

GAO

Report to the Chairman, Subcommittee  
on Compensation, Pension, Insurance  
and Memorial Affairs, Committee on  
Veterans' Affairs, House of  
Representatives

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January 1997

# VA DISABILITY COMPENSATION

## Disability Ratings May Not Reflect Veterans' Economic Losses



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United States  
General Accounting Office  
Washington, D.C. 20548

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**Health, Education, and  
Human Services Division**

B-274058

January 7, 1997

The Honorable Terry Everett  
Chairman, Subcommittee on Compensation,  
Pension, Insurance and Memorial Affairs  
Committee on Veterans' Affairs  
House of Representatives

Dear Mr. Chairman:

The Department of Veterans Affairs' (VA) disability program is required by law to compensate veterans for the average loss in earning capacity in civilian occupations that results from injuries or conditions incurred or aggravated during military service. These injuries or conditions are referred to as "service-connected" disabilities. Veterans with such disabilities are entitled to monthly cash benefits under this program even if they are working and regardless of the amount they earn.

In fiscal year 1995, VA paid about \$11.3 billion to approximately 2.2 million veterans who were on VA's disability rolls at that time. Over the past 50 years, the number of veterans on the disability rolls has remained fairly constant. During this period, the disability rolls were at their lowest level in fiscal year 1946 with a total of about 1.9 million veterans and at their highest during fiscal years 1978 through 1984 with a total of about 2.3 million veterans each year.

The amount of compensation veterans with service-connected conditions receive is based on the "percentage evaluation," commonly called the disability rating, that VA assigns to these conditions. VA uses its "Schedule for Rating Disabilities" to determine which rating to assign to a veteran's particular condition. VA is required by law to readjust the schedule periodically on the basis of "experience." Since the 1945 version of the schedule was developed, questions have been raised on a number of occasions about the basis for these disability ratings and whether they reflect veterans' current loss in earning capacity.

This report responds to your request for information that would enable the Subcommittee to assess the need for a comprehensive study of the economic validity of VA's rating schedule. It describes (1) the basis for the disability ratings assigned to conditions in the current schedule; (2) socioeconomic changes that have occurred since the original version of the schedule was developed that may have influenced the earning

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capacity of disabled veterans; (3) the results of a previous study that examined the validity of ratings in the schedule; (4) VA's efforts to help ensure that the ratings do reflect disabled veterans' average impairment in earning capacity; and (5) the advantage of basing ratings in the schedule on actual loss in earnings, and approaches that could be used to estimate this loss.

To develop this information, we analyzed legislation and reviewed documents on the history of the program and had discussions with current and former VA officials and representatives from veterans service organizations (VSO) familiar with the program's history. We also reviewed the results of the President's Commission on Veterans' Pensions (known as the Bradley Commission) study and the Economic Validation of the Rating Schedule (ECVARS). We discussed the ECVARS and its results with VA's Office of Inspector General and Compensation and Pension officials and former VA officials familiar with this study.

To identify possible approaches VA could use to evaluate and update its rating schedule to help ensure that ratings reflect the average reduction in veterans' earning capacity, we reviewed literature on research design and methods and reviewed the ECVARS methodology. We also obtained the views of Bureau of the Census, Social Security Administration, and Bureau of Labor Statistics officials, economists, statisticians, and research methodologists.

We did our work from April 1995 to December 1996 in accordance with generally accepted government auditing standards.

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## Results in Brief

The disability ratings in VA's current schedule are still primarily based on physicians' and lawyers' judgments made in 1945 about the effect service-connected conditions had on the average individual's ability to perform jobs requiring manual or physical labor. During fiscal year 1995, disabled veterans' basic monthly benefit ranged from \$89 for conditions rated at 10 percent to \$1,823 for conditions rated at 100 percent. Veterans rated at 100 percent who have special needs, however, could receive up to a total of \$5,212 monthly.

Although the ratings in the schedule have not changed substantially since 1945, dramatic changes have occurred in the labor market and in society since then. The results of an economic validation of the schedule conducted in the late 1960s indicated that ratings for many conditions did

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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. Hence, the schedule may not equitably distribute compensation funds among disabled veterans.

VA has done little since 1945 to help ensure that disability ratings correspond to disabled veterans' average loss in earning capacity. Despite the results of the economic validation study, VA's efforts to maintain the schedule have concentrated on improving the appropriateness, clarity, and accuracy of the descriptions of the conditions in the schedule rather than on attempting to ensure that the schedule's assessments of the economic loss associated with these conditions are accurate. For example, some of the criteria have been revised to describe more accurate measures of disease severity or to recognize the effects of medical and technological advances on particular disabilities.

Basing disability ratings at least in part on actual earnings loss rather than solely on judgments of loss in functional capacity would help to ensure that veterans are compensated to an extent commensurate with their economic losses and that compensation funds are distributed equitably. For example, according to the schedule, loss of the use of a hand has a disability rating of 60 percent for the nonpredominant hand and 70 percent for the predominant hand because such a loss is expected to reduce veterans' earning capacity on average by 60 and 70 percent, respectively. However, VA's economic validation study in the late 1960s showed that the reduction in earning capacity that veterans who had lost the use of a hand experienced was, on average, closer to 40 percent. In contrast, veterans who had a disability rating of 70 percent for pronounced psychotic conditions were found, on average, to have experienced a reduction in earnings closer to 80 percent.

Our work demonstrates that there are generally accepted and widely used approaches to statistically estimate the effect of specific service-connected conditions on veterans' average earnings. These estimates could be used to set disability ratings in the schedule that are appropriate in today's socioeconomic environment. It could cost between \$5 million and \$10 million to collect the data that produce these estimates, a small fraction of the over \$11 billion VA paid in disability compensation to veterans in fiscal year 1995.

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## VA's Disability Compensation Program

The law directs VA to compensate veterans for their service-connected physical or mental conditions according to a schedule of disability ratings, which represents the average impairment in earning capacity that results from these conditions. The first schedule was developed in 1919 and has undergone many changes since then. The Schedule for Rating Disabilities includes a list of physical and mental conditions with disability ratings assigned to each. These ratings are used to determine the amount of compensation that veterans are entitled to receive on the basis of their specific conditions.

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## VA's Schedule for Rating Disabilities

Federal law (38 U.S.C. 1110 and 1155) requires VA to “adopt and apply a schedule of ratings of reductions in earning capacity from specific injuries or combination of injuries” to determine the amount of compensation disabled veterans are entitled to receive. The ratings are to be based, “as far as practicable, upon the average impairments of earning capacity resulting from such injuries in civil occupations.” The law gives the chief administrator of VA the discretion to define “average impairments in earning capacity” and the authority to readjust the schedule to help ensure that disability ratings reflect VA’s experience.

The War Risk Insurance Act of 1917 called for the creation of the first rating schedule. The schedule was developed in 1919 and provided an early framework for the basic design of the current compensation and pension programs for disabled veterans. It underwent major revisions in 1921, 1925, 1933, and 1945, becoming more comprehensive with each major revision (see fig. 1). The last major revision to the schedule was made in 1945.

**Figure 1: History of VA's Schedule for Rating Disabilities**

1917	<ul style="list-style-type: none"> <li>War Risk Insurance Act called for the creation of a rating schedule.</li> <li>War Risk Insurance Act amendments called for adoption of a rating schedule based on average impairment in earning capacity.</li> </ul>
1918	
1919	
1920	
1921	<ul style="list-style-type: none"> <li>Rating schedule revised.</li> <li>Schedule contained guidelines for rating disabilities.</li> <li>Schedule divided into sections: neuropsychiatric and surgical disabilities; eye, ear, nose, and throat difficulties; and dental conditions.</li> </ul>
1922	
1923	
1924	
1925	<ul style="list-style-type: none"> <li>Rating schedule revised.</li> <li>Schedule followed the California workmen's compensation system of rating disabilities (not based on average impairment in earning capacity for all occupations).</li> <li>Schedule included general policy for rating disabilities.</li> <li>Schedule contained index of diseases and injuries (beginning of diagnostic codes).</li> <li>Instructions added on how to use the schedule.</li> </ul>
1926	
1927	
1928	
1929	
1930	
1931	
1932	<ul style="list-style-type: none"> <li>Rating schedule revised.</li> <li>VA reverted to the method of "averaging" for all occupations.</li> <li>Revised ratings were based on the average impairment in earning capacity.</li> <li>Schedule added "multiple disabilities."</li> <li>Gynecological conditions added to schedule.</li> </ul>
1933	
1934	
1935	
1936	
1937	
1938	<ul style="list-style-type: none"> <li>Rating schedule revised to reflect advances in science, technology, and medicine.</li> <li>New diagnostic codes added.</li> <li>Disabilities indexed numerically under systems.</li> <li>Disabilities identified by a code series.</li> <li>Schedule serves as benchmark for current rating decisions.</li> </ul>
1939	
1940	
1941	
1942	
1943	
1944	
1945	

The Schedule for Rating Disabilities contains medical criteria and disability ratings. The medical criteria consist of a list of diagnoses organized by body system and a number of levels of medical severity specified for each diagnosis. The schedule assigns a percentage evaluation, commonly referred to as a disability rating, to each level of severity associated with a diagnosis. The disability rating conceptually reflects the average impairment in earning capacity associated with each level of severity. For example, VA presumes that the loss of a foot as a result of military service results in a 40-percent impairment in earning capacity, on average, among veterans with this injury. All veterans who lose a foot as a result of military service, therefore, are entitled to a 40-percent disability rating whether this injury actually reduces their earning capacity by more than 40 percent or not at all. Ratings for individual diagnoses in the schedule range from 10 percent to 100 percent in gradations of 10 (see table 1).<sup>1</sup>

**Table 1: Number of Veterans Receiving Disability Compensation During FY 1995, by Degree of Disability**

Degree of disability (percent)	Number of veterans
0	18,588 <sup>a</sup>
10	886,279
20	365,241
30	308,377
40	183,679
50	108,583
60	106,798
70	60,770
80	37,488
90	16,592
100	143,280
<b>Total</b>	<b>2,235,675</b>

<sup>a</sup>While 0-percent ratings are normally noncompensable, some veterans may receive special monthly compensation for such things as the loss of a procreative organ.

Source: VA, Annual Report of the Secretary of Veterans Affairs—Fiscal Year 1995 (Washington, D.C.: VA, Mar. 1996).

<sup>1</sup>A veteran can also receive a 0-percent noncompensable rating that may be increased to a compensable rating of 10 percent or more if the veteran's condition worsens. A 0-percent rating generally means that VA has determined that a veteran has a condition that can be classified as service connected; however, it is not severe enough to qualify for monetary compensation on the basis of the medical criteria specified in the schedule. Some veterans with a 0-percent rating receive special monthly compensation under the VA disability program. On the basis of 1994 data, VA estimated there were about 1.2 million veterans who were rated at 0 percent and were not receiving disability compensation.

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## Disability Compensation Amounts

The amount of compensation veterans are awarded for their disabilities is based on (1) the disability rating the schedule assigns to a veteran's specific condition and (2) the specific benefit amount the Congress sets for each of these disability rating levels. To determine what basic compensation a veteran with a service-connected condition is due, first the veteran's condition is medically evaluated to determine its severity. Then VA compares the results of the evaluation with the medical criteria in the schedule to determine what disability rating is warranted given the severity of the veteran's condition. The veteran will receive the amount the Congress has set for that disability rating.

The Congress has adjusted the benefit amounts for each disability rating level annually. In fiscal year 1995, the basic monthly benefit amount ranged from \$89 for conditions assigned a rating of 10 percent to \$1,823 for conditions assigned a rating of 100 percent (see table 2).

Although the primary purpose of VA's disability compensation program is compensation for impairment in earning capacity, the program also provides for additional monthly compensation over and above the amount based on the schedule, for loss of "physical integrity." Loss of physical integrity is defined as tissue loss, loss of body parts, or any disease or injury that makes an individual less functionally whole. The law (38 U.S.C. 1114) provides for additional monthly compensation for such things as the loss of a hand, foot, eye, or procreative organ.

VA regulations also allow veterans to receive "extra-schedular" awards when VA determines that the severity of a veteran's condition is not adequately captured by the rating the schedule assigns to it. Extra-schedular awards allow veterans to receive compensation for a rating higher than the one specified in the schedule for their condition. In a case of unemployability, for example, if the criteria in the schedule indicate that a veteran's condition warrants at least a 60-percent disability rating but VA determines that, on the basis of that veteran's unusual circumstances, he or she is unable to obtain and sustain gainful employment, VA can raise the compensation for that veteran to the amount provided for a 100-percent rating.

VA regulations also allow veterans to be compensated for "social inadaptability" or "social impairment" to the extent it affects industrial adaptability. Social inadaptability contemplates those abnormalities of conduct, judgment, and emotional reactions that affect economic adjustment, that is, that impair earning capacity.

**Table 2: VA Disability Compensation Rates During FY 1995, by Degree of Disability**

Degree of disability (percent)	Monthly rate
10	\$89
20	170
30	260
40	371
50	529
60	666
70	841
80	974
90	1,096
100	\$1,823 <sup>a</sup>

Note: Effective December 1, 1995, these rates were increased to the following: 10 percent—\$91; 20 percent—\$174; 30 percent—\$266; 40 percent—\$380; 50 percent—\$542; 60 percent—\$683; 70 percent—\$862; 80 percent—\$999; 90 percent—\$1,124; and 100 percent—\$1,870.

<sup>a</sup>When veterans suffer from conditions that result in additional needs, such as special assistance in the home, they can receive up to \$5,212 a month in disability compensation, including the basic benefit.

Source: VA, Federal Benefits for Veterans and Dependents, 1995 ed., VA Pamphlet 80-95-1 (Washington, D.C.: VA, 1995).

In 1995, about 70 percent of the 2.2 million veterans on the rolls were being compensated for conditions with disability ratings of 30 percent or less for a total of nearly \$2.8 billion, or about 25 percent of total benefits paid to veterans that year. Those rated 100 percent accounted for only 6 percent of those on the disability rolls that year and received \$3.7 billion, or about 32 percent of the total amount of benefits paid (see table 3).

**Table 3: Total Compensation Paid During FY 1995 to Disabled Veterans, by Degree of Disability**

Degree of disability (percent)	Number of veterans	Percentage of all veterans	Total amount paid	Percentage of total amount paid
0	18,588	0.8	\$ 14,917,200	0.1 <sup>a</sup>
10	886,279	39.6	950,119,200	8.4
20	365,241	16.3	746,307,600	6.6
30	308,377	13.8	1,068,338,400	9.4
40	183,679	8.2	913,666,800	8.1
50	108,583	4.8	762,907,200	6.7
60	106,798	4.8	1,256,940,000	11.1
70	60,770	2.7	892,731,600	7.9
80	37,488	1.7	659,898,000	5.8
90	16,592	0.7	330,303,600	2.9
100	143,280	6.4	3,707,430,000	32.8
<b>Total</b>	<b>2,235,675</b>	<b>100.0<sup>b</sup></b>	<b>\$11,303,559,600</b>	<b>100.0<sup>b</sup></b>

<sup>a</sup>While 0-percent ratings are normally noncompensable, some veterans may receive special monthly compensation for such things as the loss of a procreative organ.

<sup>b</sup>Totals may not add to 100 percent because of rounding.

Source: VA, Annual Report of the Secretary of Veterans Affairs—Fiscal Year 1995 (Washington, D.C.: VA, Mar. 1996).

## Disability Ratings May Not Reflect Economic Loss

Disability ratings in the current schedule may not reflect the actual economic loss that disabled veterans, on average, now experience. While the law contains no definition of “impairments in earning capacity,” ratings assigned to conditions in the schedule are based more on judgments of the loss in functional capacity, rather than in earning capacity, resulting from these conditions. Advances in medicine and technology and changes in the economy and public policy and in the field of rehabilitation since 1945 raise questions about whether ratings for specific conditions set 50 years ago reflect the average loss in earning capacity today among veterans with these conditions. In addition, studies conducted in the mid-1950s and the late 1960s concluded that the ratings in the schedule did not accurately reflect the reduction in earning capacity that disabled veterans experienced at those times and that the ratings needed to be updated.

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## Impairments in Earning Capacity Not Defined in the Law

The law gives the Secretary of Veterans Affairs the authority to determine what is meant by “average impairments in earning capacity” in civilian occupations. Although VA’s Economic Validation of the Rating Schedule (ECVARS) in the late 1960s defined reduction in earning capacity as “the loss or lowering of average income from wages or employment,” VA has not defined in regulations what is meant by average impairment in earning capacity other than to generally describe it as an economic or industrial handicap.

Beginning at least as early as 1923, when assigning a rating to a condition, VA used the loss in physical or overall functional capacity resulting from that condition (or some other proxy, such as the average veteran’s ability to compete for employment in the job market) as an indicator of average impairment in earning capacity. According to an official in VA’s Office of General Counsel, the average impairment in earning capacity in civilian occupations means the impairment of an individual’s ability to engage in any type of work available in the economy.

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## Functional Capacity Used as an Indicator of Earning Capacity

The actual loss in earnings associated with a service-connected condition has not been considered when determining the degree to which that condition impairs earning capacity. Nor has it been considered when determining the rating that condition should be assigned in the schedule. In 1945, when the framework for the current schedule was developed, the job market was oriented toward physical labor, and physical capacity was expected to have a major influence on earning capacity. At that time, a Disability Policy Board, consisting of doctors and lawyers, set the disability ratings for the conditions contained in the schedule. According to a former Director of VA’s Compensation and Pension Service, VA’s Department of Medicine and Surgery, now the Veterans Health Administration, provided the Board with a medical monograph—a detailed description of etiology and manifestations—for each of the conditions included in the schedule at that time. The Board used these monographs to estimate the relative effects different levels of severity of a condition have on the average veteran’s ability to compete for employment in the job market. It set disability ratings on this basis. Thus, ratings for conditions that limited physical ability, such as the loss of the use of an arm or leg, were expected to greatly impair veterans’ average earning capacity and were given a relatively high rating.

Since 1945, VA has made many revisions to the schedule. The revisions have included modifications to medical criteria associated with the

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ratings, changes in the maximum convalescence period allowed before requiring reevaluation of the condition, and addition of more levels of evaluations or ratings. The revisions, however, have not been based on empirical data on the effects certain conditions have on veterans' earnings.

According to VA Compensation and Pension officials, the basic procedure used to determine what disability rating to assign to a condition has not changed since 1945. This determination has been and continues to be based on the judgment of individuals with knowledge and expertise in this area. When adjusting ratings for conditions already in the schedule or assigning ratings to new conditions added to the schedule, VA's goal has been to maintain the internal consistency of the schedule over time. In doing so, VA tries to ensure that new or adjusted ratings are consistent with the ratings of analogous conditions and reasonable relative to all other conditions. As a result, the ratings in the 1945 schedule have been, in effect, the benchmark for all the ratings adjusted and added since then, and VA officials acknowledge that the ratings in the current schedule are consistent with the ratings developed in 1945.

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### Changes in the Economy and Society Since 1945 Indicate That Ratings May Need Updating

Even if functional capacity accurately approximated disabled veterans' reduction in earning capacity in 1945, changes have occurred since then that have implications for how accurately those ratings reflect disabled veterans' reduction in earning capacity today. Numerous technological and medical advances have taken place, as well as economic changes, that have created more potential for people to work with some conditions and less potential for people to work with other conditions. There have also been changes in the labor market and social attitudes toward the disabled that may affect disabled veterans' ability to work.

Since 1945, medical and technological advances have enabled individuals with some types of disabilities to obtain and sustain employment. Advances in the management of disabilities, like medication to control mental illness or computer-aided prosthetic devices that return some functioning to the physically impaired, have helped reduce the severity of the functional loss caused by both mental and physical disabilities. Electronic communications and assistive technologies, such as synthetic voice systems, standing wheelchairs, and modified automobiles and vans, have given people with certain types of disabilities more independence and potential to work.

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There has also been a shift in the U.S. economy since 1945 from predominantly labor and manufacturing to skill- and service-based jobs. In the 1960s, earning capacity became more related to a worker's skills and training than to his or her ability to perform physical labor. Advancements in technology, including computers and automated equipment, following World War II and the Korean Conflict reduced the need for physical labor. The goods-producing sector's share of the economy—mining, construction, and manufacturing—declined from about 44 percent in 1945 to about 21 percent in 1994. The service-producing industry's share, on the other hand—such areas as wholesale and retail trade; transportation and public utilities; federal, state and local government; and finance, insurance, and real estate—increased from about 57 percent in 1945 to about 80 percent in 1994.

While the shift to a more service-oriented economy may have had a positive effect on job opportunities for veterans with physical disabilities, it may have had the opposite effect for those with some mental impairments. However, new treatments and medications have made it possible for individuals with some mental illnesses to function more fully today. About 20 percent of the veterans on the disability rolls as of September 30, 1995, were receiving compensation for psychiatric and neurological conditions, whereas 80 percent were being compensated for general medical or surgical conditions, or physical disabilities (see table 4).

**Table 4: Distribution of Veterans on the Rols in FY 1995, by Degree of Disability and Major Medical Category**

Degree of disability (percent)	Total number of veterans	Psychiatric and neurological conditions		General medical and surgical conditions	
		Number of veterans	Percent	Number of veterans	Percent
0	18,588	a	a	18,588	100
10	886,279	111,002	13	775,277	87
20	365,241	23,852	7	341,389	93
30	308,377	70,225	23	238,152	77
40	183,679	27,147	15	156,532	85
50	108,583	39,774	37	68,809	63
60	106,798	19,487	18	87,311	82
70	60,770	22,430	37	38,340	63
80	37,488	11,061	30	26,427	70
90	16,592	4,873	29	11,719	71
100	143,280	97,203	68	46,077	32
<b>Total</b>	<b>2,235,675</b>	<b>427,054</b>	<b>19</b>	<b>1,808,621</b>	<b>81</b>

<sup>a</sup>Not applicable.

Source: VA, Annual Report of the Secretary of Veterans Affairs—Fiscal Year 1995 (Washington, D.C.: VA, Mar. 1996).

In addition, in recent decades there has been a trend toward greater inclusion of and participation by people with disabilities in the mainstream of society. Changes in public attitudes toward people with disabilities have resulted, over the past 2 decades, in public policy requiring the removal of environmental and social barriers that prevent the disabled from fully participating in the workforce as well as in their communities. The Americans With Disabilities Act of 1990 (ADA), which supports the full participation of people with disabilities in society, fosters the expectation that people with disabilities can work. The act prohibits employers from discriminating against qualified individuals with disabilities and requires employers to make reasonable work place accommodations for these individuals.

## Studies Have Found That Ratings Need Updating

Two major studies have been conducted since the implementation of the 1945 version of the schedule to determine whether the schedule constitutes an adequate basis for compensating veterans with service-connected conditions. One was conducted by a presidential commission in the mid-1950s and a second by VA in the late 1960s. Both concluded, for various reasons, that at least some disability ratings in the

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schedule did not accurately reflect the average impairment in earning capacity among disabled veterans and needed to be adjusted.

The President's Commission on Veterans' Pensions, commonly called the Bradley Commission, was created in 1955 "to carry out a comprehensive study of the laws and policies pertaining to pension, compensation, and related nonmedical benefits" for veterans. As part of this study, the Commission examined VA's Schedule for Rating Disabilities. To determine whether the schedule at that time constituted an adequate and equitable basis for compensating disabled veterans, the Commission examined (1) the medical criteria in the schedule and (2) the disability ratings associated with these medical criteria.

On the basis of the results of a survey designed to obtain the views of medical specialists nationwide, the Commission concluded that the medical criteria in the schedule did not reflect the advances that had been made in medicine since 1945. The Commission also asked 169 physicians whether they believed the ratings fairly represented the average impairment of earning capacity resulting from the various degrees of severity of physical impairment. Forty percent of the 153 physicians who responded believed that the ratings fairly represented average impairment in earning capacity, 40 percent believed the ratings did not, and 20 percent did not respond or gave vague responses. Many of those who believed the schedule's ratings in general fairly represented average impairment of earning capacity, however, believed that the ratings for the lower disability percentages (usually below 30 percent) did not.

The Commission's comparison of the earnings and income of disabled veterans with the earnings and income of nondisabled veterans and others indicated that, with the exception of totally disabled veterans and elderly disabled veterans, there was little difference in combined median annual earned income of these groups. The Commission concluded that the amount of disability compensation seemed to make up for the difference in overall income between the two groups. But this compensation was not based on the average impairment in earnings capacity. The Commission observed that no studies had been conducted to measure the actual impairment in earnings capacity among the disabled, and the standard used to set disability ratings in the schedule was geared to the impairment of the individual who performs manual labor. Thus, because "functional physical capacity" has a major effect on a laborer's ability to work, the Committee concluded that physical impairment has been VA's predominant standard for setting disability ratings.

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In addition to presenting the results of its study, the Commission pointed out that advances have been made in surgery, prosthetics, medical treatment, and rehabilitation since the schedule was revised in 1945 and that these advances could change the extent to which physical impairment affects earning capacity. The Commission also noted that the job market has shifted from predominantly manual labor jobs to more clerical and service-oriented jobs. Thus, the Commission concluded that the rating schedule tended to be less representative of the average impairment in earning capacity of veterans who performed nonmanual labor jobs.

The Commission's overall recommendation with regard to the schedule was that it should be revised thoroughly on the basis of factual data to ensure that it reflects veterans' average reduction in earning capacity, as required by law. The Commission stated that the basic purpose of the program is economic maintenance and, therefore, it is appropriate to compare periodically the average earnings of the working population and the earnings of disabled veterans, and update the schedule accordingly to help ensure that veterans are adequately compensated for the average reduction in earnings they experience as a result of their service-connected conditions.

In the late 1960s, VA conducted the ECVARS in response to the Bradley Commission recommendations and recurring criticisms that ratings in the schedule were not accurate. This study was designed to estimate the average loss in earning capacity among disabled veterans by calculating the difference between the earnings of disabled veterans, by condition, and the earnings of nondisabled veterans, controlling for age, education, and region of residence.<sup>2</sup> The ECVARS is the most comprehensive assessment of the validity of the ratings ever done. On the basis of the results, VA concluded that of the approximately 700 diagnostic codes reviewed, the ratings for 330 overestimated veterans' average loss in earnings due to their conditions, and about 75 underestimated the average loss among veterans. For example, for the disarticulation of an arm (amputation through the joint where the shoulder and arm join), VA estimated a 60-percent rating more closely approximated veterans' average reduction in earning capacity than the 90-percent rating listed in the schedule. VA also estimated that a 40-percent rating was more representative of veterans' average reduction in earning capacity for the disarticulation of the thigh (with the loss of extrinsic pelvic girdle muscles) than the 90 percent that was listed in the schedule. Some of the ratings that underestimated veterans' reduction in earning capacity were

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<sup>2</sup>See app. I for a description of the scope and methodology of the ECVARS.

assigned to mental conditions. For example, VA estimated that pronounced neurotic symptoms so severe that they would impair a veteran's ability to obtain or retain employment would result in an 80-percent reduction in earning capacity as opposed to the 70 percent listed in the schedule.

## VA Has Not Taken Adequate Steps to Help Ensure That Ratings Reflect Loss in Earnings

VA has not systematically reviewed and adjusted the disability ratings in the schedule to reflect the current average impairment in earning capacity. Although the ECVARS found that many of the ratings in the schedule did not correspond to the actual earnings loss experienced by veterans, no changes were made to the schedule on the basis of these findings. Current revisions VA is making to the schedule focus on updating medical criteria, not on ensuring that disability ratings accurately represent the effect that service-connected conditions have on the average earning capacity of disabled veterans, and few adjustments are being made to ratings in conjunction with these revisions. When making adjustments to the ratings or adding conditions to the schedule, VA relies on its experience implementing the schedule and the responses it receives from the proposed rule-making process to help ensure that ratings are appropriate.

## Ratings Were Not Changed on the Basis of the Results of ECVARS

On the basis of the results of the ECVARS, VA proposed adjustments to the disability ratings and produced a revised schedule that included ratings it believed more accurately represented the reduction in earning capacity that veterans experience as a result of their service-connected conditions. However, VA did not adopt this revised schedule. According to VA and VSO officials, the schedule was not adopted because VA believed that the Congress did not support it. Since the ECVARS was conducted, VA has not done another comprehensive study to systematically measure the effect of service-connected conditions on earnings.

## Current Update Does Not Assess the Extent to Which Ratings Reflect Economic Loss

In a 1988 report,<sup>3</sup> we reviewed the medical criteria in VA's rating schedule to determine whether they were sufficiently current to ensure veterans were being given accurate and uniform percentage ratings. We found that VA could not ensure that veterans were given accurate and uniform ratings because the schedule had not been adjusted to incorporate recent medical advances at that time. We recommended that VA update the medical criteria in the schedule and keep them current. In response to these recommendations, VA is in the process of systematically updating the

<sup>3</sup>Need to Update Medical Criteria Used in VA's Disability Rating Schedule (GAO/HRD-89-28, Dec. 29, 1988).

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medical criteria in the rating schedule. VA is reviewing each major body system in the schedule to ensure that the medical criteria for each diagnosis are up to date. The objectives of the current update are to make the criteria for assigning the disability ratings clearer, more objective, and accurate.

To date, VA has revised the medical criteria for 8 of the 16 body systems contained in the schedule. Revisions generally consist of such things as (1) wording changes for clarification or reflection of current medical terminology, (2) addition of alternative criteria, (3) addition of medical conditions not in the schedule, (4) deletion of conditions that through advances in treatment are no longer considered disabling, and (5) reductions in the time period for reevaluating unstable conditions.<sup>4</sup>

Few revisions involved the disability ratings themselves. Of about 68 diagnostic codes subject to revision in the first 4 body systems VA reviewed, the ratings for 12 were modified in some way. Of these 12 modifications, 3 resulted in obvious reductions in ratings, while none resulted in obvious increases.<sup>5</sup> None of these reductions in ratings, however, will result in lower ratings for veterans currently on the disability rolls. Federal law (38 U.S.C. 1155) specifies that changes in the rating schedule will, in no event, reduce a veteran's rating in effect when a change occurs, unless the veteran's condition has improved.

When a revision in the medical criteria or the addition of a new condition to the schedule requires VA to adjust or set ratings for conditions, these adjustments are generally based on the judgments of VA's Compensation and Pension staff. VA's goal is to maintain the internal consistency of the schedule over time by trying to ensure that new or adjusted ratings are consistent with the ratings of analogous conditions and reasonable relative to all others. For example, when VA added endometriosis to the schedule, it tried to find a condition already listed in the schedule that was analogous or comparable in terms of the physical impairment. On the basis of the Veterans Health Administration's medical monograph for this condition, VA determined that the most severe outcome of having endometriosis would be a hysterectomy, which was already in the schedule under another diagnosis and has a disability rating of 50 percent. VA, therefore, set the maximum evaluation for endometriosis at 50 percent.

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<sup>4</sup>See app. II for examples of the types of changes made as a result of the current update of the rating schedule.

<sup>5</sup>See app. III for a summary of the types of changes made to the rating schedule as a result of updating 4 of the 16 body systems.

VA then set disability ratings for the less severe symptoms associated with endometriosis. In setting the rates for the less severe symptoms, VA Compensation and Pension personnel told us that they used their best judgment or experience, or both, to estimate the amount of time an individual might lose from work as a result of this condition. VA set the rating at 30 percent for moderate symptoms and 10 percent for milder symptoms (see table 5).

**Table 5: Disability Ratings for Endometriosis**

Symptoms	Disability rating (percent)
Lesions involving bowel or bladder confirmed by laparoscopy, pelvic pain or heavy bleeding not controlled by treatment, and bowel or bladder symptoms	50
Pelvic pain or heavy or irregular bleeding not controlled by treatment	30
Pelvic pain or heavy or irregular bleeding requiring continuous treatment for control	10

### VA's Process for Setting and Adjusting Ratings Does Not Factor in Loss in Earnings

When it proposes changes to the schedule, VA relies on its experience in implementing the schedule, on feedback from veterans and VSOS, and on the comments it receives from the public. According to VA officials, the feedback they have received from veterans and VSOS over time about the schedule and VA's experience implementing it indicate that veterans appear to be generally satisfied with the ratings in the schedule. The VSO officials we contacted believe that VA's disability rating schedule is a well-constructed document that has withstood the test of time. They also believe that ratings in the schedule generally represent the average loss in earning capacity among disabled veterans.

Under the proposed rule-making process, proposed changes to the schedule are published in the Federal Register, and veterans and others are given the opportunity to comment on these changes before they are adopted. According to VA officials, veterans have made relatively few comments on changes currently proposed, which they believe suggests that current changes are acceptable.

Because the schedule appears to be widely accepted, VA officials believe that the process they use is adequate to ensure that ratings fairly accurately represent veterans' average impairment in earning capacity, and therefore there is no need to further assess their appropriateness.

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## Using Data on Earnings Has Advantages in Determining Impairment in Earning Capacity

Although VA has chosen not to do so, using an estimate of actual loss in earnings to approximate loss in earning capacity would help VA make certain that veterans are compensated to an extent commensurate with the economic losses attributable to service-connected conditions. This would also help to ensure that disability compensation funds are equitably distributed among disabled veterans given today's work environment. Unlike judgments about loss in functional capacity, estimates of actual loss in earnings are objective and economic indicators of loss in earning capacity.

When the 1945 schedule was developed, no study was done to determine whether ratings based on loss in functional capacity correlated with disabled veterans' loss in earnings. Even if ratings did correlate with loss in earnings at that time, in 1956 the Bradley Commission found that they did not. The Commission recognized that the basic purpose of the program was economic maintenance and that it was appropriate to compensate disabled veterans on the basis of the average reduction in earnings they experience as a result of their service-connected conditions. It recommended updating the schedule periodically, primarily by using estimates of the average loss in earnings experienced by disabled veterans. The results of the ECVARS again illustrated that functional loss, even if it had correlated with economic loss in 1945, did not accurately approximate the economic loss associated with service-connected conditions in the late 1960s. When ratings based on functional capacity were compared with the estimated loss in earnings experienced by disabled veterans, they often did not coincide.

There are several advantages to using empirical data, as opposed to judgments, to determine impairment in earning capacity. Estimates of the loss in earnings resulting from service-connected conditions based on empirical data are objective and more reliable than individuals' judgments about the effect these conditions may have. Such judgments can vary greatly, as the results of the Bradley Commission's survey of physicians illustrate. Half of the physicians who responded to the survey believed the ratings in the schedule fairly represented the average loss in earning capacity resulting from the various degrees of severity of physical impairment. The other half disagreed.

Judgments about the effect certain conditions may have on the ability to function, work, or earn money do not allow VA to determine whether the program is compensating disabled veterans to an extent commensurate with their economic loss. If VA compared estimates of loss in earnings,

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based on empirical data, for specific conditions with the ratings for these conditions, it could objectively determine whether the program was achieving this goal and was distributing disability compensation equitably.

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**It Is Feasible to Base Estimates of Impairment in Earning Capacity on Earnings Loss**

The average impairment in earning capacity associated with specific service-connected conditions can be estimated by calculating the difference between what veterans with those conditions earn, on average, and what they would have earned if they did not have those conditions. The average loss in earnings associated with specific service-connected conditions can be determined by using widely applied research designs for estimating the effect of one variable on another. A number of decisions would have to be made, however, with respect to an overall methodology for a study that would produce these estimates, and a number of options are related to each. Each option has implications for the cost of such a study and the validity of its results. Our work suggests that it could cost between \$5 million and \$10 million to conduct a study like this.

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**Widely Applied Approaches Can Be Used to Quantify the Effect of Service-Connected Conditions on Earnings**

Some generally accepted research designs for estimating the effect of one variable on another can be used to estimate the average loss in earnings associated with specific service-connected conditions. These designs are widely applied. While no study that measures the effect of service-connected conditions on earnings loss will give absolutely definitive results, many studies have demonstrated that it is possible to produce acceptable estimates of the impact of one variable on another. These designs have been used in policy analyses to examine the factors affecting the growth of Social Security Administration disability programs,<sup>6</sup> the role vocational rehabilitation plays in the tendency of disabled persons to return to work,<sup>7</sup> and the impact of job training on employment among ex-offenders.<sup>8</sup>

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<sup>6</sup>K. Rupp and D. Stapleton, "Determinants of the Growth in the Social Security Administration's Disability Programs—An Overview," *Social Security Bulletin*, 58:4 (Winter 1995), pp. 43-70.

<sup>7</sup>J.C. Hennessey and L. S. Muller, "The Effect of Vocational Rehabilitation and Work Incentives on Helping the Disabled-Worker Beneficiary Back to Work," *Social Security Bulletin*, 58:1 (Spring 1995), pp. 15-28.

<sup>8</sup>M.A. Finn and K.G. Willoughby, "Employment Outcomes of Ex-Offender Job Training Partnership Act (JTPA) Trainees," *Evaluation Review*, 20:1 (Feb. 1996), pp. 67-83.

Such designs have also been used in many studies that specifically measured the impact of such things as military service,<sup>9</sup> functional impairments,<sup>10</sup> and medical conditions such as epilepsy<sup>11</sup> and arthritis<sup>12</sup> on wages and earnings. VA's ECVARS is an example of one of these. It relied on a design that is often used in policy analysis and program evaluation to estimate the effect of service-connected conditions on the average earnings of veterans on the VA disability rolls at that time. Given that other studies have successfully employed methods for quantifying the effect functional impairment and specific disabilities have on earnings, these methods can also be applied to the question of how service-connected conditions affect disabled veterans' earning capacity.

## Options for a Design and Methodology for Estimating Loss in Earnings

In deciding how to conduct a study to estimate the effect of disability on earning capacity, questions related to such things as scope and study design, data collection, and analysis would need to be addressed. The feasibility and cost of a study designed to estimate the effect of service-connected conditions on earnings would depend on the options chosen relative to each of these. Following are some options we identified during our review of the literature and discussions with experts.

### Study Scope

The study's scope—how comprehensive and specific it should be—would need to be determined. Decisions about the scope will affect the overall cost and feasibility of the study and the validity of the results. The study could attempt to measure every condition's effect on earnings at each disability rating level or could select only certain conditions, depending on (1) the extent to which a condition is thought to represent or be represented by other conditions in the schedule or (2) the number of veterans on the rolls with that condition. The more conditions examined individually, the more costly and complicated the study is likely to be. However, estimates for individual conditions are more valid if those conditions are examined individually.

<sup>9</sup>R.R. Bryant, V.A. Samaranayake, and A. Wilhite, "The Effect of Military Service on the Subsequent Civilian Wage of the Post-Vietnam Veteran," *The Quarterly Review of Economics and Finance*, 33:1 (Spring 1993), pp. 15-31.

<sup>10</sup>M.L. Baldwin, L.A. Zeager, and P.R. Flacco, "Gender Differences in Wage Losses From Impairments: Estimates From the Survey of Income and Program Participation," *The Journal of Human Resources*, 29:3 (Summer 1994), pp. 865-87.

<sup>11</sup>M. Famulari, "The Effects of a Disability on Labor Market Performance: The Case of Epilepsy," *Southern Economic Journal*, 58:4 (Apr. 1992), pp. 1072-87.

<sup>12</sup>T. Pincus, J.M. Mitchell, and R.V. Burkhauser, "Substantial Work Disability and Earnings Losses in Individuals Less Than Age 65 With Osteoarthritis: Comparisons With Rheumatoid Arthritis," *Journal of Clinical Epidemiology*, 42:5 (1989), pp. 449-57.

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## Study Design

It is possible to quantify the effect of service-connected conditions on earnings by estimating the difference between the actual earnings of veterans on the disability rolls and what their earnings would have been if they did not have their service-connected conditions. The actual earnings of disabled veterans can be measured directly. If it were possible to control which veterans would incur service-connected conditions, veterans could be randomly assigned to groups with or without a disability, and the difference between the earnings of these two groups would constitute the effect of disability on earnings. Since this is not possible, what disabled veterans would have earned if they were not disabled has to be approximated.

The earnings of the disabled prior to the onset of their disabilities, or the earnings of a group of individuals who were not disabled, could be used for this approximation. Given the data requirements associated with estimating loss in earnings by comparing the earnings of veterans before and after the onset of disability, it may be more feasible to estimate this by comparing the earnings of disabled veterans with those of a comparison group of nondisabled individuals.

When using the difference between the earnings of the disabled and nondisabled to estimate the effect of a service-connected condition on earnings, the goal would be to use a nondisabled group that is similar in as many ways as possible to the disabled group. The more equivalent the two groups are, the more able we are to assume that the difference in earnings is the result of the condition and not some other factor. Veterans who are not on the disability rolls, therefore, would seem to be an appropriate comparison group. However, veterans not on the disability rolls may differ from disabled veterans in other characteristics that could explain earnings differences, including gender, age, and whether the veteran has been out of the workforce for reasons such as institutionalization. Some of these factors could be considered when selecting the final comparison group for the study or conducting the statistical analysis of the data (see next section).

## Controlling for Other Variables That Affect Earnings

If the study design chosen compared the earnings of the disabled with those of the nondisabled, the simple difference between the two would not necessarily represent the effect of the condition on earnings. To isolate the condition's effect on earnings, other variables that may differ between the disabled and nondisabled group and also influence earnings would have to be controlled for. The more variables influencing earnings that are

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controlled for simultaneously, the more valid the estimates of the effect of service-connected conditions on earnings.

Which variables to control for is another issue that the study's methodology would need to address. Some of the characteristics of both disabled and nondisabled veterans that are believed to have an impact on earnings are age, education, gender, race, and region of residence. The number of variables controlled for could influence the cost and complexity of the study.

Cross-tabulation and multiple regression are two statistical approaches that can be used to control for the differences in the characteristics of disabled and nondisabled veterans, other than disability status, that may account for the difference in earnings. Cross-tabulation would involve making comparisons of disabled with nondisabled veterans within potentially many different subgroups of the control variables (for example, age, gender, and education). Multiple regression allows the analyst to more efficiently analyze a larger number of variables simultaneously than does a series of cross-tabulations. Recent studies have used multiple regression to estimate the influence of different variables on wages and earnings.

## Data Sources

Where and how to obtain data on earnings and the characteristics of veterans that may influence earnings is another decision to be made when developing an overall approach for this type of study. Existing administrative databases, such as Social Security Administration earnings records and Internal Revenue Service tax records, as well as data from national surveys, including the Survey of Income and Program Participation and the Current Population Survey conducted by the Bureau of the Census, contain information on earnings and, in some cases, other characteristics of the general population. These databases could be used in conjunction with information in VA administrative files to identify the effect service-connected conditions have on disabled veterans' earnings. If data from these sources do not meet the requirements of this study or it is not feasible to use these sources, original data need to be collected. If this approach is necessary, sampling and data collection strategies for surveys of veterans on and off the disability rolls would need to be developed.

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## Cost of Estimating Average Impairment in Earning Capacity

As a result of their experience with similar studies, officials at the Bureau of the Census estimated that it would cost between \$5 million and \$10 million to conduct a study to determine the average impairment in

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earning capacity resulting from all, or nearly all, the conditions in the schedule. The precise cost would depend on the study's design and methodology.

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## Observations

VA's disability rating schedule has served as a basis for distributing compensation among disabled veterans relative to their level of impairment in earning capacity since 1945. The schedule's ratings do not, however, reflect the many changes that medical and socioeconomic conditions may have had on veterans' earning capacity over the last 51 years. Thus, the ratings may not accurately reflect the levels of economic loss that veterans currently experience as a result of their disabilities.

Estimates of disabled veterans' average loss in earnings attributable to specific service-connected conditions could be (1) compared with the ratings for these conditions to determine whether the ratings correspond to economic loss and (2) used to adjust ratings that do not reasonably reflect this loss. There are pros and cons, however, to developing earnings-based disability ratings.

It is uncertain what overall effect earnings-based ratings would have on total program outlays in the short term. Estimates of loss in earnings might show that ratings are appropriate and accurately represent the average loss in the earnings veterans experience. On the other hand, they might show that ratings assigned to some conditions are not appropriate and either overestimate or underestimate veterans' average loss in earnings. Even if a significant number of ratings in the schedule are reduced on the basis of these estimates, it would not result in any short-term reduction in program outlays. Veterans on the rolls are protected by law from being adversely affected if the disability ratings assigned to their conditions are reduced. If estimates indicate that some ratings should be increased, the Secretary of VA has the discretion to increase these ratings for veterans on the rolls at that time. If the Secretary decides to do so, in the short term, total program outlays would increase.

The long-term effect of an earnings-based schedule on total program outlays is also uncertain. Depending on (1) the number of ratings increased and reduced, (2) which rating levels change, (3) how much the levels change, and (4) the number of people that are affected by these changes over time, total program outlays might increase, decrease, or remain about the same over the long term.

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It could cost between \$5 million and \$10 million to develop estimates of the average loss in earnings veterans experience as a result of specific service-connected conditions. The cost, however, represents a small fraction of the approximately \$11.5 billion in disability compensation benefits paid to veterans in fiscal year 1995.

In our opinion, there is a distinct benefit to be derived from developing these estimates and using them to adjust disability ratings in the schedule. We recognize the uncertainty surrounding the effect that basing ratings on loss in earnings might have on long-term program outlays. However, we believe this uncertainty does not outweigh the benefit of ensuring that disabled veterans receive appropriate and equitable compensation. In addition, the cost of developing these estimates is not substantial relative to the program benefits paid annually.

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## Matter for Congressional Consideration

VA's disability ratings do not reflect the effect economic, medical, and other changes since 1945 may have had on disabled veterans' earning capacity. Therefore, the Congress may wish to consider directing VA to determine whether the ratings for conditions in the schedule correspond to veterans' average loss in earnings due to these conditions and adjust disability ratings accordingly.

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## Agency Comments

In commenting on a draft of our report, VA said that the "schedule as it is currently structured represents a consensus among Congress, VA and the veteran community" and that the "ratings derived from the schedule generally represent the average loss in earning capacity among disabled veterans." VA considers total disability to be "a purely medical determination," and it contends that changing the basis for the ratings in the schedule would serve no useful purpose. In addition, VA believes that "economic factors converge with" disability ratings primarily when the Congress establishes the amount of compensation payable for each disability rating level, and the Congress may adjust these amounts whenever it determines they are not appropriate.

VA also expressed concern that basing ratings in the schedule on average loss in earnings would (1) result in disparate awards based on such things as rank or education, (2) preclude the use of extra-schedular evaluations for exceptional disabilities, (3) not allow for meaningful input from VSOS, and (4) require annual revisions to the schedule to keep up with changing economic and vocational conditions.

Although the schedule may represent a consensus among the program's key stakeholders, there is no assurance that this consensus produces ratings for conditions in the schedule that accurately represent the average impairment in earning capacity currently associated with these conditions. Furthermore, while total, or 100 percent, disability may be a reasonable reference point from which to establish ratings for partial disability, we do not agree with VA's contention that disability is or should be solely a medical determination. Other programs define disability as loss in the ability to earn wages or work as a result of an impairment. An impairment is defined as a medical diagnosis of a specific abnormality, such as "paralysis of upper and lower limbs—one side."<sup>13</sup> Studies have shown that medical conditions are poor predictors of incapacity to work, that is, disability.<sup>14</sup>

We agree with VA that the Congress can adjust the rate—that is, the amount of compensation—it establishes for each rating level (10 through 100 percent) in the schedule when it believes that these benefit amounts are not appropriate. However, the primary responsibility to ensure that veterans are compensated commensurate with the average impairment in earning capacity they experience because of these conditions rests with the VA. This can be done by establishing ratings for conditions contained in the schedule that reflect veterans' average economic losses attributable to these conditions.

Basing ratings on estimates of the average earnings loss among veterans would not necessarily result in disparate treatment of veterans. Service-connected conditions that result in a high-percentage loss in earnings, on average, among veterans with these conditions would be assigned a rating higher than conditions that result in a low-percentage loss in earnings. As with the current schedule, veterans who have conditions that are assigned the same disability rating would receive the same basic monthly compensation regardless of such circumstances as their military rank or education.

We believe disability ratings in the schedule should be based primarily but not solely on estimates of veterans' average loss in earnings. Therefore,

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<sup>13</sup>World Health Organization, International Classification of Impairments, Disabilities, and Handicaps (Geneva: World Health Organization, 1980).

<sup>14</sup>For example, see S.O. Okpaku and others, "Disability Determinations for Adults With Mental Disorders: Social Security Administration vs. Independent Judgments," American Journal of Public Health, Vol. 84, No. 11 (Nov. 1994), pp. 1791-95, and H.P. Brehm and T.V. Rush, "Disability Analysis of Longitudinal Health Data: Policy Implications for Social Security Disability Insurance," Journal of Aging Studies, Vol. 2, No. 4 (1988), pp. 379-99.

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earnings-based ratings would not preclude extra-schedular evaluations. Nor would an earnings-based schedule prevent VA from obtaining and taking into account comments from VSOS and others when it revises the schedule just as it does today. Finally, the economists we consulted agreed that ratings based on earnings loss would need to be validated only once every 10 to 20 years to keep pace with changes in the economy and advances in medicine and technology that might influence the earning capacity of veterans with service-connected conditions.

We have modified the report where appropriate in response to VA's technical comments on the draft report. The complete text of VA's comments appears in appendix IV.

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We are sending copies of this report to the Chairman and Ranking Minority Member of the Senate Committee on Veterans' Affairs; the Ranking Minority Member, Subcommittee on Compensation, Pension, Insurance and Memorial Affairs, House Committee on Veterans' Affairs; other appropriate congressional committees; the Secretary of Veterans Affairs; and other interested parties. We will also make copies available to others on request.

If you have any questions about this report, please call Clarita Mrena, Assistant Director, at (202) 512-6812, or Shelia Drake, Evaluator-in-Charge, at (202) 512-7172. Other major contributors to this report are listed in appendix V.

Sincerely yours,



David P. Baine  
Director, Veterans' Affairs and  
Military Health Care Issues

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**Abbreviations**

ADA	Americans With Disabilities Act of 1990
ECVARS	Economic Validation of the Rating Schedule
VA	Department of Veterans Affairs
VSO	veterans service organization

# Design and Methodology for the Economic Validation of the Rating Schedule

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## Study Objectives

The Economic Validation of the Rating Schedule (ECVARS) was designed to provide information that could be used to

- estimate the average economic loss attributable to individual service-connected disabilities,
- recognize trends toward increases or decreases in the rate of economic loss that can be expected with the passage of time and aging of the veteran population,
- recognize and evaluate the basic differences between the disability evaluation policy of VA and that of other federal agencies for comparable disabilities, and
- formulate proposals for the refinement of the schedule on the basis of these estimates and evaluations.

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## Study Design

To determine the average impairment in earning capacity resulting from specific service-connected conditions on the rating schedule, the ECVARS calculated the difference between the median earnings of veterans on the VA disability rolls, grouped by their disability's diagnosis, and the median earnings of veterans not on the rolls. The earnings of nondisabled veterans were used to approximate what the earnings of disabled veterans would have been if they did not have their disability.

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## Sample Design

To estimate the average loss in earnings experienced by disabled veterans as a result of their specific service-connected condition, all disabled veterans on the disability rolls at that time were stratified into groups by the diagnosis assigned to their disability. While all disabled veterans in strata that contained 500 or fewer veterans were selected for this study, samples of disabled veterans were drawn from strata that contained more than 500. Sample sizes for each stratum ranged from about 200 to about 1,900 veterans.

In total, 485,000 of the approximately 2 million veterans who were receiving disability compensation when this study was done were chosen to participate. Not included were female veterans on the disability rolls, veterans with multiple disabilities, and veterans whose VA disability compensation was based on the 1925 schedule.

The ECVARS' estimates of the median earnings of nondisabled veterans were based on the earnings of a sample of noninstitutionalized, nondisabled veterans selected from lists of individuals in the general

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population that the Bureau of the Census was using at that time to draw samples for its ongoing Current Population Survey. In total, approximately 14,000 nondisabled veterans were chosen for this survey.

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## Study Scope

The ECVARS did not validate all diagnoses on the schedule, nor did it validate each individually. Diagnoses that accounted for very small numbers of veterans on the VA disability rolls at that time were excluded from the study. Diagnoses with fewer than 200 veterans and similar symptoms were combined and validated as a single diagnosis. Diagnoses accounting for at least 200 veterans were validated individually unless they were what VA referred to as “adequately represented” by another diagnosis or group of diagnoses, in which case they were not validated. The ECVARS validated about 400 diagnosis strata, each containing at least one diagnosis from the schedule.

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## Survey Methods

The ECVARS used a mail survey to collect data on earnings from disabled and nondisabled veterans. The Bureau of the Census administered this survey for VA. Census mailed out a total of approximately 500,000 questionnaires in February 1968, which asked the veterans for data on earnings and other characteristics during the prior year. Census mailed out two additional follow-up questionnaires to nonrespondents and conducted telephone and face-to-face interviews to obtain data from those who did not respond to the mail questionnaire. Data collection was completed in the first quarter of fiscal year 1969.

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## Method for Estimating Loss in Earnings

In addition to data on earnings, the ECVARS collected data on the age, education, and geographic residence of veterans. The age variable was split into four categories—under age 30; ages 30 to 49; ages 50 to 64; and age 65 and over. Education was classified as less than a high school graduate, high school graduate, and 1 or more years above high school graduate. There were two categories for the regional variable—the South and all other geographical regions.

When calculating the difference between the earnings of the disabled and nondisabled, each diagnosis stratum was paired with a unique “control” group that contained nondisabled veterans who were equivalent with respect to age, education, and region of residence to the disabled veterans in that diagnosis stratum. By controlling for the influence of these other

variables, the study attempted to isolate the effect that the service-connected condition alone had on earnings.

The ECVARS calculated a separate estimate of loss in earnings for each rating level associated with a specific diagnosis stratum. Study results were presented in terms of disabled veterans' annual dollar loss in earnings, disabled veterans' median percentage loss in earnings relative to the median earnings of nondisabled veterans, and disabled veterans' median loss in earnings relative to the median earnings of production workers.

# Examples of Changes Made to the Rating Schedule During the Current Update

Diagnostic code	Old rating schedule	Revised rating schedule	Type of change	Rationale
7501	Kidney, abscess of: rate for residuals	Kidney, abscess of: rate as urinary tract infection	Change in criteria	New system of three general areas of dysfunction
7505	Kidney, tuberculosis of, active or inactive: active - 100; inactive - see 4.88b and 4.89 <sup>a</sup>	Kidney, tuberculosis of: rate in accordance with 4.88b or 4.89, <sup>a</sup> whichever is appropriate	Change in wording	Editorial changes only
7619	Ovaries, removal of both: with complete extirpation and artificial menopause, for 6 months after excision - 100; thereafter, 30; removal of one with or without partial removal of the other - 10	Ovary, removal of: for 3 months after removal - 100; thereafter, complete removal of both ovaries - 30; removal of one with or without partial removal of the other - 0 (review for entitlement to special monthly compensation under 3.350 of this chapter) <sup>a</sup>	Change in convalescent period; change in heading; and change in evaluation criteria	To account for improved surgical techniques, to make this diagnostic code explicitly applicable to the removal of one and two ovaries, and to make removal of one ovary noncompensable because it does not ordinarily impair earning capacity

<sup>a</sup>Reference is to 38 C.F.R. parts 0-17 (1995).

Source: VA, Rating Schedule Amendments Training Package, Vol. II (Washington, D.C.: VA, 1995).

# Results of VA's Current Review and Update of the Disability Rating Schedule—Number and Types of Diagnoses Changed, by Type of Change

**Table III.1: Number of Diagnoses Added to and Deleted From the Schedule, by Body System**

	Body system				All
	Genitourinary	Oral/dental	Gynecological	Hemic/lymphatic	
Diagnoses before review/update	31	14	17	15	77
Diagnoses eliminated	4	1	0	4	9
Diagnoses remaining	27	13	17	11	68
Diagnoses added	11	3	2	1	17
Diagnoses after review/update	38	16	19	12	85

**Table III.2: Changes in Medical Criteria—Number of Diagnoses Changed in Each Body System, by Type of Change**

Type of change in medical criteria	Body system				All (out of 68 diagnoses)
	Genitourinary (out of 27 diagnoses)	Oral/dental (out of 13 diagnoses)	Gynecological (out of 17 diagnoses)	Hemic/lymphatic (out of 11 diagnoses)	
Wording change	6	3	11	5	25
Criteria changed	17	0	10	7	34
Alternative criteria added	2	1	0	2	5
Reduction in minimum convalescence period before medical reevaluation	2	0	3	1	6
Increase in minimum convalescence period before medical reevaluation	0	0	0	0	0

**Table III.3: Changes in Disability Ratings—Number of Diagnoses Changed in Each Body System, by Type of Change**

Type of change in rating	Body system				All (out of 68 diagnoses)
	Genitourinary (out of 27 diagnoses)	Oral/dental (out of 13 diagnoses)	Gynecological (out of 17 diagnoses)	Hemic/lymphatic (out of 11 diagnoses)	
Reduction in existing rating	1	0	1	1	3
Increase in existing rating	0	0	0	0	0
Addition of new evaluation levels or combination of evaluation levels	1	1	0	5	7
Elimination of minimum percentage evaluation	1	0	1	0	2

# Comments From the Department of Veterans Affairs



DEPARTMENT OF VETERANS AFFAIRS  
Veterans Benefits Administration  
Washington DC 20420

NOV 9 8 1996

In Reply Refer To: 213A

Mr. David P. Baine  
Director, Veterans' Affairs  
and Military Health Care Issues  
United States General Accounting Office  
Washington, DC 20548

Dear Mr. Baine:

Thank you for the opportunity to respond to your draft report entitled VA Disability Compensation: Disability Ratings May Not Reflect Veterans' Economic Losses (GAO/HEHS-97-9). The major conclusion of the report is that it is likely that some of the ratings in the current rating schedule do not reflect the economic loss experienced by veterans today and that Congress may wish to consider directing VA to conduct a study to determine whether current disability ratings correspond to average loss in earnings and to adjust the schedule accordingly.

Compensation is a critical cost of our nation's capacity to maintain a strong national defense. Until a rating schedule was adopted after the War Risk Insurance Act of 1917, officers received a higher level of compensation than enlisted men for the same disability. Maintaining the rating schedule is one way of precluding disparate awards based on rank, education, social status, or any other arbitrary factor. The rating schedule as currently structured represents a consensus among Congress, VA, and the veteran community about an equitable way to determine compensation for America's disabled veterans. As your draft report points out, veterans service organization officials believe that the rating schedule is a well-constructed document that has withstood the test of time and that the ratings derived from the schedule generally represent the average loss in earning capacity among disabled veterans. We concur with this basic assessment. We don't believe change in the basis of a rating schedule that has served so well and so long should be undertaken, or would serve any useful purpose.

We have enclosed a paper stating in more detail some specific concerns we have about the draft report. In addition, we noted a few factual errors and have pointed them out in another enclosed paper.

Thank you again for the opportunity to offer our comments on the draft of your report.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "Stephen L. Lemons".  
Stephen L. Lemons  
Deputy Under Secretary for Benefits

Enclosures

## **AREAS OF CONCERN REGARDING THE DRAFT REPORT**

### **CURRENT RATING SCHEDULE REVIEW**

In response to recommendations contained in a previous GAO report, (VETERANS' BENEFITS: Need to Update Medical Criteria Used in VA's Disability Rating Schedule (GAO/HRD-89-28)), VA has completed approximately half of the first comprehensive review of the medical criteria in the schedule since 1945. The review process has been a deliberative one. We solicited recommendations from non-VA medical specialists as well as the Veterans Health Administration. We also made sure that the veterans service organizations had the opportunity to be involved at several stages in the process by publishing advance notices of proposed rulemaking for each body system to solicit input before we began drafting changes, as well as publishing proposed changes for public review and comment before adopting final revisions. The rating schedule as it is currently structured therefore represents a consensus among Congress, VA and the veteran community. As the draft report clearly indicates, veterans service organization officials believe that the rating schedule is a well-constructed document that has withstood the test of time and that the ratings derived from the schedule generally represent the average loss in earning capacity among disabled veterans.

### **MEDICAL-BASED CRITERIA FOR RATING SCHEDULE**

VA's rating schedule is based on medical criteria that establish higher evaluations for more severe medical conditions, an approach that is consistent with those adopted by other disability programs. Workers' Compensation claims, for example, are generally assessed under the American Medical Association Guides to the Evaluation of Permanent Impairment. The Guides were established to bring greater objectivity to estimating the degree of permanent impairments by evaluating how they affect a patient's daily activities and occupation. Medically-based ratings are no more theoretical and abstract than ratings based on average earnings impairment as measured by an economic study, which must take into account numerous variable factors.

### **CONCEPT OF TOTAL DISABILITY IS A MEDICAL DETERMINATION**

The concept of total disability, the point where an individual's functional capacity is so diminished that the performance of work is infeasible for the average person, is a purely medical determination and, as indicated by the considerable agreement across different disability systems as to what constitutes total disability for different conditions, is a sound reference point for evaluation. For example, certain pulmonary function test values are considered to be indicative of total disability by VA, by the AMA Guides, and by the American Thoracic Society. Partial disability is some smaller percentage of total disability, and the best way to quantify it is by comparison of the partial loss of function to total disability.

### **NEED FOR EXTRA-SCHEDULAR EVALUATIONS FOR EXCEPTIONAL DISABILITIES**

In some cases, where there is extreme facial disfigurement, for example, or other catastrophic condition, the adverse impact on the quality of life, above and beyond the direct economic impact, must be taken into consideration to assure adequate compensation. Extra-schedular compensation helps to assure an equitable evaluation in such conditions.

### **FAIR, EQUITABLE, AND CONSENSUS-BASED SCHEDULE NEEDED**

The current schedule establishes a method for evaluating the disabilities of veterans that is fair and equitable and that treats disparate disabilities with roughly equivalent disabling effects in a consistent manner. In our judgment, this consistency of approach helps reassure the veteran

community that the rating schedule is a valid document for evaluating disabilities, and we would argue against an approach that does not allow for meaningful input from the veterans service organizations. The study recommended by your draft report is just such an approach. Revising the schedule on a purely statistical basis would leave little, if any, leeway for addressing valid concerns that the veteran community might raise. Since it is essential that we maintain the consensus that has been built up over the years if the disability compensation program is to continue to work, all concerned parties must be involved in any attempt to revise the basis of the schedule. Prior to the development of the first rating schedule in 1919, compensation for service-connected disability was based on both rank and degree of disability, with officers receiving a higher amount. The maintenance of the rating schedule is important in preventing a return to disparate treatment based on rank, education, etc.

#### ECONOMIC FACTORS AND DISABILITY EVALUATION

Economic factors converge with disability evaluation primarily at the point where Congress establishes the compensation rates for total and partial disability. Whenever Congress feels these rates are not appropriate, it may adjust them.

#### CURRENT SCHEDULE CONSISTENT WITH FISCAL RESTRAINT

The rating schedule is the cornerstone of a complex benefit system that is a responsible and reasonable means of addressing the needs of disabled veterans. Considering the amounts of some disability claims awarded by state courts presents a striking contrast to compensation awards for veterans. In a California case, for example, a 50 year old man who was struck by a bus and rendered quadriplegic received a nine million dollar settlement. That is a significantly larger amount than a veteran rendered quadriplegic by battle wounds at a much younger age would receive over the course of a lifetime from VA compensation. Veterans, however, are not on their own when it comes to health care, vocational rehabilitation, or providing for their survivors because the compensation determined from the ratings in the schedule is but one part of a comprehensive system designed to meet the obligations of a grateful nation to its disabled veterans at a reasonable cost to the government.

#### STABILITY OF MEDICALLY-BASED RATING SCHEDULE

Relying on economic considerations as the sole basis of disability evaluations would lead to instability of the rating schedule because frequent revisions would be needed to keep pace with changing economic, as well as vocational, conditions. On the other hand, relying on medically-based ratings allows a more stable rating schedule because medical change proceeds more slowly than economic change. Maintaining a rating schedule based on economic validity is likely to require an annual cost, rather than the projected one time cost, of \$5 to \$10 million, for economic studies.

#### CURRENT SCHEDULE WORKS WELL

Disabled veterans are being equitably compensated using a medically-based rating schedule with reliable and valid guidelines for measuring disability. The current schedule is efficient, it works, and we see no reason to validate the ratings solely from an economic perspective.

# GAO Contacts and Staff Acknowledgments

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## GAO Contacts

Clarita Mrena, Assistant Director, (202) 512-6812  
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## Staff Acknowledgments

The following individuals made important contributions to this report: Connie D. Wilson, Senior Evaluator, collected a major portion of the evidence presented; Timothy J. Carr, Senior Economist, reviewed the literature on the relationship between disability and earnings and provided advice on methodology; Steven Machlin, Statistician, provided guidance on research design and statistical methods; and Stefanie Weldon, Attorney, served as legal advisor.

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