VA Disability Compensation Program

Literature Review

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EXECUTIVE SUMMARY

Purpose of Review

This report provides a comprehensive review of key studies and other documents relevant to the VA Disability Compensation Program. The primary purpose of this report is to review data sources, methodologies, results, and conclusions of previous studies in preparation for the work of the Veterans' Disability Benefits Commission, enacted as part of PL 108-136. The review also provides a basis for possible future research for consideration by the Department of Veterans Affairs. No policy recommendations are made. In addition, this review focuses on studies that address the effectiveness of the VA disability compensation program but not the efficiency of the program.

Congressional Intent

The most dominant theme in Congressional intent, dating back to the World War I era, is that VA's Disability Compensation Program is intended to provide compensation for loss of earnings capacity. This loss of earnings capacity is not based on the disabled veteran's individual impaired capacity but only on "average" impairment capacity resulting from such injuries in civil occupations. VA has not promulgated particular goals or outcomes for the disability compensation program. OMB's Program Assessment Rating Tool (PART) report on the Disability Compensation Program states that VA does not have published program outcome goals.

Another factor motivating Congressional intent is quality of life. Although the legislation does not explicitly state that the intent of the disability program is to compensate for reduction in quality of life due to service-connected disability, this factor is evident in that Congress has set forth certain presumptions of eligibility for disability compensation and additional benefit amounts for certain disability conditions that reflect a concern for loss of quality life. The law, for example, provides additional compensation for "loss of physical integrity" such as loss of a hand, foot, or eye. Intent for quality of life is also apparent from the Hearing and Committee Reports that record testimony over the decades from Veterans Service Organizations on this point.

The legislation does not explicitly state that intent of the disability program is to provide incentive value for recruitment and retention. However, during wartime periods, Congress has generally provided greater benefits or liberalized rules for eligibility, reflecting the intention of attaining sufficient recruitment and retention.

Trends in National Disability

Most of the sources reviewed by the study team indicate that the number of disabled has been increasing due to the aging U.S. population as well as other factors such as relaxation of eligibility benefits and public awareness. For example, the number of disabled workers and their dependents receiving Social Security Administration's (SSA) Social Security Disability Insurance (SSDI) increased from 2.7 million in 1970 to 7.6 million in 2003. The number of veterans receiving VA disability compensation has increased only slightly over time but the percentage of veterans receiving this benefit

increased from 7.6 percent in 1970 to 10 percent in 2003. The rate of growth in disability rates between VA and SSDI programs for 1970-2003 period are equivalent.

Societal and individual perceptions of who is disabled have changed over the years. Technological and social changes also affect disability statistics. Medical technology has extended the average life span and may have increased the number of disabled. Medical technology has also reduced disabling conditions and helped the disabled to adapt. Three important and visible legislative actions have occurred in the past 30 years to protect people with disabilities: the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, and the Freedom Initiative of 2001.

ADA prohibits discrimination in employment, State and local government services, public accommodations, commercial facilities, transportation, and telecommunications on the basis of disability. The goal of the 1973 Rehabilitation Act was to "promote the rehabilitation, employment, and independent living of people with disabilities." The New Freedom Initiative of 2001 was announced by President Bush, as part of a nationwide effort to remove barriers to community living for people with disabilities.

There is no universally agreed upon definition of disability; the literature cites 20 identifiable definitions. There are numerous sources providing disability statistics but the numbers reported on disability differ depending on the definition of disability and the population covered. For example, ADA reported 43 million disabled people in 1990 which is higher than the 33.8 million estimated from the National Health Interview Survey (NHIS) for the same year.

Eligibility Requirements

Veterans are entitled to receive compensation for combat, training, sports related injuries and diseases incurred or aggravated during service, but not for injuries that happen after separation or that have no connection to military service. Also, disabilities resulting from willful misconduct are excluded.

The compensation amounts are based on the number of dependents (for those veterans with 30% and above disability rating) and degree of disability, which is measured from 0% to 100%, based on a rating schedule. The ratings can be for a single disability or combined (multiple) disabilities. The law also provides for additional compensation for "loss of physical integrity" such as loss of a hand, foot, or eye for 100% service connected veterans through schedules L and S. Service-connected veterans are also eligible for other benefits such as vocational rehabilitation services, higher priority in receiving healthcare benefits, and specially adapted housing grants.

Presumptive Conditions

With changes in modern warfare and advances in science, the issue of presumptive conditions has become complex and dynamic. Over the years VA and Congress have increased both the number of diseases presumed to be service-connected, as well as the presumptive period in which they can be claimed. A critical review of presumptive conditions in the Bradley Commission Report (1956), noted the need for current medical research and technology to determine which diseases could be presumed to have a

relationship with a veteran's period of military service. VA currently uses outside sources such as the National Academy of Sciences, the POW Advisory Committee and the Environmental Hazards Committee for expertise in this matter. Methods include but are not limited to epidemiological, clinical and population studies, as well as specific patient level analysis from medical doctors.

There are several major issues concerning presumptive conditions that are currently very important to VA. Herbicides, like Agent Orange used in the Vietnam era, have been linked to many diseases developed by veterans who were exposed to such harmful agents during their service. Decades after original exposure, veterans still have potential to develop certain diseases associated with Agent Orange. Similarly, during the Gulf War veterans were exposed to biological, chemical, and environmental agents that could now be associated with a handful of diseases and impairments claimed by veterans. Currently military personnel are being vaccinated pre-exposure to such harmful agents as Anthrax. However, there have been claims that the inoculation itself can be linked to certain illnesses and the Congress has authorized VA to create such presumptions if there is a positive association between such inoculations and the development of disease, but that has not yet occurred. Finally, presumptions for POWs with disabling conditions connected to their period of internment has been an additional recent theme.

All of these issues have influenced VA and Congress to maintain an expansive list of presumptive conditions as well as the presumed period in which a veteran could develop the disease.

Profile of Beneficiaries

Typical or dominant characteristics of veterans receiving compensation are that they are mostly male and 45 years of age or older. Almost one-half of the disabled veterans receive compensation for minor disabilities (i.e., 20% or lower). Bones and joints, and mental health are the most reported impairment among the veterans receiving VA compensation.

The percentage of veterans on VA's disability compensation rolls with disability rating less than 40 percent was 73 percent in 1955 and this percentage decreased to 61 percent in 2003. On the other hand, veterans with a disability rating over 50 percent increased from 14 percent in 1955 to 24 percent in 2003. The percentage of veterans totally disabled (i.e., 100% disability rating) increased from 6 percent in 1968 to 8 percent in 2003.

Adequacy of VA Disability Compensation

Since the end of World War II and the implementation of the 1945 rating schedule, only a few studies have been conducted on the adequacy of disability compensation for loss of earnings capacity. The President's Commission on Veterans' Pensions, referred to as the Bradley Commission, produced an extensive report in 1956. The next major study was conducted by VA to compare earnings of veterans receiving disability compensation in different diagnostic categories to veterans without the compensation. This latter study was submitted to the Committee on Veterans Affairs, U.S. House of

Representatives in 1971 and is referred to as the "Economic Validation of the Rating Schedule" study or ECVARS. A series of GAO reports since 1988 did not contain any independent statistical analysis but concluded that VA's administration of the Disability Compensation Program, in effect, was based on judgments of loss in functional capacity rather than on loss of earnings capacity. VA's response to GAO's position, found in the GAO 97-9 (January, 1997) report, is that VA's disability rating schedule represents a consensus among Congress, VA, and the veteran community that the schedule is "equitable."

The basic hypothesis is that higher disability ratings translate into higher disability compensation levels. If the proportional wage loss is greater at higher disability ratings, the rating system can be assessed as valid to a certain degree. The Bradley Commission concluded that the disability rating bore little, if any, relation to the loss or reduction in earnings except for the 100 percent disability rating category. Our conclusion based on the limited data and our own analysis is that the data provided by the Bradley Commission report reveals just the opposite. That is, there is a positive relationship between loss of earnings and higher disability compensation.

A careful review of the reports of the two key studies provided insights that appear to have been previously overlooked. Analysis of data provided in tables in both the Bradley Commission Report and the ECVARS study illuminate two crucial questions: are disability compensation levels associated with economic need, and do they provide excess or not enough income to the disabled veteran?

Surprisingly, although data pertinent to these questions was available in both reports, important analysis does not appear to have been performed. The Study Team's analysis of data in these two reports shows that disability compensation levels are strongly correlated with the loss of earnings due to disability. Specifically, the Study Team found that survey earnings data for the mid-1950s provided in the Bradley Commission report when analyzed with respect to disability compensation levels in effect at the time, were strongly correlated. For each $100 of income lost due to veterans' disabilities, in 1955, disability compensation replaced approximately $77, on average. Analysis of ECVARS data shows a similar high correlation between economic loss and disability compensation.

These findings lend support to the hypothesis that VA's Disability Compensation Program provided compensation for loss of earnings capacity. However, these studies are very dated at this point in time. There is clearly a need to conduct new research on how well the VA Disability Compensation Program meets Congressional intent of replacing average lost earnings capacity of veterans with service-connected disabilities. Little research has been done on how well or to what extent the disability benefit contributes to meeting the financial needs of the *individual* disabled veteran. Another relevant research question that has not been adequately addressed is how adequate the disability compensation is for servicemembers in compensating the risks to life and health inherent with military service. There are relatively few studies or data on the coordination of services or benefits from different programs for veterans, including VA

and non-VA programs. One particular area deserving attention is the outcome, cost-effectiveness, and appropriateness of care for veterans with traumatic war experiences.

Rating Schedule

VA uses a ratings schedule for rating disabilities to assign a loss in average earnings capacity to the veteran for not being able to work at a full or lower capacity. VA's Schedule of Ratings was created in 1917 with the War Insurance Act. Since then many changes have been made to the schedule, yet there are numerous studies in the literature suggesting that the rating schedule needs to be improved. Despite calls for change in the rating schedule, it has helped to provide consistent levels of compensation to veterans from different periods of conflicts.

The Schedule of Ratings lists physical and mental conditions with disability ratings ranging from 0 to 100 percent, assigned to each condition. The medical conditions include levels of severity specified for each diagnosis. Veterans' impairments are evaluated at VA regional offices. Each of the 57 VA Regional Offices has one or more Rating Boards to evaluate veterans' impairments. Rating Boards consist of non-medical rating specialists or claims evaluators. Upon receipt of a benefit application, the veteran is referred to a VA medical center or clinic for an exam. Then based on the medical assessments and other additional information available to the evaluator, the claimed conditions are determined to be service-connected or non-service-connected. In addition, each disability is classified according to diagnostic codes in the rating schedule and degree of severity.

Several studies in the literature recommend revising the rating schedule periodically citing reasons such as the advances made in the medical field, changes in labor market, and changes in people's perception of the term "disabled." Many studies including those examining the rating process of other disability programs (e.g., state workers' compensation and SSDI) report that ratings assigned are not consistent, predictable, and uniform across rating specialists both in VA and other disability programs. Implementing procedures to test the reliability of the rating process as well as training the examiners on a continual basis is important in order to improve the rating process.

It is noteworthy that the findings of studies conducted years ago (e.g., Bradley Commission, 1956) are similar to those of more recent studies (Holmes, 2002). They all report that some of the disability ratings are not in accord with current medical principles. Classification of diseases needs to be updated with rapidly changing current medical standards. VA has updated the criteria used in the Schedule of Rating Disabilities since 1989 for 16 body systems.

Disability criteria used by disability programs is another area that needs to be updated to reflect recent medical advances. In determining who is disabled, some disability programs limit the role of treatment of medical conditions due to the regulatory and statutory design of the programs.

Lost Earnings Capacity of Disabled Persons

The science-based literature focuses mostly on workers' compensation programs, which provide benefits to workers for on-the-job injuries and work-related diseases. Benefits include wage replacement, medical benefits, and vocational rehabilitation. Loss of earnings benefits are paid to disabled workers who do not return to work or who return at a wage level less than that prior to the disability. State disability benefits may be determined solely by the impairment rating, loss of earnings, or a combination of both factors. Methods actually used vary by state and may include economic factors in addition to the physician's determination of impairment.

Research has been conducted and is available on disability benefits, earnings prior to onset of disability, and demographic information (age, sex, education level, income level, etc.) for workers receiving workmen's compensation. The literature generally indicates that the adequacy and equity of benefits for permanently disabled workers is a major challenge in workers' compensation.

By way of example, one study (Durbin and Kish, 1998) compared the medical impairment ratings provided by the examining physician to final disability ratings that determine the award amount in over 4,000 workers compensation claims filed in ten states. The study found a significant correlation between the initial impairment rating and the final disability rating. This study also pointed to the presence of other factors besides the physician impairment rating that affect determination of final disability. This was strongly corroborated by using sophisticated multivariate analysis which found that the same injuries when measured by a physician impairment rating may be very different from final disability ratings as a result of factors unrelated to the injury or d isability such as age, educational level, or the predicted future loss of earnings. More specifically, the key findings include:

- Disputed claims give rise to higher disability awards.
- A final disability rating that is based on loss of earnings rather than physical impairment results in a significantly higher final rating than one based solely on physical impairment.
- Disability ratings vary significantly across states even after controlling for severity of injury, other demographic characteristics, and the impairment rating.

Similar research has not been done on veterans receiving VA disability compensation. This lack of information hinders examination of the issue of whether a single compensation schedule for all veterans is economically appropriate. Congress has not differentiated veterans' earnings losses based on factors unrelated to the circumstances of the loss itself.

Another consideration is that most other disability compensation lasts for a limited period of time, during which the disabled worker is presumed to mitigate the loss though rehabilitation, retraining, and the acquisition of new marketable skills. The fact that veterans' disability compensation is generally not limited in time further complicates the

issue of how to determine how much compensation is warranted, from an economic standpoint.

Employment-Related Issues

Recent research has shown that for the nearly 10 percent of the working age population classified as disabled, the strong economic growth of the 1990s did not produce increased rates of employment or increases in income. This, in the authors' view, is the result of the various impediments faced by disabled people. In particular, limited employment opportunities and limited professional and geographic mobility both contribute to the effect of restricting earnings growth among disabled persons.

In recent decades, the labor force and employment trends for the disabled population have not been consistent with the trends of the non-disabled population. The labor force participation rate of the non-disabled population has increased from 1970 to 2000, whereas it has decreased slightly for the disabled population. In addition, the employment rate of the non-disabled population has not drastically changed from 1990 to 2000 whereas the employment rate of the disabled has significantly decreased over the same period. Several theories have been drawn to explain the recent decline in the employment rate of the disabled, including lack of effectiveness of the ADA, the reclassification of many labor force non-participants as disabled and relaxation of eligibility requirements in various disability compensation programs.

Studies show that the lost earnings capacity of disabled workers has fluctuated throughout history. In recent decades, labor market earnings of disabled workers have had periods of both increases as well as decreases. However, disabled workers have consistently reported less income than non-disabled workers. In general, the literature indicates that disabled persons suffer lost earnings capacity and that this varies with the individual's age, education, and socioeconomic characteristics.

Disability compensation programs may produce unintended consequences. Disability compensation programs could provide disincentive to work by supplying beneficiaries with benefits such as heath care that some employers would not be willing to offer. Thus, rules designed to protect disabled workers may instead limit employment opportunities.

Disabled individuals at work face other constraints that are barriers to productive employment. Research shows that disabled people are offered lower wages than non-disabled people, suggesting discrimination against the disabled. Supervisors can discriminate as one study (Kim, 1996) found that disabled Federal employees have less chance of getting promoted than their fellow non-disabled co-workers. Research also shows that sometimes the emotional burden of being disabled in a predominantly non-disabled environment can outweigh the financial gain of holding the job.

Studies show that effective vocational rehabilitation can be a powerful federally funded tool that facilitates a veteran's re-entry into the work force. New approaches have improved the efficiency of vocational rehabilitation programs. In 2003, 23,996 veterans initiated VA's Vocational Rehabilitation and Employment Service, of which 39.8 percent successfully completed the program for the first time. This program is an ongoing benefit for service-connected veterans and it can be used multiple times. There is, however, a limit to the productivity of rehabilitation. Studies show that severely impaired individuals may not find rehabilitation helpful and that they may require specialized individual attention that is beyond that typically provided by vocational rehabilitation programs.

Technological improvements have also yielded success in employing disabled individuals. Studies show that technology has advanced to a point where many disabled people's adaptive capacity has greatly improved. More firms can afford the new technology as the cost of purchasing state of the art innovations have declined. In addition, firms have several avenues for financial support such as federal grants and tax incentives in order to afford the technology required to hire disabled employees.

Other Disability Compensation Programs

In comparing VA's Disability Compensation Program with other programs, we found that the VA Compensation Program is similar in some ways and different in others. VA's program is similar to the Federal Workers' Compensation (FECA), Office of Personnel Management's (OPM) Federal Disability Retirement Benefits, Social Security Disability Insurance (SSDI), and Supplemental Security Income (SSI) programs in that they all provide cash benefits to recipients and survivor benefits.

The VA Compensation Program differs from the Federal Workers' Compensation program in purpose and design, eligibility requirements, benefits determination, benefit amounts, and duration of receipt of benefits. The key differences between VA's and SSDI and SSI programs are as follows. Veterans can work and receive disability compensation under the VA's program but SSDI beneficiaries cannot work (based on the eligibility criteria). In addition, the VA program covers a wide variety of disability levels but SSDI program is only for severely disabled. The VA Compensation Program and the SSDI and SSI programs use different evaluation tools to assess disability. Even though compensation can provide overlapping coverage for some veterans, there is no requirement for integration or coordination between the VA Compensation Program and these other Federal programs, except that VA compensation payments are treated as income when eligibility for SSI benefits is determined.

The amount of compensation payable to disabled individuals differs across disability programs. FECA determines the compensation amount based on a percentage of the actual wages lost, whereas SSDI uses earnings during the individual's work history.

In the OPM program wage loss or benefit amount is based on employee's age, length of service, and high 3-average salary. The military disability retirement program provides cash benefits to active duty servicemembers who become physically unfit to perform duties required of their grade, office, rank, or rating, and their survivors. The amount of

cash benefits paid by the military disability program is based on military pay combined with degree of disability and length of service.

In state workers' compensation programs there is no uniform procedure across states for rating processes or determining compensation amounts. Some states provide lost wages until the employee returns to work while others base payments on the impairment rating given to the employee. Research has found that some state workers' compensation programs have severe limitations. For example, California's state system only compensates 40 percent of wages prior to the onset of the disability. In addition, one of the researchers in the literature found that the correlation coefficient between the impairment rating and the final disability rating in state systems is only .58 across a sample of claims.

Potential Research

Several areas of potential research are identified for consideration by the Department of Veterans Affairs and are listed here by research issue or question. The order of the areas of potential research discussed below reflects the Study Team's approximate recommended order of priority.

1. How well does the VA Disability Compensation Program meet Congressional intent of replacing average impairment to lost earnings capacity of veterans with service-connected disabilities?

As a first priority, research should be conducted to determine the extent to which the Disability Compensation Program is meeting the goal of replacing lost earnings capacity of veterans with service-connected disabilities. Data on the earnings of disabled and non-disabled veterans can be obtained through matches with Social Security Administration earnings records or Internal Revenue Service records. This approach would yield accurate earnings data without relying on survey data. This is particularly advantageous if a large number of disabled veterans were to be surveyed in order to obtain statistical representation at individual diagnostic categories.

The SSNs of participants in the VA disability program linked to certain diagnostic categories based on their own administrative records would need to be provided for the matches. Other kinds of data such as income from other sources or employment would not be required to address Research Issue 1. For a methodologically sound study, earnings data for a comparison group of non-disabled veterans should be drawn. Obtaining SSNs and other data discussed below (e.g., education and age) for the comparison group could be logistically challenging and expensive. This process may be very complex and challenging as the VBA data is limited in identifying veterans not receiving VA benefits. Consideration should be given to the question of whether any comparison group should contain veterans with nonservice-connected disabilities.

Respondents to VA's National Survey of Veterans were asked to provide their SSNs to VA at the end of the survey and to give their name and address for the purpose of being included in possible future VA studies. Veteran records with SSNs and who are not in the VA Disability Compensation Program or who are not service-connected disabled

can be extracted from the NSV database for an IRS or SSA match. This should be further investigated to identify the number of records with SSNs in the NSV file and whether they constitute a representative sample of non-disabled veterans.

The previous ECVARS study serves as a useful example in identifying several diagnostic categories to make comparisons of earnings of veterans with certain types of disabilities or conditions. Of course, the list of diagnostic categories would have to be updated since the ECVARS study was conducted many years ago. An important use of the analysis would be to guide the assignment of the appropriate disability rating level to different diagnostic categories. As in the ECVARS study, earnings comparisons between disabled and non-disabled veterans should be made for veterans in similar education and age categories. This would allow for the comparison of average earnings for veterans, yet still control for education and age differences.

This detailed type of earnings comparison should be made periodically by VA on an ongoing basis. Once necessary administrative and research procedures have been set up, it should become fairly routine to obtain and analyze comparative data from the Social Security Administration. Given the relatively rapid change in medical diagnostic categories, medical technology and care, rehabilitation, and other factors, analysis should be updated fairly often, say, at least every five years and possibly as often as every three years.

2. Does the program benefit help to improve quality of life due to service-connected disabilities?

Consideration should be given to conducting a survey of veterans receiving the disability compensation benefit in order to gain insights into the veteran's circumstances and perception of loss of quality of life affected by service-connected disability and how well VA's Disability Compensation Program helps to improve quality of life. The survey would obtain data on veteran beneficiaries' perceptions of the adequacy and equity of not only the VA Disability Compensation Program benefit but also other VA benefits in the context of quality of life. Survey questions should include the actual circumstances of the person's life, such as mobility, activities of daily living, and social interaction.

Consideration should be given to what would constitute a suitable comparison group. One comparison group, for example, might include veterans without disabilities. NSV data is one source for identifying veterans without disabilities. Another might be individuals in the general population with disabilities matched on the basis of age, education, occupation, and severity of disability.

3. Does VA's measure of impairment, disability criteria, and the rating schedule need to be reexamined?

VA has been updating the criteria used in the Schedule of Rating Disabilities since 1989 for 16 body systems. As the process is long, once updating one body system is completed it is likely that another revision will not be made for many years for the same body system. Several studies in the literature recommend revising the rating schedule

periodically citing reasons such as the advances made in the medical field, changes in labor market, and changes in people's perception of the term "disabled." Many studies including those examining the rating process of other disability programs (e.g., state workers' compensation and SSDI) report that ratings assigned are not consistent, predictable, and uniform across rating specialists both in VA and other disability programs. Training examiners periodically and implementing procedures that test the reliability of rating processes are important factors in maintaining program quality.

Disability criteria used by disability programs is another area that should be updated to reflect recent medical advances. In determining who is disabled, some disability programs limit the role of treatment of medical conditions due to the regulatory and statutory design of the programs.

A study examining other disability systems on the issues above is needed. Collaboration with other Federal and state government agencies, private insurers, and medical associations in a study would yield an improved rating schedule for VA. Revising and updating the body systems is needed on an ongoing basis to reflect the most recent medical advances.

4. Are the disability compensation and other VA programs for disabled veterans adequate for incurring the risks to life and health inherent in military service?

Inherent risks to life and health associated with military service require commensurate compensation and benefits to offset the risks. The quality and strength of the military requires pay comparability with the civilian sector. Otherwise, recruitment and retention are adversely affected.

Research is needed on the components of pay comparability that provide compensation for work-related illnesses and injury. Previous research by Cullinane (1992) on the comparability of the benefit value of military/VA disability benefit programs and civilian workers' compensation programs serves as an example. In addition to workers' compensation programs, comparisons can also be made with the compensation and benefits afforded for certain dangerous non-military occupations such as fire fighting and law enforcement.

Survey data on the attitudes and perceptions about the adequacy of compensation and benefits in the context of the risks of military service could be another source of information. This issue pertains not only to veterans with service-connected disabilities but also to servicemembers on active duty, veterans without service-connected disabilities, and individuals considering a military career or job. VA and DoD should collaborate in efforts to conduct research on this issue.

5. Does the disability benefit affect the beneficiary's incentive to work?

The legislation does not require the disabled veteran to actively strive to be employed, nor does it require the disability benefit to be offset by employment earnings (in contrast to VA's Pension Program). However, employment of disabled veterans is an issue of interest to numerous stakeholders, including Congressional members, OMB, GAO, and

the public. A main goal of the Americans with Disabilities Act is to promote the employment of people with disabilities. Employment not only affords earnings but respect, independence, and social identity.

In addition, it may be relevant to obtaining a valid answer to Research Issue 1 listed above. Research Issue 1 involves an examination of earnings *capacity*, as opposed to only actual earnings. It is possible that some disabled individuals do not work or work less when they are capable of working because they receive income from non-earnings sources such as VA disability benefits, other financial support programs, or spousal income. In this case, the comparison of earnings capacity between disabled and non-disabled veterans is not as straightforward as comparing actual earnings.

It is outside the scope of work to state any policy recommendations in this study. Hence, identification of potential research on this topic is not a recommendation to adjust benefits according to work behavior; it is a suggestion to inform discussion among stakeholders.

In order to examine work behavior of veterans with varying degrees of disability, it may be necessary to obtain such information from a VA-sponsored survey of disabled and non-disabled veterans. In addition or alternatively, secondary data sources such as CPS, SIPP, or Census could be used to analyze the labor force participation of disabled veterans and the factors that affect work force participation. A primary limitation of secondary sources is that they provide little or no information on diagnostic category. However, they could still serve as a useful supplemental source of information, particularly since they offer considerable information on work behavior and characteristics of the individual.

6. How well or to what extent does the disability benefit contribute to beneficiary's total income?

The legislation does not require an income means test to be eligible for disability benefits for service-connected disabilities. However, in the interest of better understanding the outcome of the program, research could be conducted to study the effect that disability compensation has on the veteran's income. This analysis should be done in the context of the veteran's total income and other benefits or services afforded by VA for service-connected disabled veterans. Does the program provide income needed to maintain a basic standard of living? Does it help to provide long-term financial stability? Is there coordination with other disability programs? How does the income of veterans with service-connected disabilities compare to non-veterans with similar disabilities? Can any comparison be made of data before and after receipt of the disability benefit?

In order to investigate these kinds of questions, it would be necessary to conduct a survey of program beneficiaries. Since data besides earnings data are required, relying on data from SSA will not be sufficient. However, it would not be necessary to draw large samples to obtain representation at individual diagnostic categories, as is required for Research Issue 1 above.

7. The legislation requires that the disability benefit be based only on loss of average earnings capacity, not on loss of individual earnings capacity. Should Congress reconsider this issue?

Legislation that requires that the disability benefit be based only on loss of *average* earnings capacity dates back to the early part of the twentieth century when manual labor was the norm in the work force and the military had little variation in occupations. Today's military is advanced technologically and has a diverse and wide range of occupations. Reservists play a big role in today's military (for example, their role in Iraq is critical). If reservists become disabled, they may find themselves drawing only a fraction of their civilian income, in comparison to years past where active duty service members did not have well-established income levels.

In order to address this question, data would be required on how much individual variation in loss of earnings capacity there is at each disability rating level. Is there wide variation in how well disability compensation offsets earnings capacity loss for different disabled veterans (particularly for activated reservists and regular military)? Statistical analysis could be conducted to determine which factors relate to individual variation such as age, occupation, or time period that the disability first occurred. This information would then be synthesized with analysis of financial needs among individuals and the perceptions of stakeholders.

8. How does rehabilitation affect earnings capacity? What coordination, if any, should there be between the disability benefit program and rehabilitation?

More information is needed on the connection between rehabilitation and earnings capacity. Very little research, to date, exists on this subject, particularly for disabled veterans. This research would require data on earnings, rehabilitation services provided, and the characteristics and disabilities of the individuals receiving the rehabilitation services. Statistical analysis of the relationship between earnings and rehabilitation services and other variables would be conducted to inform decisions of policymakers.

9. Should mentally disabled individuals be identified separately from physically disabled people?

Further research into the employment capacity of mentally disabled individuals should be conducted. The shift in the job market from physically demanding labor to more mentally challenging work may favor physically disabled people re-entering the work force. Advancements in technology also accommodate physically disabled individuals. Further analysis could be conducted to understand how these two advancements in the employment of the disabled focus on physically handicapped individuals as compared to mentally disabled individuals. There is a limited amount of research on technological innovations for the mentally disabled compared to the substantial amount for the physically disabled. Analysis could be conducted to address whether the changing job market is equally advantageous to a mentally disabled individual relative to physically

disabled individuals. Analysis could also assess the possible gain in special rehabilitation programs for mentally disabled individuals.

1. INTRODUCTION

This report provides a comprehensive review of key program literature and other documents relevant to the U.S. Department of Veterans Affairs (VA) Disability Compensation Program, covering the period from the Vietnam War to present. The primary purpose of this report is to review data sources, methodologies, results, and conclusions of previous studies in preparation for the work with the Commission on Disability Compensation. The review provides a basis for identifying where additional research is needed, includes comparisons of the VA Program to other Federal, state, and private programs, and also identifies national disability trends and patterns. Several areas of potential research are identified in the report for consideration by the Department of Veterans Affairs. No policy recommendations are made. In addition, this review focuses on studies that address the effectiveness of the VA Disability Compensation Program but not the efficiency of the program.

Study methods, data relevance or quality, statistical samples, and sampling methods used for key documents are discussed under each topical area. Major documents identified for this study are critiqued on validity, reliability, and sampling under each relevant topical area. A single document being reviewed may address more than one topic in the report and therefore may be critiqued or cited throughout the report. Science-based literature is reviewed as it pertains to topics relevant to this study. Economic Systems Inc. (ESI) was careful to ensure that there was no bias in the selection of literature documents.

Section 2 of this report summarizes the background on legislative intent and reviews possible goals and outcomes relating to the Disability Program. Section 3 provides national trends on disability, eligibility requirements for VA Disability Compensation Program, presumptive conditions, and characteristics of VA disability claimants. Section 4 reviews studies that addressed the adequacy of VA disability compensation for replacing lost earnings. Only a few studies have addressed this particular outcome. Section 4 also reviews studies that relate to the impact of the program on the individual beneficiary, and the disability benefit as part of the total readjustment package. Section 5 provides more background and detailed information pertaining to the rating schedule. Section 6 reviews the literature on the lost earnings capacity of disabled persons in the general population, the relationship between disability impairment, lost earnings, and disability benefits, and the methods used for analysis. Section 7 looks at other employment-related issues, including disincentives to work, barriers to productive employment, coordination with vocational programs, labor force trends, and technological progress. Section 8 describes other disability programs.

We also refer the reader to the Study Team's companion report, *Legislative History of the VA Disability Compensation Program*, which provides an extensive review and synthesis of the legislative background.

2. GOALS AND OUTCOMES

Section 2 provides a brief overview of Congressional intent for the VA Disability Program (based on the Study Team's contemporaneous report, *Legislative History of the VA Disability Compensation Program*). This section also reviews possible outcomes for the disability program and, for the sake of comparison, goals and outcomes of other VA benefit programs. In a comprehensive evaluation of the disability program, it would be important to focus on the essential goals of the program and outcome measures that reflect how well the goals are being met.

Congressional Intent for VA Disability Compensation

The Study Team reviewed the legislation on VA's Disability Compensation Program for Congressional intent in order to identify the goals for this program. A range of goals could include:

- Compensate veterans for average loss of earnings capacity due to service-connected disability
- Compensate veterans for loss of quality of life due to service-connected disability
- Assure potential recruits and servicemembers of compensation for the risk inherent in military service, thereby providing an incentive for recruitment and retention.

As reported by the Study Team in its report on the legislation, the most dominant theme in Congressional intent, dating back to the World War I era, is that VA's Disability Compensation Program is intended to provide compensation for impairments of earnings capacity. However, this impairment is not based on the disabled veteran's individual impairment of earnings capacity but on "average" capacity (38 U.S.C. 1110 & 1155). The legislation does not specifically define "average." The legislation makes no distinction between officer and enlisted capacity for earnings. It does not provide guidance on tailoring compensation benefits to specific occupations that the disabled veteran had been engaged in during military service or engaged in as a civilian. The Disability Compensation Program for veterans does not require the disabled veteran to actively strive to be employed; nor does the program offset employment earnings against the disability compensation benefit.

Another factor motivating Congressional intent is quality of life. Although the legislation does not explicitly state that the intent of the disability program is to compensate for reduction in quality of life due to service-connected disability, this factor is evident in that Congress has set forth certain presumptions of eligibility for disability compensation and additional compensation for certain disability conditions that reflect a concern for loss of quality life. The law, for example, provides additional compensation for "loss of physical integrity" such as loss of a hand, foot, or eye. Schedules L to S in 38 U.S.C. 1114 provide additional compensation for veterans with 100% service-connected disability whose disabilities present additional disability or burdens (such as blindness or

housebound status). Congressional Hearing and Committee reports (see the Study Team's companion report, *Legislative History of the VA Disability Compensation Program*) support this as well.

The legislation does not explicitly state that intent of the disability program is to provide incentive value for recruitment and retention. However, during wartime periods, Congress has provided greater benefits or liberalized rules for eligibility, reflecting the intention of attaining sufficient recruitment and retention. Also, Congress has legislated benefits for veterans using the phrase "in gratitude of service rendered for a grateful Nation," indicating that benefits are provided for a variety of different reasons.

Goals and Outcomes for VA Benefit Programs

Outcomes typically are measured as fulfillment of the intended impact on the target population. This contrasts against "output" goals that measure the production efficiency of the program such as the timeliness and accuracy of claims processing. The Office of Management and Budget's (OMB) Program Assessment Rating Tool (PART) report on the Disability Compensation Program states that VA does not have published program outcome goals that are based on Congressional intent (Office of Management and Budget [OMB], 2004). Furthermore, according to the OMB PART report: "The impact of providing payments to veterans is not known because no objective study has been conducted to determine the percentage of income that this program replaces or whether the monthly benefit amount is appropriate."

An evaluation of four VA compensation and pension programs (U.S. Department of Veterans Affairs [VA], 1983) reported that VA's Compensation and Pension Service established the principal goals for each program and that VA's General Counsel reviewed the goals and found them to be compatible with legislative intent. The evaluation stated:

> *The major goal of the Service-Connected Disability Compensation Program is to afford financial assistance in a responsible manner to veterans with service-connected disabilities to compensate them for the impairment of earning power resulting from such disabilities, based on the average impairment of earning capacity resulting from comparable injuries and disease entities in civil occupations* (VA, 1983, p. 11).

In recent years VA has published goals and outcomes for most of its benefit programs but it has not promulgated specific goals or outcomes for the VA Disability Compensation Program. The Study Team, with its previous study of goals and outcomes for several VA benefit programs and in its legislative history of the VA Disability Compensation Program, refers the reader to the following examples of outcomes to illustrate plausible outcomes for the VA Disability Compensation Program (these outcomes are *not* recommendations, only illustrations):

- Outcome 1: The VA Disability Compensation Program makes payments to disabled veterans that offset the average loss of earning capacity resulting from service-connected disability or disease.

- Outcome 2: Disability compensation recognizes veterans' loss of quality of life.

- Outcome 3: Servicemembers and veterans perceive that the VA Disability Compensation Program adequately compensates them for service-connected disability; hence, the Program, as part of the overall compensation package for serving in the military, helps to maintain incentive value for recruitment and retention.

To provide additional context for goals and outcomes, we consider the stated goals and outcomes for related VA benefit programs. Another program for disabled veterans is the Service-Disabled Veterans Insurance (SDVI), enacted by the Insurance Act of 1951 on April 25, 1951 (Pub. L. No. 82-23). This program provides veterans with service-connected disabilities the opportunity to purchase life insurance at standard premium rates paid by individuals without disabilities. The legislative history for SDVI indicates that Congress' intent was that veterans should not be penalized in obtaining life insurance coverage on the basis of disabilities incurred during uniformed service. The approach with SDVI was to put the disabled and non-disabled veterans on the same footing regarding coverage levels and premiums. Table 1 below exhibits the principle goal and outcome stated in a previous evaluation study of the SDVI program.

Table 1. SDVI Program Outcomes, Goal, and Measures

Outcome	Goal	Measure
Provide veterans who are advised their disabilities are service-connected with the opportunity to obtain life insurance at standard premium rates without regard to their service-connected impairments for a reasonable time period following establishment of a service-connected disability.	Parity with the options available to healthy veterans of similar ages to purchase reasonable amounts of life insurance in the individual market at any time and at competitive rates and with comparable policy features.	Compare life insurance coverage amounts and premium levels available under the SDVI program with the average insurance amounts and premiums purchased by healthy individuals in the private insurance market.

Source: (VA, 2001)

Another comparison can be made with the VA Pension program. The VA Pension program is a need-based program for veterans with non-service-connected disabilities. Congressional intent for VA's Pension program is to assure a level of income above the minimum subsistence level allowing wartime veterans to live their lives in dignity and not to have to turn to welfare assistance. Table 2 below lists the VA Pension program

financial security outcomes stated here are not explicit objectives of the VA Disability Compensation Program.

Table 2. VA Disability Pension Program Outcomes

Access Veterans and their families get the information and help they need to access, understand, and participate in the Pension Program and related health care options.
Income VA Pension Program provides entitled wartime veterans and survivors the income they need to afford the basic necessities for themselves and their families.
Basic Security Pensioners and their families can rely on the financial continuity and stability of VA Pension Program in time of need.
Dignity VA pensioners are accorded the dignity and respect earned through the veteran's service to our Nation during wartime.

Source: (VA, 2003)

3. TRENDS IN NATIONAL DISABILITY AND VA DISABILITY COMPENSATION PROGRAM

This section provides an overview of trends in national disability statistics, and eligibility requirements of the U.S. Department of Veterans Affairs (VA) Program. It also includes presumptive conditions for injuries or illnesses in which VA presumes a relationship exists between service and the condition being claimed. Finally, characteristics of VA Disability Compensation Program beneficiaries found in the literature are presented.

National Disability

Numerous sources provide disability statistics but disability is not consistently defined. Each data source or survey may have a different objective and definition for *disability*. For example, Mashaw and Reno (1996) reports over 20 definitions of disability. Examples of different definitions of disability are as follows:

- Under the Americans with Disabilities Act (ADA) of 1990 (Pub. L. No. 101-336) a person with disability is defined as one "with a physical or mental condition that substantially limits a life activity, who has a record of such a condition, or who is regarded as having such a condition" (Social Security Advisory Board [SSAB], 2003).

- The Social Security Act of 1935 (Pub. L. No. 271) defines individuals as disabled "if they have an inability to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than 12 months" (SSAB, 2003).

- U.S. Bureau of the Census definition includes people over age 4 with a sensory, mental, physical, or self-care disability, people over age 15 with a disability affecting going outside the home, or people between 16-64 years old with an employment disability (Census, 2000).

- The Current Population Survey (CPS), providing labor market information for the Bureau of Labor Statistics (BLS), defines disability in terms of work limitation (U.S. Bureau of the Census, Current Population Survey [CPS], 2000).

- The National Health Interview Survey (NHIS), conducted by the National Center for Health Statistics (NCHS) defines disability in terms of limitations in a person's activities due to a health problem or impairment (LaPlante, 1996).

Further, disability statistics may not be comparable from one year to the next within the same data source. For example, data collection methods or the base population of "disabled" included in a data source may change over the years. NHIS is one source that went through significant changes in 1982 such that the disability statistics before 1982 are not directly comparable to those after 1982.

Each data source can provide a different rate for disability, depending on how disability is defined. According to the Census Bureau's Survey of Income and Program Participation (SIPP) data, in 1991-1992, the proportion of the U.S. population with disabilities was 19.4 percent (Bradsher, 1996). This number is higher than the 13.7 percent reported from the NHIS for the same time period (Kaye, LaPlante, Carlson, & Wenger, 1996). The reason lies in the difference in definition of disability between the two sources. SIPP's definition of disability is broader than NHIS' definition. SIPP's disability rate includes those with limitations in a functional or social activity, whereas NHIS rate includes those with limitations in activity due to chronic health conditions and impairments.

The 2001 National Survey of Veterans (NSV) showed that 13.9 percent of male veterans reported a service-related disability compared to 12.7 percent of female veterans (U.S. Department of Veterans Affairs [VA], 2001, Table 4-10). This statistic corresponds directly to the U.S. population as a whole in that there is a slightly higher percentage of disability for males. In the 2000 Census, 19.6 percent of males (aged 16-64) were classified as disabled compared with 17.6 percent females.

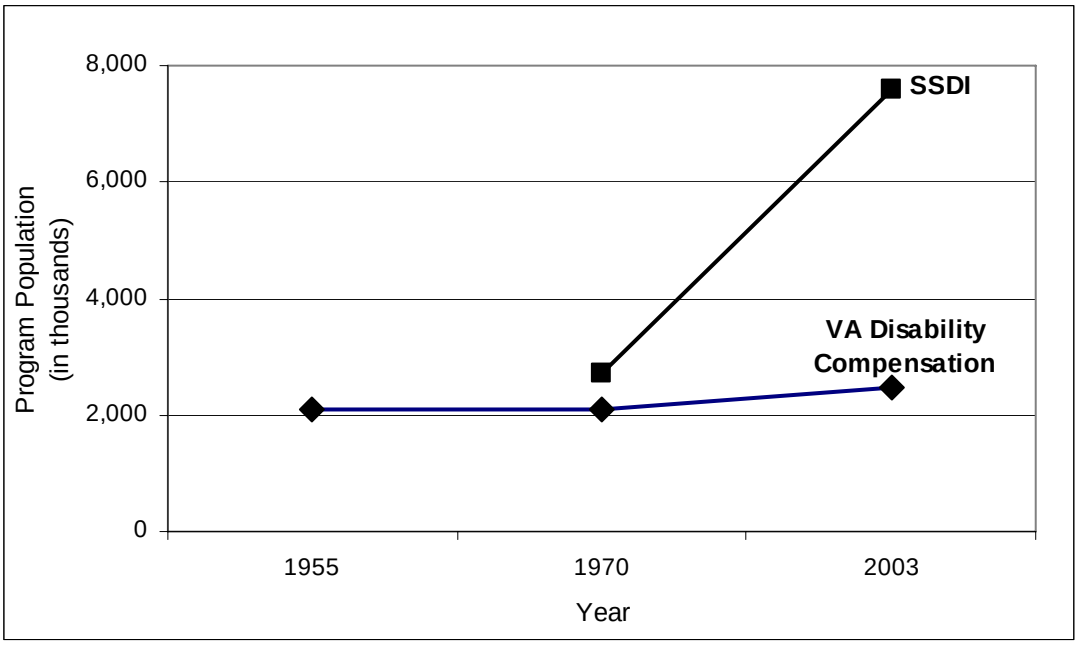
Most sources indicate that the number of disabled in the U.S. general population has been increasing as the U.S. population is aging. For example, the number of disabled workers and their dependents receiving Social Security Administration's (SSA) Social Security Disability Insurance (SSDI) program increased significantly from 2.7 million in 1970 to 7.6 million in 2003. This is important as SSDI has a restrictive definition of disability (i.e., only those workers who are unable to perform any substantial gainful activity are eligible).[1] Meanwhile, SSDI disability rates among the adult population (16 to 64 years old) have almost doubled from 2.2 percent in 1970 to 4.0 percent in 2003.

Figure 1 and Figure 2 compare the VA and SSDI programs in terms of the number of recipients and disability rates. The total number of veterans receiving disability compensation payments from VA has increased only slightly from 2.07 million in 1955 to 2.09 million in 1970 to 2.49 million in 2003. However, the percentage of veterans receiving VA disability compensation has risen from 7.6 percent in 1970 to 10.0 percent in 2003. Compared to the percent of U.S. population 16 to 64 years of age on SSDI rolls (4% in 2003), VA disability rate, in absolute terms, is higher but in terms of the rate of increase in disability rate from 1970 to 2003, it is the same as SSDI.

According to the 1990 Census, there were 12.8 million individuals (aged 16-64) with work related disability (i.e., limitation in a person's ability to work due to a chronic health condition or impairment). Slightly over one-half (51.5%) of them reported themselves severely disabled (LaPlante, 1993). There was a significant increase in both figures in the 2000 Census. Of the 21.3 million who reported to have a work related disability 65.8 percent claimed a severe disability (Census, 2000).

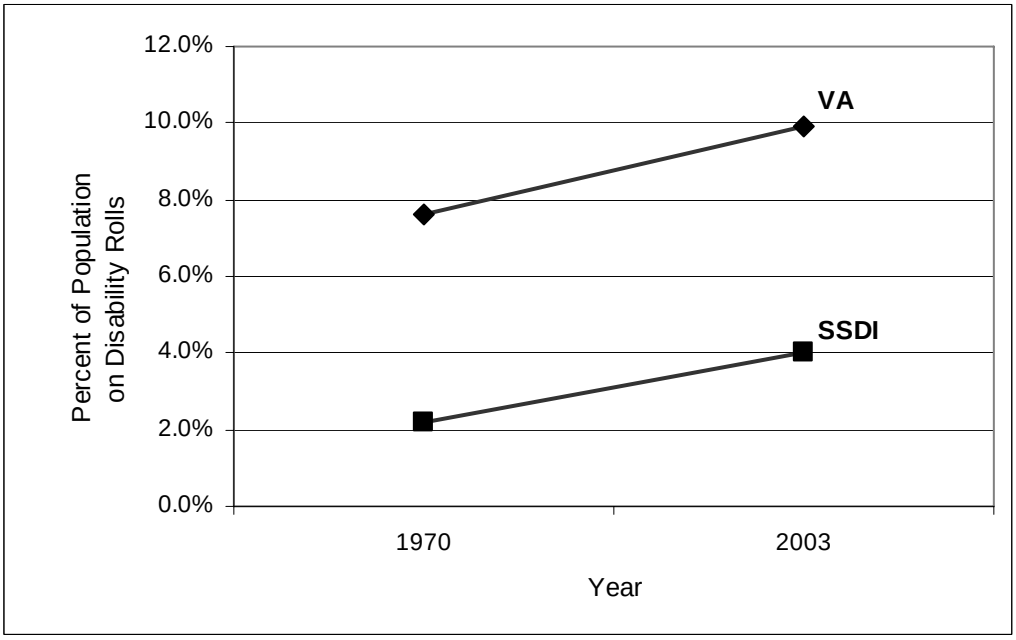
[1] SSDI, a disability program enacted in 1956, is available to regularly employed individuals who develop any medically determinable physical or mental impairment that can be expected to result in death or that has lasted or can be expected to last 12 months or longer (Congressional Budget Office, 2001). Other disability programs including SSDI are discussed in Section 8.

Figure 1. Number of VA Disability Compensation and SSDI Recipients



Source: (VA, 1979; VA, 1996; VA, 2003, June; & SSAB, 2003)

Figure 2. Disability Rates: VA vs. SSDI



Source: (VA, 1979; VA, 1996; VA, 2004, June; SSAB, 2003; & U.S. Bureau of the Census data.

According to the NHIS data the percentage of the population with limitations in activity due to chronic health conditions and impairments increased from 11.7 percent in 1970 to 14.4 percent in 1981. After 1981 the rate stayed at about 14 percent, and was still constant at 14 percent in 2002.

Part of the reason for the increase in the number of disabled individuals can be attributed to the change overtime in societal and individual perceptions of who is disabled (Collignon, 1997). A series of legislative actions taken to protect the disabled may have motivated more individuals to label themselves as disabled, thereby increasing the number of disabled individuals. Outreach efforts conducted by agencies such as SSA may increase public awareness of the disability programs (Apfel, 2000). Technological and social changes are other factors affecting the disability statistics (Rupp & Stapleton, 1998; Stapleton, 1995). Medical advances and innovations caused the survival rates of individuals in accidents and with diseases to live longer, which in turn added more numbers to the disabled population.

Some disability programs were rejuvenated over the years by adopting these changes and by modifying eligibility requirements and/or the definition of disability. For example, SSDI, a program originally intended for totally and permanently disabled people, went through many changes such as extending the eligibility to individuals younger than 50 and imposing a requirement of periodic disability review for continued eligibility.

There were three important and visible actions taken in the past 30 years to protect people with disabilities (U.S. Department of Justice, 2002):

- Rehabilitation Act of 1973 (Pub. L. No. 93-112)
- Americans with Disabilities Act (ADA) of 1990 (Pub. L. No. 101-336)
- Freedom Initiative of 2001 (Executive Order 13217)

ADA prohibits discrimination on the basis of disability in employment, State and local services, government, public accommodations, transportation, and telecommunications. ADA requires employers (with more than 15 employees) to make reasonable work place accommodations for disabled employees.

ADA's definition of disability is broader than most of the other sources. ADA's estimate of 43 million people with disabilities in 1990 is higher than NHIS's 33.8 million. LaPlante (1992) points out that NHIS does not include people living in institutions. When people with disabilities living in institutions are included, the number increases from 33.8 million to 36.1 million. This shows how careful the reader needs to be in comparing results from one source to the next, and more importantly, the broad level of societal disagreement as to what disability is and how it needs to be measured.

The intent of Congress in the ADA was to provide "equality of opportunity, full participation, independent living, and economic self-sufficiency" for individuals with disabilities. The ADA's goals are much broader than those of the Rehabilitation Act. The

goal of the 1973 Rehabilitation Act was to "promote the rehabilitation, employment, and independent living of people with disabilities."

The ADA does not specifically name all of the impairments considered to be disabling conditions. The ADA covers those with past impairment (e.g., mental illness and cancer) that limited major activities but who later recovered, those who have *difficulty* performing major activities (e.g., walking, breathing, hearing, speaking, seeing, learning, caring for oneself, working, and performing manual tasks), and those who are *regarded by others* as having an impairment limiting their major activities. The last part of the ADA coverage is to protect those who are perceived by others as disabled even though they may not have any impairment.

The New Freedom Initiative of 2001 was announced by President Bush as part of a nationwide effort to remove barriers to community living for people with disabilities. The New Freedom Initiative has the following goals "(a) increasing access to assistive and universally designed technologies, (b) expanding educational opportunities for Americans with disabilities, (c) promoting homeownership, (d) integrating Americans with disabilities into the workforce, (e) expanding transportation options, and (f) promoting full access to community life."

Eligibility Requirements

In this section we provide the eligibility requirements of the VA Disability Compensation Program. Comparison of the VA Program to other disability programs is provided in Section 8.

The basic eligibility requirements for VA's Disability Compensation Program are stated in 38 C.F.R. Part 3 Subpart A §3.4 as follows:[2]

> *(1) Basic entitlement for a veteran exists if the veteran is disabled as the result of a personal injury or disease (including aggravation of a condition existing prior to service) while in active service if the injury or the disease was incurred or aggravated in line of duty (38 U.S.C. 1110, 1131)*
>
> *(2) An additional amount of compensation may be payable for a spouse, child, and/or dependent parent where a veteran is entitled to compensation based on disability evaluated as 30 per centum or more disabling (38 U.S.C. 1115).*

Under the VA Disability Compensation Program, veterans receive compensation for combat, training, sports related injuries and diseases incurred or aggravated during service, but not for injuries that happen after separation from service or that have no connection to the military period of service. Also, disabilities resulting from willful misconduct are excluded. All preexisting medical conditions of servicemembers are noted during the entrance physicals when servicemembers enter the military service. If

[2] Regulations related to authority for schedule for rating disabilities are included in Section 4 of this report.

a preexisting condition increases in severity during service, then it is considered aggravated by service. If the increase in severity is caused by the natural progress of a disease or injury, then it is not considered aggravated by service.

The compensation amounts are based on degree of disability, which is measured from 0% to 100%, based on a rating schedule and the number of dependents (for those veterans with 30% or above disability rating). The ratings can be for a single disability or combined (multiple) disabilities. In addition, payments are based on legal provisions relative to special conditions such as loss of limbs, need for skilled care, or need for aid and attendance of a person. Those veterans with less than 10% disability rating generally do not receive any compensation but may be paid in certain situations involving special monthly compensation.

Several factors such as changes in labor workforce and advances in medicine may contribute to change in disability status over time. As one GAO study (U.S. General Accounting Office [GAO], 1989, July) indicates, unlike other programs such as SSDI and Supplemental Security Income (SSI), the legislation does not require VA to determine periodically whether veterans continue to meet the disability requirements of the Program, which change from time to time. However, where improvement is likely, Veterans Benefits Administration (VBA) as a standard operating procedure requests future reexamination.

Determination that a veteran is service-connected makes the veteran eligible for other benefits. Veterans rated at least 20% disabled are also eligible for vocational rehabilitation services if they have an employment handicap (10% if a severe employment handicap would result) (Pub. L. No. 102-568). Veterans with service-connected disabilities receive higher priority in receiving health care benefits than other veterans. In addition, veterans who have severe service-connected disabilities are eligible to apply for grants for adapting their houses.

Presumptive Conditions

Veterans are entitled to compensation for certain medical conditions that become manifest to a degree of 10% or more disability after they leave the military service, if there is a relationship between service and the condition being claimed (38 U.S.C. 1113). A presumptive condition is an injury or illness in which VA presumes a relationship exists between service and the condition being claimed. Veterans may receive compensation for these conditions if it is positively associated with their period of active duty. For example, the presumed period for certain chronic diseases (e.g., arthritis, diabetes) is 1 year after separation, whereas it is 7 years for multiple sclerosis. On the other hand, there is no limiting presumed period for any disease associated with being a prisoner of war (POW). For example, a POW veteran who is diagnosed with the beriberi disease at any time after separation from military will be considered a service-connected disabled veteran.

There are a number of “presumptions” relating to service-connection of disabilities, as follows (“President’s Commission” [Bradley], 1956, Vol. 2., p. 257):

- *Presumption of sound condition: Every person employed in the active military service is presumed to have been in sound condition when examined, accepted and enrolled for service except as to defects, infirmities, or disorders noted at the time of the examination, acceptance, and enrollment, or where clear and unmistakable evidence demonstrates that the injured or disease existed prior to acceptance and was not aggravated by such active military or naval service.*

- *Presumption of service-connection - Aggravation: A pre-existing injury or disease is presumed to have been aggravated by active military service, where there is an increase in disability during active service, unless there is a specific finding that the increase is due to the natural progress of the disease.*

- *Presumption of service-connection – Diseases manifest after discharge: Certain chronic and tropical diseases are presumed to be service-connected.*

- *Presumption of total disability: Total disability is said to exist when there is present any impairment of mind or body, which is sufficient to render it impossible for the average person to follow a substantially gainful occupation. Permanent total disability would exist when the impairment is reasonably certain to continue throughout the life of the disabled person.*

VA in conjunction with Congress will grant compensation for conditions that can be presumed to be service-connected under the doctrine of reasonable doubt in favor of the veteran. In cases where the legislation leaves benefit implementation details up to the discretion of VA, VA proposes regulations which are open to comment from the public and publishes final regulations. Congressional committees are consulted on regulations and review suggested legislation changes. To determine if a condition is service-connected, VA often calls upon outside sources, such as the National Academy of Sciences, the POW Advisory Committee and the Environmental Hazards Committee for expertise. Methods include but are not limited to epidemiological, clinical and population studies as well as specific patient level analysis from medical doctors. These techniques are used strictly to show a positive association between a condition and a service-related cause.

Sometimes a statistical study that shows a disproportionate number of veterans with a particular condition compared to the general population will be enough evidence for VA and Congress to deem the condition service-connected. For example, if after the Vietnam War there were statistical data that showed a larger percentage of veterans who had been exposed to a certain herbicide had developed Hodgkin's disease compared with that of the general population, VA and Congress may then conclude that the condition was a direct result of their period of service and award compensation. This being just an example, it is usually much more complex to determine the exact cause of a specific disease in veterans.

VA has classified the myriad of presumptive diseases into five independent categories as shown in Table 3. This table only applies to veterans and their dependents, such as children born with spina bifida, and other birth defects.

Over the years more presumptive diseases have been added to accommodate the growing number of conditions that have been accepted as service-connected. This may be a result of new diseases spawned from modern day warfare or simply because some diseases take decades to fully develop. Modern day medical science has allowed us to relate certain diseases to service, hence the need for adding presumptive conditions.

In addition to the expansion of diseases and conditions classified as presumptions, there has been a lengthening of the presumptive period for certain conditions. The presumptive period is the allowable post-active duty period that a veteran would have to develop a disease in order to be eligible for compensation. One example of this trend includes the presumptive period change from 3 to 7 years for veterans with multiple sclerosis (Pub. L. No. 87-645). Other examples include the change to a presumptive period of 40 years for some cancers developed after exposure to radiation in World War II as well as the lengthening of the period for disabilities associated with Persian Gulf War service until December 31, 2011.

It seems that there are two explanations for this continual trend of lengthening the presumptive period for diseases. One is that the need to compensate veterans who have service-connected disabilities necessitating broad and inclusive presumptive periods to avoid denying legitimate claims. The other reason is that organizations like the Institute of Medicine (IOM) are constantly learning the intricacies of specific diseases and finding positive associations between herbicide exposure and conditions which cause them to recommend the lengthening of presumptive periods in order to serve and treat injured veterans. In addition, the Congress has shown a willingness to legislate presumption based on science. The issue of presumptive conditions is dynamic for the VA and will continue to present medical and scientific challenges.

There are several key issues dealing with presumptive conditions that require discussion. The first is Agent Orange and other herbicides used in the Vietnam War and their lasting affects on exposed veterans. The second issue involves presumptive diseases that occurred during the Gulf War conflict. The last issue is presumptive conditions for veterans who are former prisoners of war.

Agent Orange is the most infamous of many different herbicide agents used in Vietnam during the period beginning on January 9, 1962, and ending May 7, 1975 (38 U.S.C. 1112). These chemicals were used to help destroy thick brush that was used by the enemy for cover. The U.S. Armed Forces used Agent Orange very liberally in Vietnam but years after began to notice its harmful affects. Several disabilities are now linked to Agent Orange that is affecting a large population of veterans and their offspring (38 U.S.C. 1116). Diseases caused by these herbicide agents, range from Type 2 diabetes to prostate cancer, with new cases of disabilities still developing more than 30 years after original exposure. The presumptive period has also been extended to demilitarized zone in Korea during the late 1960s.

Table 3. Presumptive Diseases

Chronic Diseases
Anemia; Arteriosclerosis; Arthritis; Atrophy; Brain hemorrhage; Brain thrombosis; Bronchiectasis; Calculi of the kidney, bladder, or gallbladder; Cardiovascular-renal disease including hypertension; Cirrhosis of the liver; Coccidioidomycosis; Diabetes mellitus; Encephalitis lethargica residuals; Endocarditis; Endocrinopathies; Epilepsies; Hansen's disease; Hodgkin's disease; Leukemia; Lupus erythematosus, systemic; Myasthenia gravis; Myelitis; Myocarditis; Nephritis; Other organic diseases of the nervous system; Osteitis deformans; Osteomalacia; Palsy, bulbar; Parlysis agitans; Psychoses; Purpura idiopathic, hemorrhagic; Raynaud's disease; Sarcoidosis; Scleroderma; Sclerosis, amyotrophic lateral; Sclerosis, multiple; Syringomyelia; Thromboangiitis obliterans (Buerger's disease); Tuberculosis, active; Tumors, malignant, or of the brain or spinal cord or peripheral nerves; Ulcers
Tropical Diseases
Amebiasis; Blackwater fever; Cholera; Dracontiasis; Dysentery; Filariasis; Leishmaniasis, including kala-azar; Loiasis; Malaria; Onchocerciasis; Oroya fever; Pinta; Plague; Schistosomiasis; Yaws; Yellow fever
Diseases Specific as to Former Prisoners of War
Avitaminosis; Beriberi; Chronic dysentery; Helminthiasis; Malnutrition; Pellagra; Any other nutritional deficiency; Psychosis; Any of the anxiety states; Dysthymic disorder (or depressive neurosis); Organic residuals of frostbite; Post-traumatic osteoarthritis; Irritable bowel syndrome; Peptic ulcer disease; Peripheral neuropathy; Cirrhosis of the liver; atherosclerotic heart disease and hypertensive vascular disease, including hypertensive heart disease; stroke
Diseases Specific to Radiation-exposed Veterans
Leukemia; Cancer of the thyroid; Cancer of the breast; Cancer of the pharynx; Cancer of the esophagus; Cancer of the stomach; Cancer of the small intestine; Cancer of the pancreas; Multiple myeloma; Lymphomas; Cancer of the bile ducts; Cancer of the gall bladder; Primary liver cancer; Cancer of the salivary gland; Cancer of the urinary tract; Bronchiolo-alveolar carcinoma; Cancer of the bone; Cancer of the brain; Cancer of the colon; Cancer of the lung; Cancer of the ovary
Diseases Associated with Service with the Persian Gulf War
An undiagnosed illness, which may be associated with the following chronic symptoms: fatigue, symptoms involving skin, headache, muscle pain, joint pain, neurological symptoms, neuropsychological symptoms, symptoms involving the respiratory system, sleep disturbances, gastrointestinal symptoms, cardiovascular symptoms, abnormal weight loss, or menstrual symptoms. Also included are the following medically unexplained chronic multisymptom illnesses that are defined by a cluster of signs or symptoms: Chronic Fatigue Syndrome, Fibromyalgia, and Irritable Bowel Syndrome
Disease Associated with Exposure to Certain Herbicide Agents
Chloracne; Type 2 diabetes; Hodgkin's disease; Chronic lymphocytic leukemia; Multiple myeloma; Non-Hodgkin's lymphoma; Acute and subacute peripheral neuropathy; Porphyria cutanea tarda; Prostate cancer; Respiratory cancers; Soft-tissue sarcoma, including: Adult fibrosarcoma, dermatofibrosarcoma protuberans, malignant fibrous histiocytoma, liposarcoma, leiomyosarcoma, epithelioid leiomysarcoma, rhabdomyosarcoma, ectomesenchymoma, angiosarcoma, proliferating angioendotheliomatosis, malignant glomus tumor, malignant hemangiopericytoma, synovial sarcoma, malignant giant cell tumor of tendon sheath, malignant schwannoma, malignant mesenchymoma, malignant granular cell tumor, alveolar soft part sarcoma, epithelioid sarcoma, clear cell sarcoma of tendons and aponeuroses, extraskeletal Ewing's sarcoma, congenital and infantile fibrosarcoma, malignant ganglioneuroma

Source: 38 C.F.R. 3.309; 38 C.F.R. Sections 1117 and 1118

Veterans of the Gulf War have reported disabilities stemming from an illness many refer to as “Gulf War Syndrome”. Symptoms range from memory loss to respiratory infection and vary in severity. Like Agent Orange the general claim is that these symptoms are a result of either chemical exposure or stress during military service. Biological, chemical, and environmental agents were all used during the Gulf War and could potentially be linked to such illnesses (Brown, 2001).

VA continues to use outside research to determine the validity of these claims. For example, IOM has several recent reports analyzing these two issues and the likelihood of a link between chemical exposure and veteran disability. Table 4 shows some examples of relevant IOM studies and their general conclusions.

Table 4. Institute of Medicine Reports

Report Title	Conclusions
Gulf War and Health: Updated Literature Review of Sarin (August 20, 2004).	There is not enough evidence to determine whether exposure to low doses of the chemical warfare agent sarin is associated with long-term health problems.
Veterans and Agent Orange: Length of Presumptive Period for Association Between Exposure and Respiratory Cancer (March 2, 2004).	There is no epidemiological data on which to determine an upper limit on the length of time after cessation of exposure to TCDD (chemical component of herbicides like Agent Orange) during which an increase in respiratory cancer is associated with that exposure.
Characterizing Exposure of Veterans to Agent Orange and Other Herbicides Used in Vietnam: Final Report (September 30, 2003).	A valid exposure reconstruction model for wartime herbicide exposures of U.S. veterans of Vietnam is feasible and therefore recommended that VA and other government agencies facilitate additional epidemiological studies of veterans by non-governmental organizations and independent researchers.
Gulf War and Health Volume II: Insecticides and Solvents (April 8, 2003).	The study found some evidence-although usually limited-to link specific long-term health outcomes with exposure to certain insecticides and solvents but in the majority of cases, there was not enough evidence to determine whether an association exists between exposure and certain health effects.
Veterans and Agent Orange: Update 2002 (January 23, 2003).	There is sufficient evidence of an association between exposure to herbicides sprayed during the Vietnam War and the risk for development of a specific form of leukemia - chronic lymphocytic leukemia (CLL) - in veterans.

Source: (IOM, 2003 & IOM, 2004)

There have also been some strategies to proactively prevent illnesses developing from exposure to such harmful agents. For example, DoD enacted a program in 1998 making it mandatory for all military personnel to be immunized with the anthrax vaccine. However, there were many concerns on the safety of this vaccine and whether it could potentially be related to the symptoms developed during the Gulf War. Dealing with this

issue, IOM released a report (Institute of Medicine [IOM], 2002) concluding, "the vaccine is acceptably safe and effective in protecting humans against anthrax. The vaccine should protect people against all known strains of anthrax bacteria as well as against any strains that might be created by potential terrorists or others." In addition to this, the report noted that the vaccine needed to be improved and there should be better surveillance efforts to detect side effects. Although this study did not find a positive association with veteran illness and this particular vaccine, the issue of inoculations is still of concern to VA. VA General Counsel has substantiated disabling injuries from vaccination as compensable for service-connection.

Veterans who are former POWs often have difficulty in trying to assimilate back into civilian life. Psychosocial readjustment coupled with a disability can be overwhelming. With this in mind, VA has recently changed the way it assesses presumptive claims by POWs. For example, POWs can be presumptively service-connected for the following diseases regardless of period of captivity (Veterans Benefit Administration, 2004):

- Psychosis
- Dysthymic disorder or depressive neurosis
- Post-traumatic osteoarthritis
- Any of the anxiety disorders
- Cold injury
- Stroke and complications
- Heart disease and complications

This approach has not always been used to assess disabilities of POWs. Immediately after World War II, many physicians treating POWs minimized classifying disabilities. "The dominant attitude of personnel conducting these exams was that since the war was over everything would be fine" (VA, 1980). However, veterans began developing disabilities years later after returning home. Similar to Agent Orange, the full effects of POW captivity are still unknown and both the list of diseases and presumptive periods will continue to grow as new cases and conditions emerge.

The Bradley Commission conducted a survey in 1955 of 153 medical specialists to help analyze the situation of presumptive conditions. The findings of this survey were fairly strict in evaluating how presumptive conditions were rated at the time. The results are summarized as follows:

- *Presumption of sound condition, on entry into the service:* The medical specialists were very critical of this presumption, noting that at the time new recruits were enlisted at an alarming rate. Therefore, it was nearly impossible to provide accurate medical exams to everyone, making the presumption that each soldier was entering active-duty of sound condition an unreliable claim.

- *Presumption of service-connected chronic diseases:* Medical specialists agreed that the list of chronic diseases at the time was not accurate. They noted that several diseases were probably caused by old age, not necessarily service. They also believed that some diseases on the list had little to do with service in the military and in fact would be developed regardless of active-duty. In addition to this, the specialists believed that more thorough medical exams should be given to soldiers after military service to better classify health status post active-duty. Overall they believed that the list of chronic diseases at the time needed to be completely resurveyed to more accurately reflect the most updated medical knowledge.

- *Presumption of service-connected Tuberculosis:* The results for this section were very critical. A majority (63 compared to 29) of the respondents believed that the 35 year old presumptive period of 4 years was entirely too long. They noted that advancement in treatment and diagnosing methods to support their theory.

- *Presumption of service-connected Psychoses:* For the most part the specialists (59 to 36) agreed that there should be presumptive periods for cases of psychoses but there was no decisive opinion as to the specific length of these periods. They also believed that several instances of psychoses, namely schizophrenia, would have developed regardless of military service.

- *Presumption of Tropical Diseases:* Most (92 out of 106) of respondents believed that there could be a presumption of service-connection for tropical diseases but they also believed that the list of tropical diseases was not necessary for this presumption. They believed that a diagnosis of a specific disease developed by a veteran serving in a foreign location was enough of a presumption, noting that if the veteran were at home he would not have developed the disease. The respondents also believed that by limiting the list of diseases to the classification of “tropical”, several foreign illnesses were being left out, namely Japanese hemorrhagic fever. In addition to this, the specialists agreed that the presumptive period of 1 year is equitable as an average and that each case should be determined on its own merits.

- *Presumption of Total Disability:* Again the majority (50 to 36) did not favor the current system for this presumption. Most respondents believed that the current system was too simplistic and did not have convincing medical significance. They believed that the idea of “total disability” was not accurate, noting that the loss of one hand and one foot did not make a veteran totally disabled for the rest of their life. The specialists recommended a complete resurvey of the idea of total disability based on social and economic factors.

The Bradley Commission report was critical of the VA Disability Compensation Program. One criticism was that the system for presumptive conditions was outdated and overly simplistic. The findings not only called for a change in methods but also demanded much stricter guidelines for rating presumptive conditions. In addition, the commission stated that medical principles should allow direct service-connection rather

than having to resort to presumptions in many instances. The analysis cited changes in medical knowledge and improving technology as reasons for updating the rating system. The report urged VA to completely change their policy of expansive presumptive periods to reflect the current situation of the medical world.

Much has changed in the nearly 50 years since the Bradley Commission's 1955 report. Recently, we observe a shift back to a much more expansive rating system for presumptive periods. The many new diseases that are lengthening the current presumptive periods support this change. Medical specialists of this era practice under the belief that we do not necessarily know the exact cause of certain diseases, nor how long it takes to develop them. Therefore, they reason that it is only fair to rate these conditions using expansive presumptive periods and under the doctrine of reasonable doubt in favor of the veterans.

In summary, the issue of awarding disability compensation to veterans with presumptive conditions, overall, is fairly complex. New cases of diseases and conditions develop at a fairly steady pace causing VA to constantly update the list of disabilities as well as the presumptive periods allowable for compensation claims. With this ever-changing situation, VA has leaned toward ruling with the doctrine of reasonable doubt in favor of the veteran.

Characteristics of Beneficiaries

The literature is sparse on demographic characteristics of VA Disability Compensation Program recipients. In this section we present statistics compiled from the 2001 NSV data, annual reports of the Secretary of Veterans Affairs for selected years, and some data received from VA officials. We summarize the characteristics of recipients as shown in Table 5 through Table 7:

- Most (94.0%) of the recipients are male.
- Almost 12 percent (11.5%) are African American and almost 2 percent (1.8%) are other minorities (i.e., Alaskan, Native American, Asian, Hawaiian)
- Almost 5 percent (4.7%) are Spanish, Latino, or Hispanic.
- Eighty percent (80.2%) are 45 years of age or older. The two largest age categories were 55-64 and 45-54 years of age with 24.3 percent and 21.7 percent, respectively.
- Almost one out of two (47.0%) recipients has less than 30% disability rating.
- Over one out of three (34.5%) recipients are from the Vietnam era, followed by the peacetime veterans (23%).

Table 5. Gender and Race Characteristics of Veterans Receiving VA Disability Compensation, 2001

Characteristic	Number	Percent
Gender		
Male	2,529,667	94.0%
Female	163,495	6.1%
Total	2,692,161	94.0%
Race		
Total One Race	2,458,126	91.3%
White	2,149,510	79.8%
African American	308,616	11.5%
Native American/ Alaska Native	25,160	0.9%
Native Hawaiian/ Other Pacific Islander	18,213	0.7%
Asian	6,716	0.2%
Total Two or More Races	84,363	3.1%
Unknown	99,584	3.7%
Total	2,692,161	100.0%
Spanish/Hispanic/Latino		
Yes	125,405	4.7%
No	2,554,126	94.9%
Unknown	12,630	0.5%
Total	2,692,161	100.0%

Source: (NSV, 2001)
Note: The total number of veterans receiving disability compensation benefits in 2001 from VBA Administrative data was 2,333,597.

Table 6. Age Distribution of Veterans Receiving VA Disability Compensation, September 2003

Age Group	Number	Percent
Under 25	17,575	0.7%
25-34	173,128	7.0%
35-44	300,290	12.1%
45-54	539,213	21.7%
55-64	603,418	24.3%
65-74	337,790	13.6%
75-84	419,548	16.9%
85 and Over	94,267	3.8%
Total	2,485,229	100.0%

Source: VA Office of Policy, Planning, and Preparedness (008A3)

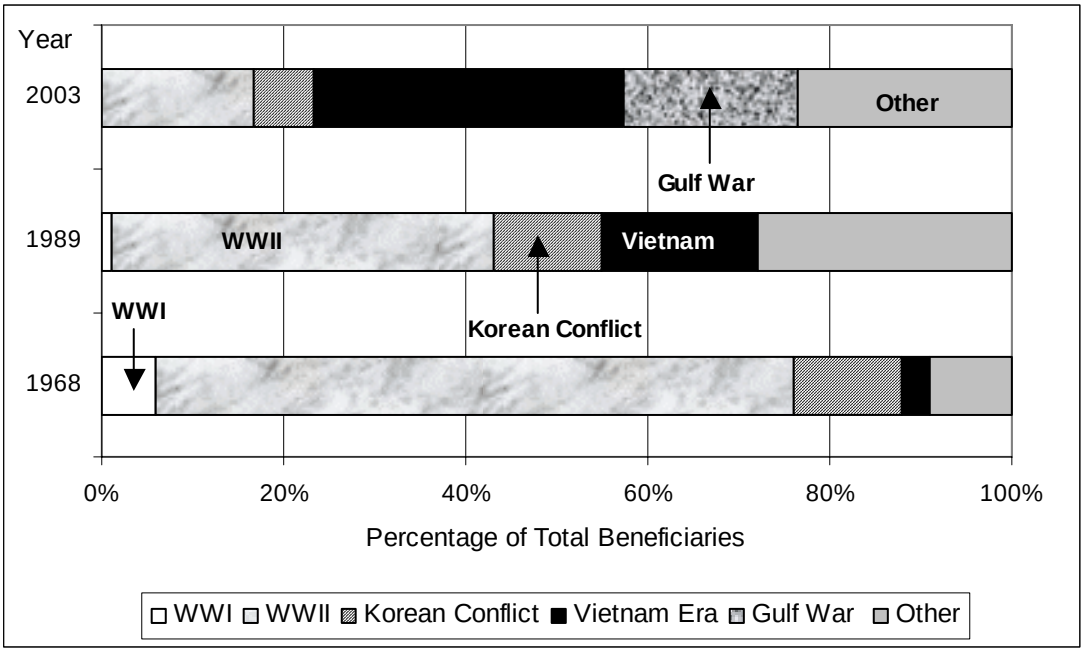
Table 7. Distribution of Veterans Receiving VA Disability Compensation by Degree of Disability and Period of Service, September 2004

Characteristics	Number	Percent
Combined Degree of Disability		
0%	15,313	0.6%
10-20%	1,185,402	46.4%
30-40%	558,306	21.8%
>= 50%	796,675	31.2%
Total	2,555,696	100.0%
Period of Service		
Gulf War	536,134	21.0%
Vietnam Era	883,092	34.6%
Korean Conflict	163,635	6.4%
World War II	385,493	15.1%
World War I	16	0.0%
Peacetime	587,326	23.0%
Total	2,555,696	100.0%

Source: (VA, 2004, September) VA Administrative Report, RCS 20-0223

The rest of this section provides some historical data on program recipients. Figure 3 below shows the relative number of program beneficiaries by period of service for time periods.

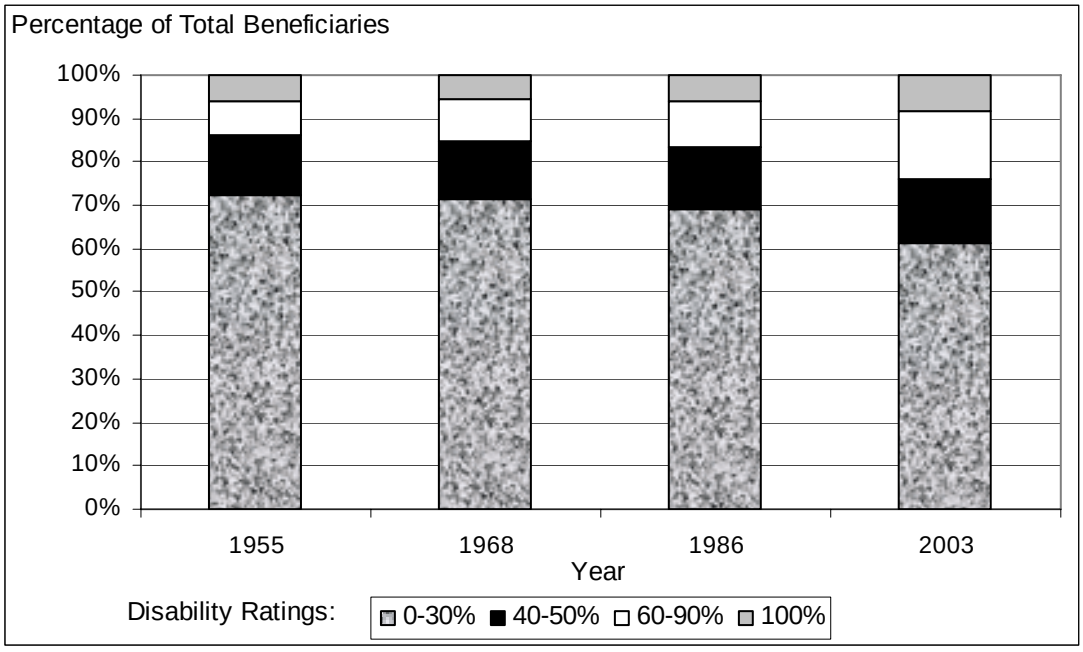
Figure 3. Percentage of Veterans in VA Disability Compensation Program by Period of Service



Source: (VA, 1979; VA, 1996; VA, 2004, June; & GAO, 1989)

Figure 4 below shows the distribution of veterans receiving disability compensation over time by their disability rating. There has been a shift in the proportion of veterans with low and high disability ratings. The percentage of veterans on VA's disability compensation rolls with disability rating less than 30% or below was 72.6 percent in 1955 and this percentage decreased to 61.3 percent in 2003. On the other hand, veterans with a disability rating 60% or above increased from 13.9 percent in 1955 to 24.0 percent in 2003.

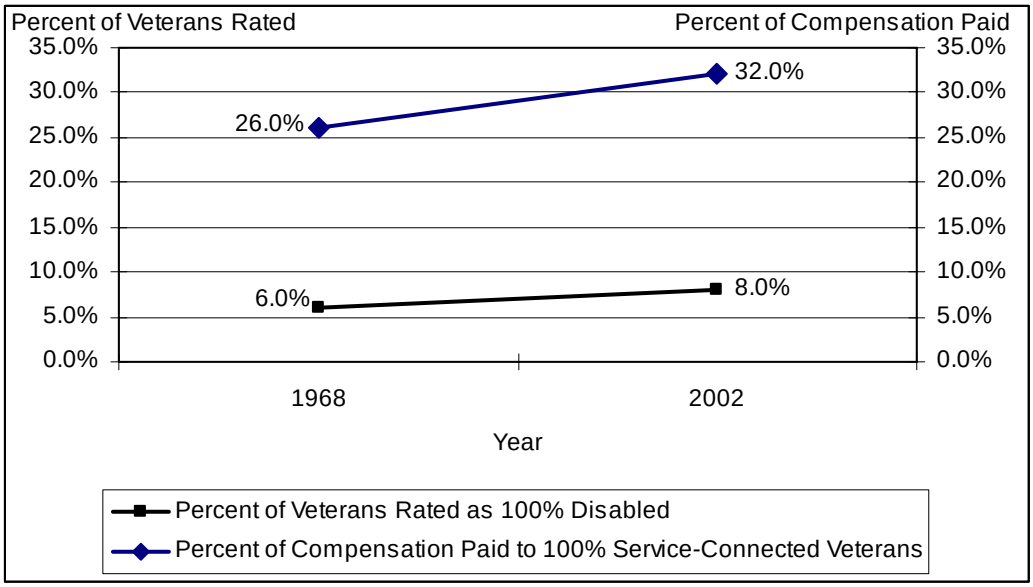
Figure 4. Distribution of Disability Compensation Beneficiaries by Rating Levels: 1955-2003



Source: (Bradley Commission, 1956; VA, 1979; VA, 1996; & VA, 2004, June)

In Figure 5, two facts are shown. First, the percentage of totally disabled veterans receiving a 100% disability rating increased from 6 percent in 1968 to 8 percent in 2002. Second, the percentage of compensation payments received by totally disabled veterans increased from 26 percent to 32 percent, respectively.

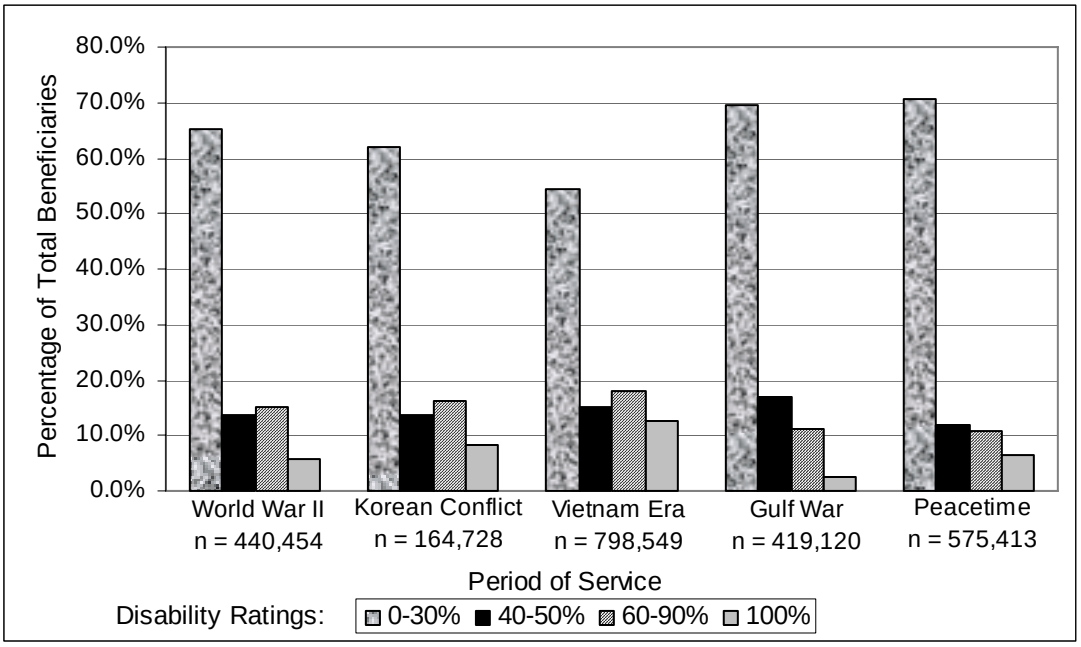
Figure 5. Number of Veterans and Benefits Paid: 100% Service-Connected Veterans



Source: (VA, 1979; VA, 2004, June; & GAO, 1989)

Figure 6 below illustrates the distribution of veterans by disability rating levels and period of service in 2002. The data show a fair amount of consistency in rating among veterans from different periods of service. There were a large proportion of veterans (55% to 71% range) with a rating 0 to 30% for each of the 5 periods. Totally disabled veterans ranged from 2.4 percent in Gulf War veterans to 12.5 percent for Vietnam veterans.

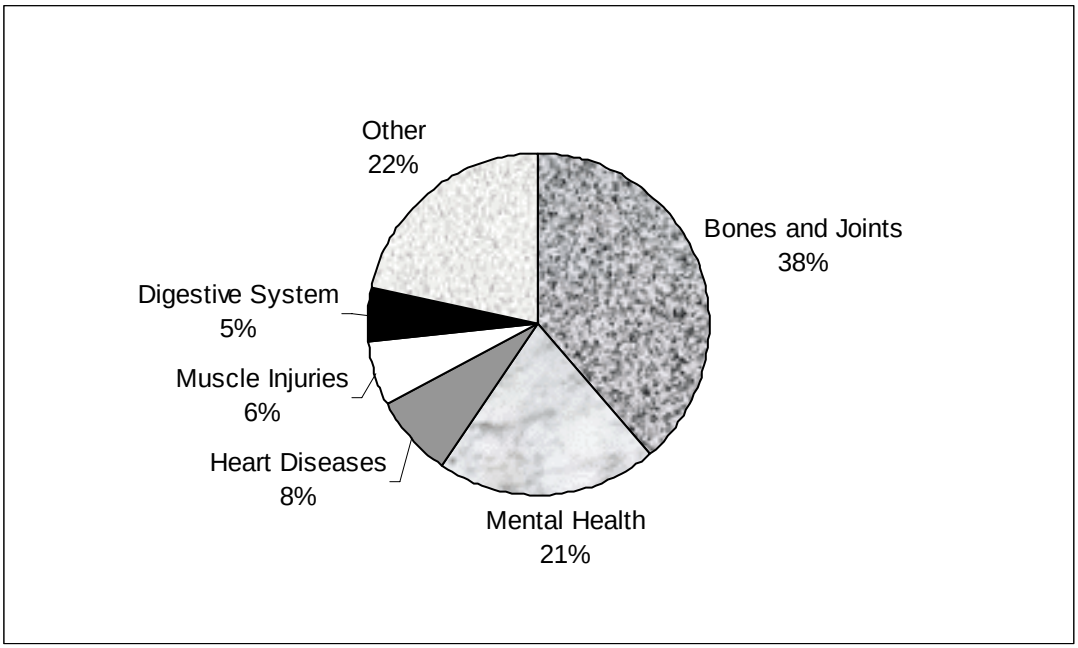
Figure 6. Distribution of Veterans in Receipt of Disability Compensation By Disability Rating and Period of Service, September 30, 2002



Source: (VA, 2004, June)

The distribution of the most frequently occurring service-connected disabilities is presented below in Figure 7. There is a large proportion of disability claims dealing with bones and joints. The next closest categories are “Other” and Mental Health which made up 22 percent and 21 percent of the claims, respectively.

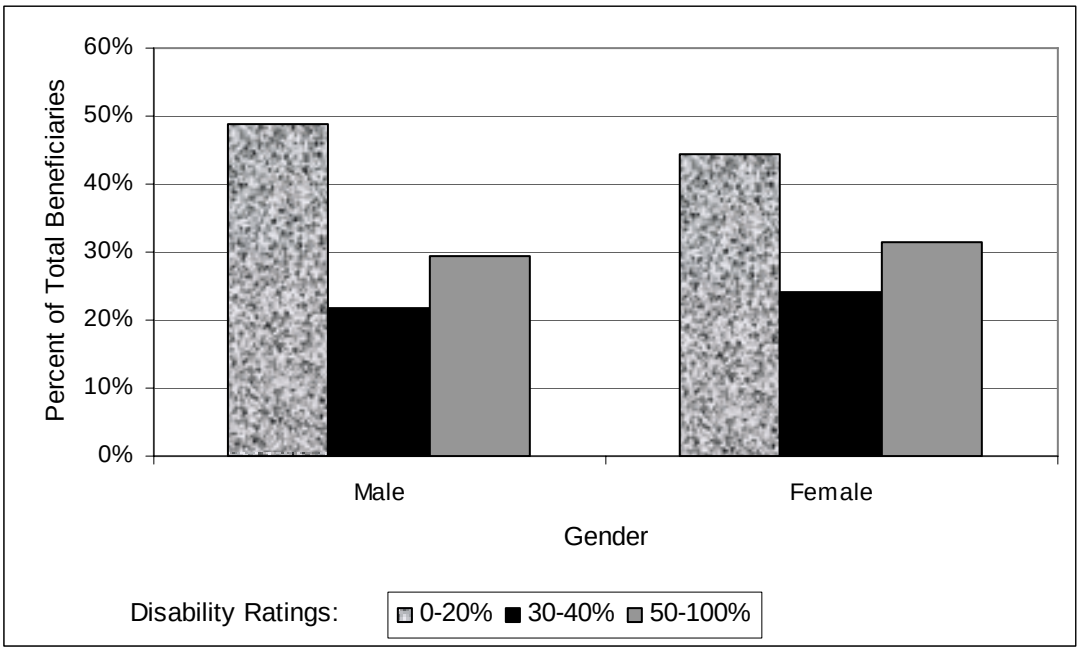
Figure 7. Veterans Receiving Disability Compensation by Impairment Categories, 2000



Source: (GAO, “Reexamination of Disability Criteria,” 2002, August)

As shown in Figure 8 there is only a slight variation in disability ratings with regard to gender. Females have a larger distribution of severely disabled (50-100%) with 31.4 percent compared to 29.5 percent of the males. The largest concentration lies within the lower disability category (0-20%), with 48.7 percent for males and 44.3 percent for females.

Figure 8. Distribution of Veterans Receiving Disability Compensation by Gender and Rating, 2003 (in percentage)



Source: Office of Policy, Planning, and Preparedness (008A3)

Although there is no readily available detailed information on characteristics of recipients of VA Disability Compensation Program, the data exists through VA's Compensation and Pension administrative files. An exhaustive profile analysis of the VA Disability Compensation Program participants can be conducted by analyzing these data files.

4. EFFECTIVENESS OF VA DISABILITY COMPENSATION

This section of the report reviews previous studies that addressed the effectiveness of VA's Disability Compensation Program in terms of adequacy of compensation for loss of earnings capacity, impact of the Program on the individual beneficiary, or the benefit as part of the total readjustment package. This section does not attempt to review the literature at large but selectively reviews available studies that specifically focused on these topics in the VA Disability Program. Subsequent sections of the report review the same and several other studies in other contexts.

Adequacy of Compensation for Loss of Earnings Capacity

Since the end of World War II and the implementation of the 1945 disability rating schedule, only a few studies have been conducted on the adequacy of disability compensation for loss of earnings capacity. The President's Commission on Veterans' Pensions, referred to as the Bradley Commission, produced an extensive report in 1956 ("President's Commission" [Bradley], 1956). VA conducted a study that compared earnings of veterans receiving disability compensation in different diagnostic categories to non-disabled veterans not receiving the compensation. The study was submitted to the Committee on Veterans Affairs, U.S. House of Representatives on July 20, 1971, and is referred to as the "Economic Validation of the Rating Schedule" study or ECVARS. A series of GAO reports since 1988 did not conduct any statistical analysis of their own but concluded that VA's administration of the VA Disability Compensation Program, in effect, was based on judgments of loss in functional capacity rather than on loss of earnings capacity. VA's comment on the GAO position was that VA's disability rating schedule represents a consensus among Congress, VA, and the veteran community that the schedule is "equitable" (U.S. General Accounting Office [GAO], 1997, January).

Bradley Commission Report

The Bradley Commission report spanned three volumes and thousands of pages, covering a wide range of historical, organizational, administrative, and policy topics for several different VA benefit programs. Volume II contains three sections of the Commission's staff report on programs pertaining to service-connected disability. The second section, Part B, reports on the results of a medical appraisal of the rating schedule while Part C contains information on income, earnings, age, occupation, and education of disabled veterans receiving disability compensation.

The medical appraisal of the rating schedule addressed such questions as: Is the disability rating in accordance with present day medical principles? Do medical criteria in percentage ratings reflect residuals of disease and injury? Are disability ratings fairly representative? A questionnaire was mailed by the Commission to 169 medical specialists both in and out of government representing a broad range of medical specialties. A total of 153 usable responses were received. The survey question relating most to compensation for loss of average earnings capacity was:

> *In your opinion, are the various sections of the Rating Schedule and the related statutory awards in balance? That is, in your field of specialization, are the percentages in the schedule, taken together with the statutory awards, too high, or too low, in relation to other disabilities from diseases and injuries?* (Bradley, 1956, Vol. II, Part B, chap. 2, p. 216).

The 153 respondent replies to this question were distributed as shown in Table 8.

Table 8. Responses to the Question: "In your opinion, are the various sections of the Rating Schedule and the related statutory awards in balance?"

Respondent Reply	Number	Percent	Adjusted Percent[3]
In balance without exception	44	29%	33%
In balance with exception	26	17%	19%
Compensation too high	33	22%	25%
Compensation too low	9	6%	7%
Compensation too low and too high	8	5%	6%
Not in balance without exceptions	14	9%	10%
Unanswered	19	12%	Not included
Total	153	100%	100%

Source: (Bradley, 1956, Vol. II, Part B, chap. 2, p. 216)

Only 29 percent replied that, in their opinion, the Rating Schedule and statutory awards are "in balance without exception." Hence, the respondents overall displayed a lack of consensus on whether statutory awards are "in balance." As medical specialists, the respondents would have no particular knowledge or information on earnings of disabled veterans or a comparative group of non-disabled veterans. The Study Team's critique is that the attitudinal opinions of medical practitioners are not a good substitute for actual quantitative data on earnings.

The Bradley Commission recognized the lack of empirical information on the earnings capacity of disabled veterans, and it engaged the U.S. Bureau of the Census to survey veterans. The U.S. Bureau of the Census surveyed 8,000 veterans selected to be representative of the general population of veterans, and another survey was conducted of 13,000 veterans receiving disability compensation. For disabled veterans, the Commission sought to obtain representation for each 10-percentile disability rating and

[3] Adjusted percent excludes the unanswered responses.

obtained approximately 1,000 cases for most of the sampling strata. The Commission did not seek to obtain representation at the individual diagnostic code level.

The Commission conducted extensive tabular analysis of earnings of disabled veterans in relation to several factors including age, education, occupation, post-service training, and disability rating. The report concluded that the association between earnings and disability rating is neither close nor uniform. While the report presents numerous cross-tabulations on earnings and the associated factors, it contains only one table that attempts to show some direct comparison between the earnings of veterans with service-connected disabilities and non-disabled veterans. In particular, Table 9 below shows the median earnings of veterans at each disability rating as a percent of earnings of non-disabled veterans as shown below.

Table 9. Median Earnings of Disabled Veterans

Extent of Disability	Median Annual Earnings	Median Earnings of Disabled Veterans as Percentage of Non-Disabled Veteran Earnings
Non-disabled	$4,143	100.0%
Disabled	$3,570	86.2%
10%	$3,809	91.9%
20%	$3,664	88.4%
30%	$3,390	81.8%
40%	$3,352	80.9%
50%	$3,218	77.7%
60%	$3,122	75.4%
70%	$2,781	67.1%
80%	$2,966	71.6%
90%	$3,090	74.6%
100%	$1,552	37.5%

Source: (Bradley, 1956, Vol. II, Part C, chap. III, Table 66)

Veterans rated at 10% disabled, for example, had median annual earnings of $3,809 while veterans rated at 100% disabled had median annual earnings of $1,552. In looking at median earnings of disabled veterans as a percent of non-disabled veteran earnings, we clearly see an earnings gap, particularly at the higher levels of the disability-rating schedule.

It would have been useful if the table in the Bradley Commission report had included a column on actual disability compensation paid and another column that compared it to the earnings loss or difference for veterans with service-connected disabilities. The Commission's analysis addressed the 10 rating levels, not the individual diagnostic codes or category levels.

Another limitation is that median earnings of veterans with service-connected disabilities did not include cases where the disabled veteran had no earnings. Since disabled veterans could be unemployed, particularly at higher disability rating levels, the average earnings of disabled veterans could be seriously underestimated.

Higher disability ratings translate into higher disability compensation levels. If the proportional wage loss is greater at higher disability ratings, the rating system can be assessed as valid to a certain degree. In other words, in Table 9 shown above one would expect to see a consistent decrease in median earnings of disabled veterans as a percent of non-disabled veteran earnings at each higher disability rating level. However, the Commission concluded that the disability rating bore little, if any, relation to the loss or reduction in earnings except for the 100% disability rating category.

The Study Team used this data to test, in a limited way, whether the assertion of a lack of relationship is supported by available data. Our tentative conclusion based on the limited data and our own analysis is that the data provided by the Bradley Commission report reveals just the opposite. That is, there is a positive relationship between loss of earnings and higher disability compensation.

In Table 10 we added a column on the annual disability compensation for each respective disability rating along side the earnings shown in Table 9. Given that the Bradley Commission's data was from around 1955, it is most appropriate to compare 1955 median earnings with disability compensation paid at that time, which would be the rates that went into effect in October 1954. We then compared the total of earnings and compensation for disabled veterans to the earnings of non-disabled veterans. There are certain points of interest in this analysis. For one, the payments are appropriate for 7 out of 10 of the rated disability levels, with a slight over payment in two and a significant underpayment for those rated 100%. Second, one can infer that for a certain period in the mid-1950s the VA Disability Compensation Program was largely effective in meeting Congressional intent. However, we should also point out this analysis is highly aggregate and does not show the relationship between earnings and disability compensation at the diagnostic category level.

The Study Team also performed a simple correlation analysis to determine the statistical relationship between disability compensation paid to veterans and median annual earnings. For median earnings and disability compensation paid in 1955, the correlation coefficient was -.83 indicating a high correlation between loss of earnings and disability compensation. A perfect negative correlation would result in a correlation coefficient of -1.0 while no correlation would have a coefficient of 0.

Given that there are only 10 possible observations for calculating the correlation coefficient, the coefficient is strikingly high. The Study Team also conducted a simple regression analysis to estimate the linear relationship between earnings and disability compensation and found that each $100.00 reduction in annual earnings is associated with annual disability compensation of $76.60. This means that in 1955, on average, disability compensation paid by VA was replacing just over three quarters of the income that a veteran was losing because of his or her disability.

Table 10. Median Earnings and Disability Compensation of Disabled Veterans

Extent of Disability	Median Annual Earnings	Annual Disability Compensation	Earnings plus Disability Compensation (DC)	Earnings plus DC of Disabled Veterans as Percentage of Non-Disabled Veteran Earnings
Non-disabled	$4,143	$0	$4,143	Not Applicable
Disabled	$3,570	$1,178	$4,748	115%
10%	$3,809	$204	$4,013	97%
20%	$3,664	$396	$4,060	98%
30%	$3,390	$600	$3,990	96%
40%	$3,352	$792	$4,144	100%
50%	$3,218	$1,092	$4,310	104%
60%	$3,122	$1,308	$4,430	107%
70%	$2,781	$1,524	$4,305	104%
80%	$2,966	$1,740	$4,706	114%
90%	$3,090	$1,956	$5,046	122%
100%	$1,552	$2,172	$3,724	90%

Source: Earnings data are from Bradley Commission Report, 1956, Vol. II, Part C, chap. III, Table 66; Disability compensation data are from VA Manual M21-1 Part 1, Appendix B, Section IX.

For the sake of further comparative analysis, we used the 1955 median annual earnings as a proxy for earnings in 1957, assuming that the 1955 earnings would be correlated with veteran earnings in 1957. The Study Team ran a correlation coefficient for earnings and disability compensation in effect in 1957 and found an even higher correlation coefficient of -.92 compared to -.83 for 1955. Perhaps Congress enacted new disability compensation levels for 1957 that reflected a review of the Bradley Commission report. In fact, Congress enacted a relatively large increase in benefit for the 100% disability rating from an annual level of $2,172 in 1955 to $3,060 for 1957, a 41 percent increase.[4]

ECVARS Report

VA's 1971 ECVARS report was the most comprehensive study done, and included a mail survey of 485,000 veterans receiving disability compensation. The large number of veterans being surveyed allowed for representation of about 700 different diagnostic categories. Economic loss was measured as differences between median income of veterans with a service-connected disability and veterans without such disability of comparable age, educational attainment, and area of residence. The survey group of veterans not receiving VA disability compensation included 14,000 veterans. Age categories for comparison purposes were: under age 30; age 30 to 49; age 50 to 64; and age 65 and over. Education categories were: less than a high school graduate; high

[4] The Study Team performed the same analysis for several other years after 1957 and found the correlation coefficient to remain at about -.9 or higher. However, such analysis becomes increasingly tenuous to use 1955 medium earnings as a proxy for years far removed from 1955.

school graduate; and one or more years above high school graduate. Categories for residence were South and all other geographical regions.

The ECVARS report presented wage loss and compensation paid by diagnostic codes of the VA rating schedule. Data presented for each diagnostic code were annual median earnings loss in 1967, actual annual disability compensation paid, median income loss as a percent of control group income, and median loss as a percent of 1967 average earnings of production workers in the manufacturing industry. The control group included those veterans not in receipt of VA disability compensation reflecting comparable age, education, and area of residence categories. However, the report available to the Study Team for review did not contain any summary of results or conclusions drawn from results. For example, summary data could have been provided to show the average and statistical distribution of earnings loss at each 10-percentile interval rating level. Statistical analysis could have been performed to measure the degree of correlation between earnings loss and compensation paid.

According to a GAO report (GAO, 1997, January), disability compensation exceeded economic loss for 330 of 700 diagnostic codes in the ECVARS study while it was less than the economic loss for 75 diagnostic codes. Based on this, the GAO report concluded: “The results of an economic validation of the schedule conducted in the late 1960s indicated that ratings for many conditions did not reflect the actual average loss in earnings associated with them. Therefore, it is likely that some of the ratings in the schedule do not reflect the economic loss experienced by veterans today.” No changes were implemented in the disability rating schedule pursuant to the ECVARS report. According to the same report (p.16): “According to VA and VSO officials, the schedule was not adopted because VA believed that the Congress did not support it. Since ECVARS was conducted, VA has not done another comprehensive study to systematically measure the effect of service-connected conditions on earnings.”

According to Congressional Records (January 20, 1973, p. E873, and February 8, 1973, p. H882), data from the ECVARS study indicated that mentally ill veterans suffered a greater earnings loss than amputees. The implication of this would have been to give the mentally ill a higher disability rating and amputees a lower rating than what they were currently getting. 200,000 physically handicapped Vietnam veterans would have lost significant benefits if the change had been made. Public uproar ensued, and significant changes in the disability ratings were not made.

GAO did not specify what criteria were used in arriving at their summary of results from the ECVARS report. Presumably, certain judgments were made to assess that economic loss for a given diagnostic category did or did not equate to compensation paid but these judgments are not revealed in GAO’s report. A more complete analysis would have applied statistical correlation and other analyses, examined statistical distribution characteristics of key measures, and assessed potential for sampling variability in the data being used. We also suggest that a comparison of earnings loss to compensation paid is more a matter of degree rather than an all-or-nothing outcome.

The ECVARS report presents data on 1,005 observations on annual median wage loss and actual disability compensation paid at the individual diagnostic code level. The same disability rating can apply to several different diagnostic codes. The Study Team ran a correlation coefficient on the two sets of variables and obtained a coefficient of .73. This result is statistically significant at the .01 level (two-tailed test). This result, while only exploratory and in the context of critiquing the literature, is the opposite of the conclusion made in GAO report (GAO, 1997, January).

The Study Team found no major weaknesses in the ECVARS study methodology to assess earnings comparisons at the diagnostic category level. The overall sample size of nearly a half million is a rich one, and appears adequate for representation of earnings of veterans in different diagnostic categories. The U.S. Bureau of the Census guided the survey methodology. The age and educational categories used for comparison with the control groups (e.g., the age group of 30 to 49) were broad, and weighting of observations or more advanced statistical analysis could have dealt with this issue. Possible differences in the occupational mix of veterans with service-connected disabilities and the control group were not addressed although Congressional legislation does not require disability compensation to be tailored to occupational classifications. The ECVARS study also did not consider any tax advantages available with the disability benefit.

Since the study was conducted three and a half decades ago, the results cannot be expected to be current. Not only have the medical environment and civilian labor force changed but the composition of military personnel and veteran populations has undergone significant changes as well. With the advent of the all-volunteer military in the early 1970s, servicemembers and veterans are more educated and more specialized in certain occupational skills; hence, their civilian earnings are relatively higher than in previous decades (aside from general increases in the earnings of all workers). Comparison made in the ECVARS study between veteran earnings and earnings of production workers in the manufacturing industry of 1967 would not be relevant or useful today. Also, female veterans were not included in the ECVARS survey whereas today female participation in the military and civilian work forces is significantly greater.

A more recent study of VA Compensation and Pension Programs but not nearly as comprehensive, was performed in the early 1980s (VA, 1983). As part of this study, a “Field Station Survey” was sent to each of 58 VA regional offices. Of 53 Adjudication Officers responding, 45 percent expressed their opinion that VA compensation replaces the income lost by veterans due to their service-connected disabilities while 32 percent did not agree (23% stated that they did not know). In narrative remarks almost half of the respondents stated that lower percentage ratings are overcompensated. While the opinions of VA personnel serving the benefit population are important to know and weigh into an overall assessment, they are not a valid substitute for a comparison of actual quantitative data on earnings of veterans with and without service-connected disabilities.

Impact of Program on the Individual Beneficiary

Congressional intent for the VA Disability Compensation Program focuses on the benefit replacing loss of "average" earnings capacity due to the impairments caused by service-connected disabilities. The previous studies cited above do not address program impact at the individual level. However, the legislation does not preclude studies from being done that do examine individual impact. Analysis at this level could further inform Congress, VA, and the veteran community of how well the Program is working. Questions that could be addressed in this regard include:

- Does disability compensation offset loss of earnings capacity resulting from service-connected disability or disease for the individual disabled veteran, as opposed to the average? Is there wide variation in how well disability compensation offsets earnings capacity loss for different disabled veterans?
- What are the perceptions of the veteran beneficiary in terms of the adequacy and equity of the Program's benefit?
- Does the Program benefit compensate for loss of quality of life due to service-connected disabilities?
- What effect does disability compensation have on the veteran's financial situation in the context of the veteran's total income and other benefits or services afforded by VA for service-connected disabled veterans?
- How does the income of veterans with service-connected disabilities compare to non-veterans with similar disabilities?
- Are the disability compensation and other VA programs for disabled veterans adequate for the risks to life and health inherent with military service?

For the most part, past studies of the Disability Compensation Program have not addressed these questions. An exception was a comparison of veterans and non-veterans with long-term disabilities made as part of the Bradley Commission study. Bradley Commission staff analyzed data from a 1952 disability follow-up survey of disabled persons, conducted by the U.S. Bureau of the Census for the Department of Health, Education, and Welfare (Bradley, 1956, Vol. II, Part C, chap. VII). The disability follow-up study covered persons in the general population who were disabled seven months or longer. Disability was defined as "inability to engage in normal activities or inability to engage in full-time remunerative work steadily, on account of disease or injury." Comparisons between veterans and non-veterans in the 1952 survey were made on a sample of 1,157 cases, of which 19 percent were disabled veterans.

While this is a relatively small sample, the Commission staff found that the disabled veterans were economically much better off than the disabled non-veterans. Table 11 shows median income by major source of income for long-term disabled veterans and

non-veterans in 1951.[5] As seen in this table, much of the relative advantage for the veteran was from veteran benefit payments. Higher wage earnings of veterans also contributed to the overall greater income for veterans compared to non-veterans. Perhaps, the education benefits of the GI Bill for veterans returning from World War II affected part of the higher earnings for veterans shown in the table. This study, though, did not distinguish between veterans with service-connected disabilities versus veterans with non-service-connected disabilities.

Table 11. Income of Long-Term Disabled Veterans and Non-Veterans in 1951

	Veteran			Non-Veteran		
Major Source of Income	Number	%	Median income	Number	%	Median income
Total	230,200	100.0	$992	960,450	100.0	$75
Earned income	37,100	16.1	1,384	113,400	11.8	547
Veterans benefit payments	161,750	70.3	1,022	22,250	2.3[6]	738
Public assistance	950	.4	750	175,450	18.3	571
Other Government benefits[1]	6,250	2.7	1,421	90,050	9.4	662
Non-Government unearned income	10,500	4.6	806	112,250	11.7	631
No income	13,650	5.9	NA	447,050	46.5	NA

[1] Workmen's compensation, unemployment benefits, old-age and survivors insurance, etc.

Source: (Bradley, 1956, Vol. II, Part C, chap. VII, Table 4, p. 243)

An issue that often arises with benefit programs is whether or not the benefit acts as a disincentive to work. In the case of the results just described that compare the income of long-term disabled veterans and non-veterans, if VA Disability Compensation was a disincentive to work, one would expect the civilian disabled population (which did not have this disincentive) to work and increase their earnings. Since civilian disabled non-veterans earn substantially less as shown in Table 11 above, it appears that their disability is an explanation for lower earnings and that VA's compensation is not a disincentive to work.

Previous Studies of Other VA Programs

Prior evaluations of other VA benefit programs have addressed questions of program impact on the individual beneficiary and provide examples of possible data that could be collected. The Study Team, for example, conducted a 2003 evaluation of the VA Disability Pension Program for veterans with non-service-connected disabilities (VA, 2003). This study examines the overall financial situation of the beneficiary, quality of

[5] Because of the small sample size, the author(s) made tabulations only for major sources of income, not for the different sources of income. Hence, while veterans and non-veterans may have more than one source of income, the percent columns in Table 11 add up to only 100%.

[6] The Bradley study reports that "This could mean some error on the part of individuals who were veterans and received veteran's benefits but who failed to indicate their veteran status. On the other hand, the percentage is small enough to be accounted for in terms of survivor's and dependent's benefits."

life, factors affecting the benefit amount, basic financial security outcome, and interaction with other programs. Similar studies were performed of the Dependency and Indemnity Compensation, SDVI, and other VA benefit programs (VA, 2001, May). Study methods included surveys of nationally representative samples of program participants and analysis of comparable populations using data from secondary sources. The study found that SDVI premium rates were much higher than standard commercial rates for non-smokers (not fulfilling the Program goal that veterans with service-connected disabilities be able to purchase life insurance at standard rates for non-disabled people). The study also concluded that the $10,000 basic coverage provided by SDVI is not adequate in the context of financial circumstances affecting survivors of disabled veterans.

As part of the 2004 evaluation of the VA Home Loan Guaranty Program, the Study Team conducted a survey of veterans with service-connected disabilities who participated in VA's Specially Adaptive Housing (SAH) Grant Program (VA, 2004, July). Veterans who have permanent and total disabilities due to military service may be entitled to a grant for constructing an adapted dwelling or modifying an existing home to meet their needs.

The Study Team conducted the survey to assess the veteran's awareness of the SAH Program, the adequacy of the maximum grant amounts, and whether having the grant improved the quality of life of disabled veterans. The Study Team surveyed the entire population of disabled veterans who received a SAH grant in fiscal year 2002 (which was approximately 500).

Survey results indicate that the SAH Program offers a needed benefit to disabled veterans. Most participants are satisfied with the Program, with 49 percent reporting that they are very satisfied with the Program while 46 percent reported being satisfied. Sixty percent felt that the grant amount was very adequate, and 29 percent indicated somewhat adequate. We concluded that the maximum grant amount of $50,000 is generally sufficient to adapt a house according to the SAH adaptation requirements. Ninety-nine percent of the respondents said that SAH adaptations improved their quality of life. In addition, 98 percent of the veterans responded that the adaptations helped them live more independently. These results indicate a successful Program that is exceeding its performance standard for participants.

VA periodically conducts the National Survey of Veterans (NSV) in order to discern trends in the veteran population over time, compare characteristics of veterans who use VA services with veterans who do not, and VA's role in the delivery of benefits to veterans. For the 2001 NSV, a total of 20,048 telephone interviews were completed (VA, 2002). About 13,000 were randomly sampled from the general population of veterans while 7,000 were selected from files of veterans who enrolled in VA health care or who received compensation or pension from VA. The 2001 survey is the fifth and most recent in a series of comprehensive nationwide surveys conducted every several years.

Projected from the 2001 NSV results, 8.1 million veterans reported a disabling condition (almost a third of the veteran population). Specifically, 43.5 percent of those with a self-reported disabling condition stated that they had applied for VA disability benefits, and of those who applied, 61 percent reported that their most recent application had been approved. Nearly 90 percent of those with a self-reported disabling condition stated that they currently receive service-connected disability compensation while about 6 percent receive non-service-connected disability pension benefits. The percentage does not represent the entire population of veterans receiving non-service-connected disability funds but rather the subset of veterans with a self-reported service-related disability or with a disability rating. About 62 percent of veterans receiving service-connected disability compensation reported that the compensation was extremely or very important in meeting their financial needs. This result was consistent across all age groups.

Benefit as Part of Total Readjustment Package

Another perspective in assessing the effectiveness of the Disability Compensation Program is to view the compensation in the context of the total readjustment package for those who have served in the military and are afforded access to or given priority status based on the service-connected rating. Important elements could include:

- Benefit value to veteran
- Coordination with DoD disability benefits
- Medical care, vocational rehabilitation, and other disability related benefits
- Outreach conducted prior and post-discharge/release.

Various approaches or measures to analyze these elements might include surveys of the perceptions of the beneficiary population, qualitative assessment of coordination or interaction with other benefit programs, financial analysis of the benefit value, and comparison to other programs providing disability insurance or benefits.

Congressional Research Service (CRS) Report 95-469 (Goldich, 1995), though somewhat dated now, provides background information on concurrent receipt issues of military disability retirement and veterans' compensation. It describes the various arguments for and against eliminating or reducing the offset and allowing concurrent receipt. As discussed in the Study Team's review of the legislative history, Congress recently passed legislation that will phase in concurrent receipt for veterans.

The CRS report points to the distinction between military retirement pay and military *disability* retirement pay. The Military Disability Retirement Pay Program allows the individual to choose between two formulas, one based on percent-of-disability and the other on length-of-service. With the percent-of-disability formula, benefits are computed by multiplying the disability percentage rating by the pre-retirement basic pay on which retirement benefits are based. The length-of-service formula is the same as the formula applied to non-disability retirees. Both disabled retirees and non-disabled retirees may apply for benefits under VA's Disability Compensation Program (GAO, 1995).

According to the CRS report, a key argument by advocates of concurrent receipt is that the two payments of military non-disability retirement pay and veterans' compensation are unrelated – one is for completion of a military career and the other is compensation for a service-connected disability. This distinction does not apply equally in the case of military *disability* retirement pay. The CRS report states that there are many more precedents for having offsets of one federal program against another than there are for allowing full concurrent receipt of federal benefits including disability benefit programs.

There are relatively few studies or data on the coordination of services or benefits from different programs for veterans, including VA and non-VA programs. One area deserving attention is the outcome, cost-effectiveness, and appropriateness of care for veterans with traumatic war experiences. An example of a study in this area was evaluation of the use and satisfaction with VA medical services and disability benefits received by two groups of elderly prisoners of war in South Carolina (Frueh, 2003). The two groups were similar in most respects except that one group consisted of members of a national POW service organization and the other group did not. Length of time in captivity and trauma exposure severity were considerable for both groups. For mental health care, virtually none of the subjects reported seeking help outside of VA. An examination of service use patterns for the two groups revealed that the POWs rely heavily upon the VA for medical and mental health care and disability compensation support. Study findings indicated that the POWs were generally satisfied with the VA services and benefits. However, the sample size of POWs was a slightly less than 200.

5. RATING SCHEDULE

In this section we first provide background information on U.S. Department of Veterans Affairs' (VA) rating schedule and then review previous studies on the effectiveness of the rating schedule.

Background

The origins of a rating schedule date to 1917 (War Insurance Act Amendments of 1917). Since then many changes have been made to the schedule but according to GAO (U.S. General Accounting Office [GAO], 1997, January) the last time the rating structure was changed substantially was in 1945 (Table 12). The Veterans Claims Adjudication Report chaired by Melodosian (U.S. Department of Veterans Affairs [VA], 1996) also reports that "no changes appear to have been made in its construction of clinical impairment, disability, impairment of earning capacity, or the relationships between and among these." VBA officials indicated to the Study Team that based on the GAO recommendation, VA has incorporated current medical terminology and unambiguous criteria for evaluating disability. As presented later in this section, VA updated the criteria used in the Schedule of Rating Disabilities for 11 out of 16 body systems between 1989 and 2002 (GAO, 2002, August).

Table 12. History of Rating Schedule: 1917-1945

1917	War Risk Insurance Act called for the creation of a rating schedule. War Risk Insurance Act amendments called for adoption of a rating schedule based on average impairment in earning capacity.
1921	*Rating schedule revised.* Schedule contained guidelines for rating disabilities. Schedule divided into sections: neuropsychiatric and surgical disabilities; eye, ear, nose, and throat difficulties; and dental conditions.
1925	*Rating schedule revised.* Schedule followed the California workmen's compensation system of rating disabilities (not based on average impairment in earning capacity) for occupation of the veteran. Schedule included general policy for rating disabilities. Schedule contained index of diseases and injuries (beginning of diagnostic codes). Instructions added on how to use the schedule.
1933	*Rating schedule revised.* VA reverted to the method of "averaging" for all occupations. Revised ratings were based on the average impairment in earning capacity. Schedule added "multiple disabilities." Gynecological conditions added to schedule.
1945	*Rating schedule revised to reflect advances in science, technology, and medicine.* New diagnostic codes added. Disabilities indexed numerically under systems. Disabilities identified by a code series. Schedule serves as benchmark for current rating decisions.

Source: (GAO, 1997, January)

The rating schedule lists physical and mental conditions with disability ratings ranging from 0 to 100 percent (with 10 percent increments), assigned to each condition (GAO, 1999). Veterans may have more than one disability and therefore may be assigned a "combined" rating. Schedules also exist in statute for providing additional compensation for disabilities such as blindness that result in varying needs for care, such as housebound, aid and attendance, or VA or other institutional care. The medical conditions include levels of severity specified for each diagnosis. The disability rating percentages are used to assign a loss in average earnings capacity to the veteran for not being able to work at a full or lower capacity.

Each of the 57 VA Regional Offices has one or more Rating Boards to evaluate veterans' impairments. Rating Boards consist of non-medical rating specialists or claims evaluators. Upon receipt of a benefit application, the veteran is referred to a VA medical center or clinic for an exam. Then based on the medical assessments and other additional information available to the evaluator, the claimed conditions are determined to be service-connected or non-service-connected. In addition, each disability is classified according to diagnostic codes in the rating schedule and degree of severity. If there is more than one disability which is service-connected, all disabilities are combined for an overall evaluation. VA sometimes combines evaluations under multiple diagnostic codes to create an overall disability for the same condition (e.g., multiple sclerosis). VA utilizes the Schedule of Ratings to process claims. VA's Physician's Guide for Disability Evaluation Examinations is an important tool used in the examination process.

If veterans' service-connected disabilities worsen, veterans can file a new claim to request an examination for an increase in rating, or to reopen a previous claim, which will yield higher compensation. If the disability condition is likely to improve, standard procedure is for the Rating Board to schedule a future exam for reassessment of the disability rating. In a 1989 report (GAO, 1989), GAO reported that about one-third of veterans receiving VA compensation have an increase in their ratings over their lifetime. GAO also reported that the ratings were lowered only for "a small percentage of cases" due to medical improvements but they did not give any details on the number of cases.

VA and the Armed Services use the same rating schedule to determine the severity of disabilities with the exception that the Armed Services do not use Part A of the rating schedule, which contains VA's general rating policy. In this regard, DoD's interpretation of the schedule may be different than VA's.

Previous Studies of VA Rating Schedule

The two major studies of the VA Disability Compensation Program, the Bradley Commission study and ECVARS, evaluated several aspects of the rating schedule. We present the objectives, findings, and recommendations of these two studies along with the previous GAO studies relevant to the rating schedule in Table 13 (presented at the end of this section).

In general, the studies included in Table 13 provided one or more of the following reasons for recommending changes in the rating schedule:

1. Medical advances: With the advances made in medicine, some conditions considered as disabling became less severe or not disabling at all, through treatment, therapy, and rehabilitation.

2. Labor market changes: The composition of the U.S. industry changed dramatically over the past 60 years. Today, there is less demand for jobs requiring physical labor, as the share of the mining, construction, and manufacturing sectors decreased from 44 percent in 1954 to 18 percent in 2002 according to the Census data. The increase in jobs in service industry allowed a higher participation rate for disabled persons in the work force.

3. Social changes: Acceptance and inclusion of disabled persons into the mainstream society was achieved throughout the years with acts such as Rehabilitation Act (1973), ADA (1990), and New Freedom Act (2001).

4. Ratings assigned were not uniform across rating specialists.

The Bradley Commission studied the medical criteria and the disability ratings associated with these criteria to determine the adequacy and equitableness of the rating schedule used at that time (mid-1950s). Part of their study was to conduct a survey of 169 physicians who were either in or out of military service in different parts of the U.S. in 20 major medical specialties (Bradley, 1956, Staff Report Number VIII, Part B). Of the 153 responses received, 151 were found valid for analysis. The questionnaire prepared by members of the Commission was grouped into four sections Schedule of Rating Disabilities, Presumptions, Statutory Awards, and General Matters. The results of the survey relevant to the rating schedule are as follows:[7]

- Almost two-thirds (63%) of the respondents indicated that the disability ratings were in accord with the [then] current medical principles. However, a majority also believed that some ratings do not reflect the recent changes in medical treatments (e.g., medications) and advances (e.g., rehabilitation and improved surgical methods).

- Two-thirds of the respondents indicated that the classification of the diseases were in accord with the [then] current medical standards; however, many included notes stating that specific parts of the schedule were not.

- Although a majority (55%) said that the medical criteria for determining the disability ratings (i.e., 0 to 100%) were sound, almost all included notes agreeing "that the medical criteria should be modernized and more clearly correlated to percentages, disability, and average impairment in earning capacity." The majority (53%) said assigning disability percentage ratings within 10-point

[7] Additional results of this survey were provided in Section 4 of this report under the heading Adequacy of Compensation for Loss of Earnings Capacity.

accuracy was not medically feasible in determining the percentage of impairments. The answers were scattered when asked their opinions on how many intervals there should be. Twenty-four percent suggested a scale of 5 steps and 32 percent a scale of 4 steps. The rest (44%) suggested miscellaneous scale of gradations.

- Almost one-half (48%) of the respondents agreed that advances in medical rehabilitation should lower the disability rating.

The results of the Bradley survey are based on only 151 medical specialists and may not represent views of medical specialists at the national level. Some results are provided at the medical specialty level, which makes it more difficult to generalize the findings at that level, as the number of responses is insufficient. The response values in survey were coded as:

- "*Yes, unqualified (The reply to the coded question was clear.)*
- *Yes, qualified (The reply to the coded question was qualified as to the meaning and intent.)*
- *No, unqualified (The reply to the coded question was clear.)*
- *No, qualified (The reply to the coded question was qualified as to the meaning and intent.)*
- *Indeterminate (The reply was vague and not determinate of a "yes" or "no" classification.)*
- *Unanswered."*

Our assessment finds that since the written responses were coded into one of the categories above, it is likely that the subjective judgment of the coders might have affected the distribution of responses.

Over time the medical terminology used in determining certain impairments may be outdated. For example, with the rapid changes in medical technology, the term "x-ray" was revised to acknowledge current imaging techniques such as MRIs (Apfel, 1999).

VA conducted an internal study in 1983 (VA, 1983) to evaluate four VA programs including the Disability Compensation Program. As part of the study, 16 claims, representing 26 disabilities were sent to 56 Regional Offices to be rated for degree of disability by one or more Rating Boards. The intent was to check on the uniformity of the Rating Board decisions for similar medical conditions. VA officials, based on the rating schedules, established a range of optimal "rating judgments" for each of the medical conditions (i.e., diagnosis). For example, diagnostic code 9411 (post-traumatic stress) had set percentage ranges of acceptability ratings at 10%, 30%, and 50%. Out of 51 valid responses, only 2 gave this disability 0% rating (lower than accepted range) and only 1 gave this disability 70% rating (higher than accepted range).

Most respondents rated 26 disabilities within the accepted range. However, the ratings for each medical condition were scattered across the possible disability rating percentages (i.e., 0% to 100% where relevant). Since the rating specialists made their evaluation of the severity of disability based on physician's terms such as "severe," "moderately severe," and "moderate", it is highly likely that disabilities with similar or the same conditions received different ratings from different rating specialists.

In the same report (VA, 1983) VA acknowledged this deficiency but at the same time stated: "…to expect all boards to reach the same conclusion is unrealistic." However, to be rated below or above 30%, as well as at 50% or above, may have significant impact on the veteran. For example, those rated 30% or higher receive a dependents allowance. Since 1983 VA has implemented quality review procedures to enhance consistency and also revised this portion of the rating schedule to address terminology problems.

In their anecdotal conclusions of the report (VA, 1983), VA also found that lack of uniformity was random, not specific to regional variation. VA concluded that most of the problems was related to the rating schedule. The rating boards had the pressure of making decisions based on sometimes incomplete or vague reports of the physicians. VA also added that in order to meet the timeliness work standards, Rating Boards did not request additional information for clarification from the physicians. Since this study was conducted, VBA has instituted an advanced training program for its disability compensation claims examiners. VA has also been moving towards a credentialing process for all examiners in order to apply objective standards. Finally, VBA conducts medical assessment at the nearest VA hospital or clinic, through contracted services or uses a hospital summary if it is appropriate to ensure medical review.

The Bradley Commission conducted an analysis of records of 1,508 servicemembers with disability retirement (Bradley, 1956, Vol. II, Staff Report Number VIII, Part A, chap. III). After randomly selecting records from military rolls, they attempted to match them with VA records to check the consistency of VA's disability ratings with the military disability retirement ratings. They found that a wide disparity in the ratings given by VA and the military existed. Based on the 971 matched cases that they were able to analyze, the average ratings of VA was 37, compared with 53 of Armed Services. VA was more conservative in rating veterans, especially in higher age groups. They indicated that selective factors might be one of the reasons for VA's lower ratings but they concluded that without a further detailed study, it would be hard to determine the level of accuracy.

The problem of rating the same individuals by different evaluators and assigning a different rating for the same condition is not unique to VA. Other programs such as SSA and workers' compensation reported such inconsistencies (Holmes, 2002). Some states such as California and Texas tested their systems by requesting the examiners to evaluate the same disability case (Kaganoff & Peterson, 1997; Texas Monitor, 1999). In California, the disability rating differed as much as 85 percentile points. Peterson, Reville, and Stern (1998) reported that the unpredictability and inconsistency of disability ratings in the California system produce litigation and expense. They report

that a single claim may receive different ratings by not only different raters but even by the same rater at different times. Texas examined the cases with multiple ratings (i.e., disputed cases receive multiple ratings) and reported that 43 percent of those cases had a different disability rating with disparities of 5 percent or more between doctors. Among the factors influencing the rating are experience and competency of the physicians. In addition, the guide used for evaluation is an important factor.

Qualification of examiners is an important factor in having consistent ratings. Some organizations offer training programs certifying examiners for impairment rating. In some states board certified specialists provide the rating, whereas in others chiropractors, nurse practitioners, and physician assistants are allowed to provide ratings. SSA has a list of accepted medical sources for providing ratings.

A GAO report (GAO, 1988) concluded that VA's rating schedule did not incorporate the results of recent medical progress, which may result in over compensating some veterans and under compensating others. Some technological advances such as voice recognition devices were not considered during the disability rating process, which would affect some veterans' earning capacity. GAO derived their conclusions by interviewing only 14 physicians from VHA and 18 physicians at the Jefferson Medical College, Philadelphia. Since the interviews were based on a small number of physicians and did not include other knowledgeable sources involved with the clinical treatment and assessment of VA's rating schedule, the results of the evaluation of the rating schedule and the medical criteria and terminology that VA uses in the schedule cannot be generalized.

In the same report (GAO, 1988) GAO indicated that as opposed to periodic changes, VA makes changes in the rating schedule usually when major stakeholders such as VSOs or Congressional staff bring the subject to the table. GAO reports that between 1978 and 1988 there were 4 sections of the rating schedule updated but not comprehensively. Ten out of the 14 sections were not updated at all. As part of this study, GAO surveyed about 400 VA rating specialists to identify the problems of converting the medical conditions to diagnostic codes with degrees of severity. The results suggested that many diagnostic codes do not include sufficient medical criteria to determine the degrees of severity. In addition, GAO found 15 conditions that were not in the rating schedule. The VA rating specialists surveyed indicated that in cases where they cannot locate a specific condition on the list, they find the conditions by analogy. When GAO asked them to assign a diagnostic code for the 15 medical conditions not on the list, as many as 10 different conditions were listed for each of the conditions. These findings were based on an adequate sample size. In addition, about 50 percent of respondents indicated there was a great need to quantify the descriptions used in determining the degrees of severity and to update diagnostic codes in identifying medical conditions that are not listed in the rating schedule.

In the same study, GAO obtained input of military officials on identifying problems related to medical criteria and how the VA rating schedule could be improved. The officials suggested adding more diagnostic impairments to the list and clarifying the

medical criteria for some codes. GAO did not report how many officials were interviewed.

Another GAO report (GAO, 1989) estimated that 32 percent of the disabilities that qualify veterans to receive VA disability compensation (such as diabetes, osteoarthritis, hemorrhoids, chronic obstructive pulmonary disease, and arteriosclerotic heart disease) possibly were not caused or aggravated by military service. The Veterans Claims Adjudication Report chaired by Melodosian (VA, 1996) also reports that although VA's Rating Schedule includes many injuries and disabilities associated with combat and military service, most of the disabilities reported by veterans receiving disability compensation are not of that nature; in contrast, they are similar to those experienced in the general population, such as diabetes, osteoarthritis, hemorrhoids, and so on. However, onset or exacerbation of these illnesses during military service, allows for a service-connected disability to be made. A testimony before the Committee on Veterans' Affairs reported that "according to VA data, about 290,000 veterans received about $970 million in disability compensation benefits in fiscal year 2002 for diseases identified by GAO as neither caused nor aggravated by military service" (GAO, 2003, September).

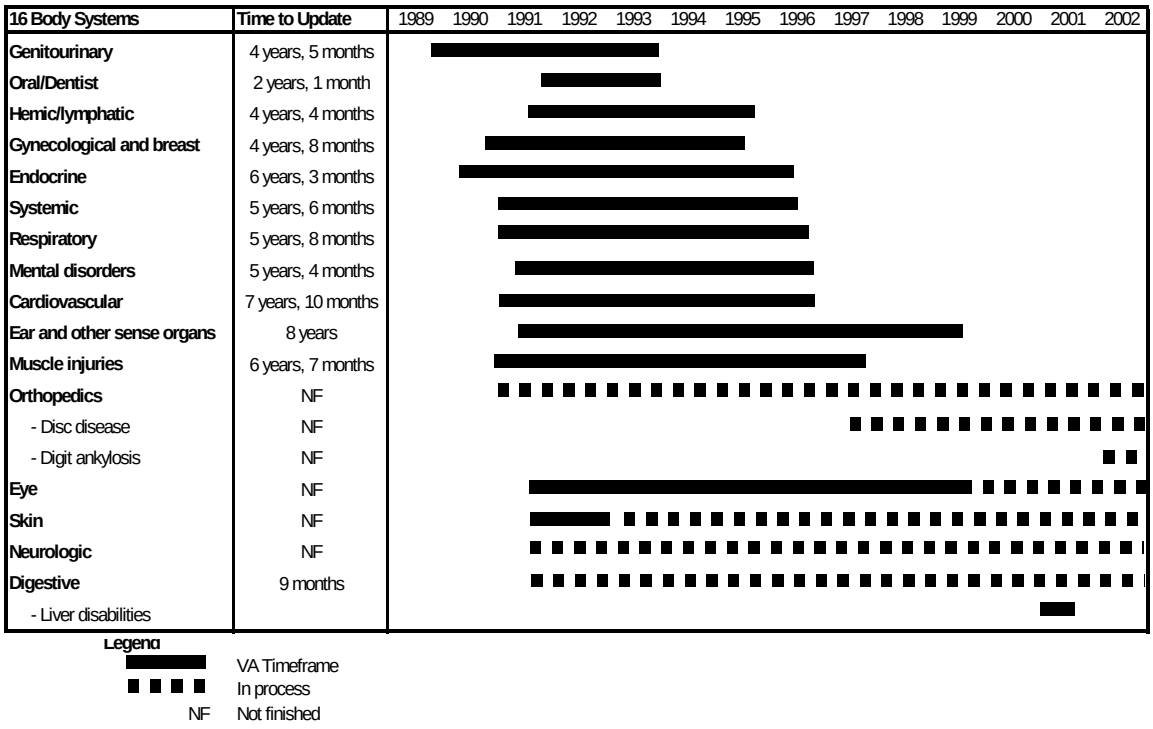
GAO (GAO, 1997, January) reviewed legislation, interviewed VA officials and VSO representatives, and documents such as the Bradley Commission and ECVARS. They also reviewed the literature on research design and methodology in order to suggest approaches to VA for a new study to revise the rating schedule. GAO stated that the schedule developed a long time ago by physicians and lawyers based the disability ratings on the effect of disabling conditions on the average individual's ability to perform jobs requiring manual and physical labor. They argued that since the composition of U.S. industry and workforce has changed over the years, the schedule does not reflect the average impairment of earnings capacity for income of veterans.

The 1997 GAO report cited above also indicated that little has changed since the results of the ECVARS study were published. ECVARS study expected that the rating schedule would be changed as advances were made in technology and changes were experienced in the mix of industries and the workforce over the years. There were 15 minor revisions between 1957 and late 1960s, mostly reflecting the changes in the U.S. labor market. They indicated that VA's revisions over the years consisted of modifications to medical conditions associated with the ratings including more levels of ratings, changes in the recovery period allowed before requiring reevaluation. VA also made revisions to presumptive conditions.

In a later study (GAO, "Reexamination of VA Disability Criteria," 2002, August), GAO reported that in 1989, VA, with the help of a contractor, organized a team of physicians to review and update the criteria used in the Schedule of Rating Disabilities. As of August 2002, VA completed the updating process for 11 out of 16 body systems. The process takes very long (about 5 years) mainly because a formal review is required by different offices such as OMB, VHA, Office of Inspector General, and VA's legal counsel. According to GAO, the insufficient number of staff coordinating the updating process is another reason for VA taking long in updating the schedule. Figure 9 (taken

from the GAO report) shows the time required for updating the schedule for the 16 body systems.

Figure 9. Timeline for Updating VA's Schedule of Ratings



Source: (GAO, "Reexamination of VA Disability Criteria," 2002, August)

In the same study GAO points out that the disability criteria used by VA, SSDI, and SSI (in overall program design) have not been updated to reflect medical advances. There have been some updates but the process has been slow. As part of the updates, the severity and occurrence of some conditions have been changed but the medical advances in treatment of these conditions have not been included in the updates as the "…statutory and regulatory design of these programs limit the role of treatment (such as advanced prosthetics and wheelchair designs) in determining who is disabled." GAO interviewed agency officials and experts, reviewed VA documents, prior GAO reports, SSA advisory board reports, and other documents in the literature for this study.

VA did not agree with GAO's recommendation on developing timetables for future updates of the Schedule for Rating Disabilities, citing that the initial review started in 1989 is still going on. In response to VA's comments, GAO indicated that some parts of the so-called updated schedule were completed 8 years ago and were based on the information collected 12 years ago. VA also did not agree with GAO on the recommendation that the disability criteria be updated based on medical advances such as assistive technologies.

The August 2002 GAO reports “the law does not specifically require VA to conduct continuing disability reviews to determine whether veterans continue to meet the disability requirement of the law.” However, the GAO report does not provide a complete nor clear picture of the existing Regulation and standard operational procedures in place with respect to reassessment examinations for disability compensation benefits. For example, C.F.R. 4.1 states "Over a period of many years, a veteran's disability claim may require reratings in accordance with changes in laws, medical knowledge and his or her physical or mental condition. It is thus essential, both in the examination and in the evaluation of disability, that each disability be viewed in relation to its history." Further, the regulations specify in C.F.R. 4.28 the use of prestabilization ratings subsequent to discharge or release from military service. These ratings are appropriate when the disability has not sufficiently stabilized in order for a permanent rating to be assigned. In addition, "temporary" ratings can be made in other situations where residuals are not known at the time of rating. For example, in the case of respiratory cancer, a "temporary" rating is warranted at the 100% level during treatment and for six months thereafter with a following mandatory examination so a permanent rating can be made based on residual disability. Therefore, both increases and decreases in disability ratings are fully consistent with the regulations that are in place. VA also did not agree with GAO on the regulations emphasizing the need for conducting reexaminations but do not require them as the SSA does in the SSDI and SSI programs.

Citing that American Medical Association’s (AMA, 2001) *Guides to the Evaluation of Permanent Impairment* is a more commonly known and used tool in the medical community, Melodosian report (VA, 1996) recommends “that VA, specifically VBA, develop and implement a business plan initiative to increase its involvement with other Federal and state government agencies, with private insurers, and with medical associations which deal in disability determinations.” Such collaboration may yield a revised rating schedule for VA, conforming to the medical evaluation criteria specified in non-VA sources. However, AMA’s *Guides* has been criticized by some who say that it is limited in its ability to measure impairment accurately. Spieler, Barth, and Burton (2000) and Gloss and Wardle (1982) argue that ratings based on AMA’s *Guides* do not reflect actual loss of function. In addition, major disability programs such as California’s and SSA do not use AMA’s *Guides*. In other programs such as FECA, the employee’s physician is required to evaluate the impairment based on AMA’s *Guides* to determine the actual percentage of loss.

Table 13. Summary of Key Documents Relevant to VA's Rating Schedule

Study	Objective	Methods	Results/Findings	Recommendations	VA's Response
Bradley Commission (1956)	Study the medical criteria and the disability ratings associated with these criteria to determine the adequateness and equitableness of the schedule.	Study of laws and policies on subject matter; survey of 169 medical specialists; comparison of earnings of veterans and non-veterans; survey of servicemembers.	Survey of 153 doctors: 63% said disability rating in accord with current medical principles 66% said classification of diseases in accord with medical standards 55% said medical criteria used are sound. But notes attached to responses indicated that many specific ratings and criteria need revision.	Schedule should be revised on the basis of factual data. Medical criteria should be modernized.	N/A
	Check on the consistency of ratings by VA and military.	Survey of 1,508 retired or separated servicemembers with disability retirement cases on the military rolls.	Wide disparity in the ratings given by VA and military exists; Overall, VA is less generous than Armed Services. Selective factors may be one of the reasons.	More studies need to be conducted for objectivity and consistency in rating process.	N/A
VA ECVARS (1971)	In response to Bradley Commission recommendations: estimate the average loss in earning capacity.	Analyze legislation; Study of VA's rating schedule; Review of Bradley Commission's analyses.	Functional loss did not relate to the economic loss associated with service-connected conditions.	No recommendations.	N/A
VA Program Evaluation (1983)	Part of evaluation of VA's 4 benefit programs: check on the uniformity of Rating Board decisions.	Survey of Rating Boards at 53 VAROs: 13 decisions representing 23 impairments sent to all VAROs.	Lack of uniformity exists (randomly; not specific to certain locations) among Rating Boards in rating of disabilities; Vagueness and generality of the rating schedule contributes to the lack of uniformity.	No recommendations.	N/A

Table 13. Summary of Key Documents Relevant to Rating Schedule (continued)

Study	Objective	Methods	Results/Findings	Recommendations		VA's Response
GAO (December 1988)	Review of rating schedule	Interview 14 physicians at VA's Department of Medicine and Surgery (now VHA); and 18 physicians at the Jefferson Medical College, Philadelphia	Terminology outdated; Some impairment needed clarifications; Some medical conditions not listed in the schedule; Medical criteria contain insufficient information.	Physicians: All sections needed improvements; some needed significant revisions; some sections contain ambiguities and vagueness.	GAO: Review rating schedule comprehensively and then revise medical criteria accordingly; Systematically review the schedule to keep it updated	VA accepts GAO's recommendations
	Identifying problems of converting the medical conditions to diagnostic codes	Mail survey of rating specialists: 383 respondents (95%)	Many diagnostics codes have minimal medical criteria to determine degrees of severity of disability. Some (15) medical conditions not listed in the schedule.	Rating Specialists: Rating schedule descriptions should be quantified to determine degrees of severity uniformly; Update diagnostics codes; Update medical terminology.		
	Review of procedures in implementing military disability program	Interview military service officials in DC and selected field locations	Identified diagnoses that needed clarification.	Suggested ways to improve the schedule.		N/A
GAO (January 1997)	Describes the basis for disability ratings assigned to conditions in the current schedule; describes results of Bradley Commission report and ECVARS	Analyze legislation; Review literature on research design & methodology; Interviews with VA officials, VSOs; Obtain views from other federal agencies and experts	Schedule has not been changed substantially since 1945 but major changes have occurred in labor market and society since then. Schedule may not equitably compensate veterans. GAO: Out of 700 diagnostic codes, 330 overestimated and 75 underestimated the average loss in earnings due to their conditions.	Congress should direct VA to determine whether ratings for conditions in the schedule correspond to veterans' average loss in earnings due to these conditions; Adjust disability ratings based on results of the study; Estimate the effect of SC conditions on veterans' average earnings; then use these estimates to set disability ratings.		VA did not concur with the recommendations stating that the current rating schedule [then] represents a consensus among Congress, VA, and other stakeholders.
GAO (August 2 2002)	Review the extent to which SSDI, SSI, & VA's disability criteria have been updated	Interview agency officials & experts; Review VA documents, prior GAO reports, SSA Advisory Board reports, and literature	In all 3 programs the criteria have not been updated to reflect medical, technological and labor market changes.	Update criteria periodically within the context of VA program's design. Agencies should study how scientific advances and labor market changes could affect the eligibility criteria and benefits package.		VA did not concur with the recommendations.

6. DISABILITY BENEFITS AND LOST EARNINGS

In this section we review the literature on the relationship between disability impairment, lost earnings, and disability benefits as well as the methods used for analysis. Much of the science-based literature in this area focuses on workers' compensation insurance programs. Workers' compensation programs are a collection of state mandated programs that vary by state.

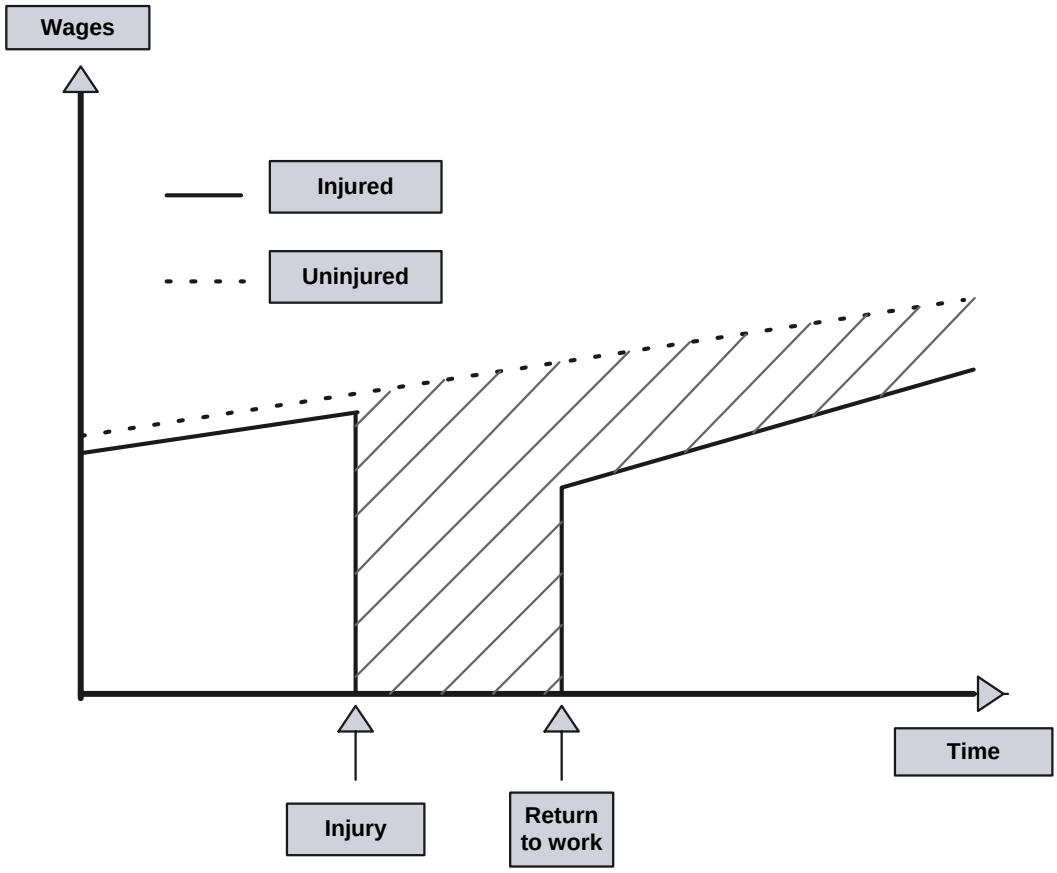
As one study (Cullinane, 1992) notes, VA and state-mandated workers' compensation programs have certain similarities and differences. Both the workers' compensation and VA programs provide the same basic benefits: cash benefits to replace lost earnings, medical care for the disability claim, and rehabilitation benefits. More than 90 percent of civilian workers are covered by workers' compensation while military/VA disability programs cover all servicemembers and veterans. Workers' compensation covers all work-related injuries and illnesses while military/VA disability programs covers all injuries and illnesses that began during service. VA's Disability Compensation Program allows eligibility for diseases that have long latency periods whereas latency periods are not used in workers' compensation programs.

Factors Influencing Disability Benefit Amounts

For the VA Disability Compensation Program, an important issue is how well the Program fulfills a major Congressional intent mandating compensation to replace lost earnings capacity of the disabled veteran. Looking beyond studies of the VA Program, we might ask the following kinds of questions: Do non-VA programs base disability benefit on lost earnings capacity? What factors influence disability benefit levels? What types of analyses have been performed in the science-based literature to determine the influencing factors? What approaches are found at large for estimating economic loss for disabled persons?

The science-based literature focuses mostly on workers' compensation programs, which provide benefits to workers for on-the-job injuries and work-related diseases. Peterson, Reville, and Stern (1998) use a graphical depiction to illustrate a hypothetical case of how wages are interrupted and/or reduced subsequent to the start of a disability. Life-time wage loss is affected by both the physical impairment and disruption in one's career. In Figure 10 below the area with diagonal lines represents the total wage loss affected by disability. The wage loss depicted here varies on an annual basis. In this particular case, the wage loss is 100 percent of previous annual earnings rate at first and then the wage loss gap gradually narrows as the individual moves towards a full recovery. However, note that VA disability compensation benefits are not likely to closely match this pattern.

Figure 10. Lost Wages due to Injury



Source: (Peterson et al., 1998)

Loss of earnings benefits are paid to disabled workers who do not return to work or come back to work at a wage level less than wage prior to the onset of the disability. The disability benefit may be determined solely by the impairment rating, loss of earnings, or a combination of both. Methods actually used vary by state and may include economic factors in addition to the physician's determination of impairment. Lost earnings may be estimated based on education, age, experience, occupation, and work life expectancy. Life expectancy is typically derived from actuarial tables. Work life expectancy, as a rule of thumb, is based on 11 years less than life expectancy.

Some studies such as Durbin and Kish (1998), Pryor (1990), and Peterson et al. (1998) have applied sophisticated multivariate methods such as econometric analysis to analyze the statistical relationship between wage loss as a dependent variable and several explanatory variables such as impairment rating, age, sex, and industry. Alternatively, the researchers specify the disability rating as the dependent variable and several additional explanatory variables that influence disability rating. Some of the studies argue that impairment ratings do not provide useful information in that they are not valid in determining lost wages.

A Rand Corporation study of the permanent partial disability component of California's workers' compensation system (Peterson et al., 1998) found that workers who suffered workplace injuries resulting in a permanent partial disability experience large and sustained wage losses. The research found that permanent partial disability payments on average only compensated 40 percent of wages prior to onset of disability.

To determine this, the researchers estimated the financial impact of a workplace injury by linking two databases. One database was for workers' compensation claims, the other for wages. This approach had the unique benefit to track earnings of the injured workers five years before and after injury/disability. They then assessed disability ratings, benefits before, and benefits after disability. They used 30,000 claimant files for individuals injured and/or disabled between 1991 and 1994.

Also, the results were analyzed using a control group. The control group was a group of workers who were similar over the five-year period before disability and then compared post injury. Disability claimants were matched to workers in the control group who worked in the same industry, firm, and time period. Prior to injury, the earnings of the disabled/injured workers were virtually identical to those of the control group. The results diverged significantly after the injury. Five years after injury, almost 50 percent of those with the highest disability ratings remained out of work while 10 percent of those with the lowest disability ratings remained out of work.

The authors used the control group to analyze both the reduction in wages and loss of earnings due to time out of work. They consider that disability can lead to difficulty in retaining employment and less attachment to the labor force. Disincentives to working include: lower wage rate; worker is in pain at work; and benefits from alternative activities such as raising children or retirement.

Durbin and Kish (1998) state that the adequacy and equity of benefits for permanently disabled workers is a major challenge in workers' compensation. Their study compared the medical impairment ratings provided by the examining physician to final disability ratings that determine the award amount in over 4,000 workers compensation claims filed in ten states. The correlation coefficient between the initial impairment rating and the final disability rating was found to be .58 across the sample of claims. This suggested a significant correlation but also the presence of other factors besides the physician impairment rating that affect the determination of final disability.

This suggestion was strongly corroborated by using sophisticated multivariate analysis and finding that the same injuries when measured by a physician impairment rating may be very different from final disability ratings as a result of factors unrelated to the injury or disability such as age, educational level, or the predicted future loss of earnings. More specifically, the study found that:

- A 10 percent increase in the impairment rating gives rise to a 7.5 percent increase in the final disability award.

- Older workers receive higher disability ratings and impairment ratings (while holding constant other factors including severity of injury and impairment rating).
- Disputed claims give rise to higher disability awards.
- Wages before disability have no effect on the impairment rating but have a positive and significant effect on the final disability rating.
- A final disability rating that is based on loss of earnings rather than physical impairment results in a significantly higher (78%) final rating than one based solely on physical impairment.
- Disability ratings vary significantly across states even after controlling for injury severity, other demographic characteristics, and the impairment rating.

Comparisons of VA and civilian workers' compensation programs were performed in a 1992 Rand Corporation study (Cullinane, 1992). A key difference cited in this report was that VA and military disability compensation generally continue for the duration of the injury or illness while the workers' compensation programs generally do not provide payments for the full duration of the disability. This difference in duration of payment affects large differences in the value of the benefits between VA and other programs. Also, VA benefits are adjusted annually for inflation while other programs generally are not. The study calculated quantitative differences in dollar value for different examples of disability compensation. Based on these differences, the study concluded that the benefits provided to veterans are more generous.

According to VA, the VA system does not necessarily compensate for the duration of an injury or disease but might do so, depending on the facts including the date of receipt of claim. VA establishes the service-connection of a veteran's disability. Service connection, once established for a chronic condition (disease or injury), may continue in effect indefinitely during the veteran's lifetime. However, the VA compensation system generally provides disability compensation only during periods of impairment that meet 38 C.F.R. Part IV criteria for at least a 10 percent evaluation. There are a few exceptions. 38 C.F.R. § 3.324 provides compensation for the cumulative effect of multiple service-connected disorders that are each considered non-compensable disabilities.[8] VA also has regulatory provisions to pay compensation at a particular rate for a particular period.[9]

Legal Approaches for Estimation of Lost Earnings

A number of methods have found acceptance in courts to estimate lost earnings and/or associated damages in cases involving tort actions. The range of methods is attributable to the differing manner in which disabilities can affect employment and long-term earnings. Also, there is the matter of what is accepted in cases brought under

[8] See 38 C.F.R. §3.350(a) and 38 C.F.R. §4.115B, Diagnostic Code 7522.
[9] See 38 C.F.R. 4.71a, Diagnostic Code 5055 (providing for a closed period of 100 percent disability compensation for a total knee replacement).

different state court jurisdictions. In many cases of disability, the compensation for earnings loss is governed by state statute and court interpretation. For example, a statute can dictate the minimum amount allowed to recover in the event of loss of a limb or some other extremity or functionality. While it can be instructive to consider how the legal system compensates for lost earnings capacity, it should be clear that adversarial proceedings cannot be directly compared with disability compensation programs. In tort actions, there often are additional elements whereby a party is claimed to be at fault. In the case of disability compensation programs, the element of fault is not an issue.

For most workers' compensation programs, a primary authority on evaluating disability or impairment is the *American Medical Association's Guides to the Evaluation of Permanent Impairment (AMA, 2001).* AMA's *Guides* assist the physician in determining a percentage disabled rating. A number of states require using the *Guides*, and if a determination cannot be made, then to use a specified alternative. For example, in Alaska, according to the Workers' Compensation Website ("Workers Compensation," 2004):

> *To rate your loss, the doctor must use the American Medical Association's Guides (AMA Guides) to the Evaluation of Permanent Impairment...*
>
> *Under the AMA Guides injuries to the head, trunk, and most body systems are rated as a percent of the whole person. The AMA Guides also have ratings for loss or loss of use of fingers, hands, arms, toes, feet, legs, vision, or hearing. If the Board decides the permanent impairment cannot be determined under the AMA Guides, the impairment rating may be based on the American Academy of Orthopedic Surgeons Manual for Evaluating Permanent Physical Impairments.*

In this approach, an implicit assumption is that the percentage disability translates directly into earnings capacity. For example, a worker who has a 50% disability rating is expected to have 50% of the earnings capacity of a worker who is not disabled. It is important to note, however, that, as a determinant of income, the effect of a disability can and does vary over time. In litigation cases where total disability has not occurred, courts typically expect that the impact will be reduced over time for most injuries and that the injured party is expected to mitigate the loss over a period of years.

For compensating state employees, some states, such as North Carolina, have a specific list of disabilities that they translate into a number of weeks for receiving a specified portion (two-thirds is a common proportion) of the worker's pay. For example, under Section 97-31, *Schedule of Injuries; Rate and Period of Compensation,* of North Carolina's state code:

> *In cases included by the following schedule the compensation in each case shall be paid for disability during the healing period and in addition the disability shall be deemed to continue for the period specified, and shall be in lieu of all other compensation, including disfigurement, to wit:*

> *(1) For the loss of a thumb, sixty-six and two-thirds percent (66 2/3%) of the average weekly wages during 75 weeks…*
>
> *(15) For the loss of a leg, sixty-six and two-thirds percent (66 2/3%) of the average weekly wages during 200 weeks.*
>
> *(16) For the loss of an eye, sixty-six and two-thirds percent (66 2/3%) of the average weekly wages during 120 weeks* (Duffus & Associates, 2004).

In the case of a partially disabled individual, the extent to which the partial disability impacts the individual's future earnings stream is considered. Moreover, the extent to which the partial disability can impede acquisition of additional skills or enhance existing skills is also considered.

The effect of a partial disability on an individual is not considered to contribute to a simple linear subtraction from wages over time. It does have a range of effects with impact on earnings growth and career mobility (Albrecht, 1991). An approach in widespread use is the offset approach (Carlson, 1976). Here earnings and the offset due to disability, and issues such as possible reduced living costs and other benefits, are considered.

A common application is to compute the net present value of lost earnings. Then an annuity formula is used to determine the monthly amount the injured party might be paid to compensate for income lost due to the injury.

In most private compensation cases, there is a mitigation period, after which it is expected that the disabled person will have fully recovered from the injury, except in the case of permanently and totally disabling injuries. Using the expected recovery period, a monthly annuity amount is calculated. Depending on the court or other adjudicative body, as well as the parties involved, payment can be made either as an annuity or as a lump sump equal to what one would have to invest in order to produce the indicated stream of monthly payments.

7. EMPLOYMENT-RELATED ISSUES

In this section, we summarize literature on the impediments of re-entering the labor force with a disability and analyze the progress of technology, government and of society as a whole, to accommodate the disabled in the job market.

Labor Force and Earning Capacity Trends

The literature is rich in studies showing the labor force participation rate and employment level of people with disability and those without disability. Here we present findings of these studies for several different periods. Table 14 displays the labor force participation rate for the U.S. working age population from 1970 to 1992. Eighty-two percent of men were in the labor force in 1992, compared to 86 percent in 1970. Women went from being represented in the labor force with less than half their population to being represented by two-thirds of their population. In total, 74 percent of the population was in the labor force in 1992, up 12 percent from 1970.

Table 14. Labor Force Participation Rate by Gender and Year

Gender	Year	Total
Male	1970	86%
	1992	82%
	Change	*-5%*
Female	1970	48%
	1992	66%
	Change	*+38%*
Total	1970	66%
	1992	74%
	Change	*+12%*

Source: Taken from Yelin (1997)

Table 15 displays the labor force participation rate for the disabled population. 53 percent of the disabled men were in the labor force in 1992 compared to 64 percent in 1970, a decrease of 17 percent from 1970. Only 42 percent of disabled women were in the labor force in 1992, which was an increase of 40 percent from 1970. Overall, the labor force participation rate decreased slightly, from 48 percent in 1970 to 47 percent in 1992. Thus, although disabled women were able to make a strong presence in the labor force, the disabled men still outnumbered the women; higher number of males in the labor market caused the overall participation rate to decrease.

Table 15. Labor Force Participation Rate of Disabled Population by Gender and Year

Gender	Year	Total
Male	1970	64%
	1992	53%
	Change	*-17%*
Female	1970	30%
	1992	42%
	Change	*+40%*
Total	1970	48%
	1992	47%
	Change	*-2%*

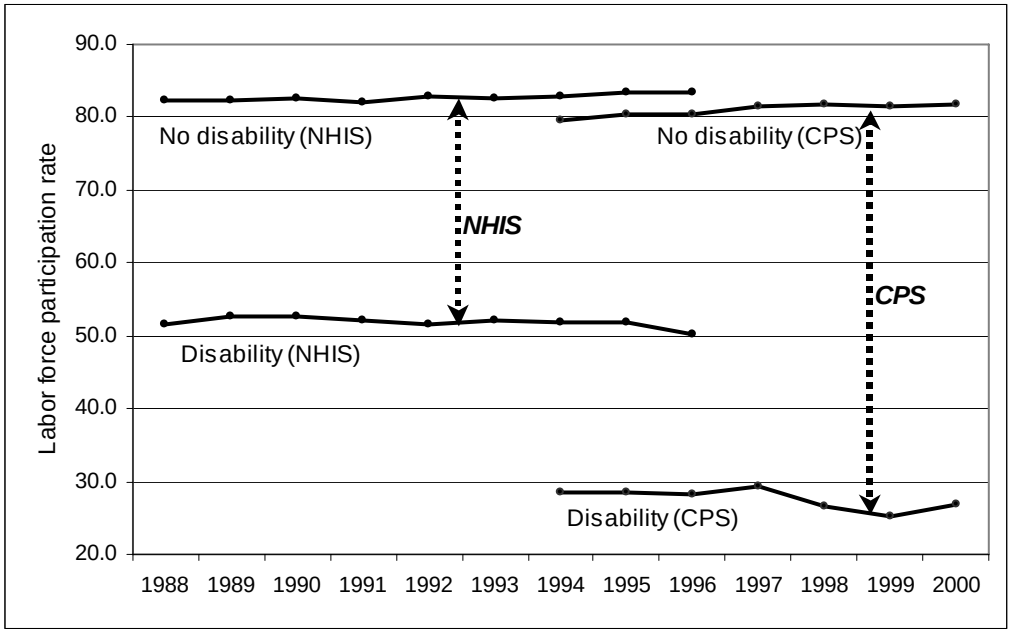
Source: Taken from Yelin (1997)

Figure 11 displays labor force trends data from the National Health Interview Survey (NHIS) as well as the Current Population Survey (CPS) from 1988 to 2000. The population used for this figure was working-age adults (ages 18-64). Figure 11 displays the labor force participation rate by disability. CPS and NHIS show vastly different rates for the disabled population as the two surveys have dissimilar definitions for disability. For example, in 1995, CPS produced a labor force participation rate of 28.5 percent for the disabled population while NHIS produced 51.9 percent. Also, CPS shows a larger gap between the disabled and non-disabled populations than the NHIS data. For example, in 1995, the gap between the two populations was 51.9 percent for CPS and 31.4 for NHIS. Both NHIS and CPS show slight increase in the labor force participation rate of people without disabilities over time. The two surveys, however, show slight decreases in the labor force participation rate for the disabled.

Autor and Duggan (2002) estimated possible causes of the recent decline in the labor force participation, including decline in real wages, differential health trends, rising immigration rates, rising incarceration rates, and shifts in Unemployment Insurance benefits. Their analysis, however, concludes that none of these measures significantly correlates with the recent labor force decline.

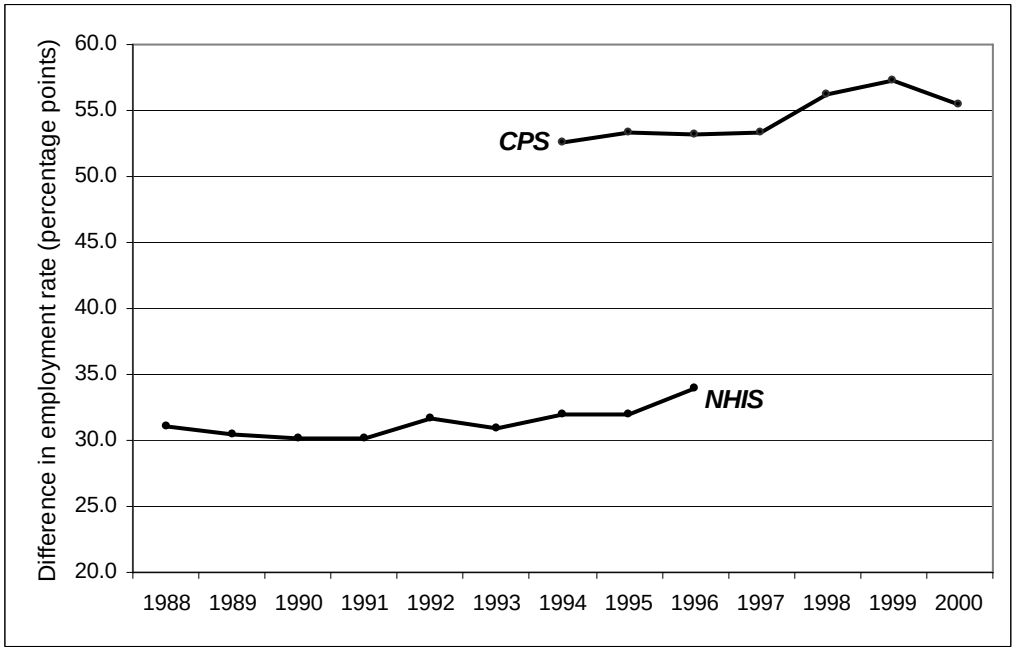
Figure 12 displays the employment gap defined as the difference in employment rate between those with and without disability. Both surveys show an increase in the employment gap. The NHIS data shows a 3.7 percentage point raise in the employment gap from 1990 to 1996 while the CPS data has the gap growing 2.8 percentage points from 1994 to 1999.

Figure 11. Labor Force Participation Rate by Disability Status, 1988-2000



Source: Kaye (2003)

Figure 12. Employment Gap Between People With- and Without Disabilities, 1988-2000



Source: Kaye (2003)

Among the literature on employment trends for the disabled, there is no uniform conclusion on the affect of the Americans with Disabilities Act (ADA) on the employment rate of the disabled population. Some argue that ADA is a failure since the employment level of disabled people has decreased since ADA was phased in. Others suggest that the decrease in employment levels should be attributed to other factors. We summarize both arguments below.

According to Kaye (1998), ADA raised awareness of the problem of the employment of the disabled. However, for the most part, statistics do not show an improvement of the employment situation for the disabled. NHIS reported no significant change in the employment rate of people with chronic health conditions and impairments from 1990 to 1994. Kaye analyzes data from the Survey of Income and Program Participation (SIPP) to show statistical evidence of increased employment of the disabled in one of its two measures. People with severe functional limitations such as the inability to climb up a flight of stairs without resting experienced an increase in their employment rate by 16.7 percent from 1991 to 1994. In contrast, over the same period, SIPP found that the employment rate of people with any general degree of functional limitation did not change (Kaye, 1998).

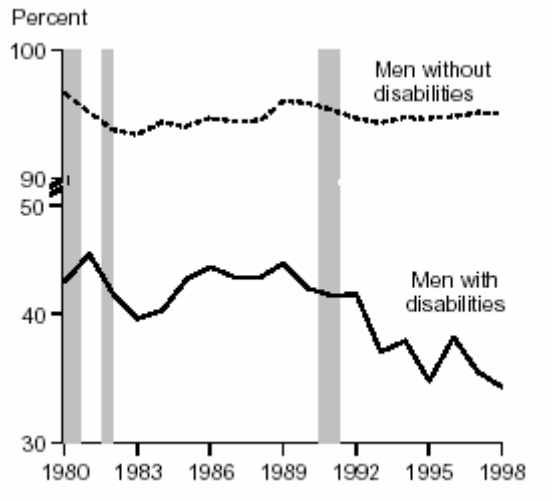
By the late 1990s, ADA still had not statistically improved employment of the disabled. The period from 1992 to 1998 represented seven years of economic prosperity in the U.S. Over these seven years, employment of the non-disabled grew along with the economy. However, the disabled labor force participation rate decreased over these years of economic expansion (Daly, Burkhauser, & Houtenville, 2000). CPS reported that the labor force participation of people with work disabilities did not change significantly (Kaye, 1998).

While the number of disabled individuals drawing benefits from federal programs such as SSDI and SSI increased over the past 15 years, employment rates for the disabled population fell. Some blamed the ADA for the decrease in the employment rate (DeLiere, 2000). Some argued that relaxation in eligibility requirements allowed individuals to leave the labor force and enroll in disability programs (Bound & Waidman, 2002). Others suggested that the decrease in low-skilled jobs forced the workers to apply for disability payments (Autor & Duggan, 2001).

Burkhauser (2001) also noticed a decline in the employment rate of the disabled population during the 1990s. Thus, despite seven years of economic growth, a smaller percentage of disabled people were employed and a larger fraction relied on some source of disability compensation.

Figure 13 displays the trend of the employment rates of men with and without disabilities from 1980 to 1998. When the economy was in recession, highlighted by the gray area in Figure 13, the employment rates decreased. However, when the economy was not in recession, employment rates for the most part, slightly increased. From 1992 on, the employment rate of men with disabilities went against the trend and decreased dramatically in a time of economic prosperity.

Figure 13. Employment Rates by Disability Status



Source: Daly et al (2000)

Hotchkiss (2002) suggests that the decrease in employment among disabled people can be attributed to the drop in the labor force participation rates among those classified as disabled. Using data from CPS, he shows that the joint probability of labor force participation and employment of a disabled person dropped 4 percentage points after the implementation of ADA, compared to a non-disabled person's joint probability. However, he argues that this drop is not a result of disabled people leaving the labor force but rather of a reclassification of many non-disabled, non-participant people as disabled. Further, he suggests, "…this phenomenon likely occurred as a result of more stringent welfare reform requirements and more generous federal disability benefits." He repeats the same analysis using the SIPP data and finds similar results, confirming the CPS results.

Popovich, Scherbaum, and Polinko (2003) state several reasons for the lack of effectiveness of the ADA in increasing employment of the disabled. First, ADA presents general guidelines and does not go into detail as to how to make disabled people more effective in the work place. They argue that definitions of key words such as 'disability' and 'reasonable accommodation' can be interpreted in several ways. In addition, they report inconsistent employer ideas on what should and should not be considered a disability. Thus, each employer may have different perceptions on how the ADA should be implemented.

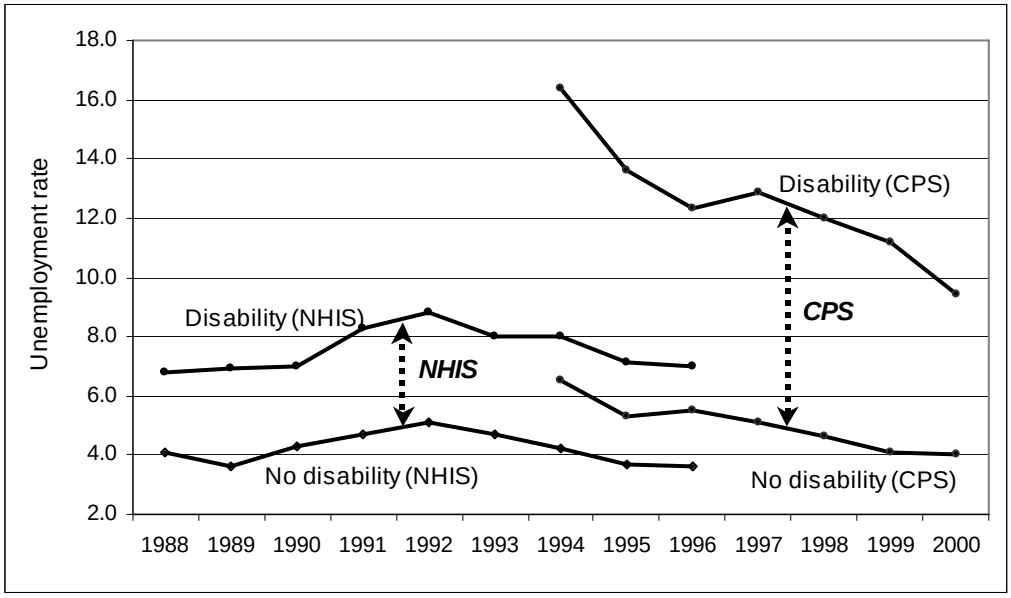
A book edited by Stapleton and Burkhauser (2003) questions the use of employment rate of the disabled population to assess the performance of social policies such as ADA. The editors state that the employment rate calculations include disabled people (in the denominator) who report (in surveys) that they are unable to work at all. They argue that including these people in calculations may be misleading. Their book presents studies of several researchers on the subject of employment decline of

disabled people. They report that all of the researchers included in the book agree that the employment rate for the disabled people decreased but they disagree on the reasons. The editors group the reasons for the decrease in employment for the disabled into three main categories:

1. Increase in the severity of disabilities and health conditions
2. ADA
3. Relaxation of eligibility criteria and increases in benefits of SSDI and SSI programs

Figure 14 displays the unemployment rate trends for people with disabilities and without disabilities. From 1992 to 1996, in the NHIS data, the non-disabled population decreased 1.8 percentage points while the disabled population's rate decreased 1.5 percentage points over the same period. In the CPS data, the disabled population decreased from 7.0 percentage points from 1994 to 2000 while the non-disabled population rate decreased 2.5 percentage points. Although the two surveys cover different periods of time, CPS had a steeper drop than NHIS in their overlapping years.

Figure 14. Unemployment Rate by Disability Status, 1988-2000



Source: Kaye (2003)

Lost earnings capacity of disabled workers has fluctuated throughout history. In recent decades, labor market earnings of disabled workers have had periods of both increases as well as decreases. However, disabled workers have consistently made less income than non-disabled labor force participants. In general, the literature indicates that

disabled persons suffer lost earnings capacity and that this varies with the individual's age, education, and socioeconomic characteristics.

Research shows that labor market earnings of disabled workers increased in the 1960s and into the first half of 1970s (Haveman & Wolfe, 1988). The earnings of disabled persons rose both in nominal and inflation-adjusted dollars. However, it was also found that in the last half of the 1970s the earnings of disabled workers decreased. The loss in earnings was offset by an increase in the growth of government transfer payments during that same period. After 1980, programmatic changes led to net reductions in transfer payments which when coupled with further declines in earnings led to a decrease in the economic well-being of disabled persons.

Burkhauser (1997) reports that in 1988, a disabled male earned significantly less ($11,513) than the median male without disability ($32,237). This is also the case for men with families. The median disabled man with a family made $20,343 compared to the median non-disabled man with a family ($27,069). The same pattern is true for women. Men with disabilities saw an earnings decline of 24 percent one year after the onset of the disability. Women's earnings decline was even steeper.

In a more recent study Stapleton and Burkhauser (2003) reports earnings data from CPS. Between 1989 and 2000, mean household income of working age men without disabilities increased by 9.4 percent whereas it decreased by 2.9 percent for working age men with disabilities. For women, the results were more favorable. Mean household income of working age women increased for both those without disabilities (12.6%) and with disabilities (5.6%).

Daly et al. (2000) shows that for the nearly 10 percent of the working age population classified as disabled, the strong economic growth of the 1990s did not produce increased rates of employment or increases in income. This, in the authors' view, is the result of the various impediments faced by disabled people. In particular, limited employment opportunities and limited professional and geographic mobility all conspired to limit earnings growth among large numbers of disabled persons.

Disincentive to Work

The stated goal of U.S. disability policy in the last twenty years has been to improve and encourage employment opportunities for working age persons with disabilities. Of the four national policies goals stated in ADA, three including equality of opportunity, full participation, and economic self-sufficiency are built around encouraging work. Still a range of research has found that some programs do generate disincentives to work.

Several disability compensation programs exist to stabilize disabled people financially while unemployed. However, according to Stapleton and Burkhauser (2003), while these programs are temporarily helpful, they may also provide beneficiaries disincentive to work. Some people who receive disability compensation without working do not feel the strong need to re-enter the work force. For example, rising health care costs cause some employers to offer health care plans with an increasing number of restrictions. Thus, employment becomes less attractive for SSI beneficiaries as the health benefits

they receive from SSI may outweigh the cash benefits of obtaining a job (Stapleton & Burkhauser, 2003).

Although many changes were made in the Social Security disability programs, the Chairman of the Social Security Board testified before the House Social Security Subcommittee in May 2002, indicating the disability programs needed improvements:

> *As we have emphasized in our reports, disability is at the heart of SSA's many challenges. It accounts for two-thirds of the agency's administrative budget – about $5 billion this fiscal year. Disability benefits will account for nearly $100 billion in spending this year, or nearly 5 percent of the Federal budget. The current disability structure is seriously flawed and needs to be reformed in the interests of both claimants and taxpayers* (Social Security Advisory Board [SSAB], 2003).

Over time each disability program may need some revisions including redefining the term "disabled." In their 2003 report, Social Security Board questions, "whether the very definition that is at the heart of the existing disability programs is consistent with our society's basic beliefs about disability and work" (SSAB, 2003). Social Security Administration's (SSA) definition of disability (i.e., inability to do substantial work) in a way undermines ADA's goals. Existing work disincentives for SSA (SSDI and SSI) beneficiaries may contribute to their lack of motivation in returning to work. In order to be eligible for the SSA programs, a claimant "must be unable to engage in substantial gainful activity…" (Ross, 2000). Thus, after proving their inactivity, beneficiaries may be reluctant to return to work as it would undermine their claim for disability benefits.

According to some researchers, disabled individuals are discriminated against in their wages, causing further disincentive to work. Baldwin and Johnson (1994) studied disabled men in 1984 and concluded that disabled men were offered $0.52 less an hour than non-disabled men. The same study found that this wage discrimination reduced the probability of employment for disabled men. In general, the study found that 80 percent of the disabled population in the workforce was not significantly affected by wage discrimination but that wage discrimination does exist for the disabled. According to the author, even this relatively small sense of discrimination is an obstacle to disabled individuals looking for work, and causes discouragement in their job search.

Barriers to Productive Employment

Barriers to work faced by people with disabilities include discrimination and lack of training and/or rehabilitation. Similarly, many disabled veterans encounter all the additional myriad barriers faced by individuals who are diverse with respect to gender, race, and ethnicity.

Since it took effect in early 1990s, ADA has helped bridge the relationship between the disabled and prospective employers. It has opened numerous employment opportunities in a wide array of industries and has facilitated disabled people's entrance

into the work force. However, underlying problems persist in the work environment for Americans with disabilities.

One problem facing the disabled in obtaining employment is lack of personnel who are trained and aware of ADA imposed regulations. The ADA regulations for the hiring of disabled employees are not effective unless put into practice, and some companies are not properly training their staff to be as open to the disabled as required by law. Although legislation has been imposed to protect disabled people's rights, it may not be followed and enforced in some cases. This would suggest that a system to more effectively enforce the concerns highlighted in ADA could further progress the employment of disabled individuals (Hignite, 2000).

The enactment of the ADA displays an effort on the part of the Federal government to integrate the disabled into the labor force. Burkhauser (1997) argues that although ADA has helped the progressive opening of employment opportunities for disabled individuals, additional legislation to supplement the ADA could highlight government goals of the ADA and make the imposed regulations for the employment of disabled individuals more effective. For example, countries in Europe have been successful in efficiently running their disability benefit programs. Several Western European counties relaxed their disability program eligibility requirements which allowed many older and less healthy workers to leave the labor force (Burkhauser, 1997). The United Kingdom offers tax credit for employers who have a disabled person work at least 16 hours a week. Germany requires an employer to get approval from the government before they can dismiss a disabled worker. In addition, some European countries have strict quotas for employment of the disabled (SSAB, 2003).

Even after obtaining a job, employment of people with disabilities can bring further challenges that a non-disabled work environment would not have. In most cases, participation in the labor force requires a great deal of social interaction that some disabled individuals find stressful. According to Boyle (1997), the awkward environment can be twofold as non-disabled employees may find interacting with disabled coworkers uncomfortable. The 2004 Harris Survey of Americans with Disabilities further highlighted this point as it found that people with disabilities are less likely to socialize, eat out of the office or attend religious services compared to the non-disabled population (National Organization of Disability [NOD], 2004). Knowing this phenomenon, employers may not hire disabled employees in order to optimize comfort in the work environment.

In addition, the stress associated with social interaction may drive a disabled person out of a job if they find the emotional burden outweighs the financial gain of holding the job. Boyle (1997) discusses some cases where employment caused the disabled individual to showcase their impediments. For example, a disabled employee may have to ask his/her employer for time off to visit a doctor or to get more rest than a non-disabled employee would. This showcasing of disability can be a sensitive subject for a disabled person and can ultimately lead to job-related stress and resignation.

Kim (1996) studies how discrimination in the workplace is not limited solely to interactions with peers in the workplace. Supervisors can also discriminate as Kim's research has found that having a disability can significantly affect job advancement. His study shows that on average, disabled Federal employees have much less promotional rates than those Federal employees without disability. Thus, supervisors can be prejudiced in their decision to promote an employee.

NOD (2004) extracted statistics from the Harris Survey of Americans with Disabilities which provided further evidence of the barriers of employment for disabled people. In 2004, 22 percent of employed people with disabilities encountered job discrimination. This marks a 14 percent decline from 2000. However, it still indicates a relatively high number of discrimination cases. In addition, 31 percent of people with disabilities have inadequate transportation compared to only 13 percent of the non-disabled.

Coordination With Vocational Rehabilitation And Other Programs

Vocational rehabilitation became a federal concern after World War I (WWI), when disabled soldiers arriving home from service were having trouble finding employment. The first federal system of vocational rehabilitation took place in 1920 with passage of the Smith-Fess Act. The notion of a federal system for vocational rehabilitation progressed with the Social Security Act of 1935, which authorized rehabilitation for recipients. In 1965, a Finance Committee report documented that rehabilitation sources were only being utilized by a small percentage of disability beneficiaries. Thus, the Social Security Act was amended to allow payments for recipients participating in the rehabilitation services. In 1972, SSI was established, allowing its beneficiaries rehabilitation services.

With little progress in the number of Social Security disability beneficiaries in the rehabilitation system in the 1970s, the Budget Reconciliation Act was enacted in 1981. This legislation changed the system of payment so that the government only reimbursed vocational rehabilitation agencies when they successfully placed an employee into a job. This forced the rehabilitation services to run more efficiently. The "Ticket to Work and Work Incentives Improvement Act of 1999" aimed at further increasing access to rehabilitation for disabled beneficiaries. Eligible participants are given a "ticket" which can be redeemed for enrollment in vocational rehabilitation, training, and other employment services in both the private and public sector (SSAB, 2003).

The 1990s brought about economic prosperity, which did not translate into an increase in the employment rate of the disabled. As a result of the lack of improvement in the employment of the disabled, new approaches were made to improve the efficiency of the rehabilitation programs (Kosciulek, 2003). For example, customer satisfaction began being measured frequently as a source of information on the effectiveness of rehabilitation services.

Adjusting to non-military life can be very difficult for a veteran who has spent significant time in the Armed Services. Upon leaving service, veterans must quickly re-acclimate themselves to society and find a source of income. Re-entering the labor force can be a burden on veterans as they transition to a different work environment in civilian life.

Veterans with disability have an even greater task, as they have to be rehabilitated before they can find employment.

U.S. Department of Veterans Affairs' (VA) Vocational Rehabilitation and Employment Service (VR&E) was authorized under 38 U.S.C. Specifically, Chapter 31 of Title 38 focuses on the training and rehabilitation for veterans with service-connected disabilities. The legislative intent of Chapter 38 was "to provide for all services necessary to enable veterans with service-connected disabilities to achieve maximum extent feasible, to become employable and to obtain and maintain suitable employment" (38. U.S.C. 3100).

As of fiscal year 2003, 2.3 million of 25 million U.S. veterans were disabled. Out of 2.3 million, 1.5 million are evaluated at the 20% service-connection or higher. A 20% service-connection or higher is the rating percentage needed for eligibility to VR&E program. In 2003, there were 65,055 applicants to the VR&E program of which 23,996 (36.8%) ended up initiating Rehabilitation Plans. Of the 23,996, 9,554 (39.8%) successfully completed the program for the first time. This program is an ongoing benefit for service-connected veterans and it can be used multiple times. Annually, around 10,000 veterans are successfully rehabilitated through the VR&E program (VA, 2004, March).

The Federal Employees Compensation Act's (FECA) vocational rehabilitation program is generally only utilized by claimants who are released from their doctor but who are unable to return to work. Only a small percentage of FECA's claimants each year are referred to the rehabilitation program. Overall, thirty-three percent of FECA's rehabilitation participants return to work and another twenty nine percent end up completing the program (U.S. Department of Labor [DOL], 2004).

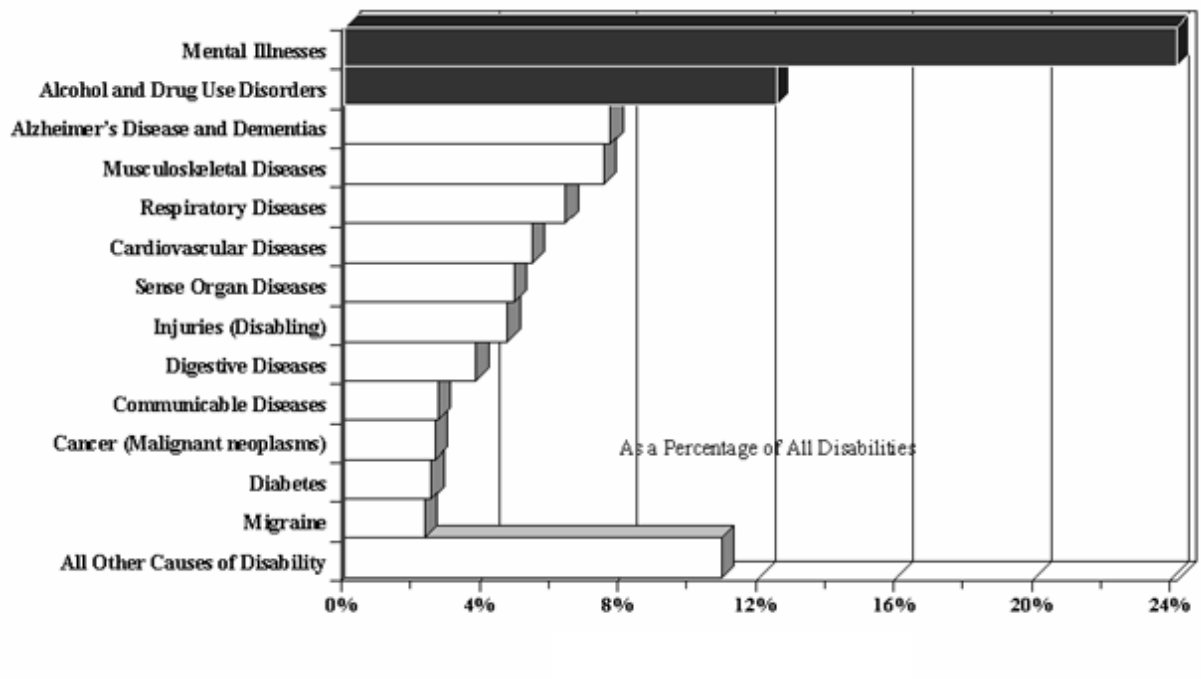
Additional literature analyzes vocational rehabilitation further in order to decipher its true value. For example, according to a customer satisfaction study on the success of vocational rehabilitation, Yelin (1997) found that only one half of the successfully rehabilitated participants received jobs related to the subject of their training. Thus, the vocational rehabilitation did not necessarily focus its participants in one particular job field.

If used properly, vocational rehabilitation can be a powerful tool in the re-entry of the work force for a veteran. For example, Spieler, Barth, and Burton (2000) describes that health is a significant factor in an employer's hiring decision, and that rehabilitation programs are a main source of aid in bringing a disabled individual's health up to an employer's standard. In addition, vocational rehabilitation is most useful if applied early, while the disabled individual still has a strong incentive to work and while the relationship with the employer is not too distant (SSAB, 2003).

There is, however, a limit to the productivity of rehabilitation. Individuals who are severely impaired may not find rehabilitation helpful in increasing their prospect of hire (Spieler et al., 2000). Work experience and intellect are important factors for disabled individuals in their success of rehabilitation.

People suffering from psychological disabilities require special attention in vocational rehabilitation. According to a report of the Surgeon General (U.S. Department of Health and Human Services [HHS], 1999) Figure 15 displays the causes of disability for the U.S, Canada, and Western Europe in 2000. Mental illness was found to be the leading cause of disability among adults in developed nations such as the U.S. (HHS, 2002).

Figure 15. Cause of Disability: United States, Canada, and Western Europe, 2000



Source: (World Health Organization, 2001)

In the past few decades, mental health issues affecting one's ability to work have increased dramatically. According to data extracted from National Health Interview Survey (NHIS), mental health issues was the second most prevalent condition causing unemployment among working-age adults from 1988 to 1996. The U.S. Census Bureau reports that in 2000, 20.4 percent of disabled people aged 16 to 64 had a mental disability.

Excluding mental retardation, there were 498,000 working age adults in the U.S. who claimed that mental health issues were the prime reason of unemployment in 1988. By 1996, the number nearly doubled to 973,000 (Kaye, 2003). Kaye suggests that the growth in the number of mental health related issues are likely due to several factors: the increase in the number of people seeking treatment, increased recognition of mental health conditions as a disability, and the general societal openness of the conditions.

Post-Traumatic Stress Disorder (PTSD) is a specific mental condition affecting 15 percent of veterans (White, 2004, October 3). For veterans of the Vietnam War, PTSD was the most prevalent disability, with 5.8 percent claiming that they were disabled due to PTSD (VA, 2004, June). In a study of veterans seeking disability compensation for

PTSD, Sayer, Spoont, and Nelson (2004) report that only around 50 percent were receiving mental health treatment at the time of their application. In addition, more than half of the claimants applied for disability compensation for non-financial issues such as relief, validation, or acknowledgment that they were victims of a mental illness. In another study, Frueh et al., (2003) found that veterans with PTSD who applied for compensation are more likely to exaggerate their symptoms compared to veterans with PTSD who were not applying for compensation. Sayer et al. concludes that veterans seeking disability benefits have unmet mental health care needs and that policy makers should consider financial benefits as only one of many possible reasons in seeking disability compensation.

A study by Cook (1999) identified specific principles for successfully rehabilitating people with severe mental disability. These principles include rating participants' job behaviors and attitudes as well as placing participants in competitive or supported employment within the duration of the training to accelerate their working experience.

Impact Of Technological Progress

The ADA mandated firms and other organizations to architecturally facilitate disabled. However, some disabilities require further resources than accessibility to enable maximal job performance. Lower costs of assistive technology have also made innovations economical and more accessible to the average employer, thus increasing their potential usage.

Technological progress impacts the disabled and their earnings and employment opportunity in two ways. First, medical technology advancement permits ameliorating some disabilities through improved prosthetic devices, rehabilitative procedures, and surgical and medical advance. The second approach and central to this review, is the impact of technological progress on the workplace and the changes in occupational structure and physical demands. These changes all impact the earnings and employment of the disabled workers. There is no clear consensus on the earnings capacity impact of technological improvements for the disabled, as there are different labor force and earnings results for different groups of disabled persons. Factors such as age, location, extent and or nature of disability all have varying impacts on labor market and earnings outcomes for disabled workers.

Several decades ago, an employee with poor vision would have to use a magnifying glass in order to see small scripted documents. Since then significant advances have been made, and an employee with vision impairment has a variety of tools available to help. One of these is a closed-circuit television (Mottl, 2001), which includes a camera to easily view documents. Another is a pair of glasses that allow shortsighted people to view overheads and projections in meetings.

Even individuals without strong use of their arms can be productive for a company through advancing technology. Head-pointers and voice recognition systems replace a mouse and keyboard so that employees without the full use of arms can point and click on a computer (Marenghi, 1991).

Mottl (2001) notes that a major concern in purchasing the latest employee assistance technology has been cost. In the past, disabled employees requiring state of the art technology could not easily get the technological assistance they needed, as it was too costly. Now, organizations are making efforts to dispel perceptions of high technological costs. For example, NOD reports that 15 percent of the disability technology does not cost anything and that 51 percent costs between 1$ to $500 (Mottl, 2001). Thus, they claim that 66 percent of the disability technology are priced under $500. The federal government has also attempted to educate people in the workforce about the availability and access of disability technology. Upon review of disability technology, the Equal Employee Opportunity Commission concluded that 80 percent of all disability accommodations cost less than $500 (Banking Information Source, 1992).

The Federal government has also attempted to educate people in the workforce about the availability and access of disability technology. To further educate the public of disability technology, the government passed the Technology-Related Assistance for Individuals with Disabilities Act of 1988, which established programs to educate employers as well as disabled individuals about the available technological innovations in the disability field (Russell, Hendershot, LeClere, Howie & Adler, 1997). In addition, the Job Accommodation Network (as cited in Cornell University, 2000) concludes that 80 percent of disability accommodations cost less than $1,000.

Employers with difficulty affording disability related technology for their employees have several avenues for financial support. Technological costs can be mitigated through federal grants, tax incentives, and sponsorship from organizations (Mottl, 2001). Tax credit can be obtained through numerous sources. The Targeted Jobs Tax Credit provides employers with credit if they hire disabled employees. In addition, the Disabled Access Credit offers credit for employers for technology and accommodation of disabled employees (Marenghi, 1991).

One of the issues raised in recent research is that technological progress has drastically reduced the prevalence of “brute force” jobs in the U.S. economy. Even some traditional blue-collar occupations now involve monitoring computers that operate machines doing the work. Many jobs no longer require much physical work. As a result, persons with disabilities can meet the demands of an increasing number of jobs. Still, changes in workplace organization from long-term secure work to short-term contingent work in many sectors are said to contribute to jeopardizing the employment prospects of persons with disabilities.

8. OTHER PROGRAMS FOR DISABLED PERSONS

In this section we first present a comparative analysis of Federal disability programs (excluding the Military Disability Retirement Program) that provide compensation benefits to individuals as a result of their injury or illness and potential loss of earnings capability. Then we provide a summary on the description and eligibility requirements of each program separately. Next we provide a narrative on the Military Disability Retirement Program followed by other disability programs such as state workers' compensation programs and private programs. A brief discussion is also included at the end of this section for disability programs available in other countries.

Federal Disability Programs

Other Federal disability programs include:

- Worker's compensation program under the Federal Employees Compensation Act (FECA): This program is administered by the U.S. Department of Labor (DOL) and applies only to Federal employees.

- Federal Disability Retirement Benefits under either the Civil Service Retirement System (CSRS) or the Federal Employees' Retirement System (FERS). These programs are managed by the U.S. Office of Personnel Management (OPM) and provide benefits for Federal workers who have long-term disabilities.

- Social Security Disability Insurance (SSDI): This program administered by the Social Security Administration provides benefits for workers with severe long-term disabilities. The recipients must be insured for coverage in the SSDI program (Nelson, 1994).

- Social Security Supplemental Security Income (SSI): Another program administered by the Social Security Administration, SSI provides benefits to disabled, blind, or aged individuals who have low income and limited resources regardless of how long they have worked under Social Security.

Each of these Federal programs has some similarity to VA's Disability Compensation Program. However, there are also major differences. Table 16 summarizes some of these similarities and differences (U.S. General Accounting Office [GAO], 1997, February; GAO, 2002, August; and Study Team analysis).

Table 16. Comparison of Disability Compensation Programs

Program	VA Disability Compensation Program	Federal Workers' Compensation Under FECA	Federal Disability Retirement Under OPM	Social Security Disability Insurance (SSDI)	Supplemental Security Income (SSI)
Main Program Objectives	To compensate veterans for physical or mental conditions incurred or aggravated during military service resulting in lost earnings capacity.	To provide benefits to Federal employees who sustain work-related injuries or diseases; to limit employers' liabilities to workers' compensation payments; and to return the injured worker to work.	To provide benefits to Federal employees who are unable to work because of long-term disability.	To provide benefits to workers who are unable to work because of severe long-term disability; to encourage workers to return to work.	To provide benefits for disabled, blind, or aged individuals who have low income and limited resources; to encourage workers to return to work.
Types of Benefits	Cash benefits for service-connected conditions. Special monthly compensation for permanent loss or loss of the use of body parts or functions, or procreative organs. Survivors and dependents' benefits. Priority eligibility for medical care in VA Medical Centers. Vocational rehabilitation, including payment of stipends. Allowances for special needs, for example, clothing and attendant.	Cash benefits for wage loss. Scheduled awards (cash payments) for permanent impairments; loss or loss of use of body parts or functions. Survivors and dependents' benefits. Payment of medical expenses for work-related injuries or illnesses. Vocational rehabilitation. Allowances for special needs, such as the payment of an attendant.	Cash benefits for wage loss. Survivors' benefits if elected.	Cash benefits for wage loss. Survivors and dependents' benefits. Eligible for Medicaid after receiving SSDI benefits for 24 months. Refer candidates to state vocational rehabilitation agencies.	Cash benefits for wage loss. Amount varies for single or couple and amount of income and resources. Most programs through the administration of the states also include Medicaid with SSI eligibility. Refer candidates to state vocational rehabilitation agencies.

Table 16. Comparison of Disability Compensation Programs (continued)

Program	VA Disability Compensation Program	Federal Workers' Compensation Under FECA	Federal Disability Retirement Under OPM	Social Security Disability Insurance (SSDI)	Supplemental Security Income (SSI)
Eligibility Criteria	For cash and other benefits, rating of the service-connected condition. Initial eligibility is not contingent on individual veteran's ability to work, amount earned or earning capacity, or participation in vocational rehabilitation.	For cash benefits related to wage loss, the worker must have actually lost wages because of a work-related injury or illness. If recommended by DOL, participation in vocational rehabilitation is required. To receive benefits related to a permanent impairment, the worker must have lost use of certain body parts or functions due to a work-related injury. Workers may be eligible to receive cash benefits for both wage loss and permanent impairment for the same injury but not concurrently.	For cash benefits for wage loss, must be covered by a Federal Retirement System (either CSRS or FERS). Diagnosis of long-term disability.	Workers with disabilities must be covered (worked long enough and recently) under Social Security and be unable to work at gainful levels for *any* work. There is no requirement that a disabling impairment be job-related. To be considered disabled an adult must be unable to engage in any substantial gainful activity because of any medically determinable physical or mental impairment that can be expected to result in death or that has lasted or can be expected to last 12 months or longer.	To be considered disabled, an adult must be unable to engage in any substantial gainful activity because of a medically determinable physical or mental impairment that can be expected to result in death or that has lasted or can be expected to last 12 months or longer. Means tested for eligibility.
Basis for Compensation	Based on disability rating (percentage evaluation of 0-100%) assigned to the veteran's specific condition through application of VA's Schedule for Rating Disabilities.	For wage loss, the compensation amount is based on a percentage (usually 66.67% without dependents) of the actual wages lost by the worker as a result of the work-related injury or illness.	For wage loss, the benefit amount is based on employee's age, length of service, and high-3 average salary.	Amount of SSDI benefit is derived from a formula established under the Social Security Act.	Amount of SSI benefit is derived from a formula established under the Social Security Act.

Table 16. Comparison of Disability Compensation Programs (continued)

Program	VA Disability Compensation Program	Federal Workers' Compensation Under FECA	Federal Disability Retirement Under OPM	Social Security Disability Insurance (SSDI)	Supplemental Security Income (SSI)
Compensation Limits	No limit on time period for which veterans can receive VA compensation. The rating schedule payments are supplemented by special schedules such as K and L for special disabilities and veteran status.	For wage loss, benefits can be paid for the duration of the disability. For permanent impairments (schedule awards), limits are placed on the maximum length of time benefits are payable and the total amount payable. Workers may be eligible to apply for wage loss benefits if they are still unable to work after the Schedule Award ends.	For wage loss, the higher of basic annual annuity computation or the guaranteed minimum disability annuity. Election required if FECA and OWCP disability benefits apply, dual entitlement prohibited, except during Schedule Award period.	Benefits continue until death; or SSA determines that the individual is no longer eligible for SSDI; or until benefits are converted to Social Security retirement benefits at age 65.	Benefits continue until death; or SSA determines that the individual is no longer eligible for SSI. Many states provide a supplement to the Federal portion.

In summarizing Table 16 we note that the common goal of these programs is to provide benefits to the disabled. However, VA Disability Compensation Program is directed to veterans, FECA and OPM programs are applied to Federal employees, SSDI covers workers who have sufficient work history under Social Security, and SSI is designed for individuals who have limited income and resources. In addition, a primary objective of the FECA, SSDI, and SSI programs is to return the disabled worker to work. Coupling the VA Vocational Rehabilitation Program benefit with VA disability compensation fosters a return to work opportunity within the VA Disability Compensation Program.

Although cash benefits are paid under each of these programs, VA Disability Compensation Program also offers allowances for special needs such as clothing or services of an attendant. This type of benefit is not available under other programs.

Each program includes medical benefits but involves a different source or provider of those benefits. Under the VA Disability Compensation Program veterans are eligible to receive care at a VA medical center. The FECA program pays for medical expenses for work-related injuries or illnesses regardless of where the care or treatment is provided. Individuals who have received SSDI benefits for 24 months are eligible for Medicare coverage, while persons who are eligible for SSI benefits also qualify for medical care under Medicaid.

Vocational rehabilitation is a common benefit found in each of these programs. Since the FECA, SSDI, and SSI programs emphasize return to work, recipients are required to participate in vocational rehabilitation programs. In contrast, this is optional under the VA Disability Compensation Program.

An individual must have lost wages due to a work-related injury or illness to be eligible for FECA. Eligibility under the OPM, SSDI, and SSI programs is based on a disability that is long-term, and results in loss of wages. The disability does not need to be work-related. Under the VA Disability Compensation Program, the veteran must have a service-connected condition. Eligibility is not contingent upon the veteran's ability to work, or the amount of current earnings or earnings capacity but is based on a disability condition incurred in service prior to entering the civilian labor market. However, some of these criteria are relevant to the basis for, or amount of, compensation once service-connection has been established.

Each program uses a different instrument to determine the amount of compensation payable to an individual. VA uses its Schedule for Rating Disabilities to evaluate the veteran's disability rating for a specific service-connected condition. Compensation is based overwhelmingly on disability percentage. In certain special provision determinations VA does use employability, earning capacity, and amount of earnings. The FECA benefit is based on a percentage of the actual wages lost by a worker. Benefits under both the SSDI and the SSI programs are derived from a formula established under the Social Security Act. The SSDI formula uses earnings during the individual's work history. The amount of the SSI program benefit varies based on the

individual or couple's income and resources. In the OPM program wage loss or benefit amount is based on employee's age, length of service, and high 3-average salary.

Since eligibility for the FECA, SSDI, or SSI benefits involves wage loss, the payment of compensation ends when the recipient is no longer eligible under the criteria. For permanent impairments (i.e., a permanent disability involving the loss or loss of use of a member or function of the body) the FECA program places limits on the length of time benefits are payable and the total amount received. The length of time a schedule award is made depends on the severity of the impairment. When a recipient under the SSDI program reaches age 65 benefits are converted to Social Security retirement. Under the VA Disability Compensation Program there are no similar limits on the time period that a veteran can receive compensation.

Workers' Compensation under the Federal Employees Compensation Act (FECA)

FECA coverage is provided to all civilian Federal employees who are injured while in the performance of duty. The Act also provides for compensation for employment-related diseases. FECA is administered by the Office of Workers' Compensation Programs (OWCP) of the U.S. Department of Labor.

Benefits include rehabilitation, medical, surgical, and necessary expenses. FECA pays temporary and permanently injured employees workers' compensation for lost wages as well as for permanent partial impairments to specific limbs and organs, as listed in the law as schedule members.

A temporarily injured employee (if injury or disease is employment related) is entitled to continuation of his/her pay for up to 45 days of disability. For disabilities lasting for more than 45 days there is a non-paid three-day waiting period before receiving compensation for lost wages. However, no waiting period is required if the disability causing the wage loss lasts longer than 14 days from the time compensation begins. Employee may alternatively choose to use sick leave.

For permanent job-related injuries disability compensation benefits are based on loss of earnings capacity and schedule awards for the loss or loss of use of specified members, organs, and functions of the body. The employee selects his/her own physician and FECA provides comprehensive medical coverage based on a fee schedule, which may include durable medical supplies and attendant allowance. Compensation may continue after the employee returns to work if the employee has lost some wage-earning capacity, (i.e., he/she is unable to work a full day/week or is unable to function in the date of injury position). For an employee without dependents, compensation is generally paid tax-free at two-thirds of pre-disability gross wages; if the employee has one or more dependents, compensation is paid tax-free at the rate of three-fourths of pre-disability gross wages. If the employee dies as a result of the injury compensation may be paid to dependents.

FECA provides a schedule for permanent partial impairment ratings. However, the schedule does not include some internal organs, the back, or psychological conditions. The rating schedule is based on 100 percent loss which is prorated based on the

medical evidence. The employee's physician is required to evaluate the impairment based on the American Medical Association's (AMA's) *Guides to the Evaluation of Permanent Impairment* to determine the actual percentage of loss. A DOL Regional Medical Advisor reviews the medical evidence and recommends a rating for the disability. The amount of compensation paid as a result of permanent impairment is based on the percentage of rating determined by DOL and the employee's salary at the time of injury or the date disability began. The employee may elect to receive the compensation for permanent impairment in the form of a lump sum instead of in monthly installments. FECA also provides payment for disability medical bills through a fee schedule. Most employees receiving compensation are required to be reexamined at least once a year (DOL, 2004).

Federal Disability Retirement under CSRS or FERS

Federal employees may file a claim for disability retirement if they become unable to perform the duties of their Federal job due to a medical condition. It is a benefit paid for through contributions to the retirement funds. The OPM decides if the employee has the minimum number of years of service and is considered disabled under the law. The benefits are calculated by using a formula that considers the age, length of service, and "high-three" average salary. The employee is required at the direction of OPM to be examined annually unless his/her disability is permanent in character. If the employee recovers from his/her disability, payment of the annuity terminates on reemployment by the Federal government or 1 year after the date of the medical examination showing recovery, whichever is earlier. After age 60, the employee is no longer required to submit to annual examinations. If the employee dies while in the receipt of disability retirement benefits and he/she elected survivor benefits, an annuity is paid to his/her survivors.

OPM does not use a rating schedule. The severity of the disability or the impairment is not subject to a rating schedule (i.e., benefits do not increase with the severity of the disability).

Social Security Administration Disability Insurance Program (SSDI)

Workers with disabilities are eligible for SSDI if they meet Social Security requirements for employment longevity and recency and are unable to work at gainful levels. There is no requirement that a disabling impairment be job-related.

To be considered disabled an adult must be unable to engage in any substantial gainful activity because of a medically determinable physical or mental impairment that can be expected to result in death or that has lasted or can be expected to last 12 months or longer. SSDI has a 5-month waiting period after satisfying the definition. This program requires the disabled to be evaluated periodically for determining the continuing existence of disability. If it is found that the disability shows improvement, eligibility is terminated.

At the beginning of the program, most awards were based on a list of medical conditions. Changes in workforce and medical advances made it more difficult to measure the degree of an impairment limiting an individual's ability to work based solely

on medical conditions. The Social Security Advisory Board (Social Security Advisory Board [SSAB], 2003) reports that the share of the SSDI allowances based on medical factors have declined dramatically over the years, from 93 percent in the early years of the program to 58 percent in 2000. In the 1990s SSA considered using a more functionally based index of conditions to determine eligibility due to the changes over the years but has not adopted using such an index.

Supplemental Security Insurance (SSI)

Although this program is not directly comparable to the VA Disability Compensation Program, we briefly describe the eligibility requirements of this program as background information. The SSI program is a nationwide Federal assistance program administered by SSA that guarantees a minimum level of income for needy aged, blind, or disabled individuals. Benefits are available to people who have limited income and resources if they are 65 or older or if they are blind or have another disability. The program provides monthly cash payments to help meet basic needs for food, clothing, and shelter. This program allows States to supplement the Federal Social Security benefits according to the needs of their citizens. SSA administers supplements for some of the states that provide them. SSI benefits also include Medicaid for health care. Most states use a common application for SSI and Medicaid when Medicaid eligibility criteria are the same as SSI eligibility criteria.[10] In some states a separate application must be made.

Definition of disability for adults in SSI is the same as for SSDI. A child's impairment must result in "marked and severe functional limitations" and must be expected to last 12 months or to result in death. A disabled person must accept vocational rehabilitation services if they are offered. If a disabled participant fails to comply SSI benefits are suspended unless and until he or she does comply. A person is considered blind if he or she has corrected vision of 20/200 or less in the better eye or a field of vision of less than 20 degrees.

SSA does not use impairment ratings in the SSDI or SSI programs. SSA specifically defines disability to include both medical and vocational factors in both the SSDI and SSI programs. Adult and childhood impairments are listed in *Disability Evaluation Under Social Security* (Social Security Administration [SSA], 2003). The listings are organized by body systems and provide the medical evaluation conditions for each system. Cases not meeting the requirements of the impairment list must undergo an assessment of whether the work-related limitations imposed by the impairments prevent past relevant work. The impairment list helps healthcare professionals determine if someone is disabled. SSA also considers past work experience, severity of medical conditions, age, education, and work skills.

Other Programs

Several programs other than the programs discussed above provide compensation for disability. Among them are the military disability retirement program, the State workers' compensation programs, and private disability insurance policies.

[10] Some states use their own eligibility standards for aged, blind, and disabled people (Bruen, 1999).

Military Disability Retirement Program

The Department of Defense administers the military disability retirement program which provides cash benefits to servicemembers who become physically unfit to perform duties required of their grade, office, rank, or rating, and their survivors (GAO, 2003, March). The amount of cash benefits is based on military pay combined with degree of disability and length of service. Unlike the date of claim or at best one year retroactivity that exists with veterans benefits, eligible retirees are entitled to receive benefits from date of enactment of the law or six years (whichever is later). Recently there have been changes in the law related to the military disability retirement program. We summarize the changes in these laws as follows:

1) Seriously Disabled Benefit;

2) Combat Related Special Compensation (CRSC); and

3) Concurrent Disability Pay (CDP) (known more commonly as concurrent receipt).

Seriously Disabled Benefit

This benefit has been replaced. Previously, to receive this benefit a retiree must have had:

- Retired for longevity (that is 20 years of service for retirement purposes). He or she does not qualify for this benefit if the member was retired on disability, even if the member had 20 years of service.

- Been rated by VA at 50% disability within four years of separating from service.

Payment of this benefit was automatic to the extent that VA computer extracts could document that the qualifying disability level was awarded with an effective date within four years. Qualifying payments range from $50.00 for a 50% disability to $300.00 for a 100% disability. The origin of the disability or disabilities was not a factor in eligibility, only the effective date was.

Combat Related Special Compensation (CRSC)

CRSC became effective June 1, 2003. It requires the member to apply for the benefit and a CRSC Board in each service branch determines eligibility. The Navy and Marine Corps have a joint board. CRSC benefits are tax-exempt and are exempt from division to a former spouse. To receive this benefit a retiree must have:

- Twenty years of service for retirement purposes.

- The member is eligible for CRSC if the member has 20 years of qualifying service even if the member was retired for disability. However, any CRSC payment is based solely on the amount of retirement pay the member is actually entitled to due to service. Additional retirement due to disability is fully subject to waiver.

- The member must have a qualifying condition or conditions (listed below). The amount of restored benefit (retired pay) is based upon the new combined evaluation determined by the CRSC Board for those conditions that qualify. The Board will acknowledge a VA awarded individual unemployability and special monthly compensation if shown to be related to the CRSC qualifying conditions.

- Actual payment of CRSC is limited to the maximum amount of retirement pay to which the member is entitled, based on years of service.

Qualifying conditions are as follows:

1) Any condition for which a Purple Heart Medal has been awarded.

2) Conditions incurred during combat.

3) Conditions simulating combat. Such conditions include war games and leadership and confidence courses but do not include routine physical training.

4) Condition incurred while engaged in hazardous duty. Generally this includes diving, parachuting, demolitions, and flying aircraft.

5) Conditions incurred as a result of an instrumentality of war. Agent Orange, radiation related, undiagnosed illness are examples of this. Additionally an injury sustained while riding in a personnel carrier or being hit by combat vehicle would qualify. A member who sustains injury due to accidentally running into a stationary combat vehicle on the other hand would not qualify.

Concurrent Disability Payment (CDP)[11]
This benefit became effective January 1, 2004, with the first payment due February 1, 2004. Eligibility requirements and some other information on this program are as follows:

- To receive this benefit a retiree must have twenty years of service for retirement purposes.

- The member is eligible for CDP if the member has 20 years of qualifying service even if the member was retirement for disability. However, any CDP payment is based solely on the amount of retirement pay to which the member is actually entitled due to service. Additional retirement due to disability is fully subject to waiver. This is the same rule that applies to CRSC.

- Payment is limited to members who have a combined VA disability evaluation of 50% or higher. It does not matter what the cause of the disability is, unlike CRSC.

[11] The phase-in for Concurrent receipt and Veterans Disability Compensation for beneficiaries receiving 100% has been repealed effective January 2005.

- The member does not have to apply for the benefit.
- If the member is entitled to both CRSC and CDP, he/she must make an election yearly as to which benefit is desired.
- Actual payment of CDP is limited to the maximum amount of retirement pay to which the member is entitled based on years of service.

CDP is being phased in over five years. In 2004 the rates payable are as follows:

Percent VA Evaluation	CDP Payment
50%	$100
60%	$125
70%	$250
80%	$300
90%	$500
100%	$750

Source: http://www.dfas.mil/MONEY/retired/cdpinfo.htm

CDP does not eliminate the requirement for the member to waive retirement pay to receive compensation. The law in Title 10 permits payment of this benefit without regard to the waiver requirement in Title 38. It does not rescind the waiver requirement in Title 38. In fact a member is only entitled to CDP if he/she has had his/her retirement pay reduced.

Each year from 2005 through 2014, the member gets an additional 10 percent of the retirement pay that he/she has waived added to the above base rates. By 2009 all members will be receiving more than 90 percent of what they have waived. CDP is retirement pay and is therefore taxable and subject to former spouse attachment.

For most members entitled to both CRSC and CDP, CRSC will be the higher benefit for the next couple of years, and depending on the member's circumstance, may always be the better benefit.

State Workers' Compensation Programs

Workers' compensation covers employed individuals in the 50 states and the District of Columbia. The eligibility requirements include a permanent personal disability or death by accident arising out of and in the course of employment. Besides providing compensation for permanent disability or death, programs also provide lost wages to an employee with a work injury or illness while they receive medical care, and during their recovery period and rehabilitation. Although each state sets its own laws, they all follow some general principles. The differences across states--addressed in the literature review--include the method for computing compensation (lost wage, impairment rating, etc.) and the role of independent medical examiners. States compensate disabled workers either on the basis of lost wages or an employment rating. The rating is

specified as a percentage of either whole person or of a limb usually using the AMA's *Guides*.

One important difference between civilian employment and military service is that civilian employers typically accept employees without a physical examination to determine pre-existing medical conditions. Consequently veterans were in good health when they entered military service while civilian employees might not have been. Another difference is that the military/VA programs generally cover the period of service, whereas the civilian program only covers work-related injuries.

The difference between eligibility criteria for the VA compensation program and other workers' compensation programs is significant. In contrast to the VA program, workers' compensation generally covers disabilities during and due to employment only. Also, employees can choose any physician they prefer in most state programs but sometimes an expert opinion may be required. Some states put a limit on the number of physicians an employee can see. Some states have a managed care system that requires employees to choose a physician from their list.

States' workers compensation programs have a set of "scheduled" and "non-scheduled" injuries (Durbin & Kish, 1998). Injuries that are classified as "scheduled" (such as specific losses or loss of use of parts of the body) are not assigned any rating of impairment to determine the amount of compensation. As most schedules provide the maximum amount for the *complete* loss of an extremity, rating for partial losses are not straightforward (Peterson, Reville, & Stern 1998). Across state systems, the assessment of the relative value of a limb is not consistent.

Injuries to the torso, internal organs, nervous system, and other body systems as well as the psychological claims are considered non-scheduled injuries. Since they are not included in the statutes, they are more difficult to rate. In contrast to VA, most states presume permanent total disability for multiple losses (Cullinane, 1992). To rate the non-scheduled injuries, many states recommend or require that physicians use the American Medical Association's (AMA's) *Guides to the Evaluation of Permanent Impairment* publication. AMA's *Guides* defines disability differently than VA's rating schedule and is not consistent with the VA Physicians Guide. The *Guides* evaluates disability on the basis of activities of daily living (e.g., climbing stairs, bathing, eating, etc.) and specifically excludes work activities. AMA suggests that the *Guides* is not to be used for direct financial awards nor the sole measure of disability.

The rating process varies across states due to a lack of specific rating standards and direct guidance for physicians. In some states the permanent disability rating process does not include non-health related factors such as age, education, or the predicted future loss of earnings. In California, the rating is adjusted to account for the occupation and age of the person at the time of injury. The employability of an individual may depend on the age and occupation of the injured. For example, an ankle injury to a construction worker is higher than that of a data entry clerk.

Some states base awards on both physical impairment and wage loss (e.g., Arkansas) while some states base the award only on physical impairment (e.g., Virginia). Some states give the claimant the opportunity to choose between physical impairment and projected loss of earnings (e.g., Georgia). Procedures for determining loss of earnings capacity tend to be less well defined or proscribed. Typically, the earnings capacity is based on a comparison of the claimant's pre-disability earnings with projected future earnings but several factors may weigh into this such as age, education, occupation, and potential for rehabilitation.

Private Disability Insurance Policies

These policies, either purchased by individuals or their employers, are broader than workers' compensation but not broader than the VA Program. The policies generally provide financial but not medical compensation. Sometimes, the policy is written specifically for a given occupation. If the person is unable to perform his/her current occupation, he/she can claim insurance benefits even though he/she is able to work in another occupation. An individual can also receive payments for injuries incurred while not on the job, such as an automobile accident. Insurance benefit payments are not taxable.

Most private insurance policies define an individual as disabled on the basis of total disability or whether the impairment is severe enough for a disability award. Disability payments are typically made only if the impairments interfere with ability to work. There are many types of policies available with different restrictions, requirements, and coverages.

Other Countries

A 1993 GAO report (GAO, 1993) states that VA's definition of service connection is more lenient than it is for veterans in other countries such as Germany, Italy, and the United Kingdom. Under VA's definition, the disease or injury need not be incurred during a veteran's military tour of duty; it can be considered service-connected prior to military tour of duty if it was aggravated by service. Almost all of the countries studied in this report have more strict definition of disability; typically disability must be connected to military duties. Examples include: United Kingdom – Disability must be directly connected to military duties; Finland – Besides the military duty connection to disability, the injury must occur in a location set aside for performing military duties; Germany – A causal relationship is required between the military service and disability.

Comparison for Evaluating Effectiveness and Performance

In 1997 GAO reported on a comparison of the VA Disability Compensation Program to the Federal and state workers' compensation programs (GAO, 1997, February). The following features were reviewed in each program: objectives, types of benefits, eligibility criteria, basis for compensation amounts, and compensation limits. GAO concluded that the workers' compensation programs and the VA Program differed in purpose and design, eligibility requirements, how the benefits are determined, and the time limit placed on receipt of compensation benefits. GAO also noted consistencies--

both programs provided cash benefits to recipients, survivor benefits, and vocational rehabilitation.

In another GAO report (GAO, 2002, August), the VA Disability Compensation Program was compared with the SSDI and the SSI programs. The primary basis of comparison was the specific tool that VA and SSA used to assess disability. VA uses its Schedule for Rating Disabilities, while SSA uses its Medical Listings. The August 2002 GAO report found fault with the disability assessment tools used in both these programs. GAO concluded that SSA was using outdated labor market information to assess the impact of impairments on an individual's capacity to perform work. GAO analysts determined that SSA's disability decisions rely on a DOL database that is not updated. Specifically, the database does not include new jobs and job requirements as they are added to the national economy.

The same GAO report indicated that VA's percentage ratings did not account for changes over time in the nature of work. Since what work is and how it is done have changed, the extent to which a disability limits a person's earning capacity may also have changed. In addition, the GAO report noted that the criteria used by VA and SSA in making disability decisions do not reflect advances made in medical treatment and prosthetics.

Integration or Coordination with Other Programs

In reviewing the literature, we did not find many requirements that payments under the VA Disability Compensation Program be integrated or coordinated with benefits received from the FECA, OPM, or SSDI or SSI programs. In C.F.R. 3.078, veterans need to make election between VA disability compensation, FECA, and OPM benefits. VA disability compensation payments are counted as income when eligibility for SSI is determined. The FECA program requests veterans who are Federal employees[12] to report the following information (if applicable) on their FECA claim form (CA-7)--their VA claim number, the nature of their disability, and the monthly payment amount that they are receiving from VA. This is requested so that veterans receiving VA benefits for an impairment of the same limb may be offered an election during the FECA award period. The veteran employee should not receive an increased impairment rating from VA as well as from the FECA program for an increased impairment caused by an injury covered by FECA. However, there is no cross-reference system between VA and DOL to monitor these claims. If the veteran employee omits this information with his/her claim, FECA would not know that a VA claim also exists.

Based on our review, it appears that there is potential for duplication of benefits received under the VA Disability Compensation Program, FECA, OPM, SSDI, and SSI programs. Each program offers vocational rehabilitation, although participation is optional under the VA program. All provide some type of medical care benefit, whether it is treatment at a VA medical facility, reimbursement for medical expenses (FECA),

[12] In 2003 about 16 percent of employed disabled veterans worked for the Federal government. This percentage is higher than that of nondisabled veterans (6%) and nonveterans (2%) (DOL, 2003).

Medicare coverage (SSDI), or Medicaid coverage (SSI). The VA Disability Compensation Program, OPM, FECA and SSDI all provide survivors' benefits.

9. POTENTIAL RESEARCH

In this section we first address possible sources of data and then particular research issues that could be addressed using data from one or more of the sources described.

Data Sources

Earnings Data from Social Security Administration or Internal Revenue Service

Possible sources of earnings of disabled veterans are records from the Social Security Administration (SSA) or Internal Revenue Service (IRS) matched by Social Security Number (SSN) provided by VA. The advantage of this source over survey sources is the accuracy of the data and not having to deal with attitudinal data and problems associated with non-response in surveys.

However, there are certain limitations or constraints in attempting to use SSA or IRS data. SSA obtains only earned data for the individual, not other income sources, whereas IRS has data for all types of income. Neither source has non-income data that may be required to address certain research issues.

In order to obtain SSA or IRS income data, VA would need to provide SSNs of individuals identified as potential observations for study. Privacy and security laws place certain restrictions on the use of SSNs, and special authorization is required. Securing a list of suitable SSNs for both disabled veterans receiving VA disability compensation and a comparison group of veterans without disability may present data management and logistical challenges.

Survey Data

Even if SSA or IRS data can be accessed, survey data would still be required in order to obtain demographic, employment, perceptual, and circumstantial information. Ideally, data obtained through a primary survey (i.e., VA-sponsored survey) would be linked with SSA or IRS data to obtain the highest quality and most comprehensive data set for analysis. The survey itself would be designed to be most responsive to the research issues at hand.

Secondary Data Sources

Research could also rely on data that has been collected through other Federal national data collection programs such as the U.S. Census Bureau. Some National surveys containing detailed questions about disability[13] and health issues typically have limited information on earnings, household composition, and occupation. Table 17 lists and describes several secondary data sources.

[13] It is important to note that only the national surveys such as Current Population Survey (CPS) identifies disabled veterans who receive disability compensation. Most others define “disability” in a variety of ways and do not identify the compensation received from VA. CPS, unfortunately, contains few respondents who are disabled veterans and receive disability compensation from VA.

Table 17. Data Sources on Disability and Income

Data Source (Name)	Sponsoring Agency	Initial and Latest Survey Date and Frequency	Key Related Variables	Covered Population	Earnings / Income	Sample Size
Survey of Income and Program Participants (SIPP)	U.S. Census Bureau	Initial Survey: 1983 Latest Survey: 2004 Frequency: Periodically	Veteran status, employment, program participation, health insurance, education, disability status.	Non-institutionalized, civilian population in the U.S.	Income, household wealth, measures of economic distress, pension coverage and cost of childcare.	36,700 households in 2004
National Health Interview Survey (NHIS)	National Center for Health Statistics	Initial Survey: 1957 Latest Survey: 2003 Frequency: Annually	Veteran status; activity limitations and health conditions for the Family Core, Sample Adult Core, & Sample Child Core.	Nationally representative sample of the resident civilian, non-institutionalized U.S. population.	Family income, Poverty level.	Between 36,000 to 47,000 households, and between 92,000 to 125,000 individuals
Decennial Census	The Census Bureau, U.S. Department of Commerce	Initial Survey: 1790 Latest Survey: 2000 Frequency: Every 10 years	Veteran status, long lasting conditions, difficulty in performing daily activities due to mental, emotional or physical conditions; payments received form VA.	Every individual in the U.S.	Income by source.	281,421,906 individuals in 2000
NOD/Harris Survey of Americans with Disabilities	National Organization of Disability	Initial Survey: 1986 Latest Survey: 2004 Frequency: Every 4-8 years	Severity of disability, job discrimination, future health and well-being, burden to family, reliance on assistant technology, sense of identity with other disabled people.	Adults (ages 18 and over) with disabilities and without disabilities.	Full/part time employment, annual household incomes.	1,038 adults with disabilities and 988 adults without disabilities (2004 survey)
Current Population Survey (March Supplement)	Bureau of the Census for the Bureau of Labor Statistics, U.S. Department of Commerce.	Initial Survey: 1948 Latest Survey: 2004 Frequency: Annual	Employment, unemployment, hours of work, housing characteristics, and demographic characteristics; veterans receiving disability compensation	Nationally representative sample of the civilian non-institutionalized, resident population of the U.S.	Household, family and individual level income data: various sources of income (i.e., alimony, earnings, Social Security income, workers compensation etc.)	About 50,000 households

Table 17. Data Sources on Disability and Income (continued)

Data Source (Name)	Sponsoring Agency	Initial and Latest Survey Date and Frequency	Key Related Variables	Covered Population	Earnings / Income	Sample Size
National Health Interview Survey on Disability (NHIS-D)	National Center for Health Statistics	Initial Survey: 1994 Latest Survey: 1994 Frequency: Only once	Veteran status, physical limitations, use of assistive technology, devices, hearing and visual impairments, mental health, physical activity, health conditions, services and benefits received.	Nationally representative sample of the civilian, non-institutionalized U.S. population, both children and adults		202,560 respondents. 32,788 individuals was re-interviewed
Behavioral Risk Factor Surveillance System (BRFSS)	Centers for Disease Control and Prevention	Initial Survey: 1984 Latest Survey: 2003 Frequency: Monthly	Veteran status, disability status, state & National level data on health risk behaviors, clinical preventive practices, health care access.	Random survey of adults 18 years or older, only 1 per household	Health Insurance, annual household income	264,684 in 2003
Medical Expenditure Panel Survey (MEPS)	The Agency for Healthcare Research and Quality	Initial Survey: 1977 Latest Survey: 2002 Frequency: Four component surveys (household, nursing home, insurance, medical provider) conducted periodically	Veteran status, disability status, health care, nursing home info, insurance coverage, medical provider information.	Nationally representative sample of the civilian non-institutionalized, resident population of the U.S.	Income by source	About 15,000 families, 37,000 persons in 2002 Household Component Survey
National Long Term Care Survey	U.S. Department of Health and Human Services	Initial Survey: 1982 Latest Survey: 2004 Frequency: Every 5 years since 1984	Health status, functional status, patterns of use of Medicare, hospital care, home health services, and institutional care.	Chronically disabled elderly population in terms of their health and functional status as well as their patterns of use of Medicare, hospital care, home health services, and institutional care.	Availability of personal, family, and community resources for caregiving.	About 20,000 in 1999

A leading source of data of this nature is the annual March CPS (CPS, 2003). CPS includes data such as veteran status, employment, and income-related data. Income sources are more detailed than those in Census. For example, there is a specific question on whether the person received payment from VA's Disability Compensation Program. There is only one question that asks specifically about the nature of the disability: "Does ... have a health problem or a disability which prevents work or which limits the kind or amount of work?" Other disability-related questions are income-oriented (i.e., whether they receive disability payment).

Census 2000 includes data on veteran status, income, employment, and demographic information including two questions with yes/no responses on disability:

- *Does this person have any of the following long-lasting conditions?*
  - Blindness, deafness, or a severe vision or hearing impairment?
  - A condition that substantially limits one or more basic physical activities such as walking, climbing stairs, reaching, lifting, or carrying?
- *Because of a physical, mental, or emotional condition lasting 6 months or more, does this person have any difficulty*
  - *Learning, remembering, or concentrating?*
  - *Dressing, bathing, or getting around inside the home?*
  - *(Answer if this person is 16 YEARS OLD OR OVER.) Going outside the home alone to shop or visit a doctor's office?*
  - *(Answer if this person is 16 YEARS OLD OR OVER.) Working at a job or business?* (Census, 2000)

Income-related questions include income in 1999 by source such as wages/salaries, self-employment, Supplemental Security Income (SSI), Social Security (old age), welfare, and other sources of income.

The Survey of Income and Program Participants (SIPP) is a household survey of about 8,000 units per month, conducted by the U.S. Bureau of the Census. SIPP includes data on employment, disability, veteran status, and income sources. SIPP reports persons' work status not only for a single point in time but weekly for four months prior to survey. Disability and health-related questions include: functional limitations and disability, work disability, and work disability history.

The National Health Interview Survey (NHIS) is another source that is rich with disability related data for a nationally representative sample of the resident civilian, non-institutionalized U.S. population. U.S. Department of Health and Human Services (DHHS) utilizes NHIS data to monitor trends in disability. NHIS includes income amounts and income sources.

Potential Research

Several areas of potential research are identified for consideration by the Department of Veterans Affairs and are listed here by research issue or question. The order of the areas of potential research discussed below reflects the Study Team's approximate recommended order of priority.

1. How well does the VA Disability Compensation Program meet Congressional intent of replacing average impairment to lost earnings capacity of veterans with service-connected disabilities?

As a first priority, research should be conducted to determine the extent to which the Disability Compensation Program is meeting the goal of replacing lost earnings capacity of veterans with service-connected disabilities. Data on the earnings of disabled and non-disabled veterans can be obtained through matches with Social Security Administration earnings records or Internal Revenue Service records. This approach would yield accurate earnings data without relying on survey data. This is particularly advantageous if a large number of disabled veterans were to be surveyed in order to obtain statistical representation at individual diagnostic categories.

The SSNs of participants in the VA disability program linked to certain diagnostic categories based on their own administrative records would need to be provided for the matches. Other kinds of data such as income from other sources or employment would not be required to address Research Issue 1. For a methodologically sound study, earnings data for a comparison group of non-disabled veterans should be drawn. Obtaining SSNs and other data discussed below (e.g., education and age) for the comparison group could be logistically challenging and expensive. This process may be very complex and challenging as the VBA data is limited in identifying veterans not receiving VA benefits. Consideration should be given to the question of whether any comparison group should contain veterans with nonservice-connected disabilities.

Respondents to VA's National Survey of Veterans were asked to provide their SSNs to VA at the end of the survey and to give their name and address for the purpose of being included in possible future VA studies. Veteran records with SSNs and who are not in the VA Disability Compensation Program or who are not service-connected disabled can be extracted from the NSV database for an IRS or SSA match. This should be further investigated to identify the number of records with SSNs in the NSV file and whether they constitute a representative sample of non-disabled veterans.

The previous ECVARS study serves as a useful example in identifying several diagnostic categories to make comparisons of earnings of veterans with certain types of disabilities or conditions. Of course, the list of diagnostic categories would have to be updated since the ECVARS study was conducted many years ago. An important use of the analysis would be to guide the assignment of the appropriate disability rating level to different diagnostic categories. As in the ECVARS study, earnings comparisons between disabled and non-disabled veterans should be made for veterans in similar education and age categories. This would allow for the comparison of average earnings for veterans, yet still control for education and age differences.

This detailed type of earnings comparison should be made periodically by VA on an ongoing basis. Once necessary administrative and research procedures have been set up, it should become fairly routine to obtain and analyze comparative data from the Social Security Administration. Given the relatively rapid change in medical diagnostic categories, medical technology and care, rehabilitation, and other factors, analysis should be updated fairly often, say, at least every five years and possibly as often as every three years.

2. Does the program benefit help to improve quality of life due to service-connected disabilities?

Consideration should be given to conducting a survey of veterans receiving the disability compensation benefit in order to gain insights into the veteran's circumstances and perception of loss of quality of life affected by service-connected disability and how well VA's Disability Compensation Program helps to improve quality of life. The survey would obtain data on veteran beneficiaries' perceptions of the adequacy and equity of not only the VA Disability Compensation Program benefit but also other VA benefits in the context of quality of life. Survey questions should include the actual circumstances of the person's life, such as mobility, activities of daily living, and social interaction.

Consideration should be given to what would constitute a suitable comparison group. One comparison group, for example, might include veterans without disabilities. NSV data is one source for identifying veterans without disabilities. Another might be individuals in the general population with disabilities matched on the basis of age, education, occupation, and severity of disability.

3. Does VA's measure of impairment, disability criteria, and the rating schedule need to be reexamined?

VA has been updating the criteria used in the Schedule of Rating Disabilities since 1989 for 16 body systems. As the process is long, once updating one body system is completed it is likely that another revision will not be made many years for the same body system. Several studies in the literature recommend revising the rating schedule periodically citing reasons such as the advances made in the medical field, changes in labor market, and changes in people's perception of the term "disabled." Many studies including those examining the rating process of other disability programs (e.g., state workers' compensation and SSDI) report that ratings assigned are not consistent, predictable, and uniform across rating specialists both in VA and other disability programs. Training examiners periodically and implementing procedures that test the reliability of rating process is an important factor.

Disability criteria used by disability programs is another area that should be updated to reflect recent medical advances. In determining who is disabled, some disability programs limit the role of treatment of medical conditions due to the regulatory and statutory design of the programs.

A study examining other disability systems on the issues above is needed. Collaboration with other Federal and state government agencies, private insurers, and medical associations in a study would yield an improved rating schedule for VA. Revising and updating the body systems is needed on an ongoing basis to reflect the most recent medical advances.

4. Are the disability compensation and other VA programs for disabled veterans adequate for incurring the risks to life and health inherent in military service?

Inherent risks to life and health associated with military service require commensurate compensation and benefits to offset the risks. The quality and strength of the military requires pay comparability with the civilian sector. Otherwise, recruitment and retention are adversely affected.

Research is needed on the components of pay comparability that provide compensation for work-related illnesses and injury. Previous research by Cullinane (1992) on the comparability of the benefit value of military/VA disability benefit programs and civilian workers' compensation programs serves as an example. In addition to workers' compensation programs, comparisons can also be made with the compensation and benefits afforded for certain dangerous non-military occupations such as fire fighting and law enforcement.

Survey data on the attitudes and perceptions about the adequacy of compensation and benefits in the context of the risks of military service could be another source of information. This issue pertains not only to veterans with service-connected disabilities but also to servicemembers on active duty, veterans without service-connected disabilities, and individuals considering a military career or job. VA and DoD should collaborate in efforts to conduct research on this issue.

5. Does the disability benefit affect the beneficiary's incentive to work?

The legislation does not require the disabled veteran to actively strive to be employed, nor does it require the disability benefit to be offset by employment earnings (in contrast to VA's Pension Program). However, employment of disabled veterans is an issue of interest to numerous stakeholders, including Congressional members, OMB, GAO, and the public. A main goal of the Americans with Disabilities Act is to promote the employment of people with disabilities. Employment not only affords earnings but respect, independence, and social identity.

In addition, it may be relevant to obtaining a valid answer to Research Issue 1 listed above. Research Issue 1 involves an examination of earnings *capacity*, as opposed to only actual earnings. It is possible that some disabled individuals do not work or work less when they are capable of working because they receive income from non-earnings sources such as VA disability benefits, other financial support programs, or spousal income. In this case, the comparison of earnings capacity between disabled and non-disabled veterans is not as straightforward as comparing actual earnings.

It is outside the scope of work to state any policy recommendations in this study. Hence, identification of potential research on this topic is not a recommendation to adjust benefits according to work behavior; it is a suggestion to inform discussion among stakeholders.

In order to examine work behavior of veterans with varying degrees of disability, it may be necessary to obtain such information from a VA-sponsored survey of disabled and non-disabled veterans. In addition or alternatively, secondary data sources such as CPS, SIPP, or Census could be used to analyze the labor force participation of disabled veterans and the factors that affect work force participation. A primary limitation of secondary sources is that they provide little or no information on diagnostic category. However, they could still serve as a useful supplemental source of information, particularly since they offer considerable information on work behavior and characteristics of the individual.

6. How well or to what extent does the disability benefit contribute to beneficiary's total income?

The legislation does not require a financial means test to be eligible for disability benefits for service-connected disabilities. However, in the interest to better understand the outcome of the program, research could be conducted to study the effect that disability compensation has on the veteran's financial situation. This analysis should be done in the context of the veteran's total income and other benefits or services afforded by VA for service-connected disabled veterans. Does the program provide income needed to maintain a basic standard of living? Does it help to provide long-term financial stability? Is there coordination with other disability programs? How does the financial situation of veterans with service-connected disabilities compare to non-veterans with similar disabilities? Can any comparison be made of before and after receipt of the disability benefit?

In order to investigate these kinds of questions, it would be necessary to conduct a survey of program beneficiaries. Since data besides earnings data are required, relying on data from SSA will not be sufficient. However, it would not be necessary to draw large samples to obtain representation at individual diagnostic categories, as it is required for research Issue 1 above.

7. The legislation requires that the disability benefit be based only on loss of average earnings capacity, not on loss of individual earnings capacity. Should Congress reconsider this issue?

Legislation that requires that the disability benefit be based only on loss of *average* earnings capacity dates back to the early part of the twentieth century when manual labor was the norm in the work force and the military had little variation in occupations. Today's military is very advanced technologically and has a very diverse and wide range of occupations. Reservists play a big role in today's military (for example, their role in Iraq is critical). If they become disabled, they may find themselves drawing only a

fraction of their civilian income, in comparison to years past where active duty service members did not have well-established income levels.

In order to address this question, data would be required on how much individual variation in loss of earnings capacity there is at each disability rating level. Is there wide variation in how well disability compensation offsets earnings capacity loss for different disabled veterans (particularly for activated reservists and regular military)? Statistical analysis could be conducted to determine which factors relate to individual variation such as age, occupation, or time period that the disability first occurred. This information would then be synthesized with analysis of financial needs among individuals and the perceptions of stakeholders.

8. How does rehabilitation affect earnings capacity? What coordination, if any, should there be between the disability benefit program and rehabilitation?

More information is needed on the connection between rehabilitation and earnings capacity. Very little research, to date, exists on this subject, particularly for disabled veterans. This research would require data on earnings, rehabilitation services provided, and the characteristics and disabilities of the individuals receiving the rehabilitation services. Statistical analysis of the relationship between earnings and rehabilitation services and other variables would be conducted to inform decisions of policymakers.

9. Should mentally disabled individuals be identified separately from those who are physically disabled?

Further research into the employment capacity of mentally disabled individuals should be conducted. The shift in the job market from physically demanding labor to more mentally challenging work caters to physically disabled people re-entering the work force. Advancements in technology also accommodate physically disabled individuals. Further analysis could be conducted to understand how these two advancements in the employment of the disabled focus on physically handicapped individuals as compared to mentally disabled individuals. There is a limited amount of research on technological innovations for the mentally disabled compared to the substantial amount for the physically disabled. Analysis could be conducted to address whether the changing job market is equally advantageous to a mentally disabled individual relative to physically disabled individuals. Analysis could also assess the possible gain in special rehabilitation programs for mentally disabled individuals.