formally tested for reliability in an impairment group and widely used by evaluators of work disability.

Work disability evaluations would include relevant measures of impairment, functional limitation, and disability. Particular care should be taken to include measures of

[9] Marginal employment is a term commonly used to reflect 'non-standard' employment such as part-time work and low paying jobs with only a few working hours.

[10] Feussner, J. R. (1999). Priorities for patient-centered research. *Medical Care, 37*(9), 843-845.

physical, psychological, and cognitive function. Assessments would evaluate the individual in the context of his or her total environment not only the workplace.

Policy Options for QOL Benefits

Basic Issue: One or Two Tracks of Benefits (Work Disability and QOL)?

VA currently makes a payment for loss of earnings capacity and makes QOL payments through SMCs for certain physical disabilities. Payments for SMCs are based on objective measurement—qualifying conditions for SMCs often are publicly visible; they can all be documented objectively. There are no parallel payments for mental conditions or for conditions that are less visible or conditions that cannot be measured objectively. If decisionmakers expand VA's two tracks of benefits to cover QOL for all disabilities, it can pay scheduled QOL payments for veterans receiving regular schedule payments and add an SMC for the mental body system. This could be accomplished by adding a 5 point scale to the current rating schedule. Criteria could be established to include or replace existing SMCs plus newly developed criteria for other serious injuries meriting an SMC-type payment (such as TBI and PTSD). The criteria need to be specific and well articulated, describing the lifestyle limitations of the qualifying disabilities. These special payments should be adequate to purchase the support needed. VA's disability compensation system should provide adequate payments for the severe injuries experienced by today's OEF/OIF veterans, particularly veterans with TBI and PTSD, and be flexible enough to include other injuries and illnesses that may emerge in the future.

Starting Point for QOL Benefits: VASRD or a New QOL Measure?

The analysis of QOL data indicates that while QOL loss increases with increased VASRD ratings, the increase is not parallel. QOL loss is not highly correlated with the VASRD. Even if the VASRD is adjusted, the literature tells us that QOL loss is not highly correlated with impairment. That is because QOL is an individualized perception, and people adjust to disability. About one-half of those with severe disabilities report high degrees of life satisfaction. Should decisionmakers withhold QOL payments for severely disabled individuals because some individuals have a positive outlook?

If decisionmakers link the QOL payment to the VASRD, then QOL norms can be used to determine payments. If decisionmakers link QOL payments to QOL loss, then each veteran's QOL would have to be assessed. Providing payments based on actual QOL loss would be fairer and more equitable but would be less compatible with the current system. Linking QOL payments to the VASRD would be less equitable because VASRD ratings are not correlated enough with QOL loss. At the same time, linking payments to disability ratings would prevent a QOL payment from being withheld from a severely disabled individual who has a positive outlook. Decisionmakers need to reach a balance between how veterans assess their situation and how society views their situation.

Alternatively, a new rating schedule specifically designed for QOL loss payments could be developed where the relationship between rating levels and medical impairment would be extensively revised. However, this would require new survey data and analysis

conducted at the diagnostic code level. To make this manageable, the most frequent diagnostic codes in each body system could be assessed for QOL loss and an average given to all others.

The Structure of QOL Benefits

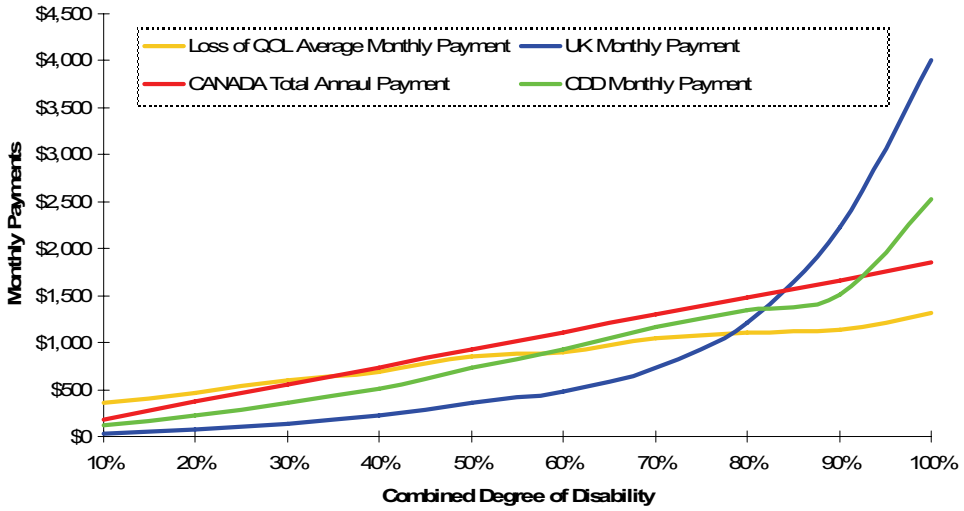
Foreign countries that award QOL payments link them closely to impairment and consider the circumstances of the individual veteran. Foreign countries that make QOL payments only pay for actual earnings loss or a specified loss of earnings capacity. A veteran must demonstrate an inability to work to receive an earnings loss payment in addition to a QOL payment in Canada, for instance, and does not receive ongoing earnings loss payments until completing three years of vocational rehabilitation.

Decisionmakers could structure VA's QOL benefits so that they are based primarily on QOL. QOL could be inferred from impairment, or it could be measured.

The lump sum systems used in both the United Kingdom (UK) and Canada have several low rating levels for QOL payments. For instance, Canada has 5 ratings below 10 percent. While making QOL payments in all 15 of its ratings, UK system does not pay for earnings loss for impairment ratings in the 4 lowest ratings of its 15-point rating scale. The Canadian schedule increases proportionally. In 2008, after the 10 percent rating, each 5 percent increase in rating in Canada has a payment increase of $12,909. The UK payments do not increase with a multiplicative constant. For instance, the highest payment is $565,000, the second highest payment is $399,000, the third highest is $228,000. The lowest pain and suffering payment in UK is $2,080. Using these benchmarks would permit great flexibility for decisionmakers in establishing payment levels. The message from the foreign governments is to make very high payments to those with severe QOL loss or severe impairment and make small lump sum payments to those with low ratings for QOL or impairment.

Figure I-6 illustrates how the payments increase for Canada and UK's QOL payments and VA's CDD payment. It also shows how payments based on QOL measurement increase as QOL loss increases. All payments except the QOL loss payment based on veteran survey data start with low payments and increase as impairment increases. The QOL loss payment starts at a much higher level but provides the lowest payment for the most severe level of disability. In contrast, the CDD and UK payments begin at very low levels and curve upward steeply at the highest levels of disability. This reflects society's view that severe disability should be compensated much more than low levels of disability. The Canadian QOL payment schedule has equal increases at every level rather than a steep increase at the highest levels.

Figure I-6. QOL Payments for Veterans in UK and Canada Compared to Proposed QOL Payments in U.S. and CDD Payments (converted to monthly payment amounts)



Source: EconSys Study Team compilation.UK and Canadian lump sum payments converted into monthly payments. QOL loss payments based on allocating VA CDD payments on the basis of QOL.

The individual with the highest QOL loss in the data available to this study was at 84% loss of QOL based on preference-based scoring. When combined into an average, 100% veterans with disabilities experience only a 30% loss of QOL. Paying a veteran with an 84% loss of QOL a 30% payment would be considered grossly inequitable. Few veterans fall into the highest QOL loss levels, and arguably they are the individuals who most need the highest payment possible. This example argues that decisionmakers should adopt a program where QOL payments can be adjusted based on the individual veteran. It is expected that most veterans would be equitably treated with average payments, but decisionmakers must include flexibility to cover extreme situations. This could be accomplished by comparing the veteran's QOL rating to the average and basing a decision on the rest of the information in the file.

Potential Effects of Options on Rating Process and Costs

The magnitude of the costs for the various QOL payment options is very large, and there are many decisions that must be made in terms of implementation. Table I-10 depicts the high and low range of estimated monthly benefit and annual costs for options using the following benchmarks: Enhanced Measure related to CDD, Preference-Based Scores, QOL Schedule, and Hybrid. These estimated costs are based on the 2,627,900 service-connected disabled veterans receiving disability benefits as of September 2007. As can be seen, the estimated annual costs would range from $3.1 billion to $30.7 billion.

Table I-10. Range of Annual Costs by Option

Options	Low Monthly Benefit Average	High Monthly Benefit Average	Low Annual Costs ($Billions)	High Annual Costs ($Billions)
CDD Based	$317	$974	$10.0	**$30.7**
Preference Score Based	$286	$703	$9.0	$22.2
QOL Schedule (with Negative Scores)	$332	$815	$10.5	$25.7
Hybrid	$99	$218	**$3.1**	$6.9

Source: EconSys Study Team analysis.

Three broad options were considered for implementing a QOL payment:

1. Statutory rates by combined degree of disability
2. Separate empirically-based normative rates for earnings and QOL loss
3. Individual clinical and rater assessments and separate empirically-based rates for earnings and QOL loss

All three options would require periodic analysis of earnings loss and QOL impact to ensure that the appropriate levels of benefits are provided for both. This would require surveys to assess QOL and matches with Social Security data to assess earnings loss.

Options 1 and 2 are similar from an operational standpoint in that no changes would be made to basic processes used for medical examinations and rating decisions. Veterans would not be evaluated on individual levels for either earnings loss or QOL. Raters would follow the current processes to assign diagnostic codes, individual diagnosis ratings, and CDD ratings. The computer would apply rate scales to determine award amounts. Therefore, we estimate very modest or no additional operational costs for these options.

Option 2 requires additional computer programming of the rate scales. The scales would result in veterans with similar CDD rating levels receiving different amounts of benefit, and this would require education of the veteran community. Option 2 would require surveys with larger sample sizes and increased costs in order to assess QOL impact for many individual diagnoses rather than at the body system level as done in the 2007 Survey of Disabled Veterans.

Option 3 is by far the most complex and costly of the three options. Assessment of each individual veteran every time he or she files a claim would require more time spent on each application by both the medical examiners and the raters.

Veterans would not be able to appeal the QOL decision under Option 1 and not under Option 2 if Congress approves the QOL rate scale. However, the rate scale will presumably be much more complex (including perhaps 100 to 200 individual diagnoses)

than the current rates for 10 levels of CDD, and Congress may not want to be involved in setting rates for that complex a system.

We estimate the increased administrative costs for rating actions for Option 3 at be 69.0 FTE and $7.0 million and the increased medical examination costs at $60.8 million. Training costs are estimated at $3.7 million. Total estimated costs for Option 3 are $71.5 million.

II. INTRODUCTION

This volume, *Earnings and Quality of Life Loss Analysis*, prepared for the Department of Veterans Affairs (VA), is Volume III of the Final Report for *A Study of Compensation Payments for Service-Connected Disabilities*. The Final Report has five volumes:

- Volume I: Executive Report
- Volume II: Transition Benefit Analysis
- Volume III: Earnings and Quality of Life Loss Analysis
- Volume IV: Review of Non-VA Programs and QOL Elements
- Volume V: Disability Forum Presentations

The EconSys Study Team's report on earnings and quality of life (QOL) in Volume III is divided into the following chapters:

I. Summary
II. Introduction
III. Definitions, Models, and Measures of Disability
IV. VA Rating System
V. Profiles of VA Disability Compensation Recipients
VI. Loss of Earnings Methodology
VII. Analysis of Loss of Earnings Results
VIII. Quality of Life Analysis
IX. Compensation for QOL Loss
X. Alternative QOL Measurement
XI. Potential Effects of Options on Rating Process
XII. Consideration of Assistive Technologies
XIII. Consideration of Rehabilitation

Analyzing the impact of disability on veterans with service-connected disabilities required multiple approaches from detailed analysis of data to literature review of assistive technologies and rehabilitation. Methodologies used are described in each chapter. VA asked that we provide analysis and findings regarding creation of a schedule for rating disabilities based on current concepts of medicine and disability taking into account the impact on loss of earnings and QOL. The time frame allowed for the study required heavy reliance on readily available information and precluded use of techniques such as processes and workload analyses, pilot tests, and new surveys.

Earnings loss was assessed using 2006 earnings received from the Social Security Administration for all service-connected veterans and a sample of non-service-connected veterans as a comparison group. This approach was similar to the methodology used by the CNA Corporation for the Veterans' Disability Benefits Commission (VDBC) in 2007 but differed in important ways that will be described later.

QOL impact was assessed using existing data resulting from a 2007 Survey of Disabled Veterans also conducted for the VDBC and data from the 2001 National Survey of Veterans (NSV). NSV data provided QOL information on non-disabled veterans for comparison. Options for establishing a QOL payment are provided for decisionmakers' consideration. Potential cost implications are identified at a macro level.

Finally, the report discusses the implications of assistive technology and rehabilitation for the disabled and explores various definitions and models for compensating disability.

III. DEFINITIONS, MODELS, AND MEASURES OF DISABILITY

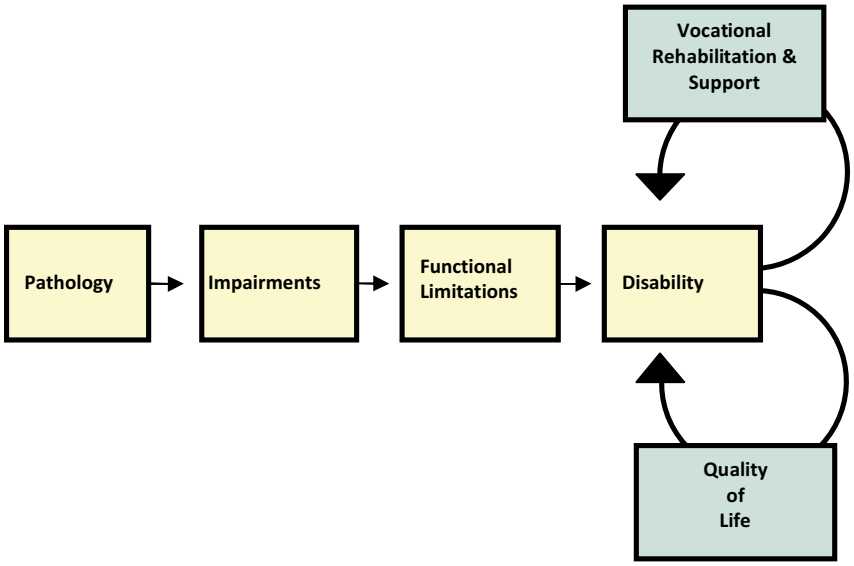
Disability compensation programs in the U.S. and foreign countries consider various elements in determining the amount of cash benefits. The formulas for cash benefits typically measure the degree of a medical impairment on the assumption that the impairment will affect the actual lost earnings or loss of earnings capacity. Less common are cash benefit formulas that assume the impairment will affect the quality of life. VA's Schedule for Rating Disabilities (VASRD) evaluates the extent of permanent impairment and assumes that the loss of earnings capacity is affected by the impairment.

The disability model underlying the primary approach to cash benefits in the VA program assumes there is a close relationship between medical impairment and loss of earnings capacity. Alternative models of disability gravitate more toward functional assessment and encompass broader domains of health, well-being, and functioning in society. These alternative approaches suggest or imply that impairments do not necessarily predict disability very well.

Key Definitions

An important starting point for any disability compensation program is a disability model that relies on clear, consistently used definitions for concepts used in the model. While several models of disability are discussed in this chapter, the Abridged Verbrugge and Jette Model of Disability shown in Figure III-1 is useful in providing the key definitions used by compensation specialists and the relationships among the concepts in these models.

Figure III-1. Abridged Verbrugge and Jette Model of Disability



Source: Jette, A. (1994). Physical disablement concepts for physical therapy research and practice. Physical Therapy, 74, 380-386.

Pathology is the disease, injury, or other physical or mental health condition that is identified or classified by a medical diagnosis.

Impairment involves damage or loss of a particular body function or ability or a worsening of and diminished capacity for a particular body function or ability. An impairment may be anatomical (loss of a leg), physiological (tinnitus), or be of a mental or emotional nature (major depressive disorder). In some instances, the characteristics of a disease or condition may result in a specific impairment with an associated specific functional limitation such as walking for individuals with peripheral artery disease (this occurs because the disease results in pain and cramping of the legs due to reduced blood flow). It should be noted that *not all impairments lead to functional loss or disability*. In addition, the same impairment may not result in similar functional loss or disability for all individuals with the same condition.

Functional Limitations typically refers to the effects of the impairment on **Activities of Daily Living** (ADL) and **Instrumental Activities of Daily Living** (IADL). ADLs are those activities and daily functions required for an individual to take care of him or herself and to remain independent. These activities include eating, bathing, dressing, toileting, and transferring (from a chair to a bed). The IADLs go beyond basic self-care tasks and include activities such as shopping for groceries, preparing meals, managing money, performing housework, or using a telephone. IADLs require a more complex set of tasks and cognitive functioning to complete the activity. For example, in order to shop for groceries, one must be able to determine what one must buy at the store, how to pay for it, and how to get to the store and then back home with the groceries. Although an individual may not be able to drive a car due to some type of impairment (for example, limitations on vision), he/she may be capable of grocery shopping with transportation assistance whether the mode of transport is a bus, taxi, or family member driving him/her to the store.

Disability refers to the effects of physical or mental impairments and the resulting functional limitations on the roles and responsibilities an individual may perform in society. Disability results when there is a gap between the demands of the physical or social environment and the capability or adaptability of the individual. The disability interferes with the individual's ability to participate in usual roles (for example, homemaker, worker, student). Disability is a relational term, determined by the individual's interaction with his/her environment.

The following definitions of disability represent those offered by authoritative sources.

- The consequences of functional limitation or "uncompensated shortfalls" in responding to role demands.[11]
- Limitations in physical or mental function, caused by one or more health conditions, in carrying out socially defined tasks and in roles that individuals are generally expected to be able to do.[12]

[11] Matheson, L.,(2003). *Functional Capacity Evaluation* (2nd ed.). Chicago.

- Limitations in performing socially defined roles and tasks expected of an individual within a sociocultural and physical environment. A necessary condition is that there are factors external to the individual which interact with personal characteristics that determine the disability.[13]

  Based on the Americans with Disabilities Act, the term "disability" means with respect to an individual:

- A physical or mental impairment that substantially limits one or more of the major life activities of such individual;
- A record of such an impairment; or
- Being regarded as having such an impairment.

A key role that may be affected by the consequences of an injury or disease is work. Work provides the earnings needed to support oneself and one's family. A **work disability** limits an individual in his or her work role because of a physical or mental impairment that impacts work performance. **Loss of earnings capacity** in disability compensation programs is the difference between an individual's capacity to earn income before disability and his/her capacity to earn income into the future after the disability. Disability compensation programs may consider the following factors in determining loss of earnings capacity:

- nature of the injury
- degree of impairment
- potential for rehabilitation and the person's ability to undertake rehabilitation
- individual's education, training, skills, and experience
- age of the individual
- employment reasonably available to the individual despite the injury

Challenges in assessing loss of earnings capacity include the lack of uniform agreement on how to evaluate the individual's likelihood of returning to work or his/her potential for vocational rehabilitation.

Impairment and functional limitations may also affect aspects of life other than work, resulting in **non-economic disability** (or **loss in quality of life**). For instance, an individual diagnosed with multiple sclerosis may have frequent exacerbations of the disease, reducing the individual's ability to take care of his/her young children. In this instance, the injury or disease has impacted the individual's ability to perform his/her role in the family.

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[12] Institute of Medicine. (1997). *Enabling America: Assessing the Role of Rehabilitation Science and Engineering*. Washington, D.C.: National Academies of Science.

[13] Nagi, S. Z. (1964). A study in the evaluation of disability and rehabilitation potential: Concepts, methods, and procedures. *American Journal of Public Health and the Nations' Health, 54*, 1579.

Models of Disability

The study team assessed five well-known contemporary and historical models of disability developed by the World Health Organization (WHO) (two models described below), the Institute of Medicine,[14] Verbrugge and Jette,[15] and Saad Z. Nagi.[16] These models were selected based upon a review of the literature for their overall germaneness to this study or of potential interest to decisionmakers.

The Original WHO Model

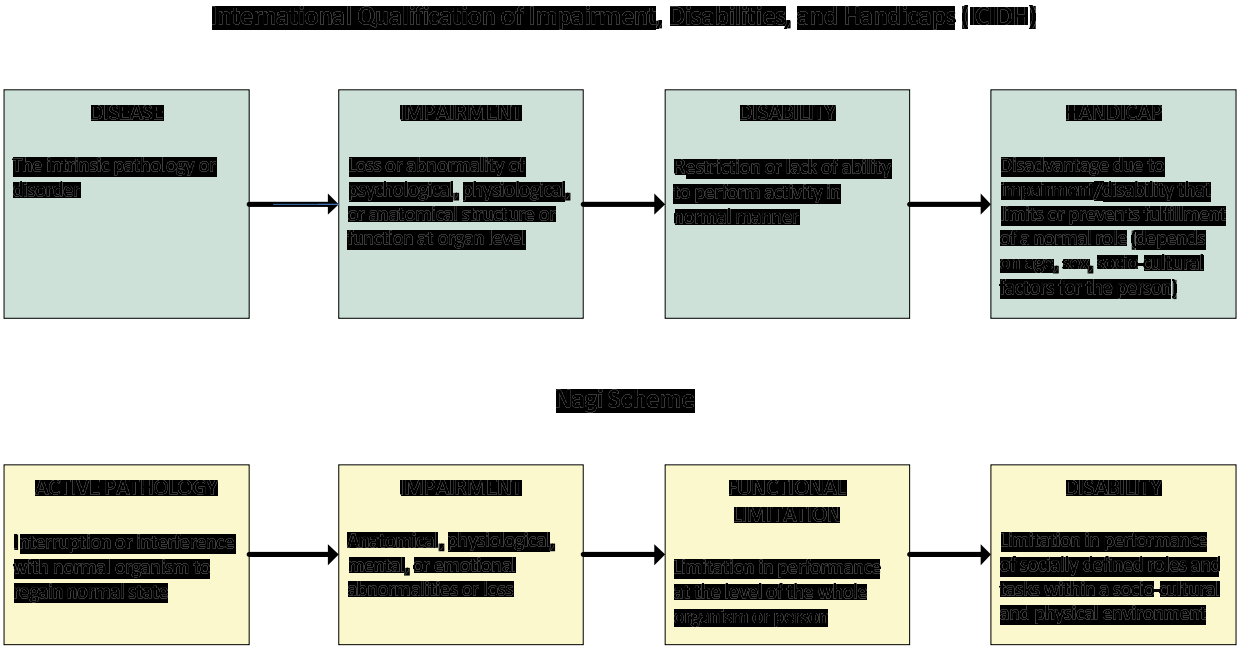
Our present concept of disability has evolved greatly from a unidirectional approach that postulated that disease leads to impairment which leads to disability and then handicap. This was articulated in the first WHO model, the International Classification of Impairment, Disability and Handicap (ICIDH). This model missed a critical concept that disability is a condition which occurs as a result of phenomena unique to a person in relationship to his/her environment. It is a condition that is dynamic, contextual, and multi-dimensional. The model predicted that even if we could develop perfect treatments, we often would not be able to reverse the disability. (See Figure III-2.)

[14] Institute of Medicine, (1997).

[15] Lois M Verbrugge has been researching gender roles and work since the late 1970's and disability since the late 1980's. She served as a consultant to the National Council on Disability and is widely published in the disability arena.
Alan M. Jette is a dean at Boston University, Sargent College of Health & Rehabilitation Sciences. He has received grants from National Institutes of Health in the area of rehabilitation research. Source: Thomson Corporation. (2008). *ISI Web of Knowledge*. Retrieved on August 8, 2008, from http://hcr3.isiknowledge.com/home.cgi

[16] Saad Z. Nagi, a sociologist at Ohio State University is considered "one of the early investigators in the sociology of rehabilitation." Nagi & Sussman, M. B. (1967). Review of sociology and rehabilitation. *American Sociological Review, 32*(4), 650-652.

Figure III-2. The Original World Health Organization (International Classification of Impairment, Disability and Handicap) and Nagi Models



Source: Adapted from Jette, A. (1994). Physical disablement concepts for physical therapy research and practice. Physical Therapy, 74, 381.

The Nagi Model

Nagi, a sociologist, developed his ideas during the 1960's while working in a Rehabilitation Center in Columbus, Ohio.[17] His model challenged both the unidirectional aspects and the exclusive focus on individual traits or conditions to explain the outcome. Also, in contrast to the ICIDH, the Nagi framework was not accompanied by a classification scheme.[18]

Nagi and others subsequently went on to posit that every individual lives within an environment with which he/she must interact. This theory assumes that disability can be meaningfully understood and estimated only within the context of an individual's performance needs/wants as well as personal, work, and social roles.

From the outset, Nagi's thinking was rehabilitative; that is, it was driven by interest in recovery or enablement. In his own study of vocational and rehabilitative potential, he evaluated five areas: socio-economic, medical, psychological, occupational, and vocational. He stressed that "maximum rehabilitative potential" could be attained if a well-designed program were in place and accessible to the individual.[19]

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[17] Nagi (1964), p. 1579.

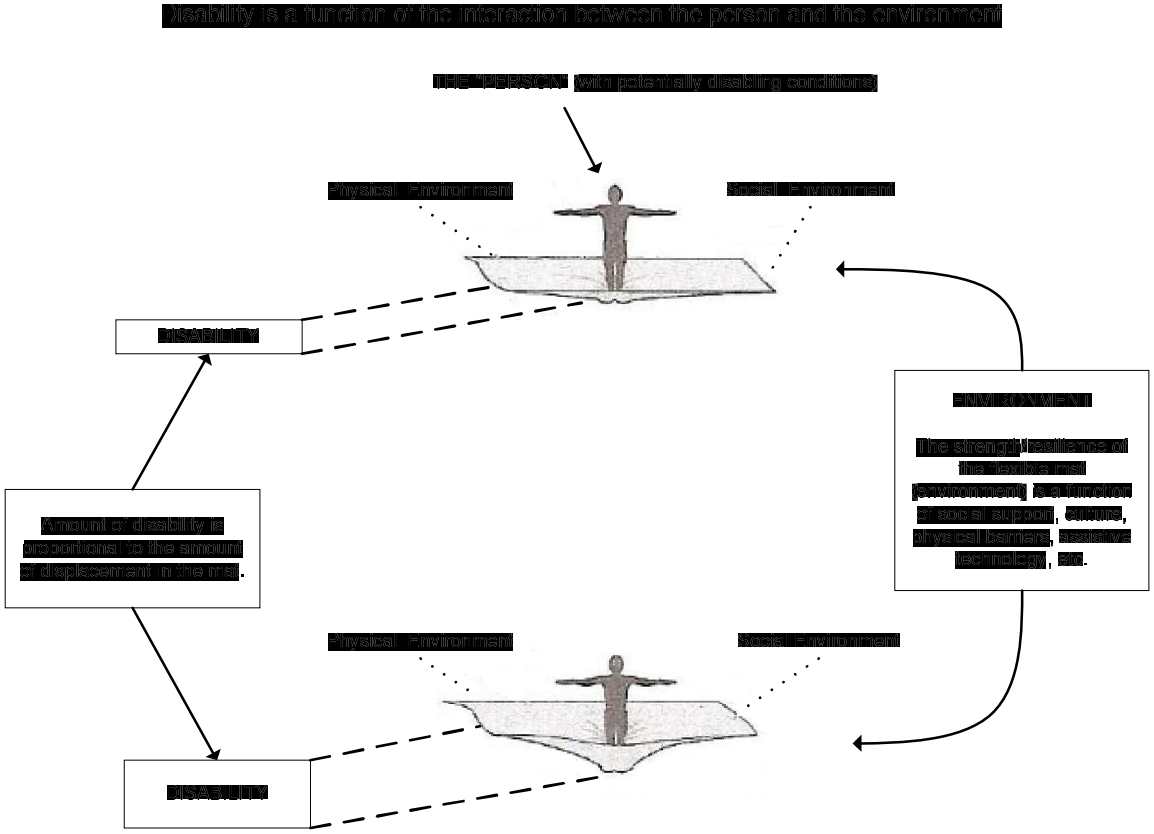
[18] Stamm, T. & Machold, K. M. (2007). The International Classification of Functioning, disability and health in practice in rheumatological care and research. *Current Opinion in Rheumatology, 19*(2), p. 184-189.

[19] Nagi (1964), p. 1568-1579.

The IOM Model by Brandt and Pope

Brandt and Pope saw disability in more visual terms as the displacement of an "environmental mat" on which each person stands.[20] In this paradigm, which they depicted in an illustration, the greater the "displacement" of an impaired individual relative to the mat, the greater the disability impact. In this way, they contended, the physical and social environments supporting the individual could mitigate or detract from the magnitude of the disability. (See Figure III-3.)

Figure III-3. Brandt and Pope View of Disability



Source: Institute of Medicine. (1997). p. 70

The Updated WHO Model: International Classification of Functioning, Disability, and Health

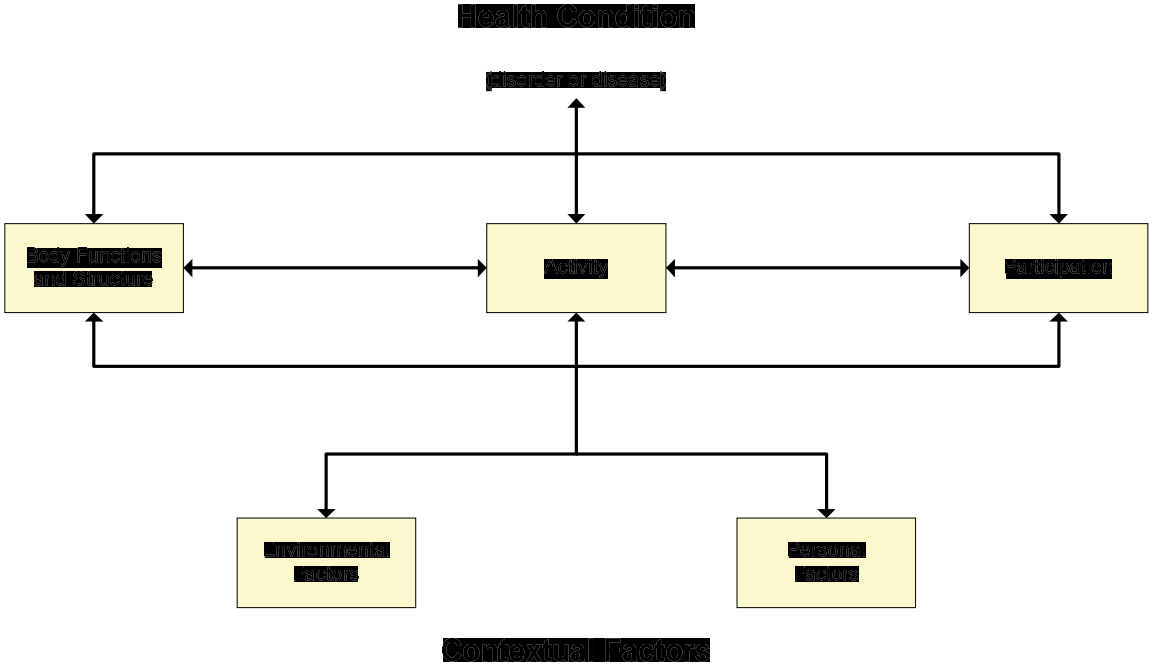
In 1980, WHO devised a scheme for classification of disability as a consequence of disease or disease process. Meanwhile, WHO has also sought to refine its understanding of disability, developing a newer, dynamic model in which there is reciprocity among the domains of impairment, disability, and societal/environmental factors that may

[20] Institute of Medicine (1997), p. 70.

influence function. This new approach has been termed the International Classification of Functioning, Disability and Health (WHO, ICF) because of its emphasis on health and functioning rather than on disability. This is a radical shift from highlighting disability.

ICF has received significant recognition worldwide, but it has not received wide acceptance as a classification scheme for work-related disability. It has been used to evaluate patients with a variety of diseases and disorders and has led to the development of core sets of measurements to help describe key components of functioning (activity and participation) and disability (limitations of activity and participation). One conceptual problem for application of ICF to work disability is that the measurements of activity and participation have significant overlap. The ICF Model is shown below in Figure III-4.

Figure III-4. The Revised World Health Organization Model: International Classification of Functioning, Disability and Health



Source: World Health Organization (WHO). (2002). Workshop on Improving Disability Data for Policy Use: Towards a Common Language for Functioning, Disability and Health, 23-26 September.

Table III-1 further identifies the terminology used in each of the components described above.

Table III-1. The Revised World Health Organization Model: Items within Identified Components of the International Classification of Functioning, Disability and Health

An Overview of ICF*				
	Part 1: Functioning and Disability		Part 2: Contextual Factors	
Component	**Body Functions and Structure**	**Activities and Participation**	**Environmental Factors**	**Personal Factors**
Domains	Body functions Body structure	Life areas (tasks, actions)	External influences on functioning and disability	Internal influences on functioning and disability
Constructs	Change on body functions (physiological)	Capacity: executing tasks in a standard environment	Facilitating or hindering impact of features of the physical, social, and attitudinal world	Impact of attributes of the person
	Change on body functions (anatomical)	Performance: executing tasks in the current environment		
Positive aspect	Functional and structural integrity	Activities participation	Facilitators	Not applicable
Negative aspect	Impairment	Activity limitation	Barriers/Hindrances	Not applicable
		Participation restriction		

*ICF - International Classification of Functioning, Disability and Health.
Adopted from ICF Introduction. An Overview of ICF (7).

Source: Madden, R., Sykes, C., & Ustun, T.B. (n.d.) World Health Organization Family of International Classifications: Definition, scope and purpose, World Health Organization Family of International Classifications. Retrieved August 27, 2008, from http://www.who.int/classifications/en/FamilyDocument2007.pdf

The Verbrugge and Jette Enablement/Disablement Model

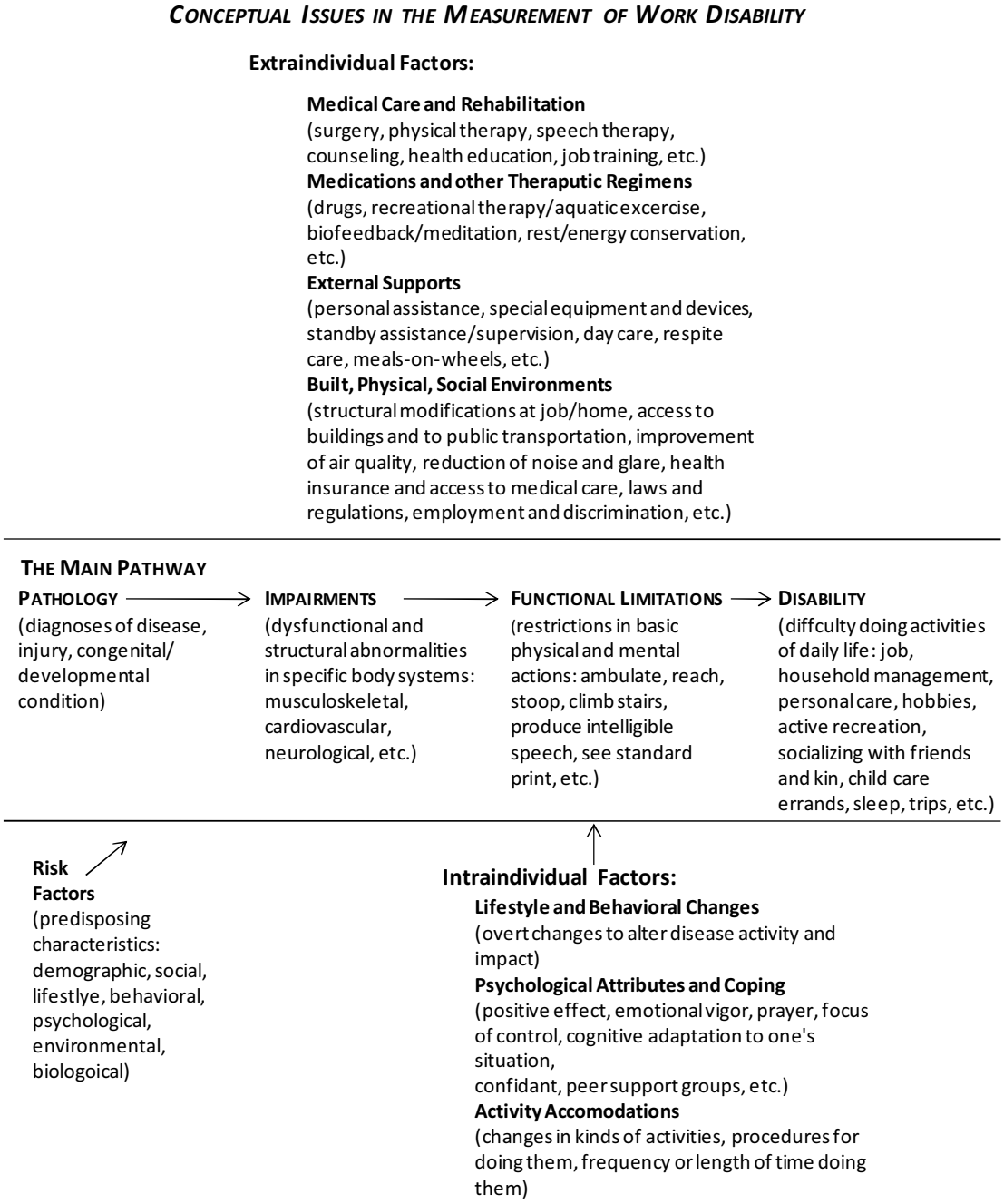
In their model of disability, which they refined to look specifically at work disability, Verbrugge and Jette modified the basic Nagi model, adding a number of biopsychosocial elements, thus making it a more dynamic model. Their new model, called the Enablement/Disablement Model, shown in Figure III-5, adds the following elements:

- Risk factors – that is, characteristics that may have preceded the disability.
- Intra-individual factors – that is, things individuals can do that will impact their functional limitations. These can be behavioral, psychological, or even activity changes that can improve or detract from an individual's ability to function.
- Extra-individual factors – that is, medical, social, and physical support that may be provided by the community to improve an individual's ability to function.

According to the authors, the model provides a comprehensive paradigm and was shown by Gaudino and others to be an effective foundation for developing evaluation

methods for assessing the significance of disability to determine an appropriate level of compensation.[21]

Figure III-5. Verbrugge and Jette: Enablement/Disablement Model



Source: Jette, A. & Badley, E. (2002). Conceptual issues in the measurement of work disability. In G. S. Wunderlich, D. P. Rice, & N. L. Amado (Eds), Dynamics of disability: Measuring and monitoring disability for Social Security programs (p. 189). Washington, DC: The National Academies Press.

[21] Gaudino, E. A., Matheson, L. N., & Mael, F. A. (2001). Development of the functional assessment taxonomy. *Journal of Occupational Rehabilitation, 11*(3), 155-175.

Measures of Work-Related Disability

A work disability model needs to be coupled with reliable tools for measuring work disability. The most obvious measure of the extent of work disability is the loss of actual earnings associated with the injury or disease. Economists rely on this measure and it is the operational measure of work disability used in this report. Other disciplines have developed other measures of work disability. Some of these measures are objective while others are self-reported and more subjective in nature. Accepting both types of instruments would likely result in a more comprehensive view of health-related work disabilities. To date, there does not appear to be a single instrument that is able to capture work disability. Therefore, multiple instruments would likely need to be used in concert.

Another option is to use separate instruments to assess impairments and health-related work disability. There may be a degree of overlap or redundancy with instruments selected for measuring QOL loss. One set of instruments could measure functional capacity or work performance. Examples include the California Functional Capacity and the Functional Assessment Instrument. Another set of instruments could measure the environmental factors (both work and non-work) that are likely to impact getting to work, performing the job, and sustaining employability. Examples include the Disability Rating Scale (DRS) and Work Behavior Inventory (WBI).

Measures of disability evolving over time would need to be sensitive to the changing demographics of the 21st century and beyond. For example, both the workforce and the worksite are diverse. Disability measures would need to be adapted for work sites requiring a significant commute as well as those that might be home-based. They would need to include work environments in which there is a standard tour of duty and one that might be intense, with long hours and time off in excess of a weekend.

Each assessment would produce a score and each portion would contribute to the total disability benefit. The task would be to select and test measurement tools that have good metric properties for determining work-related disability. Also, the task would be to consider instruments that measure more than one domain to provide a comprehensive measure.

Other illustrative examples of instruments which provide functional assessment are the Craig Handicap and Reporting Techniques (CHART) and Functional Assessment Instrument (FAI). A work place-oriented instrument is the Work Limitations Questionnaire (WLQ).

The developer of the CHART instrument described it as a "tool specifically designed to measure the level of handicap in a community setting, using the WHO model."[22] He takes the definition of handicap from the original WHO model, the ICIDH. Whiteneck says, "[A] handicap exists when individuals with impairment or disability are unable to

[22] Whiteneck, G. G., Charlifue, S. W., Gerhart, K. A., Overholser, J. D., & Richardson, G. N. (1992). Quantifying handicap: A new measure of long-term rehabilitation outcomes. *Archive of Physical Medicine and Rehabilitation, 73*, 519-526.

fulfill one or more of the roles that are considered normal for their age, gender, and culture."[23] The dimensions in CHART are based directly on the six dimensions in the ICIDH that "encompass the broad domain of handicap:"[24] orientation, independence, mobility, occupation, social integration, and economic self-sufficiency.

The purpose of developing WLQ "was to develop a psychometrically sound questionnaire for measuring the on-the-job impact of chronic health problems and/or treatment (work limitations)."[25] From the beginning, the instrument was intended to be applicable across the range of chronic conditions. Focus groups were made up of people with asthma, liver disease, depression or anxiety, epilepsy, and daily headache. WLQ demonstrated reliability and/or validity in other studies of individuals who have angina, depression, fibromyalgia, low back pain, chronic pain, head trauma, rheumatoid arthritis, and other conditions.[26]

Implications for Decisionmakers' Consideration

VA currently has multiple approaches for evaluating claimants for disability compensation. One is based on average impairment in earnings capacity and uses the VASRD for determining payment amounts. Another approach, referred to as Individual Unemployability (IU), is based on the impact of service-connected injuries or diseases on individuals' earnings. IU determinations depend on evaluation of the individual's capacity for work and the individual's ability to obtain and maintain substantial gainful employment. IU determinations are granted in cases where the work disability is more severe than in cases involving only VASRD ratings that apply average medical impairment. IU is a significant part of the VA Rating System and the number of IU cases has grown greatly in recent years as will be discussed later. Hence, a work-related disability set of measures would be worth assessing.

The definitions of disability described above may help to establish a common framework for developing uniform domains of measurement for a work-related disability evaluation such as the IU determination that VA uses. In examining the models of disability, several could be considered. There are several important features of these models that decisionmakers could consider to help guide the evolution of a disability-based benefits program for veterans. The key features include:

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[23] Ibid.

[24] Ibid.

[25] Lerner, D., Amick, B. C., Rogers, W. H., Malspeis, S., Bungay, K., & Cynn, D. (2001). The Work Limitations Questionnaire. *Medical Care, 39*(1), 72-85.

[26] Lerner, D. J., Amick, B. C., Malspeis, S., Rogers, W. H., Gomes, D. R. J., & Salem, D. N. (1998). The Angina-related limitations at work questionnaire. *Quality of Life Research, 7*, 23-32.

Lerner, D., Amick, B. C., Rogers, W. H., Malspeis, S., Bungay, K., & Cynn, D. (2001). The Work Limitations Questionnaire. *Medical Care, 39*(1), 72-85.

Allaire, S.H., W. Li, and M.P. LaValley, (2003). Reduction of job loss in persons with rheumatic diseases receiving vocational rehabilitation: a randomized controlled trial. *Arthritis Rheum*, 48(11p.), 3212-3218.

Adler, D., and others, (2006). Job performance deficits due to depression. *American Journal of Psychiatry, 163*:(9)(September): p., 1569-1576.

- A broad acceptance by veterans, the medical community, and the rehabilitation community.
- A comprehensive approach which includes a variety of factors such as the individual's impairments and performance difficulties, the limitations posed by the nature of the job and the work place, and the non-workplace environment.
- An approach based on a dynamic process that can accommodate changes in technology, environment, and personal behaviors that may alter a particular disability's impact on work status, potentially altering its impact over time.
- A process of evaluation that accepts that an individual's disability status may change depending upon treatments of underlying pathology, work place modifications, and social support.

The Verbrugge and Jette Enablement/Disablement model encompasses the four features listed above; it is widely accepted conceptually, dynamic, and adaptable. However, in its current form, some aspects seem overly complex for the VA's vocational rehabilitation and disability program needs, making the criterion for easy adaption and use a possible issue. For example, the model's Risk Factors relate to past predisposing conditions and have little effect on vocational rehabilitation planning. Also, the four Extra-individual Factors of the model seem broader than is necessary for VA purposes and the three Intra-individual Factors relating to lifestyle, emotional, and behavioral changes may appear to require more detail about an individual's life than VA appropriately would solicit.

In order for this model to be more readily adapted for VA purposes, Risk Factors could be removed from the model (as being moot). The Extra-individual Factors could be grouped as one item and collectively termed "vocational rehabilitation and support," representing VA efforts to provide vocational counseling, training opportunities, and technological assistance. The Intra-individual Factors – which have striking parallels with QOL domains discussed in another section of this report – could also be grouped as one item and viewed as QOL factors. In this way, the model neatly ties together both the work-life and private-life aspects of disability (see Figure III-5).

An option for decisionmakers' consideration would be to adopt a patient-centered, work disability measurement tool for IU evaluations as an extension of the clinical and patient-centered research as promoted by the VA Chief Research and Development Officer.[27] As with the current IU evaluation, assessments would address the individual's work history and also consider other factors including motivation and interests.

Evaluators would select questionnaire instruments from a prescribed battery that measure multiple domains relevant to health-related work disability (that is, impairments, functional limitations, and work-related disability) according to the areas of concern and the level of specificity required by the individual's unique circumstances. The instruments should meet certain criteria such as:

[27] Feussner, J. R. (1999). Priorities for patient-centered research. *Medical Care, 37*(9), 843-845.

- formally tested for reliability in an impairment group
- formally tested for validity as a measure of work disability, which would require the comparison of the ratings from the instrument with the actual loss of earnings experienced by veterans
- demonstrated validity for at least one functional scale
- widely used by evaluators of work disability
- published standards for administration

Possible complementary instruments for use might include CHART, FAI, WBI, and WLQ with adaptations to suit the individual.

Work disability evaluations would include relevant measures of impairment, functional limitation, and disability. Particular care should be taken to include measures of physical, psychological, and cognitive function. Assessments would evaluate the individual in the context of his or her total environment, not only the workplace.

IV. VA RATING SYSTEM

Overview

The VA Disability Compensation Program provides monthly benefit payments to veterans who become disabled as a result of or coincident with their military service. Payments generally are authorized based on an evaluation of the disabling effects of veterans' service-connected physical and/or mental health impairments. Monthly payments are authorized in percentage increments from 10% ($117 in 2008) to 100% ($2,527 in 2008). Veterans with disabilities rated 30% or higher receive additional benefits for dependents. These payment rates are authorized under Title 38, US Code, Section 1114.

The process for determining ratings for disability compensation benefits uses the VA Schedule for Rating Disabilities (VASRD) to assign the level of severity of the disabilities.[28] The rating process is the major component that determines a veteran's entitlement to disability compensation. We refer to the overall process as the *VA Rating System* and identify several major components of the system including:

- Rating Schedule (VASRD)
- Eligibility requirements
- Determination process that medical examiners and VA rating specialists engage in to determine ratings for a single disability
- Mathematical formula for combining ratings for multiple disabilities into a single rating, referred to as the combined degree of disability (CDD)
- Presumptive conditions
- Determination that claimant is unemployable, referred to as the Individual Unemployability (IU) determination, which results in a benefit payment amount equal to the 100% rate
- Special Monthly Compensation (SMC) benefits.

The VASRD contains a list of 724 diagnoses or disability conditions, each of which may have up to 11 levels of medical impairment. The lowest level of impairment starts at 0% then increases in 10% increments up to a maximum of 100%. Not all diagnoses have levels of severity up to 100%, and they are not all rated at all 10 levels. Disability compensation, as determined by the VASRD, is intended to replace average impairment in earnings capacity.[29]

As an example, chronic bronchitis is one of the 724 disability conditions. The level of impairment for this condition is described in terms of pulmonary function, specifically

[28] The regulatory basis for the VASRD is Subpart B—Electronic Code of Federal Regulations (e CFR): 38 CFR 0.735-1; current as of March 24, 2008.
[29] 38 U.S.C. §1155.

Forced Expiratory Volume (FEV). Higher levels of impairment are associated with a diminished capacity of FEV. The rating level based on the degree of medical impairment then serves as a proxy for lost earnings and translates into a specific monthly benefit amount. It is an empirical matter then to assess how well lost earnings is predicted by the rating level for a particular medical impairment (the reader is referred to Chapters VI and VII in this volume).

Eligibility for disability compensation generally requires a medical examination to establish the presence of a particular disabling condition and its associated level of impairment. Eligibility also requires that a determination be made that the condition is a service-connected disability. Service connected means that the condition occurred during or was aggravated by military service or for certain chronic conditions that became evident within applicable time limits following discharge from the military. It does not require that the disability be work-related or caused by conditions in the work environment. For example, a military member who becomes permanently disabled from a car accident while in the service but not engaged in an official military duty could quality for disability compensation after discharge from the military. In this regard the VA Disability Compensation Program combines elements of both disability insurance voluntarily provided by employers and workers' compensation programs mandated by government.

Another critical element of VA's rating system is the determination of the combined rating for claimants who have multiple disabilities. The determination uses a formula that is based on a whole man theory of disability. It is somewhat additive as discussed later in this chapter. Multiple disabilities are much more the rule than the exception as most compensation recipients have multiple disabilities even at the lower rating levels (except for the 10% rating level).[30] For example, the claimant, who has three disabilities each rated at 10%, receives a combined rating of 30%. At higher rating levels multiple disabilities are not as additive. A veteran with two service-connected disabilities, one rated 60% and one rated 10%, receives compensation only at the 60% rate. The combined rating is provided in a table that applies a formula that is the same in all cases regardless of the nature of the claimant's specific disabilities.

Claimants with a combined rating between 60 to 90% who are determined to be unemployable solely as a result of service-connected conditions qualify for IU. Claimants determined to be entitled to IU qualify for the same benefit payment amount as those rated at the 100% disability level. Conditions or circumstances that result in the claimant not being employable override the medical impairment rating. IU is similar to the Social Security Disability Insurance (SSDI) program in that both provide payments because the beneficiary is deemed to be unemployable.

Still another component of the overall disability system is Special Monthly Compensation (SMC), which is a benefit that is paid in addition to or instead of the VASRD-based benefits. SMC is not intended to replace lost earnings as is the regular

[30] On average, as of September 2007 veterans had 3.3 service-connected disability conditions.

rating schedule. VA provides supplementary SMC to a veteran "who, as a result of military service, incurred the loss or loss of use of specific organs or extremities."[31] Other eligibility criteria include being housebound and being permanently bedridden or so helpless as to need regular aid and attendance.

The amount of SMC payment is determined by the nature of the disability in accordance with Section 1114 of Title 38, United States Code, and referred to by the letters (K) through (S).[32] Except for SMC (K), a veteran must have a CDD of 100% in order to qualify. Examples include: loss of or loss of use of organs, sensory functions, or limbs; disabilities that confine the veteran to residence or require regular aid or attendance; a combination of severe disabilities that significantly affect mobility; and existence of multiple, independent disabilities each rated at 50% or higher.

Current Payments Based on VA's Schedule for Rating Disabilities

Veterans disabled by injuries or illnesses which were incurred in or were aggravated in the course of their military service are eligible for disability compensation if their discharge was under honorable conditions. Table IV-1 shows the monthly compensation rates by combined rating and the additional compensation amounts for veterans with a spouse and/or children for those veterans rated 30% or higher. These payments are based on regular schedular ratings of 10% to 100%. Other payments are possible for SMC, but they are determined outside of the regular rating schedule.

Table IV-1. 2007 Monthly Compensation Rates for Veterans

Combined Rating	Veteran Alone	Veteran with Spouse Only	Veteran with Spouse and Child	Each Additional Child (Under Age 18)
10%	$117	$117	$117	$0
20%	$117	$230	$230	$0
30%	$356	$398	$429	$21
40%	$512	$568	$610	$28
50%	$728	$799	$850	$35
60%	$921	$1,006	$1,068	$42
70%	$1,161	$1,260	$1,332	$49
80%	$1,349	$1,462	$1,545	$56
90%	$1,517	$1,644	$1,737	$63
100%	$2,527	$2,669	$2,772	$71

Source: U.S. Department of Veterans Affairs, Veterans Compensation Benefits Rate Tables - Effective 12/1/07.

[31] U.S. Department of Veterans Affairs. (2006). *Special Monthly Compensation (SMC) for serious disabilities*. Retrieved May 12, 2008, from www.vba.va.gov/VBA/benefits/factsheets/serviceconnected/SMCeg_0406.doc

[32] U.S. Department of Veterans Affairs. (2006). *Benefits index, compensation, and pension benefits*. Retrieved May 12, 2008, from http://www.vba.va.gov/bln/21/Benefits/#BMS

Current Rating Process

The VA rating process is executed by Veterans Service Center employees in VA Regional Offices around the country. Veterans Service Centers have been uniformly structured at all 57 VA Regional Offices to provide consistent, efficient processing. The organizational structure currently in use is called the Claims Processing Improvement (CPI) model. It consists of six specialized teams that carry a claim from initial receipt to final decision and sometimes through an appeals process.

The six specialized teams in the CPI model are:

- Triage Team
- Pre-Determination Team
- Rating Team
- Post-Determination Team
- Appeals Team
- Public Contact Team

Generally, the Triage and Pre-Determination Teams share responsibilities for initial evaluation and development of claims. These teams ensure that VA meets its statutory requirement to assist veterans in developing their claims. To provide this assistance, the Triage/Pre-Determination Teams notify claimants of any information and medical or lay evidence that is necessary to substantiate their claims. They inform claimants of the information and evidence the claimants should provide and which information VA will attempt to obtain.

Preparing a Case to be Rated

The VA rating system begins with the Veterans Service Representative (VSR), who lays the groundwork for a rating decision. When a claim is received, the VSR collects evidence that verifies the facts stated in the claim. The VSR reviews the claim to identify the issues and to evaluate the information contained in the claims file. Then, depending on the information already contained in the file, the VSR begins to collect additional evidence that will establish the veteran's eligibility for compensation and establish service connection for the injury or disease. The VSR reviews a claimant's service records to establish basic eligibility for compensation: dates of service, duty periods, and character of discharge. In addition, the VSR collects evidence that supports the specific claim. For an initial claim for post-traumatic stress disorder (PTSD), for example, the VSR reviews the service treatment records for indications that the claimant showed evidence of the condition while in service. The VSR also reviews service records to identify stressors and the claimant's involvement such as the date and place of the stressor. The VSR also accesses websites (primarily government and military websites such as the National Archives, Air Force Historical Research Agency, and/or Department of Defense (DoD) Gulflink) that contain information that may be used to verify stressors. These

websites provide historical documentation of specific military activities (for example, rocket attacks on Air Force bases in Vietnam), conditions (for example, environmental hazards in Iraq during the Desert Shield/Storm period), and military service branch lists of medals. Other pertinent information sources such as the Veterans Health Administration (VHA) educational resources concerning PTSD (that is, National Center for PTSD) are also used.

The VSR writes a "duty to assist" letter, which is part of the due process requirement of the Veterans Claims Assistance Act of 2000 (VCAA). The letter notifies the claimant of the information needed to complete the application and notes any information not previously provided as well as who (VA or the claimant) is responsible for obtaining that evidence.

VA's electronic Compensation and Pension Record Interchange (CAPRI) allows VSRs to view medical history information about the veteran contained in DoD and VHA records. CAPRI is also used to order Compensation and Pension (C&P) medical examinations. A time-consuming part of the evidence collection process, and arguably the most important, is the C&P medical examination, which is often required to establish the nexus between the current complaint and military service. A C&P examination may be required to obtain current medical information and confirm the diagnosis, to obtain information relevant to a specific impairment (for example, functional impacts of an impairment), or to obtain, when necessary, a medical opinion. The examination provides critical information; it is important that medical evidence be as current as possible.

The VSR bases the request for an examination and any special reports or studies on the conditions claimed by the veteran and the available medical evidence. Examinations are ordered under several circumstances:

- when a veteran files an original claim for service-connection and submits evidence of disability
- when a service-connected veteran asserts a worsened service-connected condition
- to provide medical nexus
- to reconcile [seemingly conflicting] diagnoses
- when directed by the Board of Veterans Appeals (BVA)
- as required by regulation[33]

The most common type of examination ordered is a general examination. A general medical examination containing a full report of complaints and functional impairments is the preferred type of examination in cases concerning original compensation claims.

[33] Pamperin T. (2006). Cited by *IOM,*McGeary, M., Ford, M.A., McCutchen, S.R., & Barnes, D.K. (Eds.). (2007). *Institute of Medicine: A 21st century system for evaluating veterans for disability benefits*. Washington, DC: National Academies Press. p. 148.

In some cases, if the veteran separated from the service less than one year from the date of claim, the discharge examination may serve this purpose. If it has been more than one year since separation, the VSR orders examinations specific to the claimed conditions. If the claim is for a specialized condition such as tinnitus, the VSR orders the specialized "ear disease" examination.[34]

The Examination Process

Examinations are conducted either by VHA or by contractors.[35] Most (82 percent from August 1, 2007 through July 31, 2008)[36] examinations are conducted by VHA and are described here. Either VHA employees or medical personnel under contract to VHA perform the examinations. The VHA facility determines who will perform the examination as well as the date and location of the examination. While the examination is requested by the VSR, it is the medical examiner who decides if a specialist exam is also warranted for a specific case. The examination is conducted and results reported using worksheets developed in the late 1990s for the Automated Medical Information Exchange (AMIE) system. There are 58 separate worksheets – one for general examinations and 57 for specific diagnoses (for example, diabetes mellitus, PTSD, and certain body systems). The AMIE worksheets have been converted into electronic templates for use by the examiners if they choose. At the end of February 2007, templates were used for 28 percent of examinations.[37] C&P examination reports must include:

- an up-to-date, brief medical and industrial history from the date of discharge or last examination;
- a record of subjective complaints (for example, performance in school, quality of peer relationships);
- a complete description of objective findings, stated in concrete terms;
- a diagnosis of all conditions noted on the exam request;
- responses to questions specifically raised in the examination request;
- opinions specifically requested in the examination request;
- a diagnosis or notation that a chronic disease or disability was ruled out for each disability, complaint, or symptom listed on the examination request; and
- the clinical findings required by the rating schedule for the evaluation of the specific disability being claimed.[38]

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[34] If medical evidence of record, from either government or private sources, is sufficient to evaluate the claimed disabilities an examination may not be necessary.

[35] QTC Management, Inc. and MES Solutions.

[36] *IOM Study: A 21st century system for evaluating veterans for disability benefits*, p.149.

[37] *IOM Study: Ibid*, p.150.

[38] U.S. Department of Veterans Affairs. (2006). *VHA Handbook, 1601E.1: Compensation and pension (C&P) examinations*. Retrieved July 28, 2008, from http://www1.va.gov/vhapublications/ViewPublication.asp?pub_ID=1400

To establish the connection between an in-service event and a current disability, medical examiners may be asked to provide an expert opinion concerning a causal relationship between the two, whether a preexisting condition was aggravated in service, and whether a condition may be a secondary manifestation or a consequence of a condition previously determined to be service-connected. The medical examiner must state his or her level of assurance about the connection. Specifically, the medical examiner must use the following terminology to describe his or her level of confidence about the connection between service and the claimed condition:

- is due to (100 percent sure);
- more likely than not (greater than 50 percent sure);
- at least as likely as not (equal to or greater than 50 percent sure); and
- not at least as likely as not (less than 50 percent sure).[39]

The medical examiner's role includes describing the effects of disability on the individual's ordinary activities.[40] Examination requests may ask about specific determination of physical limitations but are usually limited to specific limitations (for example, flexion or extension of right knee) rather than broader questions such as the effect of a disability on activities of daily living. The medical history taken by the examiner includes subjective complaints, the focus of which is primarily psychosocial.

The PTSD examination includes a summary statement of performance in employment or schooling, routine responsibilities of self care, family role functioning, physical health, social/interpersonal relationships, and recreation/leisure pursuits. The mental health status examination requires the examiner to "describe and fully explain the existence, frequency, and extent of the following signs and symptoms" and to relate how they interfere with employment and social functioning. These signs and symptoms include several that are related to limitations on activities of daily living:

- ability to maintain minimum personal hygiene and other basic activities of daily living;
- memory loss or impairment;
- obsessive or ritualistic behavior which interferes with routine activities;
- panic attacks (severity, duration, frequency, and effect on independent functioning);
- sleep impairment (and the extent to which it interferes with daytime activities); and

[39] U.S. Department of Veterans Affairs. (2002). *C&P Clinician's Guide*. Retrieved July 27, 2008, from http://www.warms.vba.va.gov/admin21/guide/cliniciansguide.doc.
[40] 38 CFR, Part IV, Section 4.10.

- other disorders or symptoms and the extent to which they interfere with activities.[41]

The medical examination, as it currently is structured, does not specifically address limitations in activities of daily living; these limitations must be inferred through the responses to questions included in the examination for other purposes. VA indicates that the worksheets are in the process of revision to include the effect of disability on activities of daily living.

Reviewing Evidence

Generally, for disability compensation issues, claims are referred to the Rating Team when all requested evidence has been received. In conducting a VA rating evaluation, the VA rating veterans service representative (RVSR) considers all evidence associated with the claim including service treatment records, any VA medical exam, records and clinical summaries from VA medical centers where treatment has been provided to the veteran, and evidence provided from private sources.

The RVSR starts the rating decision process by reviewing the evidence in the claims folder. Even though the VSR may have collected the information needed to verify eligibility and service connection, it is the RVSR's responsibility to make the final determination regarding the completeness and sufficiency of evidence. There are two requirements that must be satisfied: basic eligibility and service connection of current condition. When a claim has been fully developed, the evidence in the claims folder is sufficient to make these determinations. Service records provide the information needed to determine basic eligibility. The medical examiner's report and other evidence in the file are the bases for establishing service connection.

The first step in "working" a case is to review the claims file to ensure that all necessary evidence has been obtained and that the veteran has been provided a VCAA-compliant letter to (1) notify the claimant of the information needed to complete the application, (2) to note any information not previously provided, and (3) to notify the claimant who (VA or the claimant) is responsible for obtaining that evidence. This review may indicate that the case is incomplete or that the examination results are not sufficient. If the case is incomplete (that is, all evidence necessary to fairly decide the claim has not been obtained), the RVSR prepares a deferred rating decision that enumerates the evidence needed for a rating decision and sends the case back to the Pre-Determination Team for the VSR to collect the needed information. If a medical examination does not provide sufficient information to support a rating, the RVSR may send the examiner's report back to the medical examiner with a request for specific information.

If all necessary evidence has been obtained, the RVSR continues the review, noting all dates, prior treatment records from service, VA examinations, private physicians' reports, and clinical summaries from VA medical centers where the veteran has received treatment. This information is compared to specifics from the veteran's statement to

[41] AMIE PTSD Worksheet, dated May 18, 2006.

verify that the facts are clear. This information is entered into the evidence log in the Rating Board Automation (RBA 2000) system. This is a tool used by rating specialists that uses prompts to ensure that raters address basic requirements and that also formats the rating decision using entries made by the rater.

Next, the RVSR reviews the condition or disability the veteran is claiming and determines the number of issues involved in the claim. It is possible that a claim has only one stated issue such as diabetes mellitus type II, which in turn may lead the rating specialist to look for evidence of medical conditions that might be related to the original one. For example, veterans who have developed diabetes mellitus type II may also have hypertension, retinopathy, or peripheral vascular disease. The RVSR must include these related conditions in the review of the medical evidence because the veteran is entitled to compensation for these conditions as well as diabetes.

If the veteran has previously filed claims, the rating specialist reviews the evidence and decisions from previous claims. This review allows the RVSR to integrate all the current and previous history to determine whether the recent examination is full and complete and whether there have been changes over time.

This thorough review also provides an opportunity to reevaluate the previous rating decision (another duty of the RVSR) and to validate that regulations, legislation, or court rulings have not changed the correctness of the decision. If, for example, a veteran had filed a claim shortly after the Vietnam War, claiming health problems, the claim may have been denied. In the intervening years, several conditions have been declared to be presumed to have resulted from exposure to Agent Orange. Based on the medical evidence in the file, the veteran may be entitled to compensation for these conditions with payment retroactive to the date of the original claim.

Using the Rating Schedule

When the file review is complete and the RVSR has established that the veteran has at least one service-connected condition, the RVSR begins the evaluation process by comparing the relevant facts presented in the claims folder to the rating schedule.

The VASRD is “primarily a guide in the evaluation of disability resulting from all types of diseases and injuries encountered as a result of or incident to military service.” The percentage ratings represent the average loss of earnings capacity resulting from such diseases and/or injuries. The assumption underlying the system is that the degree of disability is the equivalent of or reasonably similar to the percentage of impairment. The regulation states that “for application of this schedule, accurate and fully descriptive medical examinations are required, with emphasis upon the limitation of activity imposed by the disabling condition.”[42]

The VASRD is organized around 15 body systems (examples include musculoskeletal, respiratory, endocrine, and mental disorders). Each body system has diagnostic codes associated with it that delineate conditions in greater specificity. The diagnostic codes

[42] 38 CFR, 4.1-2.

are "a set of arbitrary numbers for the purpose of showing the basis of the evaluation and for statistical analysis in the Department of Veterans Affairs."[43] The RVSR reviews the medical evidence for each separate condition and matches the condition to a diagnostic code. For example, a claim for ankylosis of the knee falls within the musculoskeletal body system under diagnostic code 5256. These diagnostic codes, in turn, are associated with descriptions for varying levels of severity of impairment. These levels are assigned percentages in increments of 10 on a scale from 0 to 100. For this example, the rating schedule evaluation for ankylosis of the knee is based on the amount of flexion in the joint.

Evaluation levels for ankylosis of the knee:

- Extremely unfavorable, in flexion at an angle of 45° or more – 60% rating
- In flexion between 20° and 45° – 50% rating
- In flexion between 10° and 20° – 40% rating
- Favorable angle in full extension, or in slight flexion between 0° and 10° – 30% rating

For a muscle injury, for example, the evaluation is based on more general descriptions such as severe, moderately severe, moderate, and slight for both the dominant and non-dominant sides of the body.

Computing Combined Degree of Disability

In the VA Disability Compensation Program, veterans typically claim service connection for multiple disabilities and receive a combined degree of disability (CDD). When a veteran has multiple service-connected disabilities, his/her CDD must be determined. The guidelines for computing combined disability evaluations are provided in 38 CFR Section 4.25.

The process is based on the assumption that a non-disabled individual is 100% "efficient." Each disability reduces his/her level of efficiency, leaving a residual efficiency. This residual efficiency, subtracted from 100%, gives the disability level.

The disabilities assigned to a veteran are aligned in descending order, from the most disabling to the least disabling. The rater subtracts the highest disability rating from 100, leaving the "residual efficiency." For example, if the highest disability evaluation is 60%, then the veteran is 40% efficient (100 – 60 = 40). Mathematically, the next step is to deduct the next highest disability from the residual efficiency (in this example, 40%). If the second-highest disability is 30%, then the rater computes 30% of 40% = 12%. This represents the cumulative disabling effect of the second disability. The rater adds this amount to the initial disability amount, 60%, to get the combined amount. In this example, it would be 72% (60 + 12). If the veteran had a third disability of 20%, the rater calculates its disabling effect from the residual efficiency of 28% (100 – 72): 20% of 28%

[43] 38 CFR, 4.27.

= 5.6% (which is rounded to 6%). This amount is added to the previous calculation (72%) to get the combined amount of 78%. When all disabilities have been calculated to give a cumulative percentage, then the combined value is rounded to the nearest 10%. Values of 5 and higher are rounded up, and values less than 5 are rounded down. In the example above, the veteran is given a combined degree of disability of 80%.

VA provides a table to do the mathematical calculations described above. It is found in 38 CFR Section 4.25 and in Appendix A of this volume. Here are some additional examples of how the calculations are determined using this table:

Example 1 – Claimant has five ratings, each at the 10% level

- Rating step #1 = 10%
- Rating step #2 = 19% (residual efficiency was 90%; 10% of 90 = 9; add 9 to 10, giving a working total of 19. See the table in Appendix A (38 CFR Section 4.25) shows this parenthetically at the top of the table)
- Rating step #3 = 27% (Using the table in 38 CFR Section 4.25, start with 19 in the left column, go to the “10” column, and take the result = 27)
- Rating step #4 = 34% (Using the table in 38 CFR Section 4.25, start with 27 in the left column, go to the “10” column, and take the result = 34)
- Rating step #5 = 41% (Using the table in 38 CFR Section 4.25, start with 34 in the left column, go to the “10” column, and take the result = 41)

At this point, all disabilities have been considered. The total of 41% is rounded to 40%. Note that if the veteran had three ratings of 10% or four ratings of 10%, the combined rating would round to 30% in both instances.

Example 2 – Claimant has one 30% and four 10% ratings

- Rating step #1 = 30%
- Rating step #2 = 37% (Using the table in 38 CFR Section 4.25, start with 30 in the left column, go to the “10” column, and take the result = 37)
- Rating step #3 = 43% (Using the table in 38 CFR Section 4.25, start with 37 in the left column, go to the “10” column, and take the result = 43)
- Rating step #4 = 49% (Using the table in 38 CFR Section 4.25, start with 43 in the left column, go to the “10” column, and take the result = 49)
- Rating step #5 = 54% (Using the table in 38 CFR Section 4.25, start with 49 in the left column, go to the “10” column, and take the result = 54%

At this point, all disabilities have been considered. Round the total from step #5 to 50%.

Example 3 – Claimant has one 70% and four 10% ratings:

- Rating step #1 = 70%

- Rating step #2 = 73% (Using the table in 38 CFR Section 4.25, start with 70 in the left column, go to the "10" column, and take the result = 73)
- Rating step # 3 = 76% (Using the table in 38 CFR Section 4.25, start with 73 in the left column, go to the "10" column, and take the result = 76)
- Rating step #4 = 78% (Using the table in 38 CFR Section 4.25, start with 76 in the left column, go to the "10" column, and take the result = 78)
- Rating step #5 = 80% (Using the table in 38 CFR Section 4.25, start with 78 in the left column, go to the "10" column, and take the result = 80)

At this point, all disabilities have been considered. No rounding is required and the combined evaluation is 80%.

The method of rating based on the remaining efficiency of the body produces a significant rating bias favoring veterans with low ratings. The effect of additional ratings gives greater weight to multiple 10% ratings at the low end of the scale. The effect of additional 10% ratings is diminished if the primary diagnosis has a high rating. Having multiple low ratings increases the payment dramatically for a veteran who has a low rating as the primary diagnosis; it has a negligible or much smaller effect for veterans who begin with a high rating such as 80% or more. Co-morbidities associated with a serious injury or disease are therefore compensated less than multiple unrelated diagnoses at low ratings.

An article from the *Journal of the American Medical Association* makes this comment about the American Medical Association's *Guides to the Evaluation of Permanent Impairment* that is applicable to the VA Rating System as well:

> "In reality, the combining of impairments in an individual can result in additive, less than additive, or greater than additive levels of functional loss. The current formula for rating multiple impairments always results in a less than additive result, an outcome that produces mathematical consistency but not accuracy."[44]

The Rating Decision

The RVSR reviews the medical evidence for each condition and correlates it to the diagnostic criteria and evaluation levels (10%, 20%, and so on). Once these determinations have been made, the rater then calculates the effective date for entitlement to payment for each service-connected condition. This information is entered into RBA 2000, which automatically populates some sections of the written rating decision. The RVSR then completes the formal rating decision.

The formal rating decision contains four separate sections:

- The *Introduction* to the rating decision describes the claim presented by the veteran, provides the branch and dates of service, describes the type of claim

[44] Spieler, E. and others. (2000). Recommendations to guide revision of the guides to the evaluation of permanent impairment, *The Journal of the American Medical Association, 285* No. (4), 521.

(for example, original, new, claim for increase), and the date the claim was received.

- The *Decision* lists all of the decisions for each issue (claimed and inferred). Protocol calls for the RVSR to list all issues that were granted (from the highest evaluation to the lowest evaluation) followed by those that were denied.
- The *Statement of Evidence* lists all the evidence considered when making the decision for each issue.
- The *Reasons and Bases for Decision* are the regulatory explanations for the decision. This section includes specifics about the type and sufficiency of the evidence provided. The decision also includes information about the level of disability that must be documented to receive compensation (in the case of a denied claim) or to receive the next higher evaluation for the disability.

Writing a complete and accurate rating decision requires a careful description of all the evidence considered in making the decision and provides the rationale for doing so. The decision should show that the claim was read carefully and that the decision included a review of all relevant evidence.

Presumptive Conditions

A presumption is an acceptance of a condition, or the cause of a condition, based on reasonable inference but less than full evidentiary proof. In daily life, most of us make presumptions on a regular basis. When we have a reasonable understanding of the circumstances before us and some history of how events have unfolded under similar circumstances, we often presume what is likely to occur or the consequences of certain actions. The presumption allows us to act efficiently, without waiting to know every fact and contingency. We do so knowing that there is some risk; if we recall history incorrectly, or make a presumption based on a faulty foundation, then we may be surprised by unexpected consequences.

The Institute of Medicine (IOM) study, *Improving the Presumptive Disability Decision-Making Process for Veterans*, expressed it this way: "A presumption is a procedural device that dictates that once basic fact A is established, the existence of fact B must be assumed unless the presumed fact is rebutted. A presumption therefore operates to relieve a party of the burden of establishing facts that it would otherwise be required to prove in order to prevail on its claim."[45]

VA has been using "presumptions" for almost a century. Neuropsychiatric disease and active pulmonary tuberculosis were the first two conditions that were presumed to be service-connected for purposes of services and benefits from VA. They were established in 1921 because numerous veterans were presenting with those conditions and could not prove a relationship between their disease and their military service. Senator

[45] Institute of Medicine. (2008). *Improving the presumptive disability decision-making process for veterans,* pp. 36-37 Washington, DC: The National Academies Press.

Marian Walsh introduced the concept, saying, "I propose that when it is proved by an incapacitated soldier that he has either of these two types of disease he shall immediately be entitled to compensation unless the Government proves – the burden thus being shifted to the Government – that he has contracted the disease since the time of his discharge and it is not traceable to service in line of duty."[46]

Since the first authorization of presumptions, there have been a series of enactments to grant additional presumptions. Over time, groups of veterans with unusual diseases came to VA seeking assistance. Usually the veterans could not explain, or prove, how they contracted their diseases. However, they suspected their illnesses were related to special circumstances of their military service.

The level of claims for these inexplicable diseases rose to significant levels in the 1970's and 1980's when former Prisoners of War, Vietnam veterans, and veterans who served at nuclear test sites presented with various diseases.

As these groups of seriously ill veterans grew in number, Congress held numerous hearings and called for studies. These were highly emotional and volatile matters. After much turmoil and debate, a series of laws were passed to grant presumptions for these and other groups of veterans.

Generally, presumptions were authorized to address specific veteran groups and certain inexplicable diseases. There was no consideration to build a framework for considering future presumptions. This changed with passage of the Agent Orange Act of 1991 (PL 102-4). This law provided a framework for considering future presumptions and required VA to contract with the National Academy of Sciences (or another non-government, not-for-profit, scientific organization) to perform a review and evaluation of the scientific evidence regarding the association between disease and exposure to herbicide used in Vietnam. It also required future cyclical reviews, which have been conducted every two years.

The Agent Orange Act has had a profound effect on the VA Disability Compensation Program. It has resulted in a series of presumptions for Vietnam veterans. Included among those presumptions are prostate cancer and Type 2 diabetes. VA reports show that prostate cancers, injuries, infections, and post-operative residuals accounted for over 60,000 cases and $41.5 million in monthly benefits at the end of FY 2005. Similarly, diabetes accounted for over 201,000 cases and $64.8 million in monthly benefits.[47]

Today, the main categories of presumptive conditions include chronic diseases, tropical diseases, former Prisoners of War, radiation, herbicide agents (Agent Orange), mustard gas and Lewisite, and the Persian Gulf War. The authority for these presumptions is found in Title 38, US Code, Sections 1112, 1116, 1117, and 1118.[48]

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[46] Ibid, p. 45. Senator Walsh, 61 Cong. Rec. 4105, 1921.

[47] Data Table prepared by VBA, Data and Information Services, December 27, 2005.

[48] 38 CFR Part 3, Sect. 3.307, 3.309, 3.316 and 3.317.

Presumptions change the disability compensation decision process for veterans. Normally, when a veteran applies for disability compensation, it must be determined on a factual basis that the veteran has a disability or disease and that the disability or disease was incurred or aggravated during military service. In these claims for "direct service connection," VA reviews evidence from all sources including information provided by the veteran, military service records, VA medical exams, and all other pertinent information. VA must fulfill its duty to assist the veteran in completing the evidentiary package. For presumptive conditions, it must be determined that the veteran has a disability or disease listed in Title 38, US Code, Sections 1112, 1116, 1117, or 1118, and, in addition, that the claimant's military service meets the conditions of the presumption – time and place of service. For example, the veteran's records must show that the veteran was confined as a Prisoner of War or that he or she served in Vietnam.

Consideration of presumptions is more systematic today than 30 years ago. Congress continued the review framework established under the Agent Orange Act for Gulf War veterans. Periodic studies are being conducted to consider whether new presumptions are in order. Also, the IOM study on the presumptive disability decision-making process has offered recommendations for a permanent framework for making these decisions in the future. These recommendations are intended to provide a transparent process for proposing exposures and illnesses for review, a systematic process for incorporating a new evidence classification scheme, quantification of the extent of disease attributable to an exposure, and an organizational structure to support the process.[49]

It seems likely that there will be an ongoing need for presumptions in the VA process. Veterans serve in complicated environments. Attempts to keep comprehensive records are improving, but gaps in tracking systems and unforeseen consequences will probably persist for some time.

Mapping the VASRD to ICD-9-CM Codes

IOM recommended that VA adopt the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes and the Diagnostic and Statistical Manual of Mental Disorders (DSM) codes for several reasons.[50] A universal coding system such as the ICD-9-CM would readily cover all or nearly all of the conditions encountered in veterans' disability claims and could be much more readily updated to stay abreast of current medical conditions and diagnoses. In addition, VHA currently uses the ICD-9-CM and performs most of the examinations for the disability benefit claims. Using the same classification scheme for both examination and rating would facilitate greater efficiency, accuracy, uniformity, and effectiveness in handling claims for disability compensation. Use of universally accepted diagnostic categories would also greatly facilitate statistical or other comparisons to other programs and populations (that is, outside of VA), which is of interest to researchers such as in the present study. Generally speaking, ICD-9-CM also offers more detailed coverage of medical conditions.

[49] *IOM Presumptions*, pp.16-18.
[50] *IOM Study: A 21st century system for evaluating veterans for disability benefits*, pp. 252-266.

The ICD-10-CM is a more up-to-date classification system than the ICD-9-CM system, but it has not been adopted in the United States or even pilot-tested. Another system, the Systematized Nomenclature of Medicine Clinical Terms (SNOMED),[51] is an electronic system designed for use by voice recognition software processing a dictated medical record. This system contains about 350,000 terms which allows for tremendous granularity in diagnosing medical conditions. However, this system is not in wide-spread use, and its granularity feature may not be particularly needed for VASRD.

In order to assess the utility and feasibility of VA's use of the ICD-9-CM classification system, the study team mapped VASRD diagnostic codes to ICD-9-CM codes, except for the mental conditions in the VASRD which use the DSM codes rather than the VASRD's own unique codes. A random sample of 10 cases for each diagnostic code to facilitate the mapping resulted in a total sample of about 7,500 cases. The Veteran Benefits Administration's (VBA) RBA 2000 system generally contains sufficient narrative descriptions of VA diagnoses to enable a medical records coding specialist to identify corresponding ICD-9-CM codes.

VBA's Data and Information Services (D&IS) used all RBA 2000 files received as of April 1, 2008 to identify for this study over 1.4 million rating decisions where non-analogous diagnostic codes were used. (Analogous codes and non-analogous codes will be discussed in detail later.) Samples were extracted for all diagnostic codes where decisions could be found. Some diagnostic codes did not have sufficient decisions to provide a full sample of 10 decisions. Table IV-2 shows the 20 VASRD diagnoses with the highest number of cases, beginning with the most prevalent. Note that 2 of the 20 codes listed are analogous codes. Appendix B contains the full mapping, which contains separate columns for diagnostic codes and procedure codes. This mapping is neither exhaustive nor conclusive; it is presented here in this study to aid and guide exploration of the topic.

The fifth column in Table IV-2 contains the ICD-9-CM codes that correspond to the VASRD diagnostic codes listed in the first column. The sixth column shows the total number of ICD-9-CM codes mapped from the VASRD diagnosis, while the seventh column shows the number of VASRD codes mapped to the assigned ICD-9-CM code. In most cases ICD-9-CM is more detailed, but in a few cases VASRD is more detailed.

For the sake of comparison and further illustration, these same 20 codes were also mapped to the Bureau of Labor Statistics (BLS) Nature of Injury or Illness codes, which are used by BLS to classify cases in its Survey of Occupational Injuries and Illnesses. These appear in the last (eighth) column. Nature of Injury or Illness is one of five components in the BLS Occupational Injury and Illness Classification System. (The others are Part of Body Affected, Source of Injury or Illness, Secondary Source, and Event or Exposure.) The BLS system is based on the American National Standards Institute (ANSI) Z16.2-1962, Method of Recording Basic Facts Relating to the Nature and Occurrence of

[51] Brown, S. H., Speroff, T., Fielstein, E. M., Bauer, B. A., Wahner-Roedler, D. L., Greevy, R., and others. (2006). eQuality: Electronic quality assessment from narrative clinical reports. *Mayo Clinic Proceedings, 81*(11), 1472-1481. Retrieved July 10, 2008, from http://www.mayoclinicproceedings.com/pdf/8111/8111a7.pdf

Work Injuries, revised 1969. In general, mapping to BLS is more compatible to the VASRD than mapping to ICD-9-CM because the BLS system is used to describe disabilities acquired through work, whereas ICD-9-CM is applied to all medical diagnoses. For the same reason, 'unspecified' and 'n.e.c.' (not elsewhere classified) codes are needed when mapping to the VASRD. The BLS system allows for more or less detail—expressed in more or fewer digits—depending on the particular requirements of coding work-related injuries. The BLS system of diagnostic codes would have to be expanded to include some of the conditions contained in the VASRD.

Table IV-2. The 20 Most Prevalent Service-Connected Disability Diagnostic Codes with ICD-9-CM and BLS Mapping

VASRD Diagnostic Code	Diagnosis Description	Number of Disabilities	Percent of all Disabilities	ICD-9-CM code(s)	Number of ICD-9-CM codes	Number of VASRD codes	BLS codes
Total Number of Individual SC Disabilities		*8,147,808*					
6260	Tinnitus	348,055	4.27%	388.3	3	1	1262
6100	Defective hearing	335,897	4.12%	389	15	1	1261
7101	Hypertensive vascular disease (essential arterial hypertension)	262,238	3.22%	401	3	1	132
9411	Post-Traumatic Stress Disorder	260,881	3.20%	309.81	1	1	5211 5212
5299	Generalized, Elbow and Forearm, the Wrist, Multiple Fingers, Hip and Thigh, Knee and Leg, Ankle, Foot, the Spine, the Skull, the Ribs, the Coccyx	258,228	3.17%	Many	Many	1	00 170
7805	Scars, other	254,486	3.12%	709.2		6	1899
7913	Diabetes Mellitus	240,539	2.95%	250	20	1	1912
5010	Arthritis, due to trauma, substantiated by x-ray findings	222,494	2.73%	716.1	10	1	171
5257	Other impairment of knee	208,626	2.56%	717.x	9	1	1740 1749
5237	Lumbosacral strain	172,169	2.11%	846.0, 847.2	1	1	1729
5003	Arthritis, Degenerative, Hypertrophic, or Osteoarthritis	169,543	2.08%	715	37	1	171
5293	Intervertebral disc syndrome	147,811	1.81%	722	24	1	1723
7336	Hemorrhoids, external or internal	133,757	1.64%	455	10	1	1382
5271	Limited motion of the ankle	100,877	1.24%	719.57	1	1	NEC
7800	Scars, disfiguring, head, face or neck	99,763	1.22%	709.2		6	1899
7005	Arteriosclerotic Heart Disease	98,835	1.21%	414.0	8	1	1339
7804	Scars, superficial, tender and painful	91,351	1.12%	709.2		6	1899
7899	Generalized, The Skin	86,093	1.06%	Many	Many	1	1899 others
7806	Eczema	79,736	0.98%	692, 693	13	1	1822
9400	Generalized anxiety disorder	76,985	0.94%	300.02	1	1	5219

Source: EconSys Study Team analysis; December 2005 C&P Master Record data files; VASRD; BLS codes.

With 724 codes in the VASRD, it is quite feasible to produce ICD-9-CM codes for nearly every VASRD code. As the ICD-9-CM has several thousand codes, it would be impractical to attempt to do reverse mapping and not necessary. ICD-9-CM incorporates far more diagnoses or procedures than needed for VA ratings, and so not all ICD-9-CM codes were mapped. A diagnostic code for mental retardation, for example, is not needed in the VA system because an individual so diagnosed would not be accepted for military service.

VBA raters, not VHA medical examiners or professional medical coders, select the diagnostic code. Based on discussions with a non-scientific selection of VA rating specialists, we learned that some raters sometimes assign a diagnostic code that offers a rating level that the rater feels is more appropriate in the specific instance rather than the diagnostic code that most closely identifies the actual medical condition.

The effort to map to ICD-9-CM codes revealed that VA's actual use of its diagnostic codes sometimes does not correspond to the verbal descriptions attached to those codes. Approximately one-half of the cases reviewed for this study have diagnostic text that does not match the official diagnostic description. In addition, some cases use obsolete diagnostic codes although VA has indicated that system edits prevent use of obsolete codes. The medical coding specialist mapped the obsolete codes that are still being used. For conditions not listed in the VASRD, raters frequently assign inappropriate non-analogous codes rather than analogous codes.

The mapping effort revealed that documentation of cases is not consistent. For example, in VASRD documentation, code 6030 is simply labeled "accommodation, paralysis of," without further explanation. Its purpose can be inferred from the fact that it is in the middle of the visual section. ("Accommodation" is a technical term that describes the adjustment of the lens to focus on objects depending on the distance.) Its ICD-9-CM counterpart is 367.5 (disorders of accommodation). In another instance, the VBA rater used 6030 for quadriplegia, apparently focusing on “paralysis” to the exclusion of the rest of the diagnostic description.

Another example that illustrates some of the problems with VA's use of diagnostic codes is the sample of cases that we reviewed for VASRD code 7505 "kidney, tuberculosis of." This VA diagnostic code maps to ICD-9-CM code 016.0, "Tuberculosis of kidney." Here are the contents of the diagnosis text field for 10 sample cases:

- Coronary artery disease/congestive heart failure
- Renal tuberculosis, left kidney, status post nephrectomy
- Kidney stones
- Bright's kidney disease (previously claimed as a kidney injury)
- Kidney stone
- Scars, left shoulder
- Stomach ulcers

- Renal tuberculosis with kidney scarring
- Coronary artery disease, status post stent (claimed as a heart condition)
- Albuminuria

Of these ten cases, only two involve tuberculosis, and only six involve the kidneys. The non-kidney cases look like typographical errors (coronary artery disease is code 7005, scars is code 7805, and duodenal ulcer is code 7305). Separate codes exist for kidney stones (7508) and nephritis (the modern name for Bright's disease, 7502 and other codes). These appear to be arbitrary assignments (apparently the VA rater did not know what Bright's disease was). Albuminuria (albumin in the urine) would seem to be a candidate for assignment to the analogous code 7599, "Generalized, genitourinary system," but instead it was coded inappropriately as 7505.

As another example, intervertebral disc syndrome appears twice, with two different codes (5243, 5293). Use of code 5293 is almost certainly a typographical error, but it highlights the need for improved editing of diagnostic code entries.

The auditory section of the VASRD has three different systems for designating defective hearing. Our coder was not able to figure out the correspondence between them. In the spreadsheet and in some other places, the 11 degrees of hearing loss are designated 6100-6110. In other places, they are designated by the roman numerals I-XI. But these roman numerals are sometimes applied to each ear separately and then used to infer a percentage evaluation for hearing impairment on the usual scale of 0% to 100% in 10% increments. The numeric codes 6100-6110 correspond directly to either the percentages or the roman numerals, but it was not clear which. More importantly, our coder was unable to determine whether 6100 corresponds to the most severe loss or the least severe.

In many cases the codes appear to be used incorrectly or were mis-specified. For example, raters do not always distinguish between anatomical loss of limbs and loss of the USE of the limbs. Three cases of bilateral hearing loss were coded as 5100, loss of hands and feet, when the diagnostic code for hearing loss is 6100.

The amputation section of the VASRD does not match very well to the ICD-9-CM. The VASRD system has a separate code for every possible combination of fingers while the ICD-9-CM does not even allow the coding of both finger and thumb with the same code. (Most data sets where the ICD-9-CM is used have multiple diagnosis fields, so a single code need not account for multiple digits.) It is not clear exactly what the VASRD system means by “amputation” whether traumatic, surgical, or both. Our coder presented both diagnostic codes (for traumatic) and procedure codes (for surgical) in separate columns.

There is also a short section of prosthetic joint replacements (the 5050s). Our coder matched these to the equivalent ICD-9-CM procedure codes. The use of procedure codes to represent VASRD codes, however, might be considered problematic because the two types of codes serve different purposes. ICD-9-CM procedure codes, in their native context of medical billing records, simply record that the procedure was

performed. They do not, in themselves, convey information about the patient's condition or the cause thereof – those jobs are fulfilled by diagnosis and external cause codes, respectively. But the VASRD codes appear to refer to the patient's disability status after the operation.

The *IOM Study* report stated that the VASRD is not current and gave several examples of disabilities listed in the VASRD that are out of date.[52] Our coder's experience with the mapping exercise largely confirms IOM's assessment that VASRD codes are a collection of old and new. Some codes are difficult to match to the ICD-9-CM because the terminology is so different. Internet reference searches often helped to find references to the VASRD terms that facilitated the matching to the ICD-9-CM. Differences in terminology are not always a matter of old versus new. They might also stem from differences in conventions from one academic discipline or medical specialty to another. However, our assessment is that most of the differences in terminology are related to differences in vintages of terminology.

In some cases, differences between the VASRD and ICD-9-CM go beyond semantic differences and affect the actual groupings of conditions. There are some VASRD codes that map to a broad range of codes in ICD-9-CM, while others only match to a single, relatively obscure, five-digit code. For example, VASRD code 7000 (rheumatic heart disease) corresponds to seven three-digit ICD-9-CM codes (for example, 391, 393-398). Meanwhile, VASRD code 7823 (vitiligo) corresponds to the ICD-9-CM code 709.01, which was recently broken out from the broader category 709.0 (dyschromia). This could simply reflect the specialized mix of cases VA deals with, but it may also be rooted in older classifications.

In a few instances VASRD codes are newer than ICD-9-CM. For example, some skin conditions in the VASRD are difficult to match to ICD-9-CM but match well with ICD-10-CM. According to Table 4-2[53] in the IOM report, skin conditions were the most recent section of VASRD diagnoses to be updated (in 2002).

The musculoskeletal conditions are likely the most outdated. In addition, they are difficult to match to the ICD-9-CM because the ICD-9-CM is not well suited for non-acute injuries. It codes the original injury well but is often weak on the long-term effects. For example, in work on occupational injuries, it is often difficult to identify all of the back injuries in medical data sets coded in the ICD-9-CM. More work-related back injuries are typically found in data sets coded using other diagnosis systems.

Options for Decisionmakers' Consideration. Updating VASRD's terminology and classifications would bring them in line with current medical practice. One approach to consider is to include the corresponding ICD-9-CM code in the VASRD diagnosis description in cases where there is a close correspondence. Medical and other professionals who are not familiar with the meaning of VASRD descriptions then could refer to the more familiar terminology of the ICD-9-CM.

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[52] *IOM Study: A 21st century system for evaluating veterans for disability benefits*, pp. 110-113.
[53] *IOM Study: Ibid*, p. 108.

In cases where a VASRD code is intended to correspond to a condition that is not coded well in the ICD-9-CM, it could be matched to a code in another standard coding system such as the International Classification of Functioning, Disability and Health (ICF) that better captures that condition in VASRD. This would allow VA to maintain a list of diagnoses tailored to its own purposes, but it would tether the VA's system to what is happening in the broader medical community. That might obviate the difficulties resulting from obsolete diagnostic descriptions or medical conditions not listed in the VASRD that are routinely evaluated by VA rating specialists, while providing both the impetus and the basis for future updates of the system. As a practical matter of switching to a hybrid system, the only essential difference would be that an ICD-9-CM code would be added to many of the VASRD diagnostic descriptions. For example, "7816 Psoriasis" would become "7816 Psoriasis (696.1)." This would allow the VA rater and other subject matter professionals to easily cross-reference medical materials on that condition.

The mapping of VBA diagnostic codes to ICD-9-CM codes could also be used for statistical purposes. As an example, traumatic brain injury (TBI) is the so-called "signature injury" for Operation Enduring Freedom and Operation Iraqi Freedom (OEF/OIF) veterans. Currently there is no single ICD-9-CM code for TBI, but twelve ICD-9-CM codes are currently used for a possible TBI diagnosis. Table IV-3 shows these ICD-9-CM codes mapped to VASRD diagnosis codes.

Table IV-3. Codes for Traumatic Brain Injury

VASRD Diagnostic Code	ICD-9-CM Diagnostic Code
5296: skull, loss of part of, both inner and outer tables	ICD-9-CM 800: Fracture of skull.
5296: skull, loss of part of, both inner and outer tables	ICD-9-CM 801: Fracture of base of skull.
None	ICD-9-CM 802: Fracture of face bones.
5296: skull, loss of part of, both inner and outer tables	ICD-9-CM 803: Other and unqualified skull fracture.
5296: skull, loss of part of, both inner and outer tables	ICD-9-CM 804: Multiple fractures involving skull or face with other bones.
8045: Brain disease due to trauma	ICD-9-CM 310.2: Post concussion syndrome.
8045: Brain disease due to trauma	ICD-9-CM 850: Concussion.
8045: Brain disease due to trauma	ICD-9-CM 851: Cerebral laceration and contusion.
8045: Brain disease due to trauma	ICD-9-CM 852: Subarachnoid, subdural, and extradural hemorrhage, following injury.
8045: Brain disease due to trauma	ICD-9-CM 853: Other and unspecified intracranial hemorrhage following injury.
8045: Brain disease due to trauma	ICD-9-CM 854: Intracranial injury of other and unspecified nature.
None	ICD-9-CM 950: Injury to optic nerve and pathways.

Source: EconSys Study Team.

ICD-9-CM codes 800, 801, 803, and 804 map to VASRD code 5296. Our medical coder was reluctant to include code 802 in the list because facial fractures are generally not classified as TBI in any system, and the diagnoses under 802 do not correspond to TBI. Code 804 is not used often, and when it is used it is not clear whether the multiple fractures include TBI or are all facial except if loss of consciousness is specified.

ICD-9-CM codes 850 to 854 all map to VASRD code 8045 (brain disease due to trauma). Post concussion syndrome (310.2) should also be mapped to VASRD code 8045.

For ICD-9-CM code 950, the optic nerve is the second cranial nerve, which does not have its own code in the VASRD, unlike certain other cranial nerves (5, 7, 9, 10, 11, or 12). These do not include trauma *per se* unless the trauma results in paralysis, neuralgia, or neuritis.

VASRD is not well designed for acute injury diagnoses. It is purposed more to the long-term effects rather than to the initial injury. This is logical since the VA disability benefit is intended to compensate for long-term disability problems not the initial effects of acute injury.

Adding Service-Connected Disabilities to the VASRD

One study objective is to develop a list of service-connected disabilities (SCDs) or combination of SCDs that need to be added to or deleted from the VASRD. Our approach to the question of deleting SCDs is to determine whether there is an earnings (and quality of life) loss associated with a specific SCD. If there is no earnings loss and no quality of life loss for a specific SCD, then that SCD would be a candidate for deletion. We address earnings and quality of life loss in other chapters of this volume.

The question of adding SCDs refers to SCD codes that are not in the current VASRD. The VASRD does not have codes for certain specific conditions. When a specific condition is not in the VASRD, raters use 35 analogous codes from the VASRD as a guide to determining ratings. The first two digits in the analogous code refer to the body system or subsystem, followed by 99 to indicate that a SCD is not in the VASRD. Examples of disabilities for which analogous codes were used in our sample include: gastroesophageal reflux disease, memory loss, brain stroke,[54] certain surgical wounds, and ulcers of the toe or heel.

The raters often use analogous codes, but there are problems associated with their use. Analogous codes lack criteria for rating. According to the *IOM Study*, about 9 percent of 7.7 million service-connected disability conditions have analogous codes.[55] In some cases raters, raters have to research different body systems to make the evaluation and exercise a wide range of judgment to assign analogous codes.

[54] Brain stroke should be rated under diagnostic code 8008.
[55] *IOM Study*, p. 264.

The *IOM Study* suggested that analogous codes be analyzed to identify impairments that occur often enough to deserve their own code.[56] To take a next step in doing this, we mapped the diagnosis text in analogous-code cases to ICD-9-CM codes. In order to do this, we obtained a sample of 1,094 cases with analogous codes from the RBA 2000 system that contains descriptive information on the case, which enabled us to map the codes.

The study team requested a sample of 100 rating decisions where 5299 was used as the analogous diagnostic code, and a sample of 30 rating decisions each where the following analogous diagnostic codes were used: 5099, 7899, 8599, 7399, 8199, 7599, 7199, 7099, 5399, 6099, 8099, 8699, 6899, 6599, 6699, 9499, 6299, 9999, 7799, 8799, 7699, 6399, 7999, 5199, 8299, 9399, 7299, 6199, 9299, 6799, 9599, 8499, 8399, 9199. Analogous code 5299 has 42 percent of all analogous cases rated 10 to 100%. VBA's Data and Information Services (D&IS) identified over 385,000 rating decisions where the specified analogous diagnostic codes were used. D&IS used all RBA 2000 cases received as of March 31, 2008, as the data source to draw the samples. Note that RBA 2000 is a new system being implemented and does not contain all of the records in the Benefits Delivery Network (BDN) payment system.

The results of mapping cases with VASRD analogous codes to the ICD-9-CM are reported in Appendix B.

Table IV-4 shows summary results from the analysis of re-coded analogous code data. It lists 33 ICD-9-CM diagnoses with at least five cases in the sample in frequency order. The table covers approximately 40 percent of the 1,094 sample cases. For each diagnosis, it gives the most common analogous codes and diagnosis text.

In working with a sample of 1,094 analogous-code cases, the study team's medical coder was able to code 973 (89 percent) cases with an ICD-9-CM code based on the diagnosis text field. Our medical coder also coded four flags to indicate the presence of problematic terms in the diagnosis text: condition, residual, claimed as, and exposure.

In general, there was no uniformity in the use of the text field. Sometimes it included very specific and technical diagnosis information while other times it apparently conveyed the terms that the veteran used to describe his condition to the doctor.

Most of the 121 cases that could not be coded to the ICD-9-CM were flagged as either a condition (87) or an exposure (17) or both (2). There were 15 additional cases to which our medical coder could not assign an ICD-9-CM diagnosis. In some of these cases, the ICD-9-CM did not include the condition (for example, chronic pain syndrome). In other cases the diagnosis text was not specific enough to choose a diagnosis (for example, nerve damage, right ear). In one case the diagnosis text contained a contradiction (that is, chronic back strain – strain is an acute injury, not a chronic condition).

While some cases could not be assigned an ICD-9-CM code, other cases received as many as five diagnostic codes because that many different conditions were listed in the

[56] Ibid, p. 264.

diagnosis text. A few cases were given procedure codes instead of, or in addition to, diagnostic codes. Some cases were also given an applicable VASRD code that should have been assigned instead of the analogous code.

Our medical coder used the condition variable to flag cases with vague diagnosis text that typically consisted of a body part followed by either "condition" or "problem," for example, "ankle condition." All together, 152 cases were flagged as condition cases including 89 that could not be coded in the ICD-9-CM. (Our medical coder was able to code the other 63 flagged cases because some sections of the ICD-9-CM accommodate vague diagnoses.) The 89 cases flagged with condition that could not be coded in the ICD-9-CM fell into these categories: 14 cases for the mental health category, 7 cases for ankle, 7 for dental, and 6 for ear.

Our medical coder used the exposure variable to flag 27 cases whose diagnostic text included that word or a similar indication. Our medical coder was able to code 8 cases that also gave additional information, but in most cases no actual diagnostic information was given. The most frequent exposure categories were

- Agent Orange - 9
- radiation - 5
- asbestos - 4
- "environmental hazards" - 4
- tuberculosis - 2
- herbicides, LSD, Cipro - 1 each

The above categories correspond to the categories of diseases subject to presumptive service connection. These categories are described in the regulations (38 CFR Sections 3.309 to 3.318). The "exposure" should not be rated; the diseases resulting from exposure should be rated; for example, beriberi or chronic dysentery for former POW's; chloracne, diabetes, non-Hodgkin's Lymphoma for Vietnam service and exposure to Agent Orange.

Our medical coder found and flagged 134 cases with the phrase "claimed as." Its use by the raters is fairly widespread in that it occurs in 12 percent of the sample, but lacks uniformity in its use. In some instances it precedes informal language that is likely what the patient initially reported while in other cases it precedes technical medical language. In all the "claimed as" cases, our coder used the following convention: use the first description if it is at all useable and only resort to the "claimed as" description if the first one is too vague for mapping to ICD-9-CM.

The use of the phrase "claimed as" should identify how the veteran labels his or her disability on the benefit claim. The rating specialist should rate the claim using the diagnostic code for the disability described/diagnosed by the medical examiner.

Table IV-4. Diagnoses with at Least Five Cases Using a Specific Analogous Code

ICD-9-CM		VASRD		Number of Sample Cases
Code	Description	Analogous Codes**	Typical diagnosis text	
782.0	Disturbance of skin sensation	8399, 8499, 8299 (8)	Numbness, tingling, or paresthesia	40
355.8	Mononeuritis of lower limb, unspecified	8599, 8699, 8799 (4)	Peripheral neuropathy, lower extremity	29
389.9	Unspecified hearing loss	6199	Hearing loss	25
795.5	Nonspecific reaction to tuberculin skin test without active tuberculosis	6799	Positive TB test or positive PPD	22
719.46	Pain in joint involving lower leg	5099, 5299	Patellofemoral pain syndrome	21
784.0	Headache	8199, 8499 (5)	Headache or facial pain	20
272.0	Pure hypercholesterolemia	7199, 7099, 7799 (4)	High cholesterol or hyperlipidemia	19
530.81	Esophageal reflux	7399, 7299	Gastroesophageal reflux disease	18
310.1	Organic personality syndrome	9399, 8099	Memory loss or cognitive impairment	18
354.9	Mononeuritis of upper limb, unspecified	8799, 8699, 8599 (4)	Peripheral neuropathy, upper extremity	18
607.84	Impotence of organic origin	7599	Erectile dysfunction	17
780.52	Other insomnia	9499, 6899, 9599 (4)	Insomnia	11
844.9	Sprains and strains of unspecified site of knee and leg	5299, 5099, 8399	Shin splints or knee strain	11
301.9	Unspecified personality disorder	9499, 9299, 9399 (4)	Personality disorder	10
307.81	Tension headache	8199	Tension headaches	9
780.4	Dizziness and giddiness	6299, 8099, 9199	Dizziness or vertigo	8
307.50	Eating disorder, unspecified	9599	Eating disorder	8
443.9	Peripheral vascular disease, unspecified	7199	Peripheral vascular disease	8
786.50	Chest pain, unspecified	5399, 6899, 7099 (4)	Chest pain	7
278.00	Obesity, unspecified	9599, 7999	Obesity	7
429.9	Heart disease, unspecified	7099	Heart condition	7
783.2	Abnormal loss of weight	9599	Weight loss	7
840.9	Sprains and strains of unspecified site of shoulder and upper arm	5299	Shoulder strain	7
333.99	Other extrapyramidal diseases and abnormal movement disorders	8699 (5)	Restless leg syndrome	6
477.9	Allergic rhinitis, cause unspecified	6599	Allergies or allergic rhinitis	6
723.4	Brachial neuritis or radiculitis, not otherwise specified	8799 (5)	Pinched nerves in neck or radiculopathy, upper extremity	6
728.71	Plantar fascial fibromatosis	5099, 5299	Plantar fasciitis	6
354.0	Carpal tunnel syndrome*	8599, 8699, 8799	Carpal tunnel syndrome	5
496	Chronic airway obstruction, not elsewhere classified	6699	Reactive airway disease	5
717.7	Chondromalacia of patella	5099, 5299	Chondromalacia, knee	5
784.7	Epistaxis	6599, 7199	Epistaxis or nose bleeds	5
381.9	Unspecified Eustachian tube disorder	6299, 6199	Eustachian tube dysfunction	5
786.0	Respiratory abnormality, unspecified	6699, 6899	Breathing problems	5

** Carpal tunnel syndrome is already included in VASRD under 8615, neuritis of the median nerve.*

*** Numbers in parentheses indicate the number of different analogous codes including those shown, coded to this diagnosis. Codes not shown involve few cases, usually just one.*

Finally, 45 cases included the term “residual” or “residuals.” In injury-related cases, our medical coder interpreted it to mean what ICD-9-CM calls “late effects,” but 15 of the cases with this term were non-injuries. These included residuals of dental surgery and other medical treatments, strokes and thrombosis, and tuberculosis, among others.

Options for Decisionmakers’ Consideration. Most of the specific diagnoses reviewed with some degree of recurrence are candidates for adding to VASRD. These include the diagnoses with at least five cases in the analogous-code sample listed in the table above. VA could consider whether those conditions, which occur frequently but currently have their own specific codes in VASRD, meet VA’s criteria for inclusion as separate diagnoses. Examples of candidate cases are patellofemoral pain syndrome, gastroesophageal reflux disease, memory loss, erectile dysfunction, insomnia, shin splints, plantar fasciitis, and chondromalacia. Other candidates for addition are high cholesterol, tension headaches, obesity, weight loss, and restless leg syndrome. These candidates for addition would still need to be evaluated for compensation based on associated earnings loss or QOL loss.

However, many of the sample cases are not described with enough specificity to be useful. For example, there are several cases of peripheral neuropathy of the upper or lower extremities which were coded and described with little specificity. The use of analogous codes and vague descriptions in the neural section suggest that raters find this section excessively complex, which lends strength to a suggestion that the whole section be re-written and simplified. For example, it may not be necessary to identify the individual nerves; the functional implications of the condition may be more important than precisely which nerve it is. (ICD-9-CM does not specifically identify many of those nerves.)

The degree of hearing loss is determined by audiometric exam and should be reported and reflected by the diagnostic code assigned for that loss. However, some raters did not report the degree of hearing loss. Similarly, cases described only as eating disorder, personality disorder, and heart condition are not specific enough to add new VASRD diagnoses for them. Some of the cases listed diagnoses such as numbness, dizziness, and chest pains, which are not diagnoses but rather symptoms.

Decisionmakers may consider the option to use the ICD-9-CM codes as part of the VASRD diagnosis description where possible. It would not disrupt the VA's current practice, but it would allow the raters (and others at VA) to cross-reference VASRD with medical resources, especially when a condition goes by different names or when the VASRD's name for it is not current. In cases where the VASRD diagnostic description is itself unclear, the ICD-9-CM code would provide clarity. But there are some VASRD diagnoses that do not correspond to a single ICD-9-CM code or even to a compact range of codes. In such cases it is ill advised to force fit ICD-9-CM codes to the VASRD conditions.

Based on the above discussion, decisionmakers may want to consider adding ICD-9-CM codes to the diagnostic codes in the VASRD. There will be a few diagnostic codes that do not correlate well to ICD-9 codes, and they should be allowed not to have a

corresponding ICD-9-CM code. VBA could undertake to correct these blanks with each cyclical review and update of the VASRD. Decisionmakers may also want to consider providing a centralized resource to provide training on medical coding of diagnoses and serve as a help desk to assist rating specialists in selecting accurate codes.

Individual Unemployability

IU is a benefit that permits veterans rated at 60% to 90% disabled to be paid at the 100% regular schedular level.[57] The benefit increase for IU recipients is substantial, and the number of recipients has grown enormously in recent years. Based on the study team analysis of C&P Master Record data, the number of IU cases has grown from 100,900 in September 2001 to 189,838 cases in September 2007, an increase of 88,938. About one-half of the increases were new enrollees receiving disability compensation and half were reclassifications. PTSD cases constitute about one-third of the IU cases in 2007. About 50 percent of the new enrollees between 2001 and 2007 are PTSD cases. Forty-four percent of the IU cases in 2007 are veterans age 65 and older; 64 percent are age 55 and older.

The VA IU benefit becomes a consideration only for veterans who are rated 60% or more disabled from SCDs. Generally, in VA disability evaluations, medical impairment affecting average earning capacity is the essential criterion for determining the regular schedule benefit. However, for IU, RVSRs must not apply the concept of average impairment in earning capacity. Instead, the RVSR analyzes the impact of the veteran's SCDs on his or her individual employability circumstances. If the RVSR determines that the individual's SCDs make it impossible to secure or follow a substantially gainful occupation, then the RVSR will authorize IU benefits.

If the veteran is granted IU benefits, then his or her disability compensation benefits increase from their schedular rate of 60% to 90% to the 100% rate. At the applicable levels, the monthly increased payments for a single veteran range from $1,010 to $1,606 as shown below in Table IV-5.

Table IV-5. Amount of SMC Increase for Schedule Ratings

Schedular Rating	Schedular Amount	Amount for 100%	Amount of Increase
60%	$921	$2,527	$1,606
70%	$1,161	$2,527	$1,366
80%	$1,349	$2,527	$1,178
90%	$1,517	$2,527	$1,010

Source: EconSys Study Team.

Claims for IU come into the Veterans Service Centers in much the same way as other claims. The IU claims are handled by the same technicians who process other claims.

[57] 38 CFR 4.16(a).

Development proceeds in generally the standard manner. But there are several distinctive processing steps for IU claims that make those claims more complicated. The processing guidance for handling these distinctive components is quite general in nature. IU determinations represent an extra evaluation; first a determination is made on combined evaluation, then IU is considered.

IU claims are not based on average impairment in earnings capacity; they are based on the individual impacts of SCDs. IU determinations depend on decisions about marginal employment and substantially gainful employment; those concepts are not for consideration in routine disability compensation decisions. In IU determinations, RVSRs are also asked to segregate the impacts of service-connected disabilities from the impacts of non-service-connected disabilities.

Although age is clearly related to employment, it is not considered in IU determinations. A significant portion of IU recipients are age 60 or older. While IU is not intended for veterans who voluntarily withdraw from the labor market because of retirement, new awards could be made to veterans who are near or beyond normal retirement age for Social Security. GAO found that 46 percent of veterans who were awarded IU benefits from October 2004 to October 2005 were age 60 or older, and 19 percent were 75 or older.[58]

Veterans are also eligible for SSDI. The Veterans' Disability Benefits Commission (VDBC) and the study team both matched the records of SCD veterans with Social Security Administration records to determine the rate of receipt of both benefits. The rates varied somewhat between 2004 and 2006, most notably the rate of dual receipt by SCD veterans awarded IU decreased from 61 percent to 48 percent.

Table IV-6. Service-Connected Disabled Veterans also Receiving Social Security Disability Insurance

SCD Veterans Under Age 65 Receiving SSDI	2004	2006
All SCD Veterans	16%	19%
SCD Receiving IU	61%	48%
SCD Rated 100%	54%	52%
SCD Rated 100% & Receiving SMC (L), (M), (N), (O),or (P)	61%	66%

Sources: Veterans' Disability Benefits Commission (VDBC). (2007). Honoring the call to duty: Veterans' disability benefits in the 21st Century (p. 374). Washington, DC: Veterans' Disability Benefits Commission; and study team's SCD veterans data match with SSA data in 2008

The reasons that a higher a percentage of severely disabled veterans is not receiving both are not known. One reason that a veteran could qualify for IU but not qualify for SSDI is that a worker must have a minimum number of quarters in covered employment to be eligible for SSDI benefits. Other reasons could be that the veterans' applications

[58] U.S. Government Accountability Office. (2006). *Veteran disability benefits: VA should improve its management of individual unemployability benefits by strengthening criteria, guidance, and procedures (GAO-06-309).* Retrieved August 6, 2008, from http://www.gao.gov/docsearch/abstract.php?rptno=GAO-06-309

could have been denied or that the veterans were either unaware they might be eligible or may have chosen not to apply.

The authorization for IU ratings is found in 38 CFR Section 4.16(a). Basic components of IU are:

- Veteran has a schedular rating of 60% to 90%;
- Either a single disability is rated at 60% or higher, or the combined rating is 70% or higher and one disability is 40% or higher;
- Veteran is determined to be unable to secure or follow a substantially gainful occupation due to his or her SCDs;
- Whether employment income represents substantially gainful employment is determined by comparing the veteran's income to the Bureau of Census poverty threshold;
- The veteran's age is not considered as a factor;
- The veteran's unearned income is not considered as a factor.

In considering the viability of IU rules, it is important to be aware of another VA regulation on evaluation of exceptional cases. That regulation is Section 3.321(b)(1), and it provides VA with substantial latitude to make adjustments where the scheduler evaluations are found to be inadequate. It mandates reasonable control for the considered special cases, because it requires that regional offices submit them to VA Central Office to obtain approval of the Director of C&P Service.

IU Rating Evaluation

RVSRs are responsible for identifying claims with potential entitlement to increased compensation based on IU even when no specific claim for the benefit has been made. These are reasonably raised claims. A claim of IU is reasonably raised when the evidence shows that a veteran's schedular rating meets the minimum criteria found in 38 CFR Section 4.16(a) and evidence in the claimant's file or under VA control shows the veteran might be unemployable as a result of service-connected disability.[59]

In evaluating claims for IU, rating specialists should first evaluate all claimed conditions and determine the claimant's schedular evaluation. If the veteran is rated at 100% according to VASRD, then any pending IU claim is disregarded. If a 100% schedular rating is not appropriate, then the disability thresholds must be checked (for example, a single 60% rating If the basic requirements are met, then the veteran's employment status must be reviewed. The reason(s) for termination of employment, or if appropriate, the veteran's current employment status must be examined.

Once the RVSR reaches the point of considering the veteran's employability status, the issue differs from most other rating issues in a fundamental way. Generally, in VA

[59] U.S. Department of Veterans Affairs. (2007). *M21-1MR, Part IV, Ch. 2* .Retrieved August 22, 2008, from http://www.warms.vba.va.gov/M21_1MR.html

disability evaluations, average impairment in earning capacity is a foundational concept. For IU, however, RVSRs must not apply the concept of average impairment in earning capacity. Rather, the RVSR analyzes the impact of the veteran's SCDs on his or her individual circumstances.

Employment status will be considered "marginal" when a veteran's earned annual income does not exceed the amount established by the Bureau of Census as the poverty level. The most recent level published is preliminary for 2007 and is currently set at $10,587 annually. VA evaluators are provided this threshold level in their procedural manual, M21-1MR (Part IV, Subpart ii, Chapter 2). Marginal employment is not to be considered "substantially gainful employment," so a finding of marginal employment will not preclude a grant of IU.

It is important that the RVSR attempts to determine whether the severity of the veteran's SCDs precludes substantially gainful employment. Other (extraneous) factors such as non-service-connected disabilities or age, could also affect employability, and these factors are not for consideration of IU. So, if a non-service-connected injury is found to be the dominant factor in a veteran's inability to sustain employment, then IU could not be granted. The relative impacts of non-service-connected disabilities should be discussed in the Rating Decision.

It is not always clear whether a veteran's inability to sustain gainful employment relates mostly to his or her service-connected disabilities. A GAO report cited this as a problem in VA's guidelines for IU. GAO reported that VA Regulations do not provide RVSRs with (1) the criteria and guidance to determine whether a claimant has the ability to obtain substantially gainful employment or is unemployable because of his or her SCDs, or (2) a method for isolating the impact of non-service-connected conditions or determining how these factors should be considered in making IU decisions.[60]

Given the above criticism, RVSRs must weigh the evidence as carefully as possible. If there is a relative balance for and against service-connected causation, then the benefit of the doubt should be given to the veteran.

Issues Related to IU

The concept of IU was added to the VASRD in 1934. Prior to that time the regulations stated that total disability exists when any impairment makes it impossible for the average person to follow a substantially gainful occupation. The 1934 revision of the regulations authorized total disability ratings "without regard to the specific provisions of the rating schedule" if a disabled veteran is unable to secure or follow a substantially gainful occupation as a result of his or her disabilities.[61]

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[60] *GAO-06-309*, Summary.

[61] U.S. Department of Veterans Affairs. (2005, October 27). *Statement of the Honorable Daniel L. Cooper, Under Secretary for Benefits, Department of Veterans Affairs, before the Senate Committee on Veterans' Affairs at Hearing, "The Rising Number of Disabled Veterans Deemed Unemployable: Is the System Failing? A closer Look at VA's Individual Unemployability Benefit*. Retrieved August 10, 2008, from http://www.va.gov/OCA/testimony/svac/05102720.asp

The number of veterans rated totally disabled based on IU has increased dramatically in recent years. The number of IU recipients more than doubled from 97,275 veterans in 1999 to over 221,000 veterans in 2005.[62] This increase has resulted in greater scrutiny of the IU process.

In the late 1990's and into 2001, VA took a comprehensive look at the guidelines for IU. This analysis led to the publication of a proposed rule change for IU.[63] In the proposal, VA explained its purpose was "to revise and clarify the procedures and substantive standards for determining whether a veteran's disabilities, although they do not meet the schedular requirements for a total rating, nonetheless prevent him or her from engaging in substantially gainful employment. The intended effect of this action is to establish clear standards for assigning a total rating based on the individual's inability to engage in substantially gainful employment and to ensure consistency of decisions in such claims."

VA felt that the rules and procedures on IU were "scattered and confusing" and "neither define the terms used nor clearly state specific requirements for entitlement to a total rating based on inability of the individual to engage in substantially gainful employment." As a result of this belief, VA proposed to consolidate sections of 38 CFR, Part 4, that were considered duplicative. VA also intended to eliminate portions of the regulations considered to be unnecessary. Perhaps most significantly, VA proposed to define more clearly the requirements for IU.

The proposed rule included several specific "clarifying requirements," as described below.

In the proposed Section 4.17(a)(3), VA would have required:

- A uniform standard for deciding permanence of disability written as the "reasonably certain to continue" standard for the disabilities;
- Base a determination as to whether a veteran is unable to engage in substantially gainful employment due to SCD or the activities normally required for substantially gainful employment; and
- the veteran's ability to engage in such activities with the regularity and for the duration normally required for substantially gainful employment.

In the proposed Section 4.16(d), VA would have required:

- Medical evidence which describes the nature, frequency, severity and duration of symptoms of the SCDs and the extent to which the veteran's ability to perform activities normally required for substantially gainful employment is limited solely due to SCDs; and

[62] Ibid.
[63] Federal Register (2001, October 1). *66*(190), 49886 – 49894.

- Evidence of unusual limitations imposed by SCDs such as the nature and unusual frequency of hospitalizations or other required treatment, unusual effects of required medication, and so on.

In the proposed Section 4.16(e), VA would have required that the following concerns be disregarded:

- Non-service-connected disabilities;
- Age;
- The veteran's training or lack thereof, unless the evidence establishes that service-connected disability or disabilities would impede further training;
- The state of the economy in the veteran's community; and
- If applicable, the fact that the veteran's previous employment has been eliminated due to such factors as technological advances or employer relocation.

In the proposed Section 4.16(f), VA would have defined:

- "Substantially gainful employment" as "any work generally done for pay or profit that the veteran is able to perform with sufficient regularity and duration to provide a reliable source of income;"
- "Activities normally required" as:
  - Exertional activities including, but not limited to, the ability to sit, stand, walk, push, pull, use hands, reach, lift and carry; and
  - Non-exertional activities including, but not limited to, the ability to communicate, remember, follow instructions, use judgment, adapt to changes and deal with people including supervisors, co-workers, and the public.

VA received numerous comments on the proposed rule. Comments questioned nearly every major theme in the proposal. Specifically, comments questioned VA's approach to making determinations based solely on "medical evidence" (excluding lay evidence); the discussion of vocational rehabilitation issues relative to IU; consideration of age; training factors; and regularity and duration of work periods. Subsequently, VA withdrew its proposed rule, stating that it determined the proposal "does not accomplish the stated purpose or intended effect."[64]

VA's experience with this proposed rule highlighted the complexity of the IU issue, along with its sensitivity. The concerns that drove the proposal remain outstanding. Subsequent to VA's withdrawal of the proposal, GAO conducted its study, which echoed the same concerns found in the VA proposal. The VA Office of Inspector General published a report in May 2005 showing substantial variances in VA disability

[64] Staff Background Paper, p. 6.

compensation payments including IU.[65] Most recently, IOM published a report on VASRD that recommended use of vocational assessments in IU determinations, education, employment history, and consideration of age versus earning histories.[66]

The steadily increasing number of IU recipients, and the advancing age of those recipients, may suggest that change in the IU guidelines may still be necessary. Factors such as age, education, training, use of lay evidence, and vocational assessments could be considered in revision of the guidelines**.**

Ratings for IU are done in the context of the general claims process. If a veteran claims entitlement for IU, then the Pre-Determination Team pursues that issue. The team requests the evidence needed to establish entitlement to IU. Routinely, this includes a request to obtain employment history information by having the claimant complete a VA Form 21-8940, Veteran's Application for Increased Compensation Based on Unemployability. Requests for pertinent medical information are also made.

VA Form 21-8940 requires the veteran to furnish an employment history for the five-year period preceding the date on which he or she claims to have become too disabled to work, and for the entire time after the date on which the veteran claims to have become too disabled to work.[67]

Comparison of VA's IU Benefit to the Social Security Disability Program

Two of the several federal benefit programs designed to provide monthly income to qualified individuals who become totally disabled are VA's IU benefit as a subcomponent of its overall VA Disability Compensation Program and the SSDI program.

SSDI provides income payments to disabled individuals who are "fully disabled" and vested in the Social Security program. To be considered fully disabled, the individual's disability must be expected to last for one full year or result in death of the individual. Social Security further defines disability as the inability to engage in any substantial gainful activity (SGA) because of a medically determinable physical or mental impairment.[68]

The Social Security Administration uses *earnings guidelines* to evaluate whether a claimant's work activity is SGA, and whether the claimant can be considered disabled under the law. Then, if income is below the SGA level, they send the claim to a State agency for a medical determination. The State agency will review all available medical evidence, and if necessary, schedule a medical exam to facilitate the determination.

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[65] U.S. Department of Veterans Affairs. (2005, May 19). *Review of State variances in VA disability compensation payments - Report No. 05-00765-137*. Washington, DC: VA Office of the Inspector General. Retrieved August 7, 2008, from http://www.va.gov/oig/52/reports/2005/VAOIG-05-00765-137.pdf

[66] *IOM Study: A 21st century system for evaluating veterans for disability benefits*, p. 17.

[67] U.S. Department of Veterans Affairs. (2007). *M21-1MR, Part IV, Ch. 2* .Retrieved August 22, 2008, from http://www.warms.vba.va.gov/M21_1MR.html

[68] U.S. Social Security Administration. (2008). *Social Security protection if you become disabled*. Retrieved June 6, 2008, from http://www.socialsecurity.gov/dibplan/index.htm

If an individual is determined eligible for SSDI, then the benefit payment level must be determined. The appropriate pay rate is a function of the claimant's age and income level at the time he/she became disabled. A person who is disabled at a younger age will receive a higher monthly rate than his or her older counterpart given the same income since the younger worker's income would likely increase with experience if not disabled. A person with a higher income at time of disablement will receive a higher monthly rate than his or her lower income counterpart. However, there is a limit to this income distinction at roughly $150,000/year. SSDI payments are capped for beneficiaries who had income above that level. So, SSDI payments slide up and down based on the individual's pre-disability age and income, up to certain limitations.

Both IU and SSDI attempt to identify beneficiaries who have become fully disabled due to their peculiar set of disabilities and to replace a significant portion of their pre-disabling income.

Each program requires an evaluation to determine that the claimant is fully disabled. VA does this evaluation with in-house and contract medical staff and in-house administrative staff. SSDI does the income assessment in-house but refers the medical evaluations to affiliated State agencies.

VA IU determinations rely heavily on recent employment information and, to a lesser extent, on educational history; age is not a factor. SSDI considers past work experience, educational history, and the claimant's age.

There are certain eligibility requirements peculiar to each program. IU eligibility requires that the claimant's inability to follow substantially gainful employment must be due to his or her SCDs. VA determines substantially gainful employment by comparing income to the poverty threshold established by the Bureau of Census .[69]

SSDI is only available to individuals who are vested in the Social Security program. A claimant is considered vested in the Social Security program if he/she worked one-half of the time from his or her 21st birthday to the date of disablement. The work must have been in positions for which Social Security taxes were deducted.

SSDI generally uses *earnings guidelines* to evaluate whether a claimant's work activity is SGA. The amount of monthly earnings considered as SGA depends on the nature of a person's disability. The Social Security Act specifies a higher SGA amount for statutorily blind individuals. If the impairment is anything other than blindness, earnings averaging over $940 a month (for the year 2008) generally demonstrate SGA. If a claimant is blind, earnings averaging over $1570 a month (for the year 2008) generally demonstrate SGA.

Although SSDI and IU are similar in many ways, they use two different thresholds for income qualifications. Social Security Administration's threshold for substantial gainful activity is used for both the SSDI and Supplemental Security Income (SSI) programs and for 2008 the threshold is $11,280 per year.[70] VA uses the poverty level established by

[69] 38 CFR Sect. 4.16.

[70] U.S. Social Security Administration, Retrieved September 19, 2008, from http://www.ssa.gov/OACT/COLA/sgadet.html.

the Bureau of Census and its most recently published poverty level is for 2007 which is $10,590.[71] Thus, the IU threshold is $690 less than the SSDI threshold. The annual updating of the Bureau of Census' poverty level lags significantly behind SSA's updating. Since veterans frequently receive benefits from both SSDI and VA, it may be worthwhile for decisionmakers to consider using the threshold established by Social Security Administration.

Both programs assume responsibility for reviewing beneficiaries' ongoing eligibility. VA procedures are to send annual questionnaires to their IU recipients to confirm current level of income and employment status.

SSDI does periodic reviews of their cases to determine if claimants have improved medically or have obtained SGA. Generally, they will review a case when they receive information that a recipient may have medically improved or during a regularly scheduled medical review.

Payment amounts differ fundamentally for the two programs. At VA, all IU recipients are paid $2,527 monthly (with additional amounts payable for dependents). For SSDI, using the Social Security Retirement/Disability Quick Calculator, estimates of monthly disability payments were generated for two individuals: (1) age 60 and (2) age 25. Monthly and annual amounts are for the individual and the maximum for the family.[72] Income at the time of application is assumed to be the median income for those ages, $28,019 for age 60 and $26,418 for age 25.[73] The results are as follows.

Age	Monthly	Annual
60 - Single	$913	$10,956
Family Maximum	$1,376	$16,512
25 – Single	$1,045	$12,540
Family Maximum	$1,763	$21,156

Note: National average monthly payment for disabled workers in 2006 was $977.70.[74]

Subsequent military pay does not affect the SSDI disability payment on the assumption that the military work environment is adjusted to accommodate the disability.

SSDI benefits are subject to an annual cost of living adjustment using the Social Security benefit inflation adjustment. After two years the individual is eligible to receive Medicare benefits.

Note that SSI is available to the small number of veterans with disabilities less than 24 years of age who do not qualify for SSDI. SSI benefits are also available to persons

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[71] U.S. Census Bureau. Retrieved September 19, 2008, from http://www.census.gov/hhes/www/poverty/threshld.html.

[72] U.S. Social Security Administration.. (2008). *Social Security quick calculator*. Retrieved July 7, 2008, from http://www.socialsecurity.gov/OACT/quickcalc/index.html

[73] U.S. Census Bureau. Current Population Survey. (2007). *Annual social and economic supplement*. Retrieved July 7, 2008, from http://pubdb3.census.gov/macro/032007/perinc/new01_001.htm

[74] U.S. Social Security Administration. (2006). *Annual statistical report on the Social Security Disability Insurance Program*. Retrieved July 24, 2008, from http://www.ssa.gov/policy/docs/statcomps/di_asr/2006/index.html#highlights

receiving small amounts of SSDI benefits. SSI benefits are a provided by both the federal and state governments. Average payments for June 2008 were $477 per month including both federal and state portions with about 8 percent of the funding provided by the states.[75]

IU Policy Options

The two regulations mentioned previously, Section 4.16(a) (for IU) and Section 3.321(b)(1), could be considered two parts of the same policy for evaluating special cases. Section 4.16 (a) establishes the policy for IU while Section 3.321(b)(1) authorizes VA Central Office to make adjustments in individual cases when the criteria in the rating schedule do not fully recognize the effect of a disability on that particular veteran. Section 3.321(b)(1) would be applied to the most extraordinary cases and 4.16(a) could be narrowed in scope and more standardized. The change of scope and standardization for IU cases under 4.16(a) would involve consideration of age, a substantially expanded vocational assessment component in the process, and a new tier of consideration for IU veterans who attain age 65. These concepts are explained further below.

For IU claims, age could be considered as a factor. Once a veteran reaches a generally recognized retirement age (such as age 65 or 66), IU could be no longer available for consideration. At that age, the veteran would be eligible for Social Security Old Age benefits, or if receiving SSDI, would automatically convert to Old Age benefits. If that retirement-aged veteran is rated 60% to 90% and believes he/she deserves extra-schedular consideration and a 100% payment level, then he/she could seek relief under Section 3.321(b)(1). In reviewing those claims, VA could consider the veteran's non-earned income (investments, retirement benefits, and so on) as well as earned income.

All veterans under age 65 who apply for IU benefits, their earned income is reviewed to determine whether they are sustaining a substantially gainful employment level. If they are not, then a vocational assessment could be completed before an RVSR evaluates the case. The vocational assessment could address whether the veteran could be rehabilitated to a substantially gainful employment level. If the vocational counselor opines that the veteran could be rehabilitated, then the IU claim could be denied.

If the vocational assessment concludes that the veteran could not likely be rehabilitated to a substantially gainful employment level, then the vocational counselor could be required to provide an opinion as to whether the veteran's unemployability is due to his or her SCDs. This opinion could include discussion and opinion about the impact of the veteran's educational level on his or her employability status.

If a veteran is granted IU, and that veteran subsequently attains age 65, the claim could be reexamined. The veteran's income could be reassessed including earned and unearned income. If the veteran's total income can be expected to meet or exceed the substantially gainful employment level, then IU could be suspended. An exception to

[75] U.S. Social Security Administration. (2008). *SSI monthly statistics*. Retrieved July 24, 2008, from http://www.ssa.gov/policy/docs/statcomps/ssi_monthly/2008-06/table01.pdf

this might be that if the veteran has been receiving IU benefits for some time period, perhaps 5 years or more, and is determined to have become dependent on the IU benefit, then decisionmakers could have the option to continue full or partial IU benefits. Partial IU payments could be the veteran's statutory pay rate (60%, 70%, and so on) plus a special stipend of $500.

Special Monthly Compensation

VA provides supplementary SMC for anatomical losses and loss of functional independence. SMC ratings are evaluative in nature and outside of VASRD. The SMC benefits can be viewed as intended for quality of life loss in that they provide compensation on top of benefits based on VASRD, which are generally intended to replace lost earnings capacity.

Title 38, US Code, Section 1114, authorizes distinct payment rates for a series of discrete disabilities.[76] Disabilities that VA considers for SMC include the following:

- Loss, or loss of use, of extremities, singularly or in combination
- Immobility of a joint or paralysis, paraplegia
- Loss of sight of one or both eyes (having only light perception)
- Loss, or loss of use, of a reproductive organ
- Complete loss, or loss of use, of both buttocks
- Deafness of both ears (having absence of air and bone conduction)
- Inability to communicate by speech (complete organic aphonia)
- Loss of a percentage of tissue from a single breast or both breasts from mastectomy or radiation treatment
- Being housebound
- Being permanently bedridden or so helpless as to need regular aid and attendance

SMCs primarily affect the musculoskeletal system and body systems involving the sensory organs and reproductive organs. Mental disorders, which affect the psychological and social domains, generally are not included in the SMCs unless the condition is rated at 100 percent disabling and requires veteran to be housebound or in need of regular aid and attendance..

SMC (K) lists eight specific conditions for which monthly payment is authorized. If a veteran has more than one of these specified conditions, then he or she can receive the SMC (K) payment for each one, up to a maximum of three. For example, if a veteran has lost a creative organ and lost the use of one foot, then he or she would be eligible to

[76] U.S. Department of Veterans Affairs. (2006). *Special Monthly Compensation (SMC) for serious disabilities*. Retrieved May 12, 2008, from www.vba.va.gov/VBA/benefits/factsheets/serviceconnected/SMCeg_0406.doc

receive $91 + $91 = $182. Also, if a veteran is eligible for SMC (L), (M), or (N) and has an SMC (K) condition(s) **in addition** to those conditions that qualify for the SMC (L), (M), or (N), then he or she would receive additional payment(s) for each SMC (K). SMC (K) is awarded to veterans with combined degree of disability at all levels (0-100%) if they meet the requirements.

SMC (L, M, N, O, P, and S) can only be awarded to veterans for required disabilities that result in 100% ratings and is paid instead of the lower amount normally paid to those rated 100%. It is not paid in addition to the amount paid for 100%. Only SMC (K) is paid in addition to the schedular rating.

SMC (L, M, N, O, and S) describe specific combinations of catastrophic disabilities and prescribe specific elevated payment levels for each of those combinations. The designated payment levels increase with each succeeding paragraph as the combinations of disabilities increase in severity.

SMC (P) does not describe a complete, specific combination of catastrophic disabilities. Rather, it describes specific disabilities, which when found in a veteran who also has the disabilities listed for one of the other SMC levels, authorizes increased payments to "the next intermediate rate." These "next intermediate rates" are at the mathematical midpoints between two SMC levels (between SMC (L) and SMC (M), for example). They are shown in the table below as "(L-1/2), (M-1/2), (N-1/2)." The comprehensive descriptions of the disability combinations which entitle a veteran to payment at these "next intermediate rates" are provided in 38 CFR Part 3, Section. 3.350(f).

Special Monthly Compensation Payment Amounts

The amount of SMC payment is determined by the nature of disability in accordance with Section 1114 of Title 38, United States Code and referred to by the letters (K) through (S).[77] VA will pay higher rates for combinations of the disabilities with small adjustments for the veteran's marital status and number of dependents as shown in Table IV-7.

[77] U.S. Department of Veterans Affairs. (2006). *Benefits index, compensation, and pension benefits*. Retrieved May 12, 2008, from http://www.vba.va.gov/bln/21/Benefits/#BMS

Table IV-7. Special Monthly Compensation Rates

SMC Code	Veteran Alone	Veteran with Spouse	Veteran with Spouse and One Child	Each Additional Child Under Age 18
K[i]	$91	$91	$91	$0
L (A&A)	$3,145	$3,287	$3,390	$71
L½ (A&A)	$3,307	$3,449	$3,552	$71
M	$3,470	$3,612	$3,715	$71
M½	$3,709	$3,851	$3,954	$71
N	$3,948	$4,090	$4,193	$71
N½	$4,180	$4,322	$4,425	$71
O/P	$4,412	$4,554	$4,657	$71
Q[ii]	$67	$67	$67	$0
R.1 (A&A)	$6,305	$6,447	$6,550	$71
R.2 (A&A)	$7,232	$7,374	$7,477	$71
S (Housebound)	$2,829	$2,971	$3,074	$71

Source: U.S. Department of Veterans Affairs, Special Monthly Compensation, 12/1/2007

[i] "This rate is added to any percentage from 0% through 100%. It is added to all SMCs except (O), (Q), and (R). A veteran may receive from one to three SMC (K) awards in addition to basic and SMC rates." U.S. Department of Veterans Affairs. (2007). *How to read compensation and SMC benefits rate tables*. Retrieved May 13, 2008, from http://www.vba.va.gov/bln/21/Rates/comp01b.htm

[ii] This rate is paid in place of any percentage excluding 0%. It has not been awarded since August 19, 1968. *Source:* Ibid.

The monthly amount payable for SMC increases with the severity of the listed conditions. The SMC amount payable also increases for a veteran who suffers from multiple listed conditions. For example, a veteran who has lost one foot would be awarded SMC (K), and he or she would receive $91 per month for that. If he or she had other conditions rated at 40%, then he or she would receive the regular schedular benefit for the 40% rate plus $91. VA actually has 54 separate numerical codes for SMC reflecting several combinations of different SMC letter codes resulting in different payment amounts (see Appendix C).

In another example, a veteran who has lost both legs at or near the hip would be awarded SMC (N) and he or she would receive $3,948 per month. Additional allowance would be paid if the veteran had dependent(s).

The statutorily authorized payment rates for SMC (L) through SMC (O) increase at roughly 11 percent for each succeeding level, although the increase is not precisely the same for each increment. The payment rate for SMC (L) is $3,145; the payment rate for SMC (M) is $3,470, a 10 percent increase. The pay rate for SMC (N) is $3,948, a 13 percent increase over SMC (M). The monetary relationship in these payments has not undergone serious scrutiny in many years. The general escalation from one SMC level to the next reflects acceptance that each succeeding combination reflects more severe disabling effect. A lack of precision likely reflects mathematical distortions over time rather than any policy intent.

The determination of the proper SMC level is complex and requires careful review to assure a proper evaluation is given to each veteran-claimant.

SMC (K, L, M, N, O, and P) are primarily for loss of or loss of use of limbs or organs and can be thought of as payments for impact of the disabilities on quality of life. On the other hand, SMC (L) is awarded also when veterans do not meet the loss of or loss of use of criteria but need assistance. Likewise, SMC (R.1) and (R.2) are specifically for aid and attendance and SMC (S) is for Housebound and will be explained more fully later. The primary focus of Aid and Attendance (A&A) is on physical impairments and mobility with very little attention focused on cognitive impairments, for example, TBI or psychological impairments and the needs of those conditions for supervision and management.[78]

Table IV-8 depicts the payments for a single veteran and the amount of each SMC that is above the normal schedular amount. Additional allowances are paid for dependents.

Table IV-8. Special Monthly Compensation Rates Compared with Schedular 100% Rating

SMC Code	Veteran Alone	Amount for 100%/O or P	Increased Amount for SMC	Number of Veterans	Monthly Benefit
Quality of Life					
L	$3,145	$2,527	$618	5,355	$3,309,390
L½	$3,307	$2,527	$780	1,887	$1,471,860
M	$3,470	$2,527	$943	1,839	$1,734,177
M½	$3,709	$2,527	$1,182	1,650	$1,950,300
N	$3,948	$2,527	$1,421	477	$677,817
N½	$4,180	$2,527	$1,653	250	$413,250
O/P	$4,412	$2,527	$1,885	2,661	$5,015,985
Total				14,119	$14,572,779
Assistance					
L	$3,145	$2,527	$618	4944	$3,055,392
L½	$3,307	$2,527	$780	1742	$1,358,760
S	$2,829	$2,527	$302	31,361	$9,471,022
R1	$6,305	$4,412	$1,893	5,576	$10,555,368
R2	$7,232	$4,412	$2,820	2,151	$6,065,820
Total				45,773	$30,506,362

Source: Department of Veterans Affairs, Special Monthly Compensation, 12/1/07

SMC and Assistance

SMC (L) can also be awarded if the veteran does not meet the other requirements for this award but is in need of regular Aid and Attendance (A&A.) The study team determined through analysis of C&P data that 48 percent of those receiving SMC (L) are receiving it because of A&A. Some recipients of SMC (L) are not in need of A&A and receive SMC (L) for anatomical loss or loss of use of both feet, one hand and one foot, or

[78] *Veterans' Disability Benefits Commission (VDBC,). (2007). Honoring the Call to Duty: Veterans' Disability Benefits in the 21st Century*. p. 233.

blindness. In September 2007, SMC (L) was received by 13,928 veterans, of which 6,685 (48 percent) received the award for A&A. At that time, SMC (S) for Housebound was received by 31,361 veterans.

SMC (R) is awarded to certain veterans with entitlement under SMC (O) or SMC (P) who also need A&A. SMC (R) is awarded in two levels (R.1) and (R.2) with (R.2) requiring a higher level of assistance than (R.1). The payment rate for SMC (R) is significantly higher than the other SMC levels. These are spinal cord injuries. The payment rate for SMC (R.1) is $6,305. This is 43 percent higher than the rate for SMC (O). This reflects the fact that SMC (R) addresses individuals who have SMC-level catastrophic disabilities and also require a very high level of aid and attendance in daily living.

SMC (S) is awarded to veterans rated 100% who are housebound but do not meet the required level of assistance for SMC (L).

Thus, there are four levels of benefit for veterans rated 100% who need assistance, which are SMC (S, L, R.1, and R.2) with respectively higher requirements for assistance. Veterans receiving SMC (L) not for A&A, and those receiving SMC (M, N, O, and P) are receiving what amounts to a payment for loss of quality of life in recognition of the extreme severity of their injuries or illnesses. The net payment for assistance above the schedular rating is $618, $1,893, and $2,820 per month, respectively. A veteran who is not entitled to A&A compensation may be eligible for a housebound net monthly payment of $302 under SMC (S). Table IV-9 provides a detailed list of eligibility criteria and monthly amounts for A&A or housebound compensation.

Table IV-9. Aid and Attendance or Housebound Eligibility Criteria

Aid & Attendance and Housebound Status	SMC Code	Eligibility Criteria	Veteran Only Award Amount	Payment for Disability Rating of 100% or (O/P)	Net Payment for Assistance
Aid and Attendance	(L)	A veteran has a single service-connected disability rated at 100% and is in need of aid and attendance of another person	$3,145	$2,527	$618
	(R.1)	A veteran receiving the maximum rate under SMC codes (O) or (P) who requires regular aid and attendance[i]	$6,305	$4,412	$1,893
	(R.2)	A veteran meets the criteria for (R.1) and demonstrates a need for a higher level of care	$7,232	$4,412	$2,820
Housebound	(S)	A veteran has a single service-connected disability rated at 100% and an additional service-connected disability independently ratable at 60% or permanently housebound due to a service-connected disability	$2,829	$2,527	$302

Source: 38 United States Code §3.350, Section 1114, effective 12/1/07.

[i] Eligibility criteria for SMC codes (O) and (P) is outlined in Appendix C.

Background and Justification for Special Monthly Compensation

The history of SMC is very long but not well documented. The Bradley Commission (1956) asserted that SMC began at the time of the Civil War,[79] but allusions to the concept can be found as early as the Revolutionary War. Regardless of whether SMC dates back to the Civil War or the Revolutionary War, the concept has been with us for well over a century.

What SMC is compensating for is the next significant question. By statute, the VA Rating Schedule purports to evaluate disabilities for "impairment in earning capacity."[80] Over the many decades from the Civil War to the late 20th century, our country evolved from an agrarian society to an industrial society to a knowledge-based technological society. In the 19th century and the early part of the 20th century, SMC payments probably did reflect compensation for lost earning capacity to a great extent. However, from the middle of the 20th century to current time the significant changes that occurred in the economy of the U.S. caused the link between earning capacity and SMC-related disabilities to become murky. Over the same period, the stated purpose of disability compensation payments – and SMC – has remained constant. However, it has been observed over the years that VA rating evaluations consider several other factors, notably functional impairment, and that SMC has a strong component of quality of life since the criteria for SMC are loss of or loss of use of limbs or organs.

The Bradley Commission discussed at length the purpose of disability compensation and "statutory awards" SMC. That Commission reflected that statutory awards were antiquated and overcompensated for purely physical factors. Ultimately, the Bradley Commission recommended that they be eliminated.[81]

A later study done by VA in the 1970s, the Economic Validation of the Rating Schedule (ECVARS)[82] also indicated that the VA Rating Schedule had historically given great weight to amputations and loss of use. This study noted that when early versions of the rating schedule were developed, most employment involved unskilled work requiring physical effort.

So there has been at least some discussion over the years about the continuing viability of SMC awards for amputations and loss of use. However, in the face of this discussion, the SMC concept has been sustained. Congress looks at potential legislation for veterans every year. As recently as 2002, it passed new legislation to authorize payment of SMC (K) for loss of breast tissue in a woman veteran. While adding this new condition, Congress elected not to make changes to any of the existing SMC rules.

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[79] President's Commission on Veterans' Pensions (Bradley Commission). 1956. 84th Cong., 2nd sess. House Committee Print No. 236, Washington, DC: U.S. Government Printing Office. p. 150.

[80] 38 CFR Sect. 4.1

[81] Bradley Commission, p. 169.

[82] Economic Validation of the Rating Schedule, U.S. Senate, 93rd Cong., 1st sess., Senate Committee Print No. 3, Washington, DC. 1971. p. 12.

It is significant that this most recent addition to SMC includes no asserted link between the disabling condition and earnings capacity. This demonstrates how far the underlying philosophy has evolved since the post-WWI era. By association, and by confirmation and continuation of the existing array of SMC conditions, the Congress left the strong implication that the existing SMC designations remained valid, and earning capacity need no longer be the justifying principle for SMC.

VA's General Counsel asserted that "So-called 'statutory' awards are not predicated directly on the average reduction in earning capacity, but primarily upon consideration of noneconomic factors such as personal inconvenience, social inadaptability, or the profound nature of the disability. The purpose of the statutory award for loss or loss of use of a creative organ is to account for psychological factors."[83]

If loss of earnings capacity is not the justification for SMC payments, then the proper justification should be determined. One likely concept for this justification is "quality of life." However, before a determination can be made about quality of life, the concept must be defined.

Quality of life is a very broad concept, but most would agree that it incorporates several components including reduced functioning, pain and suffering, disfigurement, and social awkwardness or inconvenience.

[83] VA Office of the General Counsel, VAOPGCPREC 5-89.