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Final Report for the Veterans' Disability Benefits Commission: Compensation, Survey Results, and Selected Topics

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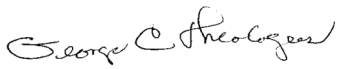

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Executive summary

The Veterans' Disability Benefits Commission (the Commission) asked The CNA Corporation (CNAC) to help assess the appropriateness of the benefits that the Department of Veterans Affairs (VA) provides to veterans and their survivors for disabilities and deaths attributable to military service.[1] Specifically, the Commission is examining the standards for determining whether a disability or death of a veteran should be compensated and the appropriateness of benefit levels. The overall focus of this project is to provide analyses to the Commission regarding the appropriateness of the current benefits program for compensating for loss of average earnings and degradation of quality of life resulting from service-connected disabilities for veterans. We also evaluated the impact of VA compensation for the economic well-being of survivors and assessed the quality of life of both service-disabled veterans and survivors.

Although we explored other issues for the Commission and documented those results elsewhere (e.g., [1]), the primary focus of this report is to address the above issues. In addition, we provide a summary of selected additional topics that the Commission asked us to address:

- Disincentives for disabled veterans to work or to receive recommended treatment or therapy.
- Surveys of raters and Veterans Service Officers with regard to how they perceive the processes of rating claims and assisting applicants.
- Comparing the VA disability compensation program to other disability programs
- Evaluating the option of offering a lump sum alternative to some service-disabled veterans.
- Individual unemployability (IU), mortality, and Social Security Disability Income (SSDI)
- Comparing DOD disability determinations to those conducted by the VA.

1. We also evaluated DOD disability separation ratings in comparison to VA ratings.

We also discuss options that the Commission may want to consider, along with data recommendations that would improve the quality of future evaluations.

Earnings comparisons for service-disabled veterans

Our primary task was to answer the question of how well the VA compensation benefits serve to replace the average loss in earnings capacity for service-disabled veterans. Our approach identified target populations of service-disabled veterans and peer or comparison groups (non-service-disabled veterans) and obtained data to measure earned income for each group. We also investigated how various factors such as disability rating, type of disability, and age impact earned income. Finally, we compared lifetime earned income losses for service-disabled veterans to their lifetime VA compensation, adjusting for expected mortality and discounting to present value terms, to see how well VA compensation replaces lost earning capacity.

Congressional language indicates that the intent of VA compensation is to provide a replacement for the average impairment in earning capacity. The VA compensation program is not an individual means-tested program, although there are minor exceptions to this. Therefore, we focused on average losses, first for all service-disabled veterans and then for subgroups. We defined the subgroups of disabled veterans, through consultation with the Commission, on the body system of the primary disability (16 in all) and on the total combined disability rating (10 percent, 20-40 percent, 50-90 percent, and 100 percent disabled). In addition, we further split the 50-90-percent disabled group into those with and without individual unemployability status (IU). After meeting certain disability criteria as well as providing evidence that they are unable to engage in substantial gainful employment, IU disabled veterans receive compensation at the 100-percent disabled level. Finally, we evaluated three subgroups of veterans who received certain types of special medical compensation (SMC).

To make earnings comparisons over a lifetime, it is necessary to have a starting point. In other words, a young service-disabled veteran will have a long period of lost earnings capacity during prime wage-earning years, while a veteran who enters into the VA disability compensation system at an older age will face reduced earnings capacity for a smaller number of years. If a veteran first becomes eligible for VA compensation at age 65 or older, the average expectation of lost earnings is very low, because a large share of individuals are retired or planning to retire soon by this age. The data show that the average age of entry into the VA compensation system is about 55 years, although many enter at a younger or older age. Also, the average age of entry varies somewhat across the body systems of the primary disability and combined degree of disability.

Looking at average VA compensation for all male service-disabled veterans, we find that they are about at parity with respect to lost earnings capacity at the average age of entry. Looking across all service-disabled veterans, at an age of entry of 55, we find that by comparing the discounted present value of their lifetime expected earnings to the earnings of their peer group (i.e., veterans who were not service disabled), the average earned income loss was $163,519. For all service-disabled veterans, we estimated the lifetime present value of their average VA compensation to be $148,580. These two figures are very similar. To calculate expected earnings parity, we take the ratio of service-disabled earned income plus VA compensation ($416,693) divided by the present value of total expected earnings for the peer group ($431,637). This figure is 0.97, which is very close to parity.[2] A ratio of exactly 1 would be perfect parity, indicating that the earnings of disabled veterans, plus their VA compensation, gives them the same lifetime earnings as their peers. A ratio of less than one would mean that the service-disabled veterans receive less than their peers on average, while a ratio of greater than one would mean that they receive more than their peers.

We also evaluated the parity of earned income and VA compensation for service-disabled veterans compared to the peer group by disability rating group and age at first entry into the VA compensation system. Our findings indicate that it is important to distinguish whether the primary disability is a physical or a mental condition. We found that there is not much difference in the results among physical body systems (e.g., musculoskeletal, cardiovascular), and for mental disabilities, it does not matter much whether the disability is for PTSD or some other mental disability.

If we only look at those with a physical primary disability, our findings indicate that service-disabled veterans are generally at parity at the average age of first entry into VA compensation system (50 to 55 years of age). This is true for each of the rating groups. However, we observed earnings ratios substantially below parity for service-disabled veterans who were IU, and slightly below parity for those who were 100-percent disabled, who entered at a young age (age 45 or less). Those who first entered at age 65 or older were above parity, except for the 10-percent disabled subgroup, which was essentially at parity. Table 1 shows the details for the subgroups for those with a primary physical disability.

2. For female veterans, the comparable figure is 1.01. In general, we report results for female veterans in an appendix, because our data have far fewer female than male veterans.

Table 1. Earnings ratio by rating group and age at first entry for those with a physical primary disability (men)[a]

Age at first entry	10%	20-40%	50-90% not IU	IU	100%
25	0.99	1.02	1.10	0.75	0.94
35	0.99	1.02	1.08	0.71	0.89
45	**0.96**	**0.99**	**1.04**	0.76	0.91
55	**0.93**	**0.97**	**1.06**	**0.99**	**1.08**
65	0.98	1.17	1.71	2.56	2.37
75	1.04	1.58	3.13	6.08	5.30

a. Values for average age at first entry are in bold type.

For those with a mental primary disability, our findings indicate that their earnings ratios are generally below parity at the average age of entry, except for the severely disabled (IU and 100-percent disabled). We find that the severely disabled who enter at a young age are substantially below parity. Those who entered at age 65 or older generally were above parity, except for the 10-percent disabled group, which was still slightly below parity. Table 2 summarizes these findings.

Table 2. Earnings ratio by rating group and age at first entry for those with a mental primary disability (men)[a]

Age at first entry	10%	20-40%	50-90% not IU	IU	100%
25	0.86	0.83	0.88	0.77	0.75
35	0.85	0.82	0.84	0.74	0.69
45	**0.81**	**0.78**	**0.82**	0.80	0.73
55	**0.79**	**0.77**	**0.88**	**1.07**	**0.95**
65	0.86	1.04	1.50	2.80	2.40
75	0.93	1.57	2.84	6.81	5.61

a. Values for average age at first entry are in bold type.

To summarize the earnings ratio findings for male veterans, there is general parity overall. However, when we explored various subgroups, we found that some were above parity, while others were below parity. The most important distinguishing characteristic is whether the primary disability is physical or mental. In general, those with a primary mental disability have lower earnings ratios than those with a primary physical disability, and many of the rating subgroups for those with a primary mental disability

had earnings rates below parity. In addition, entry at a young age is associated with below parity earnings ratios, especially for severely disabled subgroups.[3]

Veterans' quality-of-life survey results

The second principal tasking from the Commission was to assess whether the current benefits program compensates not just for loss of average earnings, but also for veterans' quality-of-life degradation resulting from service-connected disability. Addressing this issue required collecting data from a representative sample of service-disabled veterans, which would allow us to estimate their average quality of life. To do this, we constructed, in consultation with the Commission, a survey to evaluate the self-reported physical and mental health of veterans and other related issues. CNAC's subcontractor, ORC Macro, conducted the survey and collected the data. As with the earned income analysis, we designed the survey to collect data by the major subgroup. We defined subgroups by the body system of the primary disability and combined disability rating, and three SMC categories. We were also able to characterize the survey results by IU status within the 50- to 90-percent disabled subgroup.

The survey utilized 20 health-related questions taken from a standardized bank of questions that are widely used to examine heath status in the overall population. We used all questions from the short form 12 (SF-12™) and eight additional questions from the short form 36 (SF-36™). The SF-12™ questions allowed us to calculate a physical health summary score (physical component summary, or PCS) and a mental health summary score (mental component summary, or MCS). This approach is widely used to measure health status in a variety of national surveys, and it allowed us to compare the results for the service-disabled veterans to widely published population norms. We used the additional eight health-related questions to calculate five additional health subscales that also have widely published population norms.

For evaluating the survey, we decided to analyze the results by subgroup similar to the strategy we used for comparing earnings ratios. We looked at those with a primary physical disability and those with a primary mental disability separately. We also examined the PCS and MCS scores for additional subgroups within those categories. For the population norms, the PCS average is set at 50 points, and the norms decrease slightly

3. Our analysis primarily focused on men because there are fewer service-disabled women. However, we conducted a parallel analysis for women when the data allowed and found very similar results.

with age. For the MSC scores, the population norm is quite flat at an average of 50, and decreases only for the oldest age categories.

For service-disabled veterans with a primary physical disability, we found that their PCS measures were below population norms for all disability levels, and that the scores were in general lower as the disability level increased. In addition, having a primary physical disability was not generally associated with reduced mental health as measured by MCS. Mental health scores for those with a primary physical disability were close to population norms, although those who were severely disabled had slightly lower mental scores.

For service-disabled veterans with a primary mental disability, we found that both the physical and mental component summary scores were well below population norms. This was true for each of the rating groups. This was a distinction from those with a primary physical condition, who (except for the severely disabled) did not have MCS scores below population norms. Figure 1 shows the comparison of scores for the PCS, grouped by nature of primary disability, and Figure 2 shows the comparison for the MCS.

Figure 1. PCS by rating and age group for those with physical compared to mental primary disabilities

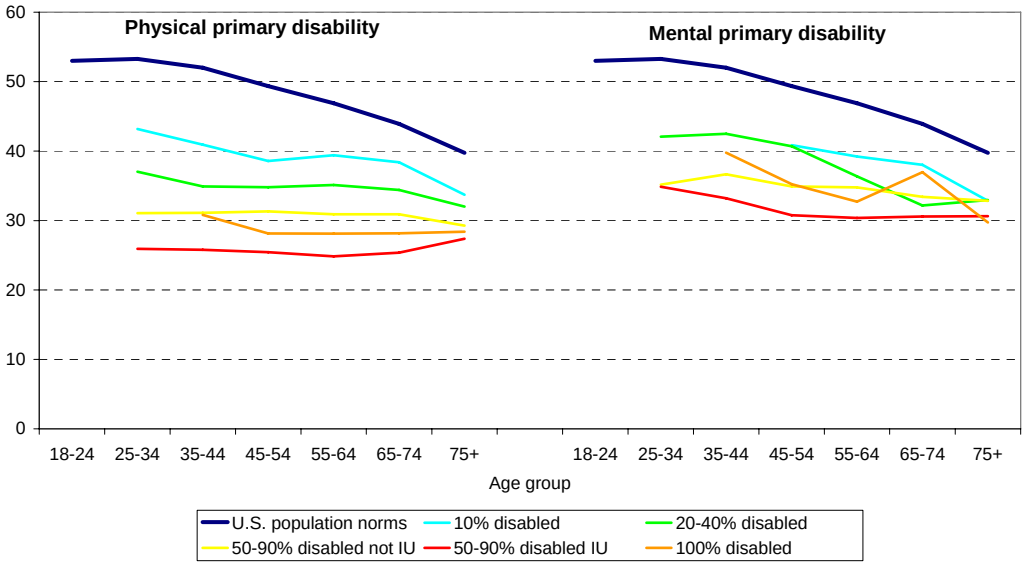
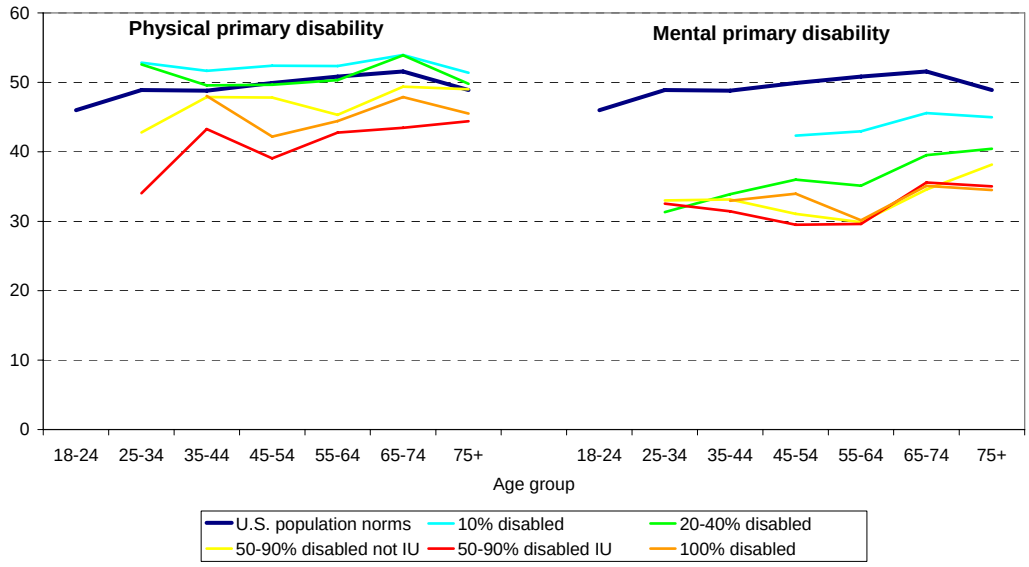


Figure 2. MCS by rating and age group for those with physical compared to mental primary disabilities



To summarize our overall findings, as the degree of disability increased, generally overall health declined. There were differences between those with physical and mental primary disabilities in terms of physical and mental health. Physical disability did not lead to lowered mental health in general. However, mental disability did appear to lead to lowered physical health in general. For those with a primary mental disability, physical scores were well below the population norms for all rating groups, and those with PTSD had the lowest PCS values.

We also used the Veterans Survey to investigate other issues that the Commission raised. First, we investigated whether service-disabled veterans tended to not follow recommended medical treatments because they felt it might impact their disability benefits. We used a series of indirect questions to ascertain this information. We found that this does not appear to be an issue, as less than one percent of those surveyed indicated that this was a motivation for them (0.45 percent).

In addition, the Commission asked us to investigate whether VA benefits created a disincentive to work for service-disabled veterans. Again, we used a series of indirect questions to ascertain this information. For example, a disincentive to work might be seen through working part-time instead of full-time, or retiring early, or not seeking work. We did not find this to be a major issue, as only 12 percent of the service-disabled veterans indicated that they might work, or work more, if it were not for the existence of their VA benefits. However, it must be noted that even within this 12 percent, it could be that these individuals felt that they would have no choice but to work more, if they

had no VA benefits, and that it might be very difficult for them to actually increase their work efforts.

Combining earnings and quality-of-life findings for service-disabled veterans

The quality-of-life measures allow us to examine earnings ratio parity measures in the context of quality-of-life issues. In essence, the earnings parity measures allow an estimate of whether the VA compensation benefits provide an implicit quality-of-life payment. If a subgroup of service-disabled veterans has an earnings ratio above parity, they are receiving an implicit quality-of-life payment. At parity, there is no quality-of-life payment, and those with a ratio less than parity are effectively receiving a negative quality-of-life payment. What we can now do is consider the implicit quality-of-life payment in the context of the veterans' self-reported health status.

With regard to self-reported quality of life, we have multiple measures to consider, such as the PCS and MCS measures, and a survey question on overall life satisfaction. In addition, there is no intrinsic valuation of a PCS score of 42 compared to a score of 45. We know that a score of 45 reflects a higher degree of health than a score of 42 does, but we have no precise way to categorize the magnitude of the difference. To simplify the analysis, we combined the information from the PCS and MCS into an overall health score, with a population norm of 100 points (each scale had a norm of 50 points separately). Then we calculated the population percentile that would be attributed to the combined score. For example, for a score of 77 points, we know that 94 percent of individuals (based on population norms of 99 points) in the age range 45 to 54 would score above 77. This gives us a way to calibrate our results, in terms of how the overall physical and mental health of the service-disabled veterans compares to population norms. By construction, the 50th percentile is the population norm of this measure.

The results of this analysis confirmed our earlier finding that there are more significant health deficits for those with a primary mental disability than a primary physical disability. We found that overall health for those with a mental primary disability is generally below the 5th percentile in the typical working years for those who are 20 percent or more disabled (this would represent a combined score of 77, compared to a population norm of 99, for those age 45 to 54). Even for the 10-percent group, the overall health score is generally below the 20th percentile (a combined score of 83 instead of the norm of 99 for those age 45 to 54).

This approach allows us to display the implicit quality-of-life payment, based on the parity of the earnings ratio, and to look at it alongside the overall health percentile and the overall life satisfaction measure (the percentage of respondents who say that they are generally satisfied with their overall life). We investigated this by rating groups and average age at first entry, separately for those with a physical primary disability compared to a mental primary disability. We show the results in tables 3 (physical primary disability) and 4 (mental primary disability), with the implicit quality-of-life payment on row 5, followed by the overall health percentile and the overall life satisfaction on rows 6 and 7.

Table 3. Earnings and quality-of-life analysis by rating group for those with a physical primary disability (men)

	10%	20-40%	50-90% (not IU)	IU	100%
Average age at first entry	45	45	55	55	55
Annual VA compensation	$1,288	$3,944	$11,343	$28,421	$28,703
Annual earned income loss	$2,543	$4,385	$9,934	$28,798	$25,782
Earnings ratio	0.96	0.99	1.06	0.99	1.08
Implicit QOL payment	($1,255)	($441)	$1,409	($377)	$2,921
Overall health percentile[a]	28%	15%	6%	2%	4%
Overall life satisfaction	78%	73%	64%	58%	60%

a. The comparison group value for the overall health percentile: 50 percent.
b. There is no comparison group value for overall life satisfaction.

Table 4. Earnings and quality-of-life analysis by rating group for those with a mental primary disability (men)

	10%	20-40%	50-90% (not IU)	IU	100%
Average age at first entry	45	45	55	55	55
Annual VA compensation	$1,294	$4,629	$11,084	$28,253	$28,034
Annual earned income loss	$7,676	$12,603	$14,571	$26,567	$29,926
Earnings ratio	0.81	0.78	0.88	1.07	0.95
Implicit QOL payment	($6,381)	($7,974)	($3,487)	$1,686	($1,892)
Overall health percentile[a]	13%	6%	1%	<0.5%	1%
Overall life satisfaction	61%	48%	32%	28%	29%

a. The comparison group value for the overall health percentile: 50 percent.
b. There is no comparison group value for overall life satisfaction.

For those with a physical primary disability, the average age at first entry varies from 45 to 55, rising with the combined degree of disability. For 10-percent and 20- to 40-

percent disability, there is a negative quality-of-life payment, although their overall health percentile ranges from 28 to 15 percent. For these groups, the overall life satisfaction ranges from 78 to 73 percent. For higher disability groups, there is a modest positive quality-of-life payment, ranging as high as $2,921 annually for the 100-percent disabled group. For the 100-percent disabled group, the overall health percentile is 4, meaning that 96 percent of the population would have a higher health score than the average score for this subgroup, and the overall life satisfaction is only 60 percent.

Looking at the service-disabled veterans with a mental primary disability, as table 4 shows, we see that there is an implicit negative quality-of-life payment for veterans of all disability levels except for IU. Also, for these subgroups, the overall health percentile is at the 13th percentile for 10-percent disabled and at the 6th percentile for 20- to 40-percent disabled. In fact, for the higher disability groups, the overall health score is at or below one percent, meaning that 99 percent of the population would have a higher overall health score. Overall life satisfaction, even for the 10-percent disability level, is only 61 percent. For disability levels 50- to 90-percent, IU, and 100-percent disabled, the overall life satisfaction measure hovers around 30 percent.

With regard to the existence of implicit quality-of-life payments, we found positive quality-of-life payments for those with a physical primary disability at a combined rating of 50 to 90 percent or higher (except for IU). For those with a mental primary disability, we found that there is a positive quality-of-life payment only for the IU subgroup. In comparing overall health percentiles and life satisfaction, however, we found that for all rating groups, those with a mental primary disability have lower overall health percentiles, and substantially lower overall life satisfaction, than those with a physical primary disability. Those with a mental primary disability have lower health and life satisfaction compared to those with a physical primary disability, but receive less in implicit quality-of-life payments.

To summarize, we found that VA compensation is about right overall relative to earnings losses based on comparison groups for those at the average age at first entry. But the earnings ratios are below parity for severely disabled veterans who enter the system at a young age and more generally below parity among subgroups for those with a mental primary disability. Earnings ratios tend to be above parity for those who enter the VA system at age 65 or older. On average, VA compensation does not provide a positive implicit quality-of-life payment. Finally, the loss of quality of life appears to be greatest for those with a mental primary disability.

Earnings and quality-of-life findings for survivors

We computed earnings profiles for survivors using a methodology analogous to that used for service-disabled veterans. We calculated earnings income by age group and compared these earnings levels to the earnings of surviving spouses in the general civilian population. Segmenting by age group is critical as 69 percent of survivors are 65 or more years old.

We also constructed and conducted a survey for survivors to assess how their self-reported health compared to population norms. As there were relatively few male survivors, we focused our comparisons of female survivors and their female peers from the Current Population Survey (CPS). The Commission asked us to explore how well Dependency and Indemnity Compensation (DIC) provides a partial replacement for lost earnings attributed to the loss of a service member or veteran in service-related circumstances.

The earnings comparisons show that on average survivors generally have lower earnings than their civilian peer groups, but that the combination of earned income plus VA compensation is as high as, or higher than, the average earned income of their peer groups at every age. In addition, based on our survey results, 90 percent of the respondents said that they were satisfied with DIC. We conclude that DIC appears to provide an adequate replacement for lost earnings for survivors.

The health differences among survivors and their peers are not as dramatic as the health differences were for service-disabled veterans and their peers, but there are some departures from population norms. The PCS for survivors is below population norms for age 55 and over, and the MCS is below population norms for ages 35 to 64. These findings are unaffected by whether or not the survivors had a Survivor Benefit Plan (SBP) offset, or whether it was less than 5 years or 5 or more years since their spouse died. We also asked the survivors whether they provided substantive care for a disabled veteran (4 or more hours per day, 5 days a week, for 2 or more years). Those survivors who provided substantive care to a disabled veteran appeared to suffer some negative effects on physical health and participation in social activities.

Raters and VSOs survey results

With regard to the benefits determination process, the Commission asked us to gather information by conducting surveys of VBA rating officials and accredited veterans service officers (VSOs) of National Veterans Service Organizations (NVSOs). The intent was to gather insights from those who work most closely with the benefits determina-

tion and claims rating process. Through consultation with the Commission, we constructed separate (but largely parallel) surveys for raters and VSOs. The surveys focused on the challenges in implementing the laws and regulations related to the benefits determination and claims rating process and perspectives on how the process and rating schedule perform.

The content of the surveys looked at issues involving training, proficiency on the job, and resource availability and usage. Respondents were asked about what they considered to be their top three job challenges. They were also asked about how they decided or established specific criteria related to a claim, how smoothly the rating process went, and the perceived capabilities of the various participants in the process.

The overall assessment indicated that the benefits determination process is difficult to use by some categories of raters. Many VSOs find it difficult to assist in the benefits determination process. In addition, VSOs report that most veterans and survivors find it difficult to understand the determination process and difficult to navigate through the required steps and provide the required evidence. Most raters and VSOs agreed that veterans have unrealistic expectations of the claims process and benefits.

Raters and VSOs noted that additional clinical input would be useful, especially from physicians and mental health professionals. Raters felt that the complexity of claims is rising over time, and that additional resources and time to process claims would help. Some raters felt that they were not adequately trained or that they lacked enough experience. They viewed rating mental disorder claims as more problematic than processing physical condition claims. They viewed mental claims, especially PTSD, as requiring more judgment and subjectivity and as being more difficult and time-consuming compared to physical claims. Many raters indicated that the criteria for IU are too broad and that more specific decision criteria or evidence would help in deciding IU claims.

VA disability compensation program compared to other disability programs

The Commission was also interested in operational aspects of the veterans' disability compensation program and asked us to compare VA's program with other federal disability compensation programs in order to determine whether there are any useful practices that VA could adopt to improve its own operations. Our first task was to identify the major criticisms of operations in the VA disability program. To do that, we reviewed a variety of publicly available sources that discussed problems with VA performance, including reports from the Government Accountability Office (GAO),

reports from the VA Office of the Inspector General (OIG), and congressional testimony. We also used the results of the Commission's site visits.

After identifying the major criticisms of VA, we spoke with the relevant VA staff to get the most current information on the areas being criticized. The people that we interviewed worked in VBA's Compensation and Pension Service, VBA's Office of Employee Development and Training, the Board of Veterans' Appeals, and the Office of the General Counsel. We discussed specific aspects of VA operations that were identified as problematic and the approaches that the other disability programs take in those areas.

Except for the very important issue of timeliness, VA does not appear to be underperforming in comparison with other disability programs. Recent training improvements seem promising for improving VA timeliness in the long term, but effects will not be seen for a while. Some of VA's problems with timeliness could be the result of a complex program design, with multiple disabilities per claim, the need to determine service connection (sometimes many years after separation), and the need to assign a disability rating to each disability. For VA to develop a focused strategy to improve timeliness, it first needs to determine the stages of the claims process that are contributing most to the total elapsed time required to complete a claim.

Option for a lump sum alternative

The Commission asked us to explore options for replacing the current annuity benefits stream for some service-disabled veterans with a lump sum alternative. We looked at this from the perspective of the potential benefits and costs both to the VA and to service-disabled veterans, and with respect to potential implementation barriers. We also investigated how other countries use a lump sum alternative for their service-disabled veterans. We focused on exploring possible options for those at the lowest disability levels (10 to 20 percent). In addition, we determined that this would be most feasible for body systems where rating changes were infrequent, as re-rating might generate the need to recalculate lump sum payments or provide an annuity.

For the VA, the anticipated benefits of a lump sum derive primarily from the potential for reduced administrative interactions (which might lead to speedier claims processing) and savings in compensation and administrative costs. If the lump sum were optional, this would increase the choices open to service-disabled veterans. Finally, there are a number of concerns about how the lump sum amounts would be determined, what would happen if a veteran's condition worsened after he/she had taken a lump sum, and whether veterans would use a lump sum "wisely" or not.

We looked at Australia's, Canada's, and the United Kingdom's disability compensation systems for their service-disabled veterans, all of which utilize some version of a lump sum alternative. These countries generally use an annuity system to compensate for "economic" losses, and reserve the lump sum for compensating for "non-economic" or quality-of-life losses. Canada and the UK use lump sums to compensate for lost quality of life, while Australia offers the veteran a choice between an annuity and a lump sum.

We made a number of simplifying assumptions and selected a small number of examples to simulate how a lump sum program might be implemented. We found that the VA could obtain net savings, but a lump sum option would be costly up front, taking between 17 and 25 years for the VA to achieve net savings. In addition, we identified a number of institutional issues that would pose execution challenges, thereby limiting the value of the lump sum option to the VA.

IU and mortality

The Commission asked us to conduct an analysis of those receiving the individually unemployable (IU) designation. This designation is for those who do not have a 100-percent combined rating but whom VA determines to be unemployable. The designation enables them to receive disability compensation at the 100-percent level.

Overall 8 percent of those receiving VA disability compensation have IU, but 31 percent of those with PTSD as their primary diagnosis have IU status. Ideally, if the rating schedule works well, the need for something like IU will be minimal because those who need 100-percent disability compensation will get it from the ratings schedule. The fact that 31 percent of those with PTSD as their primary condition have IU is an indication that the ratings schedule does not work well for PTSD.

Another issue is the rapid growth in the IU rolls—from 117,000 in 2000 to 223,000 in 2005. This represents a 90-percent increase, an increase that occurred while the number of disabled veterans increased 15 percent and the total number of veterans declined by 8 percent. The specific issue is whether disabled veterans were gaming the system to get IU status to increase their disability compensation.

The data suggest that this is not the case. While there has been some increase in the prevalence of getting IU status for certain rating-and-age combinations, the vast majority of the increase in the IU population is explained by demographic changes (specifically the aging of the Vietnam cohort) in the veteran population.

We can also use mortality rates to see to what degree gaming is an issue for IU. Do those with IU have higher mortality rates than those without IU? If so, it seems that

there is a clinical difference between those with and without IU. We found that there are differences. Those with IU status have higher mortality rates than those rated 50-90 percent without IU, but the IU mortality rates are less than for the 100-percent disabled.

Comparison of DOD/VA disability ratings

Due to concern with consistency of DOD and VA disability ratings, the Commission asked CNAC to study the issue. We first looked to see how much overlap there was between the two systems. We found that roughly four-fifths of those who receive a DOD disability rating end up in the VA compensation system in less than 2 years.

Next we explored whether DOD and VA gave approximately the same combined disability rating. On average, we found that service-disabled veterans received substantially higher ratings from VA than from DOD. The question is why? The answer is twofold. First, VA rates more conditions than DOD does. Specifically, we found that on average VA rates about three more conditions per person than DOD does. Second, we found that even at the individual diagnosis level, VA gives higher ratings than DOD does on average. This is not universally true for all diagnostic codes. For some, the average rating from DOD is slightly higher than from VA. But for others, such as mental diagnostic codes, the average rating from VA is substantially higher than the rating from DOD.

Note that while we found differences in combined and individual ratings given by DOD and VA, we make no judgment as to the correctness of the ratings in either system. We have neither the data nor the clinical expertise to make such judgments. What we have done is point out aspects of the VA and DOD disability systems that differ.

Overall options and recommendations

There are several options for addressing (1) the lack of earnings parity where it exists and for (2) compensation for lost quality of life. Earnings parity of those with mental conditions could be improved through higher ratings for mental conditions or special monthly compensation similar to that currently paid for other conditions. The issue with using higher ratings is that this would require re-rating all of those with a mental disability.

Earnings parity for the severely disabled who enter the system at “young” ages could be improved by making disability compensation levels a function of age at first entry into

the disability system or through a special monthly compensation paid only to those with a severe disability who enter the system at a young age. It may also be appropriate to consider adjusting VA compensation for those who enter the system at "older" ages.

Another issue is the individual employability (IU) designation that many veterans receive because they are unemployable. If the purpose of this designation truly relates to employment, there could be a maximum eligibility age reflecting typical retirement patterns. If the purpose is to correct for rating schedule deficiencies, an option is to correct the ratings schedule so that fewer need to be artificially rated 100-percent through IU. This would reduce the administrative burden of individual means testing associated with IU.

Turning to quality-of-life compensation, options include a lump sum payment or an annuity. This annuity could simply be an add-on to the current VA compensation. The difficult question is how much should this compensation be? The fact is that there is no way to translate the quality-of-life losses documented in the Veterans Survey into a dollar amount, so we looked for some kind of benchmark. One possibility is to use the non-economic compensation provided by other countries to their disabled veterans as a benchmark. We note, however, that due to differences between these and the U.S. program, it is not an apples-to-apples comparison. This fact should be considered when making these comparisons.

Turning to data issues, there are ways in which the VA could be enhanced to facilitate future analysis. These include a periodic authorization link to SSA and OPM compensation records with VA data to allow for future earning analysis at a more granular level than we were able to perform with aggregated data. We also recommend that VA include demographic information in its records because these data are key predictors in economic analysis. Finally, because when a service-disabled veteran first enters the VA system is a driver of earnings parity, we recommend that VA maintain and not overwrite the original award date.

Another issue that emerges from the data concerns service-disabled veterans with a mental primary disability. Their overall health percentiles and overall life satisfaction percentiles are far below those with physical primary disabilities at the same rating level. Their earnings are well below those with physical primary disabilities at every rating category except IU. These data clearly indicate that their life experience is less satisfying than that of their counterparts. An important question, beyond the scope of this analysis, is how veterans' programs could be made more effective at benefiting this group of veterans.

1 Introduction

1.1 Background

Public Law 108-136 of the National Defense Authorization Act of 2004 created the Veterans' Disability Benefits Commission (the Commission) to assess the appropriateness of the benefits that VA provides to service-disabled veterans and their survivors for disabilities and deaths attributable to military service. Specifically, the Commission is examining the standards for determining whether a disability or death of a veteran should be compensated and the appropriateness of the benefit levels. The overall focus of this project is to provide analysis to the Commission regarding the appropriateness of the current benefits program to compensate for loss of average earnings and degradation of quality of life resulting from service-connected disabilities.

The basic structure of the disabilities program for veterans was set in the 1940s, and the last comprehensive review of the program was in 1971. The environment has significantly changed since then, including significant shifts in the labor market as well as significant advancements in treatments and technologies. Over the past 50 years, the U.S. labor market mix has shifted away from manufacturing and toward the services sector, changing the types of job skills in demand. This shift has altered opportunities for those with disabilities. Additionally, advances in treatment and technologies have changed the outcomes associated with injuries and the impact on daily living activities. All of these changes suggest that it is time to conduct a new review of the disabilities benefits program.

1.2 Tasking

Our overall approach to answering the Commission's research questions regarding the disabilities compensation system comprises three main parts. First, to address issues regarding compensation for average loss of earnings capacity, we compared the compensation of service-disabled veterans to a peer group of veterans who were not service disabled (the peer group may include veterans who have disabilities that are not service related). Second, to measure the impact of disabilities on quality of life and assess the appropriateness of earnings and compensation levels, we conducted quality-of-life

surveys of disabled veterans and survivors. Third, to evaluate other questions about program structure and potential impacts of changes, we leveraged the existing literature and data to provide insights.

The Commission tasked us to conduct a variety of project activities to help them to understand and quantify the effects of the VA compensation system. Some of the tasking has been addressed in stand-alone documentation (e.g., conducting a literature review). This report concentrates on our findings regarding whether VA compensation appropriately replaces lost earnings capacity for service-disabled veterans, and on the results obtained from the quality-of-life surveys. We also briefly address the results for several additional tasks requested by the Commission. In this report, we address the following tasks:

- Determine how well the benefits provided to service-disabled veterans meet the congressional intent of replacing the average impairment in earnings capacity.
  - Compare earnings and benefits information on service-disabled veterans and a matched comparison group of veterans who were not service disabled to determine how well the VA compensation system meets the requirement to, on average, compensate service-disabled veterans for their loss of earnings due to their service-connected disabilities.
  - Given that disability compensation is directed to be based on average impairment of earnings capacity, not on loss of individual earnings, determine whether the results would be more appropriate if other factors were taken into consideration in determining benefits (e.g., the nature of the veteran's medical condition).
  - Determine whether there are negative, unintended consequences resulting from the current benefit structure (e.g., a disincentive to work or to undergo therapy).
- Evaluate the results of the separate quality-of-life surveys conducted for service-disabled veterans and survivors.
  - Determine how well the benefits provided to service-disabled veterans meet implied congressional intent to compensate for impairment in quality of life due to service-connected disabilities.
  - Determine how well benefits provided to survivors meet implied congressional intent to partially compensate for the loss of the veterans'/service members' earning capacity and for the impairment in quality of life due to service-connected death.

- Conduct an assessment of the operations of the disability benefits program, and compare them to the program operations for other federal disability programs.
- Compare disability determinations conducted by DOD to determinations conducted by VA for the same individuals.

We also summarize the stand-alone documentation previously provided to address:

- Designing, conducting, and analyzing separate surveys of Veterans Benefits Administration (VBA) Rating Officials and National Veterans Service Officers (NVSOs).
- Determining whether lump sum payments should be offered as an option, in lieu of annual compensation, for certain disabilities or certain levels of severity of disabilities.

Chapter 2 addresses earnings comparisons between service-disabled veterans and their peers. Chapter 3 explores the findings based on the material contained in the veterans quality-of-life survey, including whether VA compensation appears to provide a disincentive to service-disabled veterans to work or to follow recommended medical treatment or therapy. In addition, we combine the quality-of-life measures with the information from the earnings analysis to see how well quality of life lines up with implicit quality-of-life payments. Chapter 4 evaluates earnings comparisons for survivors compared to their peers and investigates quality-of-life issues for survivors with respect to several alternative measures.

Chapter 5 explores the insights and perspectives from those on the "front lines" of the benefits determination/disability rating process who have first-hand experience with it – the raters and the Veterans Service Officers (VSOs). This required surveying those who determine benefits through this process (raters) or assist claimants with this process (VSOs). Chapter 6 addresses program operations for the VA disability system compared to other federal disability programs. Chapter 7 provides an assessment of the option to offer service-disabled veterans a lump sum, rather than a life-long annuity, in compensation for their lost earnings capacity due to their disability. For chapters 5 and 7, we provide only a brief summary of our findings, as these topics were addressed earlier via separate stand-alone documentation. (See [2 – 3].)

Chapter 8 includes a discussion of IU and mortality comparisons. We examine alternative explanations for the recent growth in IU, discuss the distribution of IU by body system, and show mortality rates for those with IU compared other groups of service-disabled veterans. We also explore the relationship between IU participation and SSDI. Chapter 9 provides an analysis of DOD disability assessments compared to VA disability assessments. We evaluate the disability assessment of DOD personnel who are re-

evaluated by VA and compare the number of disabilities rated and the magnitude of the combined rating separately for each service branch. We conclude with chapter 10, which summarizes our conclusions, addresses options the Commission may wish to consider, and gives data recommendations.

2 Veterans' earnings analysis

This chapter answers the question of "[h]ow well do benefits provided to [service-disabled] veterans meet the congressional intent of replacing average impairment in earning capacity?"[4] And, as an extension to this, a subsequent chapter explores how DIC provides "a partial replacement for income lost due to the death of a servicemember or veteran in service-related circumstances" [4].

Before answering this question, we first describe our approach for answering it. This includes identifying target populations of service-disabled veterans and peer or comparison groups, and determining how to measure earned income. Second, we show the results of this analysis including how various factors such as disability rating, type of disability, and age impact earned income. Third, with estimates of earned income, we compare lifetime earned income losses to lifetime VA compensation to see whether VA compensation replaces lost earning capacity.

2.1 Approach

Our approach to answering the question of earned income losses of service-disabled veterans was to compare their earned income to that of their near peers. Accordingly, we first defined the target populations of service-disabled veterans and the peer groups. Second, we define how we measure "earned income." In conjunction with this, we also discuss the extent to which data availability drove our analytical approach.

2.1.1 Target populations and peer groups

To estimate average earned income losses, we had to know what service-disabled veterans earn on average and compare that to what they would have earned on average if they were not service disabled. Accordingly, our target population consisted of veterans with a service-connected disability who receive disability compensation from VA.[5] Spe-

4. See Statement of Work, research question 1.

5. Some service-disabled veterans received disability compensation from DOD in the form of temporary or permanent disability retirement or disability severance but no disability compensation from VA. We did not include these individuals in our target population.

cifically, this population consisted of 2,660,654 service-disabled veterans receiving VA disability compensation as of 1 December 2005.[6]

The comparison group for the service-disabled veterans was non-service-disabled veterans—a group of veterans without a service-connected disability.[7] Note that we did not simply compare disabled veterans to non-disabled veterans. Some veterans who are not receiving disability compensation from VA or DOD are disabled, but these disabilities are not service connected. They may be disabled from accidents, injuries from non-military employment, or some disabling medical condition during a period of life when they were not on active duty. We cannot nor would we wish to exclude these veterans from the peer group. Therefore, we need to compare the earnings of those leaving military service with a service-connected disability to those still on active duty or veterans without a service-connected disability.

The best way we can get at this non-service-disabled population is to compare military personnel records with records of those receiving VA compensation. Those who are not receiving VA compensation or DOD disability compensation are in the peer group as we defined it. The Defense Manpower Data Center (DMDC) maintains data on all those who served on active duty since 1980.[8] We determined from these data that there were 6.5 million living service members and veterans not receiving disability compensation from VA or DOD.

While this is the universe of service members and veterans serving on active duty since 1980, we don't need earnings information on all 6.5 million to get good earnings estimates for non-service-disabled veterans. Furthermore, this population is different demographically from the population of service-disabled veterans. Demographically they must be comparable so we can generate unbiased estimates of earnings losses. Accordingly, we constructed a random sample of the non-service-disabled veterans that is demographically equivalent to the service-disabled veterans based on gender, age, race,

6. These data are from VBA's Compensation and Pension Master Record. Note that we did not include all of the records in the VBA data in the analysis. We filtered out the data for non-primary DOD service branches, veterans with missing Social Security numbers, deceased veterans, veterans with "undiagnosed" as their primary disability, and duplicate records. For more on the data, see the master database document [5]. These filters dropped 21,245 observations.

7. The Institute of Medicine (IOM) notes that the test of the ratings schedule is whether it corresponds to "actual average loss of earnings among veterans with the same rating" [6]. IOM further notes that a study of the workers' compensation programs in Wisconsin and California used this test.

8. DMDC considers the data prior to 1980 unreliable.

and education. That is, for example, the proportion of non-service-disabled veterans who are male, white, 30-34 years old, with a high school education in the comparison sample was the same as we found in the sample of the service-disabled population.[9] In total, the demographically matched sample consisted of 430,774 non-service-disabled veterans.

Because we don't have visibility of veterans leaving active duty prior to 1980, we needed a supplemental comparison group to provide information for "older" non-service-disabled veterans. We obtained this from the Current Population Survey (CPS).[10] Specifically, we extracted approximately 14,084 records of service members and veterans not receiving VA compensation who were 18 or more years old from the 2004 CPS file. Of these, 12,115 were 40 or more years old, which gave us additional information on the "older" veterans.[11]

2.1.2 Defining and estimating earned income

Our approach for estimating earned income losses was to compare "earned income" between service-disabled veterans and their near peers. We defined earned income as:

$$Earned\ Income = Earnings + Benefits\ .$$

The next sections describe the estimation of earnings and benefits for the target populations and peer groups. Consistency of estimation between the target populations and peer groups is key. In estimating earnings and benefits, we remind the reader that the tasking was to estimate *average* not *individual* earned income losses; therefore, it is not essential or necessary to have earnings and benefits data that are individual specific.

2.1.2.1 Earnings

Earnings for a particular time period, such as a year, consist of (1) wages or salaries paid by an employer or (2) income generated from self-employment. Earnings do not include income sources that were not earned or that were earned in a previous period. For example, earnings do not include retirement annuities, capital gains, interest, dividends, alimony payments, etc. We recognize that such income sources are commonplace and are resources that individuals rely on for their support, but none represents

9. Note that we used the education level veterans had when they entered military service. It is not the current education level.

10. The Bureau of Labor Statistics (BLS) conducts CPS on a continuing basis.

11. The DMDC data does not provide much visibility on older veterans.

earnings from current employment. To put it another way, the Commission asked us to estimate the loss of earning capacity for service-disabled veterans. This means that we are interested in the income they can generate from current employment and not the income generated from investments that were earned or acquired previously.

For those in the target populations and the demographically matched sample of non-service-disabled veterans, we had Social Security numbers (SSNs). Hence, we could obtain from the Social Security Administration (SSA) earnings data—both wages/salaries and self-employment. Specifically SSA has earnings for all individuals for all earnings subject to FICA taxes. However, not all workers are subject to FICA taxes. For example, employees of the federal government who are under the Civil Service Retirement System (CSRS) do not pay FICA taxes.[12] This was not a problem. We were able to obtain earnings information for these workers from the Office of Personnel Management (OPM). Accordingly, we estimated earnings for the target populations and the demographically matched sample of non-service-disabled veterans as SSA plus OPM earnings.

Ideally we would have preferred to have individual-specific earnings data for the service-disabled veterans and their comparison group. We would not want this information to estimate individual-specific earnings losses (that was not our charter), but because it would given us a great deal of flexibility to estimate earnings for numerous subgroups and control for the impact of various circumstances or conditions.

Given privacy concerns, SSA and OPM were not willing to provide individual-level earnings data. However, they were willing to provide average earnings data for groups of five or more. Consequently, we stratified our data into groups of veterans based on disability and the demographic characteristics that we believed were most important to the analysis. This required careful consideration of how much detail we wanted for various characteristics because it required tradeoffs. For example, one option was to stratify the data by broad or narrow age groups. If we used a broad age group, most of the resulting subpopulations would still be large enough to stratify further by other characteristics such as education. However, if we used narrow age groups, it might not be possible to further stratify the sample for many of the subpopulations. The master database document [5] details how we stratified the population to generate subpopulations that we could submit to SSA and OPM for earnings data.

For the CPS-based comparison groups, we were able to use the earnings information in CPS. We estimated earnings for the CPS sample as the sum of earnings from (1) wages and salaries, (2) farm self-employment, and (3) non-farm self-employment. In concept

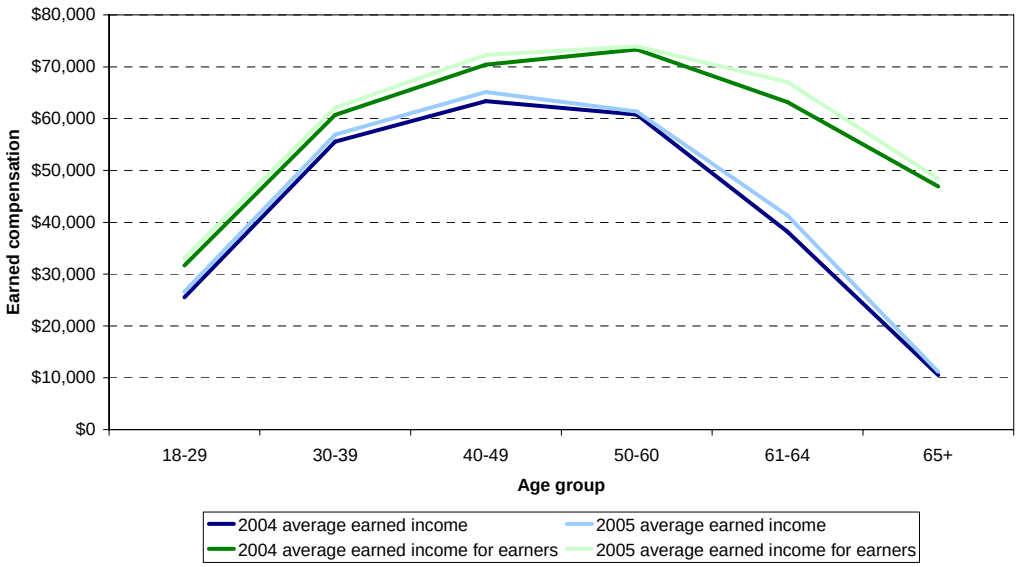
12. New federal employees since 1986 are under the Federal Employees Retirement System (FERS). They are subject to FICA taxes; hence, SSA has visibility of their earnings.

this is equivalent to the earnings information from SSA and OPM, except that the SSA and OPM data are actual earnings information while the CPS data are self-reported figures.

Note that all of the earnings data we have from SSA, OPM, and CPS are for the year 2004. At the time we submitted the earnings data request to SSA (September 2006), SSA could not guarantee that the earnings information for 2005 would be complete. This was due to delays in reporting information on earnings—particularly self-employment earnings which were derived from federal tax returns. Consequently, we chose 2004 for all of our earnings sources so that we'd have a complete and consistent earnings picture.

Some may wonder whether having earnings data from 2004 would make our results out of date in 2007. The answer is no. Why? Aggregate earnings patterns are consistent from year to year as figure 3 shows. Earnings patterns as a function of age (age earnings profile) change very little from year to year. Generally, the change is just a small upward shift for inflation, which is what we observe between 2004 and 2005. Hence, if we choose, we can put all of our results in 2007 dollars by simply adjusting for inflation.

Figure 3. Age earnings profiles for males (2004-2005)[a]



a. Based on CPS data from 2004 and 2005 with imputed benefits.

2.1.2.2 Benefits

Estimating the cost of employer-paid benefits was difficult. There were no data sources to which we could go to get benefits information by SSN as we did for earnings. Information about average employer-paid benefits is only available through survey data.

To obtain data on benefits, CNAC contracted with the Hay Group, which is a consulting firm that specializes in surveying employers regarding the cost of the benefits they provide to their employees. Their estimates cover the full range of benefits including retirement contributions, health care, life insurance, disability, social insurance, and executive benefits. They also provided data on vacation/holiday pay and sick leave, but we excluded these because those costs are included in the earnings data from SSA, OPM, and CPS.[13]

Table 5 shows the benefits data provided by the Hay Group [7]. Benefits estimates are by employer type—federal, military, large private, and small private. Two things are important to point out. First, benefits as a percentage of salary decline as salary increases. For example, average benefits are $8,632 or 43 percent of a $20,000 salary for employees working for small private employers. But for those earning $100,000, benefits are $18,721 or 19 percent of salary. So while the dollar value of benefits increases with salary, it declines as a percentage of salary. This declining percentage is due to fixed benefits such as health care that are the same cost regardless of an employee's salary.[14]

13. Another potential benefit is the value of VA health care. Service-disabled veterans are eligible for VA health care at no cost. However, simply adding the cost of providing this care as a benefit is not appropriate. First, some non-service-disabled veterans also receive VA health care benefits. Second, most service-disabled veterans already have health care benefits included as part of their earned income (based on data from the Hay Group). Adding the cost of VA health care would double-count (people will not double their health care because they have two sources of payment). Third, even for non-employed service-disabled veterans, many have health care coverage from another source (e.g., spouse, TRICARE for life, retiree health care from previous employment, Medicare). Note that the Hay Group data include values for retiree health care from all employer types so these benefits are accounted for during the working years. Fourth, much of the health care that VA provides to service-disabled veterans relates to their service-connected disabilities, and presumably they would not need that care if they were not service-disabled.

14. Despite the issues we identified regarding the value of VA health care received by disabled veterans, if we were to add to earned income a value for VA health care, what should that amount be? Average VA health care costs for the 10- to 20-percent disabled are $4,300 annually. Applying these costs to non-earners under age 65 years implies an average of $1,000 per service-disabled veteran. However, this figure is too high because much of VA health care costs are for care related to service-connected disabilities and some non-earners have access to care from other sources such as a spouse or retiree health care benefits. We have no way of estimating how much of the VA care is for service-connected disabilities, what percentage of non-earners have health care from another source, or how much we would need to add for non-service-disabled veterans for their VA health care benefits. For these reasons, we have not included VA health care as a benefit.

Table 5. Benefits by salary level and employer type (2005)

	Benefits[a] (percent of salary) by employer group			
Salary	Federal	Military	Large private[b]	Small private[b]
20,000	14,500 (73%)	21,626 (108%)	12,425 (62%)	8,632 (43%)
30,000	16,869 (56%)	25,002 (83%)	14,119 (47%)	9,804 (33%)
40,000	19,236 (48%)	28,377 (71%)	15,826 (40%)	10,979 (27%)
50,000	21,606 (43%)	31,753 (64%)	17,572 (35%)	12,186 (24%)
60,000	23,976 (40%)	35,128 (59%)	19,400 (32%)	13,469 (22%)
70,000	26,344 (38%)	38,504 (55%)	21,554 (31%)	15,029 (21%)
80,000	28,711 (36%)	41,880 (52%)	23,454 (29%)	16,369 (20%)
90,000	31,080 (35%)	45,255 (50%)	25,542 (28%)	17,785 (20%)
100,000	32,831 (33%)	48,011 (48%)	27,128 (27%)	18,721 (19%)

a. Benefits excluding vacation/holiday pay and sick leave, the cost of which is included in salary.
b. The distinction between small and large private employers is that firms with 100 or more employees are large.

Second, benefits as a percentage of salary vary substantially across employer types. For employees earning $30,000, for example, benefits are 33 percent of the salary of those employed by small private employers. This is compared to 47 percent of salary for large private employers, 56 percent of salary for federal employees, and 83 percent of salary for the military.

One complication is that we don't know from SSA data which employer type someone works for, but we know this information for those with OPM earnings and for those in CPS. By definition, OPM earnings are from federal employment, so we apply the federal benefits accordingly. Given that we don't know the employer type from SSA, we impute benefits assuming that the distribution across employer types is the same as we find in CPS data. Table 6 shows the proportion of individuals employed by the various employer types based on CPS data.

There are a few noteworthy things to point out about those who are working; the data in table 6 illustrate those things. First, service-disabled veterans are more likely to be federal employees than their peers. Second, none of the service-disabled veterans are by definition in the military. In contrast, a large share of the peer group under age 40 is in the military. Third, in all of the groups, the percentage that is self-employed increases with age. We don't impute any employer benefits for the proportion that is self-employed.

Table 6. Percentage of individuals employed by employer type based on CPS data

Age group	Federal[a]	Military	Large private	Small private	Self-employed	Total
General population						
18-29	8.4	1.0	47.0	40.3	3.2	100.0
30-39	13.3	1.1	43.5	33.2	9.0	100.0
40-49	16.3	0.5	40.9	30.0	12.3	100.0
50-60	19.5	0.1	39.3	26.6	14.5	100.0
61-64	15.5	0.1	38.3	30.3	15.9	100.0
65+	11.4	0.0	30.4	37.5	20.7	100.0
Non-service-disabled veterans						
18-29	9.2	37.7	35.2	16.4	1.5	100.0
30-39	15.9	17.0	35.7	22.8	8.5	100.0
40-49	21.4	6.3	40.4	24.3	7.6	100.0
50-60	19.9	0.6	41.5	23.3	14.6	100.0
61-64	15.4	0.3	37.3	28.0	19.0	100.0
65+	10.1	0.0	28.2	35.4	26.3	100.0
Service-disabled veterans						
18-29	11.8	0.0	47.1	35.3	5.9	100.0
30-39	29.3	0.0	39.7	25.9	5.2	100.0
40-49	33.0	0.0	34.0	25.8	7.2	100.0
50-60	34.3	0.0	36.0	17.1	12.6	100.0
61-64	15.8	0.0	31.6	42.1	10.5	100.0
65+	20.7	0.0	24.1	24.1	31.0	100.0
Widows and widowers[b]						
18-29	0.0	0.0	61.9	38.1	0.0	100.0
30-39	13.5	0.0	51.6	28.6	6.3	100.0
40-49	15.1	0.0	41.2	36.3	7.4	100.0
50-60	19.3	0.0	45.9	27.8	7.0	100.0
61-64	13.3	0.0	37.3	39.6	9.8	100.0
65+	11.6	0.0	30.8	41.3	16.2	100.0

a. For computing the share of employees in each employer-type group, we put state and local government employees in the federal group. Our assumption is that state and local government employees would have benefits that are similar to those of federal employees.

b. Because the construction of benefits is the same for surviving spouses as for veterans, we included these data here rather than repeat the analysis in the survivors' chapter.

To summarize, earned income equals earnings plus benefits. We computed earnings as SSA plus OPM earnings or CPS earnings. We imputed benefits based on the Hay Group benefits survey using the mix of individuals across the employer types from the CPS data. This mix differs between service-disabled veterans and their peers.[15]

2.1.3 Stratifying service-disabled veterans

As stated previously, our charter is to look at average earned income losses of service-disabled veterans and compare that data to VA compensation to see whether it replaces average earned income losses. Technically, we could meet the intent of the question by looking at all service-disabled veterans in aggregate; however, even if VA compensation makes up for average earned income losses in aggregate, there may be groups of veterans who do not fare well. The Commission asked us to investigate this issue for subgroups of veterans based on body system of primary rating and combined rating, along with selected characteristics. That is not to say that we are going to look at the earned income losses of individual veterans and see whether the VA compensation they receive makes up for those losses. Rather, we looked at groups of veterans with a given set of characteristics to see how the group's average earned income losses compare to the group's average VA compensation.

So what are the characteristics we used to define the groups of service-disabled veterans? There are a few obvious choices. First, in consultation with the Commission, we grouped them using the combined disability rating. Because VA compensation is a function of the combined disability rating, it is natural to see whether the VA compensation of $115 per month for those rated 10-percent disabled makes up for their earnings losses, which may be a very different answer than looking to see whether the $2,471 per month that the 100-percent disabled receive makes up for their earned income losses.[16] In the end, we stratified by four rating groups: 10 percent, 20-40 percent, 50-90 percent, and 100 percent.

Second, again in consultation with the Commission, we grouped them by the body system of their primary disability. Body systems are essentially broad disability classes. On average, service-disabled veterans have 3.1 service-connected disabilities. Clearly we

15. It is the same for surviving spouses as it is for their peer group.

16. The VA compensation figures are current compensation as of 1 December 2006. Given that our data is for 1 December 2005, the VA compensation figures at that time were $112 and $2,393 for these two groups.

cannot look at every combination of disabilities, so we grouped by primary disability.[17] The groups or body systems for primary disabilities are musculoskeletal; skin; auditory; neurological; PTSD; mental (not PTSD); digestive; cardiovascular; respiratory; endocrine; genitourinary; eye; gynecological; infectious, immune, nutritional; dental; and hemic/lymphatic.[18] The logic behind stratifying this way is that an eyesight disability, for instance, may have a very different impact on a veteran's earnings capacity than a skin disability.

Third, there are groups of service-disabled veterans who receive special monthly compensation (SMC) as part of their disability compensation. The intent of SMC is to provide additional compensation for certain types of disabilities. At the Commission's request, we created three groups of veterans who receive SMC:

- 0 percent disabled with SMC K
- 100 percent disabled with SMC S, L, M, N, or O
- 100 percent disabled with SMC R1 or R2

Fourth, we grouped veterans by whether or not they are individually unemployable (IU).[19] To be given IU status, a veteran needs to have at least one disability that is rated 60 percent or more or one disability rated at least 40 percent and a combined disability rating of 70 percent or more. In addition, VA must determine the veteran to be unemployable as a result of service-connected disabilities. Those with IU status receive VA compensation as if they were 100-percent disabled. IU status results in a substantial increase in VA compensation. For example, VA monthly compensation for someone rated 90-percent disabled is $1,483. If, however, he/she were granted IU status, the compensation would increase to the 100-percent level, which is $2,471. In fact, IU status is a further stratification of the 50-90 percent rating group.

17. We defined the primary disability as the one with the highest rating. For some veterans with multiple disabilities, there is not one disability with a rating that is higher than all of the rest. In these instances, we assumed that the first disability listed in the VBA data is the primary disability.

18. These groups cover 15 body systems, but because the Commission wanted to look at PTSD in isolation, we split the mental body system into "PTSD" and "all other mental." Because of this split, we generally refer to "16" body systems for convenience.

19. IOM found that "more than one-third of all beneficiaries with an IU classification had either a primary or secondary diagnosis of PTSD" [8].

2.2 Employment rate and earned income of service-disabled veterans relative to their peers

An economic fact is that average earned income varies by age. It rises from the veteran's entry into the labor force until it peaks in the 40s or 50s. The rise is due to returns from education and experience. From the 50s on, average earned income begins to decline. That is not to say that full-time workers start taking pay cuts at this time, but on average earned income falls. Why? Some workers retire early, some work fewer hours, and some separate from the labor force. This results in declining average earned income with age. Additionally, earned income levels are different between men and women.

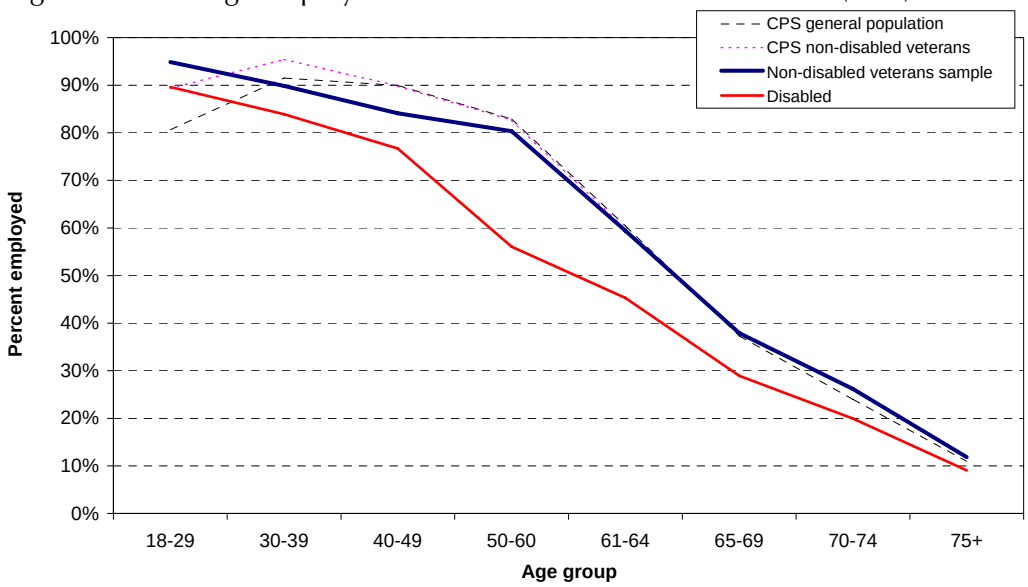
Given these earnings patterns, it is inappropriate to just compare average earned income of service-disabled veterans to that of non-service-disabled veterans without respect to age because we don't expect average earned income losses to remain constant over a lifetime, but to vary by age. Consequently, this section shows how employment rates and earned income of the service-disabled and non-service-disabled groups compare by age. We start by showing employment rates and earned income losses in aggregate and then systematically break them down for different groups of disabled veterans based on characteristics such as rating, IU status, body system, and SMC group. We show in the body of the report only the figures for men. The figures for women are not as robust because of their smaller numbers among service-disabled veterans. The appendices of this report show the comparable figures for women.

2.2.1 Earned income for all service-disabled veterans

The red line in figure 4 shows the percentage of male service-disabled veterans who are employed by age group. The blue line shows the percentage of male non-service-disabled veterans from our demographically matched comparison group who are employed.[20] (Appendix A shows the comparable figures for women.) The dashed lines show the employment rates for men generally in the U.S. population as well as for non-service-disabled veterans estimated from the Current Population Survey (CPS).

20. Note that we stratified the service-disabled veterans by age for various age groups up to the 65+ group. In part, we stratified using this age group because to further drill down on age would limit our ability to drill down on other aspects or characteristics that are important to our analysis. All of the figures in this paper show employment rates and earned income by age group up to 75+. The estimates for 65-69, 70-74, and 75+ are extrapolations of the employment and earned income data using the patterns we observe for service-disabled and non-service-disabled veterans in the CPS data.

Figure 4. Average employment rate of service-disabled veterans (men)

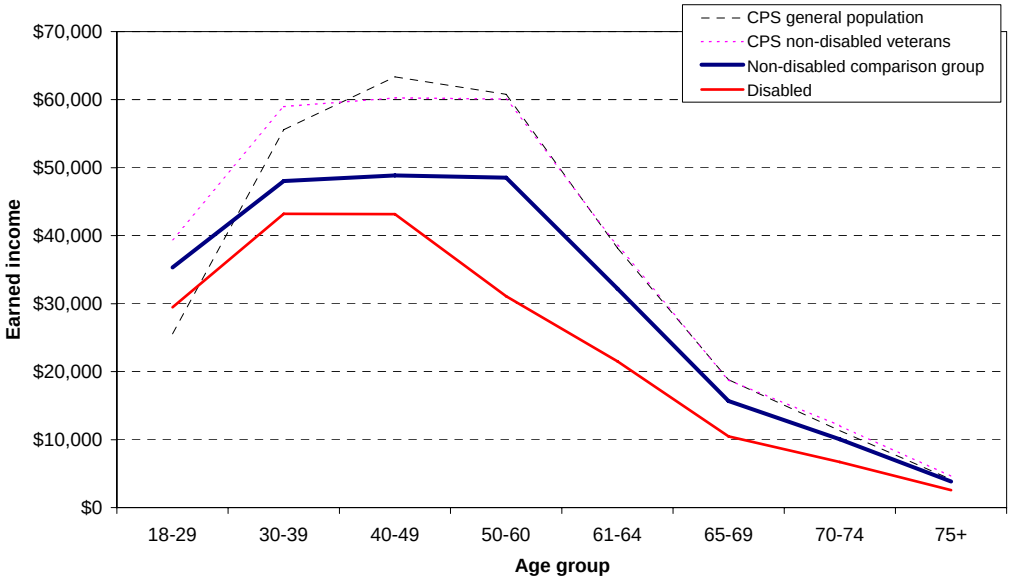


The patterns we observe are clear. For every age group, a smaller percentage of service-disabled veterans are employed than of their peers. This gap is about 5 percentage points in the 20s and 30s but widens to 24 percentage points in the 50s before shrinking again. The immediate implication is that even if service-disabled veterans who are employed earn as much as their peers, service-disabled veterans on average earn less because fewer are working.

Combining the average earned income for those who are working with the percentage who are employed we have the average earned income as figure 5 shows. The difference in average earned income is about $5,000 annually in the 20s and 30s, increasing to about $17,000 in the 50s before declining to about $1,000 annually for those 75 or more years old. What is striking is that average earned income begins declining at a younger age for service-disabled veterans compared to their non-service-disabled peers.[21]

21. The differences between SSA/OPM earnings compared to those from the CPS can be substantially different as figure 5 shows. There are a couple of reasons why. First, CPS data are self-reported whereas the SSA and OPM earnings are actual figures from SSA and OPM. Second, self-reported data may differ in how individuals understand the question or in how they perceive their income. Some individuals may mistakenly include their spouse's income in what they report in CPS. Some individuals may report figures that encompass

Figure 5. Average earned income of service-disabled veterans (men)



While figure 5 gives a visual feel for differences in earned income, it doesn't provide information about how effectively VA compensation makes up for earned income losses. To illustrate this, figure 6 shows average earned income of service-disabled veterans in the yellow shaded area and layered on top of this is average VA compensation (shown in the light blue shaded area). But just layering on VA compensation underrepresents the benefit because VA compensation is non-taxable whereas the earnings portion of earned income is taxable. We have accounted for this by computing the tax advantage of VA compensation (shown in the dark blue shaded area).[22] Adding together VA compensation and the tax advantage of VA compensation gives the taxable equivalent of VA compensation.

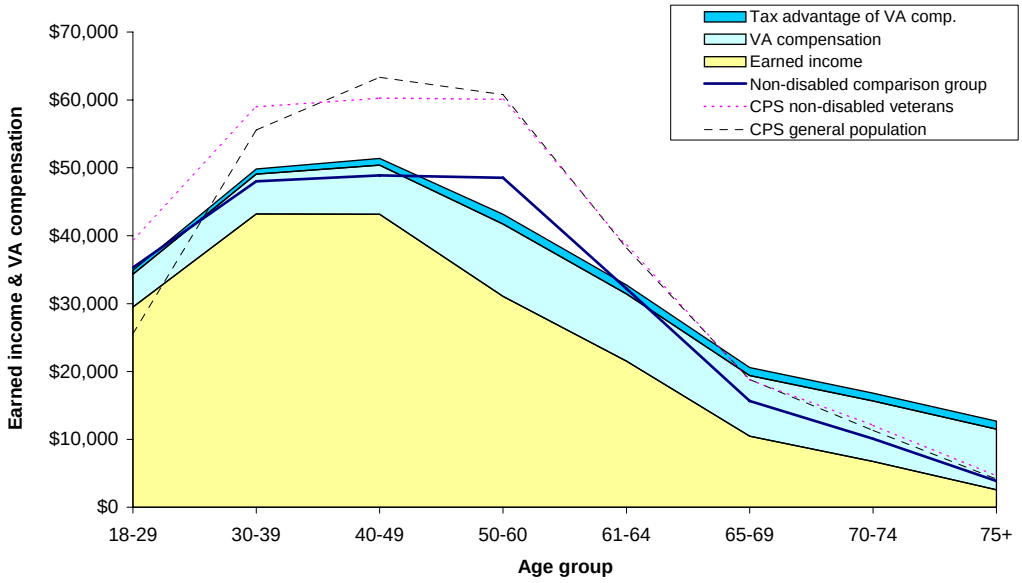
With the taxable equivalent of VA compensation layered on to earned income, we can visually see how well VA compensation makes up for earned income losses. As figure 6

more than earnings from employment, portray their income in the most positive light by including unreported income, or mistakenly report the income they report to the IRS.

22. The tax advantage is for not having to pay federal and state income taxes. We estimate average federal income taxes at 12.1 percent of earnings based on IRS data (tables 5 and 6 from http://www.irs.gov/taxstats/indtaxstats/article/0,,id=129270,00.html). We estimate average state income tax rates at 9/33 of the federal rate or 3.3 percent of earnings [9]. The total estimated income tax rate is 15.4 percent.

shows, earned income plus the taxable equivalent of VA compensation is higher than the non-service-disabled earned income (blue line) for some age groups and lower for others. Hence, on average, the visual comparison indicates that VA compensation does a pretty good job of replacing lost earning capacity.

Figure 6. Average earned income and the taxable equivalent of VA compensation of service-disabled veterans (men)



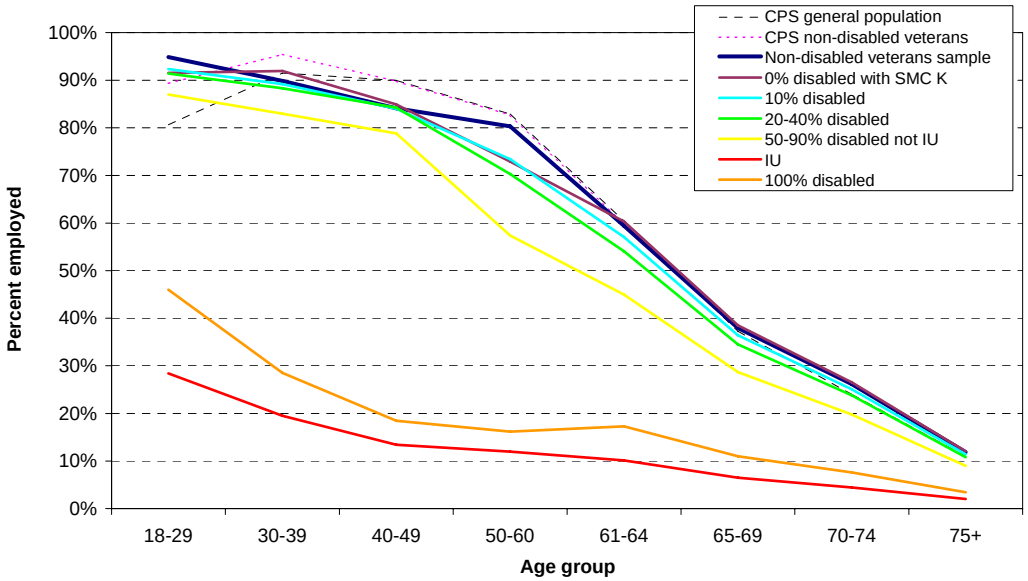
2.2.2 Earned income by rating group and IU status

This section makes comparisons for specific rating groups and also for those who are individually unemployable (IU). The rating groups that we use are 10 percent, 20-40 percent, 50-90 percent, and 100 percent. To get IU status, a service-disabled veteran must be unable to hold "substantial gainful employment" because of service-connected disability and must have a disability that is 60 percent or more or one disability that is 40 percent or more with a combined disability rating of at least 70 percent. Those with IU status receive VA compensation as if they were 100-percent disabled. Because those with IU have ratings of 60 to 90 percent, we parsed the 50-90 percent group into 50-90 percent not IU and IU. This report contains much about the employment rates and earned income for those with IU; see [10] for more information.

While the figures in the previous section show visually that VA compensation pretty well replaces lost earning capacity, they don't provide any insight into whether there are differences by rating group. Figure 7 shows the percentage of service-disabled vet-

erans employed by rating group for men.[23] It is interesting to note that the employment rates for the 0-percent and 10-percent groups are virtually the same as for the non-service-disabled group with the exception of lower employment rates when veterans are in their 50s. Those rated 20 to 40 percent have only slightly lower employment rates that the 10-percent group. Even the employment rates for the 50-90-percent group who are not IU are not dramatically lower.

Figure 7. Average employment rate of service-disabled veterans by rating group and IU status (men)



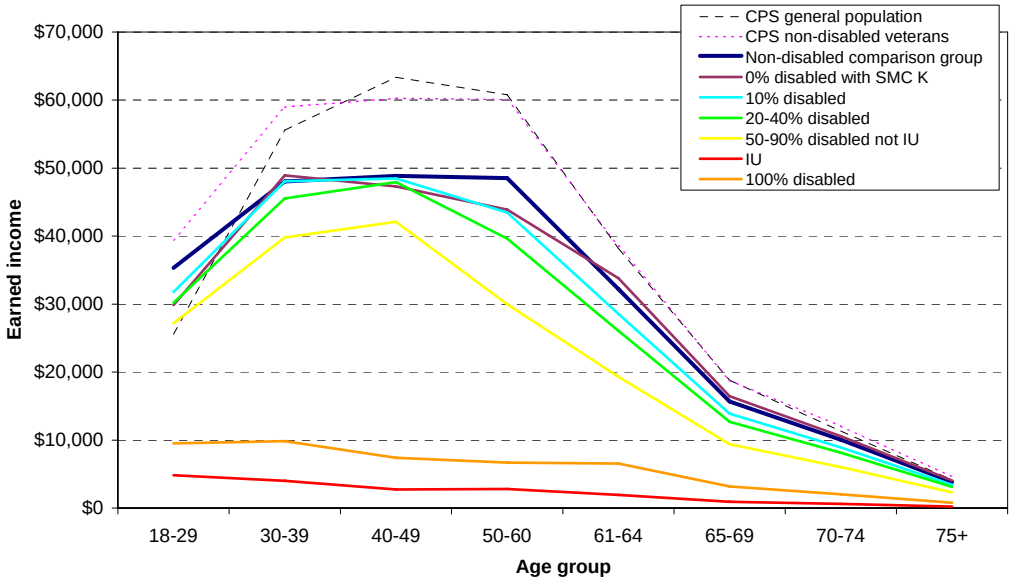
The substantial differences are for the 100-percent and IU groups. For these groups, employment rates are below 20 percent from age 40 on. Also note that the employment rate is lower for the IU group than for the 100-percent group. This is not surprising because unemployability is a requirement for IU status. This is not to say that they can't work, but they are not allowed to earn more than the annual poverty level for one person. This level was $9,827 in 2004 [11]. The U.S. Census Bureau determines the poverty level.

Turning to earned income, figure 8 shows it by rating group and IU status. With earned income, we see a little more separation between the service-disabled veterans and their peers than with employment rates. This is due to the combined effect of lower employment rates and lower average earned income for those who are employed. Even so, annual earned income losses are the most pronounced for veterans in

23. See appendix A for the comparable figures for women.

their 50s because service-disabled veterans begin leaving the workforce before their peers do. But, as with employment rates, the most substantial differences are with the 100-percent and IU groups. Specifically, earned income is below $10,000 and $5,000 for all age groups for the 100-percent and IU groups, respectively.

Figure 8. Average earned income of service-disabled veterans by rating group and IU status (men)



While we were able to show all of the rating groups in a single figure (figures 7 and 8) for the employment rate and earned income data, that is not possible when we layer on the taxable equivalent of VA compensation to earned income. Adding on VA compensation allows us to visually see how well VA compensation makes up for earnings losses. Figures 9 - 14 layer on VA compensation for each of the rating/IU groups.

Figure 9 compares earned income and the taxable equivalent of VA compensation for those who are 0-percent disabled with SMC K. VA compensation averaged $1,072 in 2004 for this group. Generally, VA compensation appears to compensate for lost earning capacity for this group with earned income plus the taxable equivalent of VA compensation slightly exceeding peer group earned income at some ages and slightly below at other ages.

Figure 9. Average earned income and the taxable equivalent of VA compensation for 0% disabled with SMC K (men)

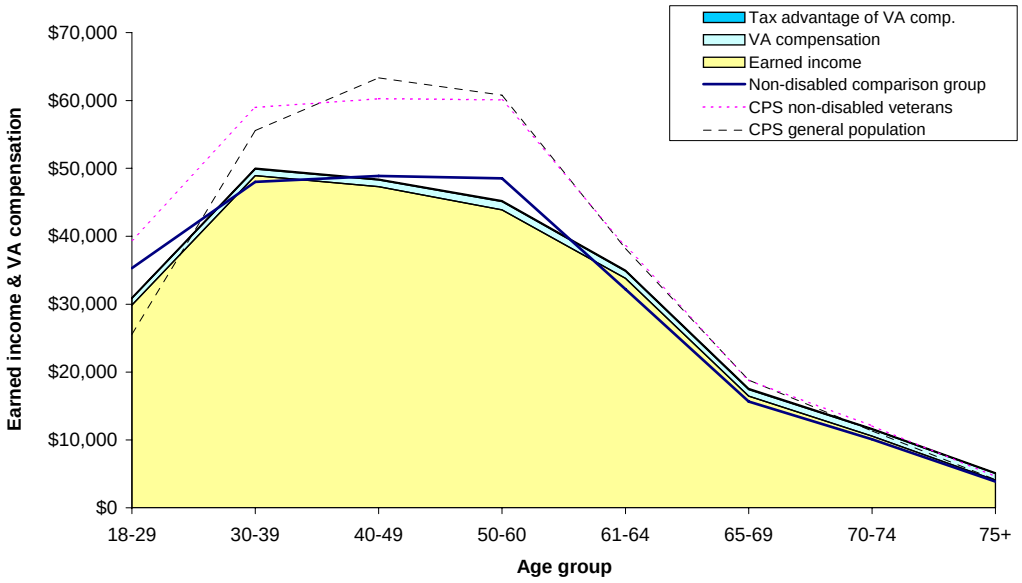


Figure 10 compares earned income and the taxable equivalent of VA compensation for those who are 10-percent disabled. For this group, average VA compensation in 2004 was $1,288 and the taxable equivalent was $1,461. Generally, VA compensation appears to slightly under-compensate for lost earning capacity for this group although for some age groups, earned income plus the taxable equivalent of VA compensation slightly exceeds the peer group's earned income. But, overall, the visual comparison indicates that it is close.

Figure 10. Average earned income and the taxable equivalent of VA compensation for 10%-disabled (men)

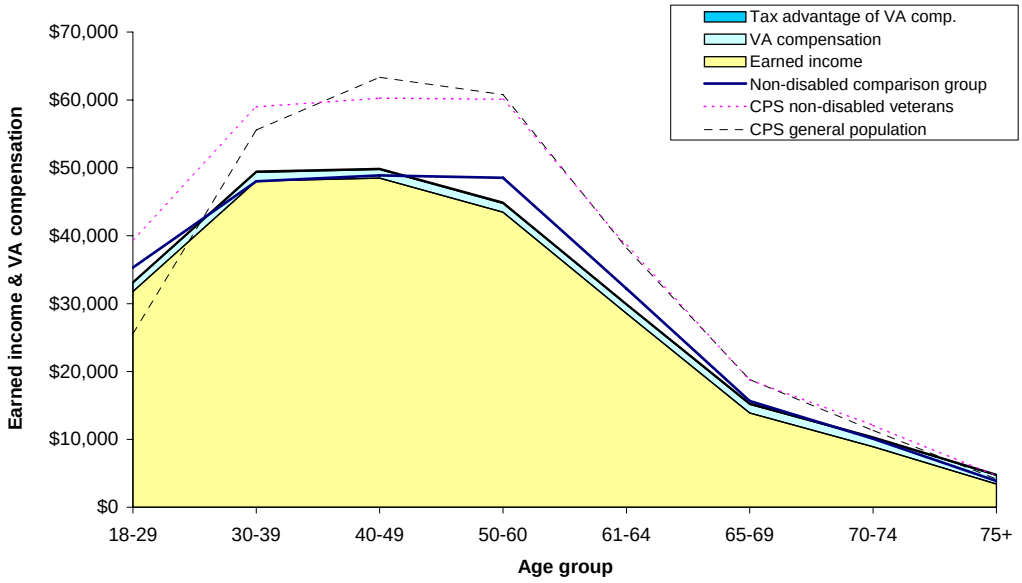


Figure 11 shows the earned income plus the taxable equivalent of VA compensation for those who are 20 to 40 percent disabled compared to the earned income of the peer group. As with the 0-percent and 10-percent groups, the two are pretty comparable. For some age groups, the earned income and VA compensation of the service-disabled exceeds by a small margin that of the peer group, and in some age groups it is slightly less.

Figure 11. Average earned income and the taxable equivalent of VA compensation for 20-40% disabled (men)

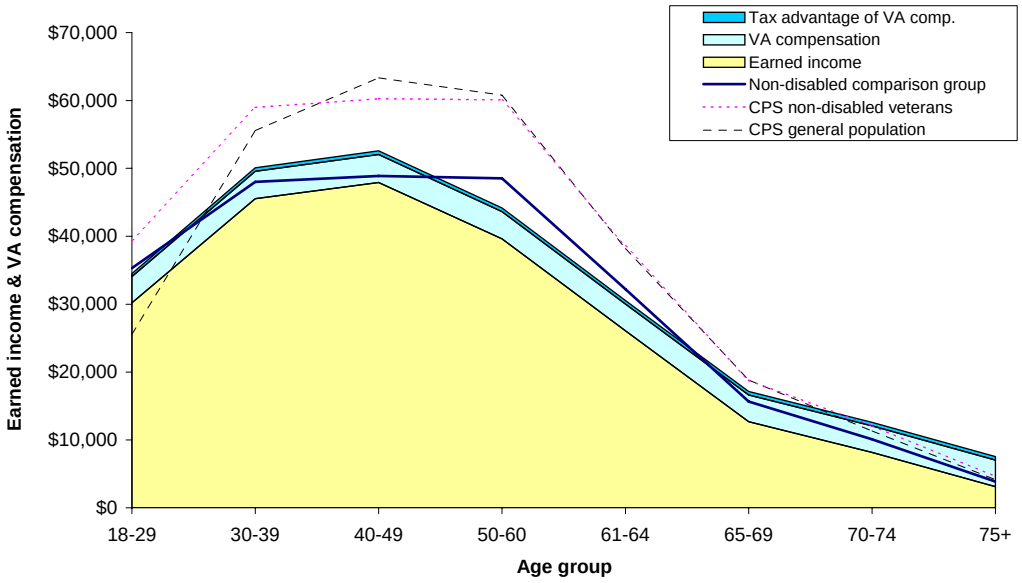


Figure 12 compares earned income and the taxable equivalent of VA compensation for those who are 50- to 90-percent disabled and who are not IU. For this group, average VA compensation was $11,280 in 2004 and the taxable equivalent was $12,768. As with the previous figures, VA compensation slightly under-compensates for lost earning capacity for this group in late middle age, although for some age groups earned income plus the taxable equivalent of VA compensation slightly exceeds the peer group's earned income. However, the largest differences are for those 65 or more years old.

Figure 12. Average earned income and the taxable equivalent of VA compensation for 50-90% disabled who are not IU (men)

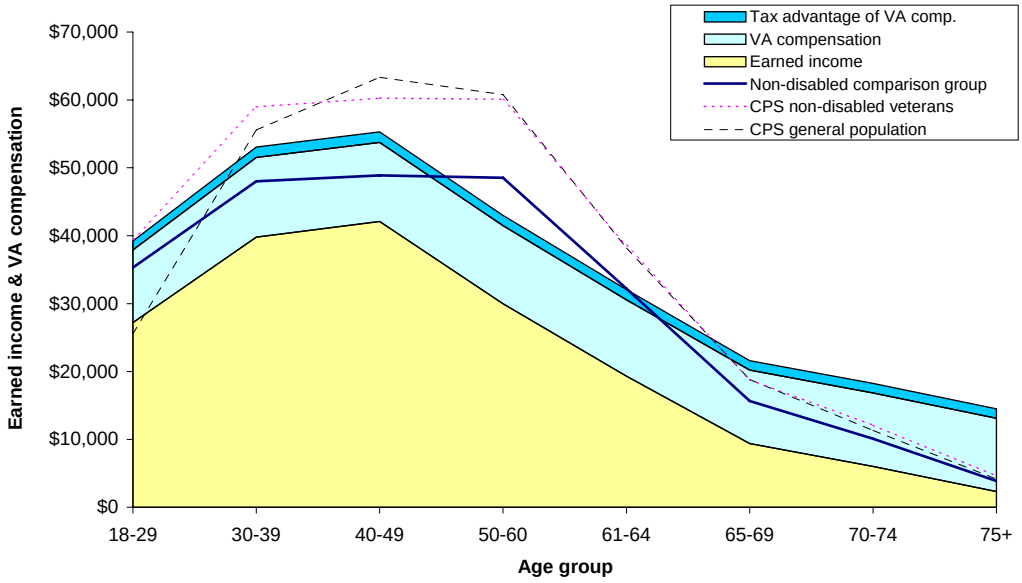
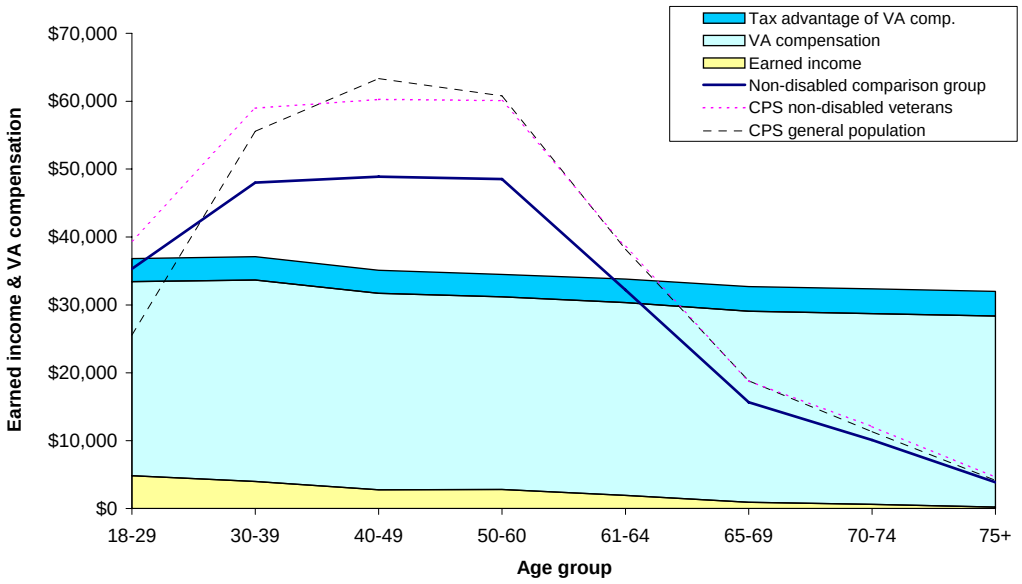


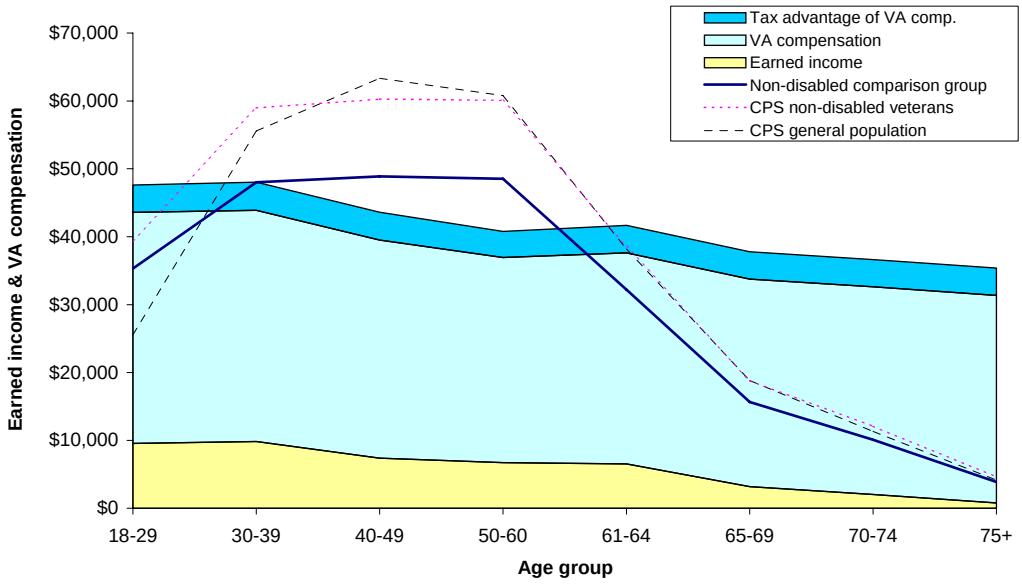
Figure 13 compares earned income and the taxable equivalent of VA compensation for those with IU status. Unlike all of those rated 90 percent or less who are not IU, the differences between the taxable equivalent and VA compensation are quite large. During the typical working years (under age 65), the compensation for VA falls short of replacing earnings losses; however, during the normal retirement years, it far exceeds the earnings losses. Hence, it is difficult to judge visually how well VA compensation replaces lost earnings capacity overall because the overages and underages at the various age groups are quite substantial.

Figure 13. Average earned income and the taxable equivalent of VA compensation for IU (men)



Finally, figure 14 compares earned income and the taxable equivalent of VA compensation for those who are 100-percent disabled. For this group, average VA compensation in 2004 was $30,723 and the taxable equivalent was $34,647. As with those with IU status, VA compensation under-compensates for lost earning capacity during the normal working years and over-compensates during the normal retirement years. Again, it is difficult to conclude from this figure alone whether VA compensation is too high or low relative to earnings losses.

Figure 14. Average earned income and the taxable equivalent of VA compensation for 100%-disabled (men)



One should not conclude from figures 13 and 14 that the non-service-disabled veterans have no "income" during the retirement years while the service-disabled are getting a comparative windfall from VA compensation. That is not the case. Remember that we are showing "earned income" which is earnings plus benefits. Benefits include amounts that employers contribute to Social Security, defined benefit plans, and 401(k)-like savings plans. These are retirement benefits, but they are included as compensation—earned income—during the year in which they were earned not the year they would be received or used to support an individual during retirement.

The fact is that we simply have no way of estimating what retirement income or investments people use each year during retirement to support themselves. This is the benefit of using earned income. We know what employers set aside during the working years as retirement contributions, so that is when we account for these benefits. We call this part of earned income because that is when they earn these benefits. So one should not look at the normal retirement years in figures 13 and 14 and conclude that VA compensation far exceeds the lost earning capacity. Because we account for retirement benefits when they are earned, the proper comparison is not to look at income comparisons at each age, but to look at VA compensation relative to lost earning capacity over a lifetime.

To illustrate how these accrued retirement benefits would translate into resources, we have taken the earned income of the 100-percent service-disabled veterans and their peer group and removed retirement benefits from earned income during the working

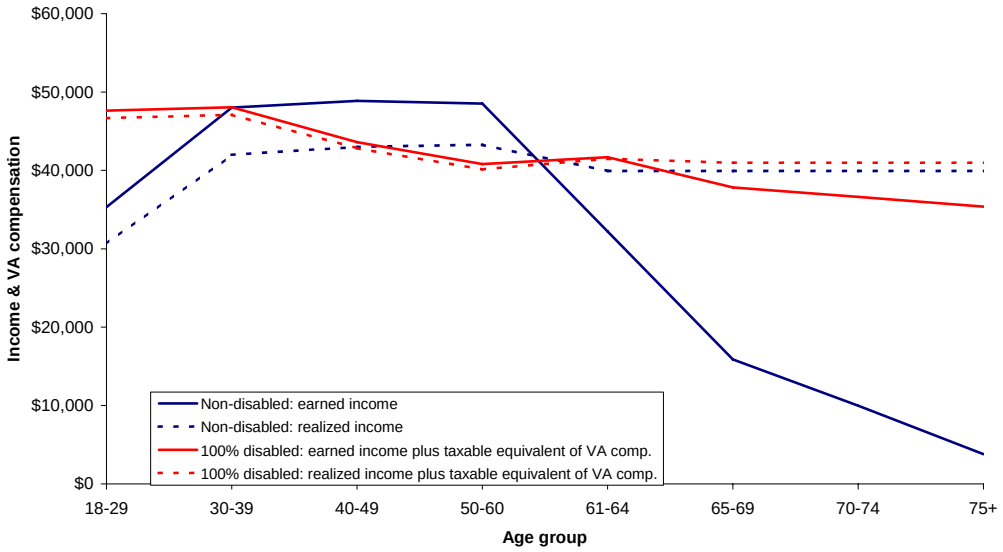
years and then added back in the annuity these contributions could generate during retirement. This is a notional example. Doing this required that we make several assumptions about how these resources would be invested to generate retirement annuities. We have no way of actually knowing what the retirement annuities would be.

Figure 15 compares "earned income" with "realized income," which is:

Realized *income* = *Earnings* + Nonretirement benefits + Notional retirement annuities

So realized income is our notional estimate of the income a person receives at each age while earned income is a measure of income when the person earned it. So if we compare realized income (dashed lines), we see that realized income during normal retirement is about the same for the 100-percent service-disabled and peer groups. Note that earned income and realized income are equivalent economically. They are merely different ways of presenting the same information.

Figure 15. Average earned income and notional realized income for 100%-disabled (men)



2.2.3 Earned income by SMC group

As previously discussed, we created three groups of service-disabled veterans based on SMC: (1) 0 percent with SMC K, (2) 100 percent with SMC S, L, M, N, or O, and (3) 100 percent with SMC R1 or R2. Figure 16 shows the percentage of men in each group

who are employed.[24] As we showed in a previous figure, the employment rate of the 0-percent disabled with SMC K, is similar to the non-service-disabled peer group, with the exception of those in their 50s when a smaller percent of them are employed than the peer group. The employment rates for the 100-percent disabled with SMC S, L, M, N, or O look very much like the rates for the 100-percent disabled group in general. In contrast, the 100 percent with SMC R1 or R2 have substantially lower employment rates, rates that are at about the same level as those with IU status.

Figure 16. Average employment rate of service-disabled veterans by SMC group (men)

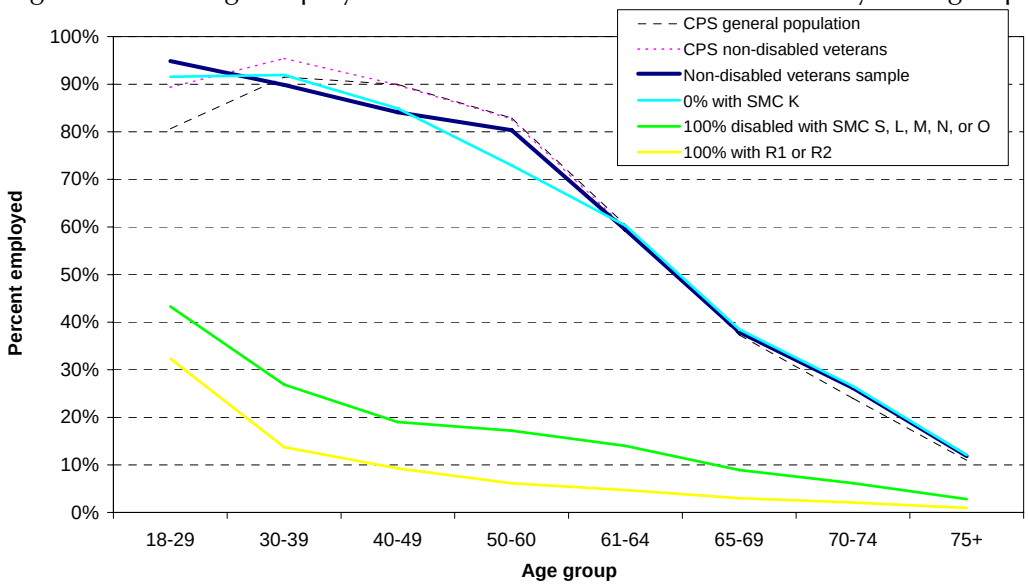
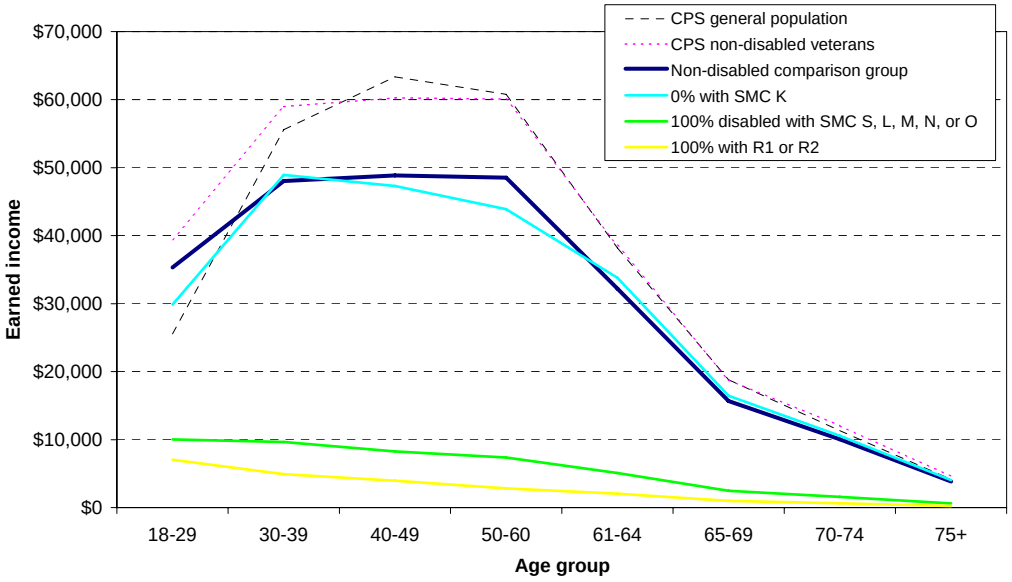


Figure 17 shows the average earned income for the three SMC groups. Again, our observations are similar to those with employment rates. We don't see substantially different earned income levels for the 100-percent SMC S, L, M, N, or O as compared to the 100-percent service-disabled group in general. Also, the 100-percent SMC R1 or R2 have about the same average earned income level as the IU group. One should not necessarily conclude from this that the economic consequence of IU status is just as severe as having SMC R1 or R2 status. Eligibility for IU status by definition requires no earnings above the poverty threshold. There is no such individual means test for the 100-percent disabled. Hence, it is logical that if there were no earnings-threshold rule for IU status, those with IU might have employment rates and earned income levels similar to those who are 100-percent disabled.

24. See appendix A for comparable figures for women.

Figure 17. Average earned income of service-disabled veterans by SMC group (men)



2.2.4 Earned income by body system of primary disability

The previous sections show how the employment rates and earned income of service-disabled veterans compare to those of their peer group overall as well as by rating group, IU status, and SMC. Generally, the visual comparisons show that VA compensation is similar to the amount of lost earning capacity. This section provides graphical illustrations of whether these findings are comparable across body systems.

We found that the results do vary by the body system of the primary disability. Although there are 16 body systems, we present the results for only musculoskeletal and PTSD here in the body of the report. Appendix B shows the results for the other body systems. We found that these two body systems are representative of the rest. Musculoskeletal disability is typical for the "physical" body systems, which have higher employment rates and average earned income than the "mental" disabilities for which PTSD is typical.

2.2.4.1 Employment rates for musculoskeletal and PTSD

Figure 18 shows the percentage of those with a primary disability that is a musculoskeletal diagnosis by rating group, and figure 19 shows the same information for those with a primary disability of PTSD. Comparing these two figures shows that for all rating groups the employment rate is lower with PTSD than musculoskeletal.

Figure 18. Average employment rate of service-disabled veterans with a musculoskeletal primary disability (men)

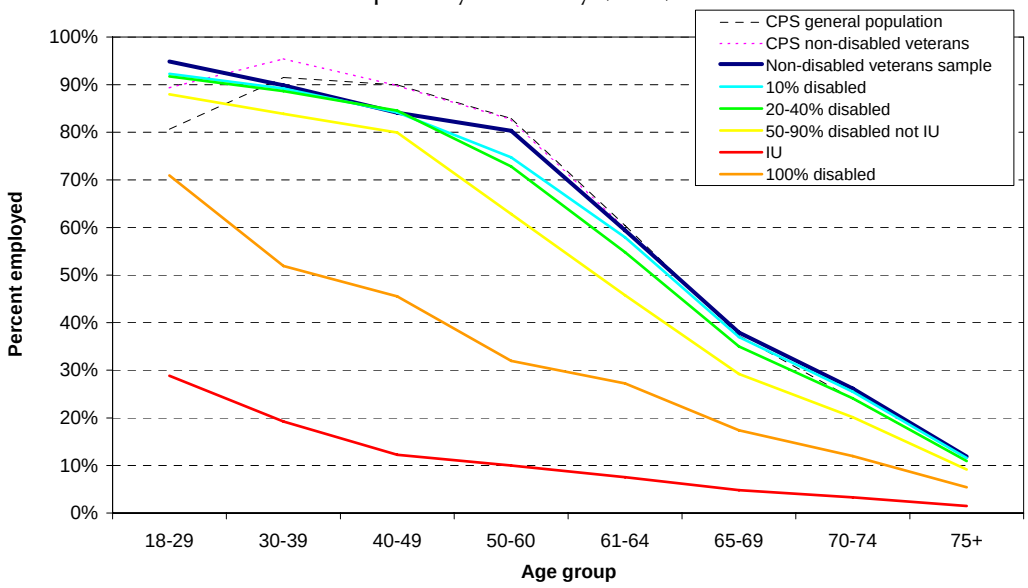
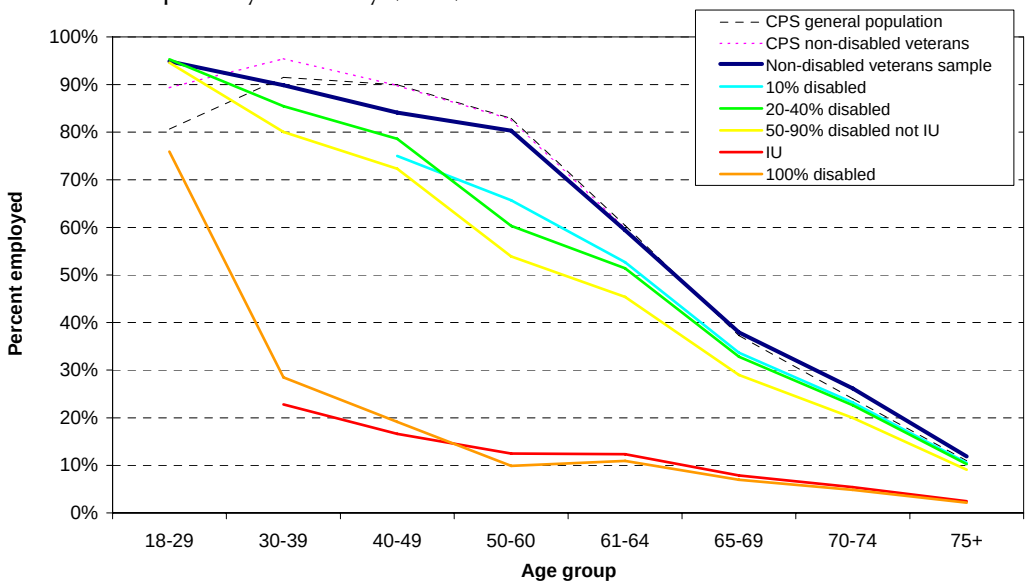


Figure 19. Average employment rate of service-disabled veterans with a PTSD primary disability (men)



2.2.4.2 Average earned income for musculoskeletal and PTSD primary disabilities

Figures 20 and 21 show the average earned income for musculoskeletal and PTSD primary disabilities, respectively. Again, it is clear that lost earning capacity is greater for those with PTSD than with musculoskeletal disabilities. These patterns are consistent with the other body system categories. Those body system categories that are "physical" in nature are very similar to musculoskeletal, while those body system categories that are "mental" in nature are similar to PTSD.

Figure 20. Average earned income of service-disabled veterans with a musculoskeletal primary disability (men)

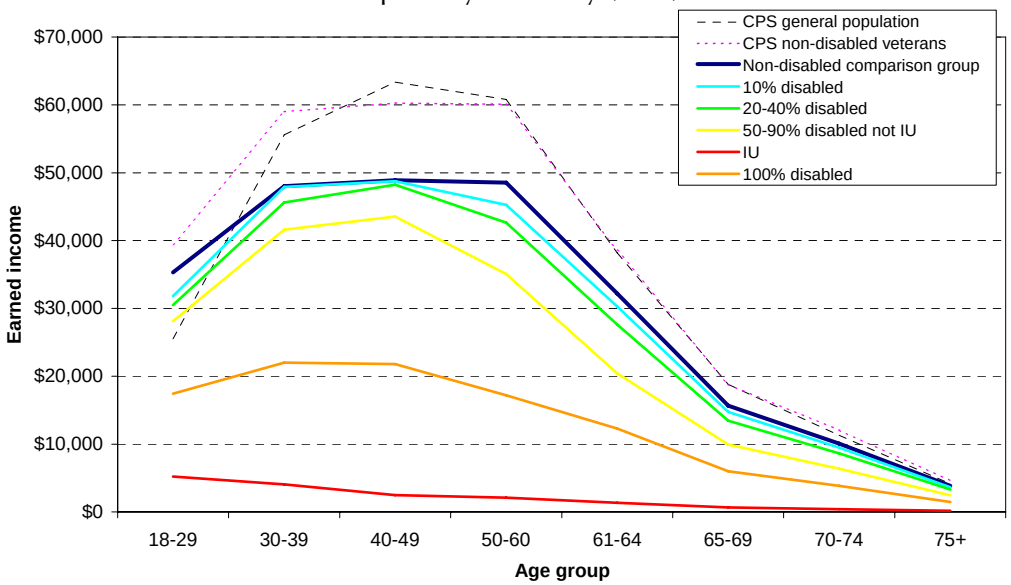
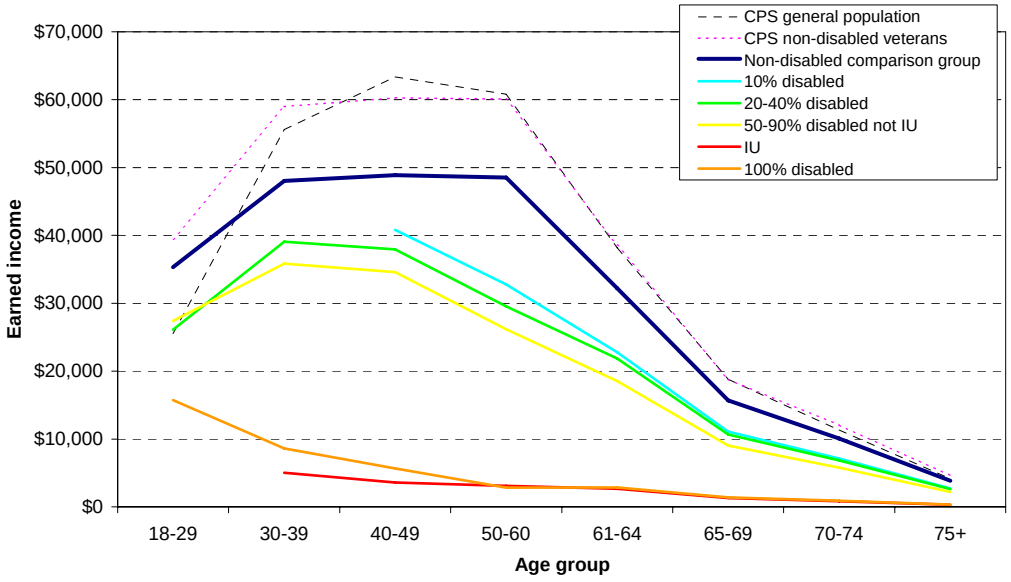


Figure 21. Average earned income of service-disabled veterans with a PTSD primary disability (men)



2.2.4.3 Employment rates for physical and mental body systems

Given the patterns of physical and mental disabilities, we created employment rate and average earned income data (1) for all physical body systems combined and (2) for all mental disabilities.[25] The results are very similar to what we found with musculoskeletal

25. The mental body system is grouped into "PTSD" and "mental not PTSD" (all other mental). The physical body systems are the remaining 14 body systems.

and PTSD. Figures 22 and 23 show the employment rates for physical and mental body systems, respectively. Here we find substantial employment rate differentials between those with a physical primary disability and those with to a mental one.

Figure 22. Average employment rate of service-disabled veterans with physical primary disability (men)

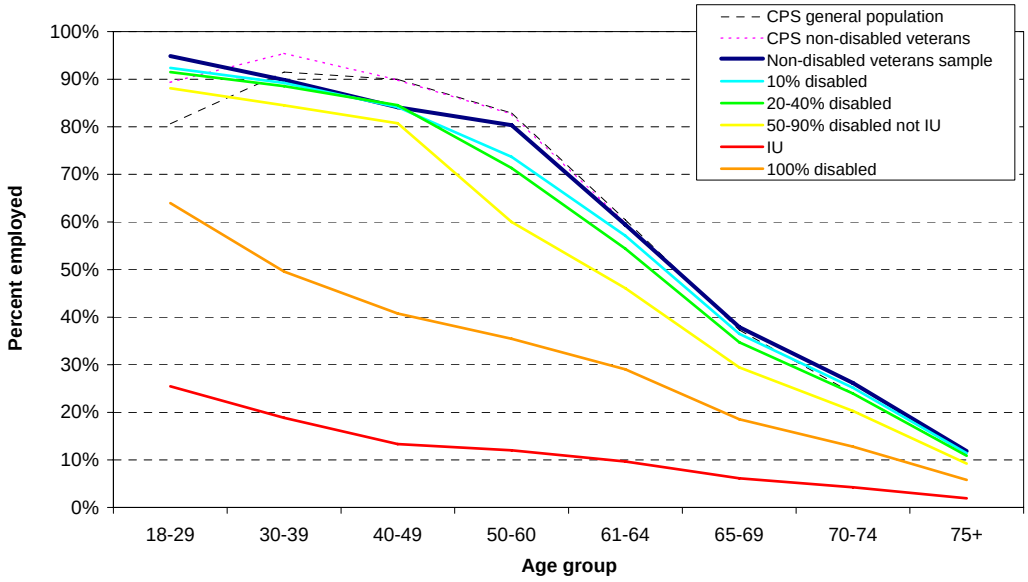
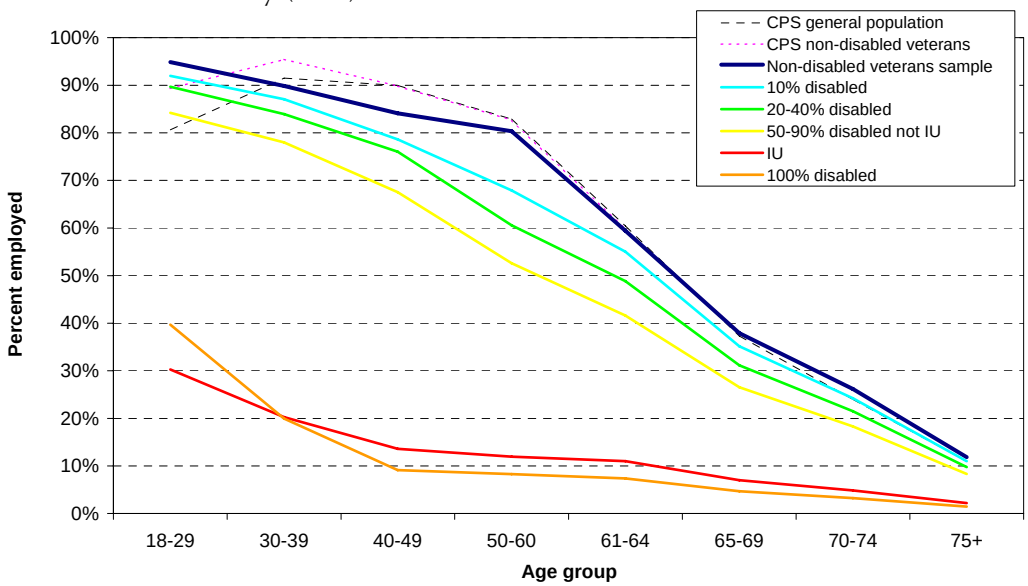


Figure 23. Average employment rate of service-disabled veterans with mental primary disability (men)



2.2.4.4 Average earned income for physical and mental body systems

The differences with earned income are more striking than with employment rates as figures 24 and 25 show. This is because earned income shows the combined effect of a smaller percentage who are working and the effect of smaller earnings for those who are working.

Figure 24. Average earned income for service-disabled veterans with physical primary disability (men)

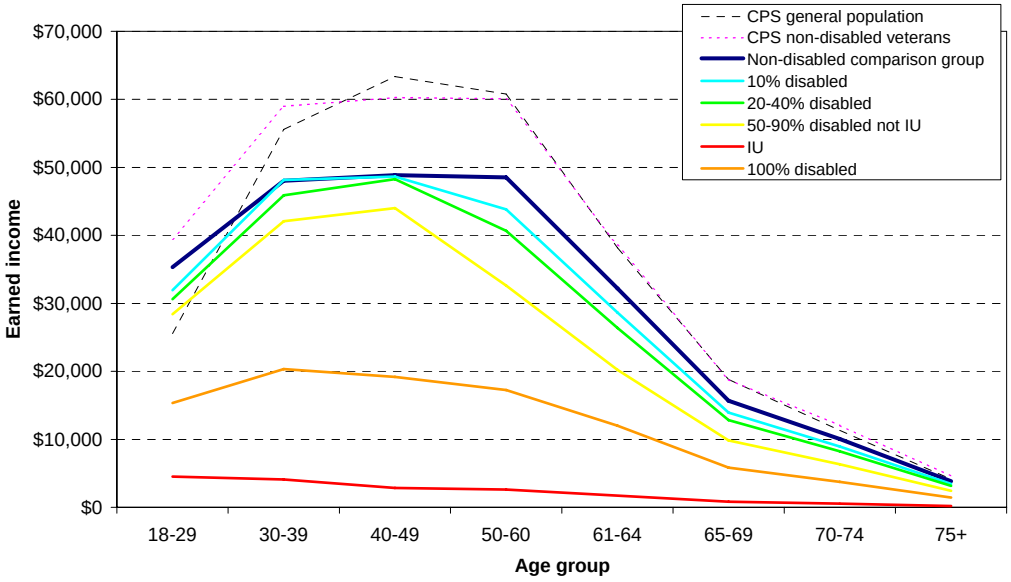
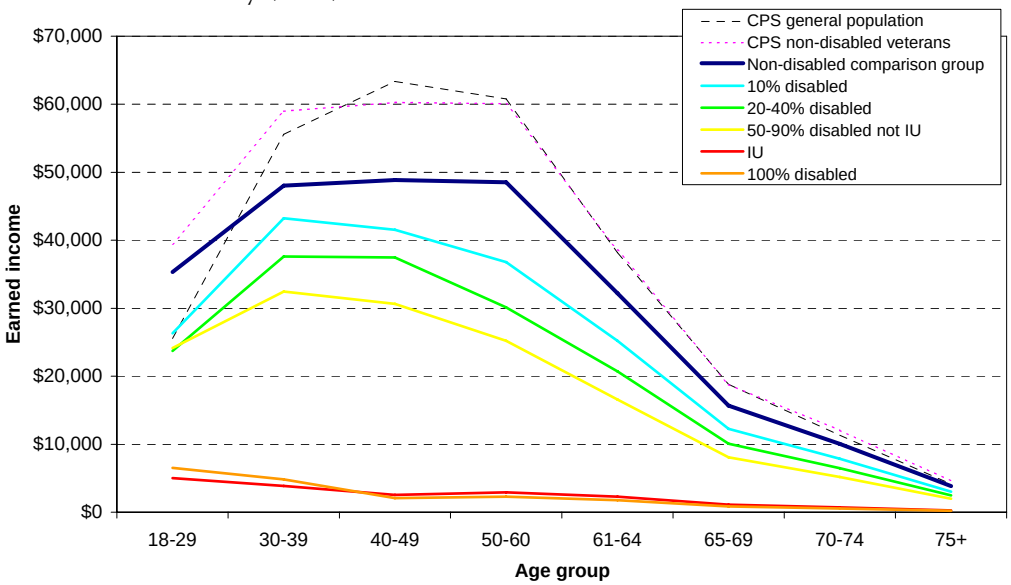


Figure 25. Average earned income for service-disabled veterans with mental primary disability (men)



2.2.5 Other factors

A key predictor of employment rates and earned income is education level. For that reason, we based the demographically matched sample of non-service-disabled veterans on education, among other things. Because VA data does not contain information about education level, we relied on DMDC data for this information, which we have from 1980 forward. Of the 2.67 million service-disabled veterans receiving VA compensation on 1 December 2005, 1.04 million were in the DMDC data. This means that we do not have education information for the remaining 1.63 million service-disabled veterans. This group consists of "older" veterans who separated from the military prior to 1980.

We can look at average earned income losses by education level using the 1.04 million service-disabled veterans that we have the information for. When we look within this group by education level, the earnings gaps are smaller than we observed for the overall group. This result has a couple of possible implications. First, the demographically matched sample (based on the 1.04 million) likely is not a perfect match for the education level of the 2.67 million service-disabled veterans as a whole.

Second, there are many facets on which the 1.04 million may differ from the 1.63 service-disabled veterans. Education is only one. Another important factor is cohort effects. Because the 1.63 million left active duty before 1980, this older group contains veterans who served mainly during wartime periods—World War II, Korea, and Vietnam. Yes, the 1.04 million who separated after 1980 will have some of these veterans, but most served generally in a peacetime era.

Given cohort differences, we cannot conclude that the differences we observe are due solely to an education mismatch. Additionally, we believe it would be inappropriate to exclude 61 percent of service-disabled veterans from the earnings analysis simply because we don't know their education level. Consequently, we rely on the results we already presented in this section for estimates of average earned income losses.

We also look at how factors such as marital status, having dependents, and race impact employment rates and earned income. The patterns we observe are exactly what we expect to find, given the vast economic literature on the impact of demographics on earnings. Specifically, we found the following:

- Married men earn more than those who are not married.
- Under age 40, married women earn less than those who are not married.
- Men with dependents earn more than those without dependents.

- Under age 40, women with dependents earn less than those without dependents.
- Those who are white earn more than those who are non-white.

2.3 Does the system compensate for earned income losses?

With the earned income profiles for service-disabled veterans and their peers, we can now determine how well "benefits provided to [service-disabled] veterans meet the Congressional intent of replacing average impairment in earning capacity." A key point here is: what is the *intent* of "replacing average impairment in earning capacity"? We see the intent as not having an individually means-tested disabled compensation program.[26] Hence, the focus is on *average* not *individual* earnings losses.

If we take this statement literally, we can look at average earned income losses for all service-disabled veterans and compare them to average VA compensation. If they are roughly equal, we can conclude that VA compensation is about right. However, there may be groups of veterans defined by certain characteristics for which VA compensation is not roughly equal to earned income losses. To look at these issues, we compare VA compensation and earned income losses by rating group, SMC group, physical v. mental primary disability, and body system as well as for all service-disabled veterans overall.

Note that none of our comparisons combine male and female veterans. This is necessary because the earned income profiles are substantially different by gender and the gender mix is not constant across age groups. For example, women account for 25 percent of service-disabled veterans under age 30 but only 2 percent for those 50 years and older. Hence, combining the genders would bias our results.

Another key to determining whether VA compensation is about right relative to earned income losses is the age at which the two are compared. Again, if we take a literal approach, using the average age at first entry into the VA compensation system is appropriate. Why average age at first entry instead of average age? Average age at first entry is correct because we need to compare lifetime earned income losses to lifetime VA compensation. So if the average age of a group of service-disabled veterans is 65 years, but they came into the system at age 55 on average, it would be inaccurate to compare

26. IU is an exception to this.

their earned income losses and VA compensation from age 65 forward instead of from age 55.

We estimated the average age at first entry in two ways. First, we computed it for the first time they appeared in the VA compensation data. We did this for 2 years—2000 and 2005. Specifically, we compared the 2000 VA Compensation and Pension Master Record (CPMR) to the 1999 VBA Mini Master File from DMDC. If a veteran was in the 2000 file but not in the 1999 file, he/she was a new entry. We made the same comparison between the 2005 CPMR and the 2004 VBA Mini-Master Files.

Ideally, we'd use the age at the original award date to estimate average age at first entry, but there are two problems with doing this. One is that the original award date is not a reliable variable because (in the past) it was often overwritten when there was a change in the rating. The other problem is that we'd need to know the rating level associated with the original award, which we don't know.

Second, because ratings change for many service-disabled veterans after they are in the VA system, we needed to look at their average age when their rating changed. Comparing the 2000 and 2005 VA data, we identified those with a rating change sometime between 2001 and 2005. For those with a rating change, we used their age in 2003 as an estimate of their age when their rating changed.

Table 7 shows the average age at first entry and the average age for those with a rating change. Overall the average at first entry was 47 in 2000 and 52 in 2005. This increase reflects the aging of the Vietnam cohort. In other words, the changing demographics of the veteran population can affect the average age at first entry. Of those already in the system but who had a rating change, the average age was 58. Note that while the veterans' average age at first entry generally increases with the severity of the disability, they are normally 50 or older when first entering the system (in 2005). We see the same for those with a rating change.

We found, in addition to the differences by rating group, that the average age at first entry is different and has different distributions by body system. Generally, the peaks or clusters in these distributions occur in the early 20s, early 40s, and mid-to late-50s. These ages correspond to the time around completion of the first service commitment, military retirement age, and the demographic peak of Vietnam Era veterans. For more information on these distributions see [10].

Table 7. Average age at first entry into the VA system or average age at a rating change

Rating group	Average age at first entry in the VA system[a]		Average age of those with a rating change between 2000 and 2005[b]
	2000	2005	
10%-disabled	43	50	50
20-40% disabled	43	49	55
50-90% disabled	49	53	58
Not IU	48	51	57
IU	56	60	60
100%-disabled	54	59	61
All	47	52	58

a. Based on the age of those first appearing in the VA Compensation and Pension Master Record (CPMR) in 2000 and 2005 compared to the 1999 and 2004 VBA Mini-Master Files from DMDC, respectively.

b. This is the average age in 2003 for those who were in both the 2000 and 2005 CPMR and who had a change in their rating between 2000 and 2005.

2.3.1 Comparison for all service-disabled veterans

This section shows our estimates of the adequacy of VA compensation relative to earned income losses for service-disabled veterans of all disability ratings. Again, we provide separate estimates for men and women.

2.3.1.1 Methodology and overall results

Because this is the first comparison we make, this section discusses our methodology for the estimate. All of the estimates appearing subsequently use the same methodology, so in those cases, we just report the results.[27]

To make the comparison, we computed from the age at first entry the present value of lifetime earned income of service-disabled and non-service-disabled veterans and the present value of lifetime VA compensation. Specifically, we reduced to present value all future values using a net discount rate of 3.8 percent, which accounts for differences between inflation rates and yields on 10-year U.S. Treasury bonds over a 25-year period (1981-2006). We also accounted for mortality differences between service-disabled and non-service-disabled veterans. In other words, earned income for the peer group would occur for more years on average than the earned income and VA compensation of service-disabled veterans due to the higher mortality rates of service-disabled veterans relative to their peers.

27. For a more detailed or technical description of our methodology, see appendix C.

For all male service-disabled veterans using an average age at first entry of 55, the present value of average earned income for non-service-disabled veterans is $431,637. Subtracting from this the present value of average earned income for service-disabled veterans of $268,113, earned income losses are $163,524.

The present value of VA compensation from the average age at first entry for the remainder of life is $148,580. This figure is not all that different from earned income losses of $163,524.

To facilitate an easy comparison between service-disabled veterans and their peers, we computed the ratio of earned income plus VA compensation of service-disabled veterans to the earned income of non-service-disabled veterans. Values less than 1 mean that VA compensation doesn't make up for earned income losses, and values greater than 1 mean that VA compensation more than makes up for losses. A value of 1 is parity. So for male service-disabled veterans, the average earned income plus VA compensation is $416,693 ($148,580+$268,113). Comparing that with the average earned income of the peer group of $431,637 yields an earnings ratio of 0.97. When we do this for female service-disabled veterans, the earnings ratio is 1.00. Essentially, this is parity, meaning VA compensation is about right overall.

2.3.1.2 Impact of age at first entry

While these overall earnings ratio estimates are correct for an overall average, there may be groups of veterans for whom the averages don't work well. That is not to say we think VA compensation should be means-tested or done individually. Rather, there may be groups of veterans with a given set of characteristics for whom VA compensation is more or less than earnings losses on average.

The first characteristic we look at is the age at first entry. Age 55 is a good estimate of the average age at first entry, but it is an average. There are many whose age at first entry is well above or below that figure. So we want to see how well current VA compensation replaces lost earnings capacity for those entering at ages much different from the average. As table 8 shows, when we look across all service-disabled veterans for various ages at first entry, the current VA compensation roughly makes up for lost earning capacity as seen by the earnings ratios near 1 for ages at first entry from 25 to 55.

Table 8. Earnings ratio by age and gender[a]

Age at first entry	Men	Women
25	1.05	1.05
35	1.02	1.03
45	0.96	1.00
55	**0.97**	**1.00**
65	1.51	1.63
75	2.62	3.59

a. Values for average age at first entry are in bold type.

Where VA compensation and lost earning capacity don't line up very well is for those entering the system at older ages—65 years or more. For these, the earnings ratio exceeds 1 by substantial margins. Why? This occurs because the veteran is entering at an age at which many people retire. Hence, as we look at their future losses of earned income, they are substantially smaller because the prime earning years are past. So when we computed the earnings ratio, the VA compensation in the numerator of the ratio may dwarf the non-service-disabled earned income in the denominator. Recall that we include the retirement benefits as part of earned income when they are earned rather than when they are used to support individuals during their retirement. This is true for both service-disabled and non-service-disabled veterans.

2.3.2 Comparisons by rating groups

Now that we've looked at earnings ratios overall and by age at first entry, we drill down further to look at earnings ratios by rating group and age at first entry. Table 9 shows the earnings ratios for men (see appendix D for the like figures for women). Comparing earnings ratios by rating group, we find that they are about right when looking at the average age at first entry. Some ratios are slightly above or below parity, but generally close to 1. The earnings ratio is always close to 1 for the 10-percent disabled regardless of the age at first entry. For the 20-40 percent and 50-90 percent not IU groups, this is also true for age at first entry between 25 and 55. At older ages it is well above parity.

While the IU and 100-percent disabled groups are close to parity at the average age at first entry, that is the only age at which this holds. For younger ages, compensation is well below parity, and well above at older ages. The inference from this is that VA compensation does not replace lost earning capacity for those entering the VA compensation system at younger ages and that it more than compensates for lost earning capacity for those entering at older ages.

Table 9. Earnings ratio by rating group and age at first entry (men)[a]

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
25	0.99	1.01	1.05	0.76	0.87	1.05
35	0.99	1.01	1.03	0.72	0.80	1.02
45	**0.96**	**0.97**	**0.98**	0.78	0.83	0.96
55	**0.93**	**0.95**	**1.00**	**1.01**	**1.04**	**0.97**
65	0.97	1.16	1.66	2.61	2.50	1.51
75	1.03	1.58	3.08	6.19	5.60	2.62

a. Values for average age at first entry are in bold type.

Why the difference? For those who become severely service disabled at younger ages, most of their working life is ahead of them. Hence, they incur substantial lost earning capacity for longer periods so it requires more disability compensation to replace lost earning capacity. In contrast for those who become service disabled at older ages, much of their working years are behind them, so their disability compensation is replacing only the earned income that occurs after they become service disabled.

Because age at first entry is a key factor in determining earnings parity for the severely disabled (IU or 100 percent), a logical question is how prevalent is it? We show in table 10 the percentage of first entry by age group for each rating group. About 6 percent of those first entering the system with an IU designation in 2000 were less than 35 years old. The comparable figure for 2005 was 5 percent. In contrast, 26 percent of those first entering with IU in 2000 were 65 or more years old. Similarly, the 2005 figure was 28 percent. We found that the patterns for those first entering the system as 100-percent disabled were similar to those entering with IU.

Note that we used age at first entry as an estimate of the age at which earnings are affected by the service-connected disability. Age at first entry may be many years following release from active duty. One argument is that service-disabled veterans sometimes live with the consequences of their service-connected disabilities for years before coming into the VA system. Clearly this is the case for some veterans. Hence, the assumption of no effect on earned capacity prior to coming into the VA system may not hold for these veterans.

The fact is we simply don't know how prevalent this is. Clearly there are many veterans and disabilities where the effects of the disability may not be felt for many years after they are released from active duty. For example, the Institute of Medicine reports that there is "abundant scientific evidence indicating that PTSD can develop at any time after exposure to a traumatic stressor, including cases where there is a long time interval

between the stressor and the recognition of symptoms. Some of these cases may involve the initial onset of symptoms after many years of symptom-free life" [8]. For other conditions, the effects of the service-connected disability may not be felt for years until the normal aging process impacts them. The point is that the economic impact of the disability likely does not go all the way back to when a service-disabled veteran was released from active duty.

Table 10. Age distribution at first entry (2000 and 2005)

	<35	35-44	45-64	65+	Total
First entry in 2000					
10%	35	24	28	12	100%
20-40%	30	30	30	10	100%
50-90% not IU	17	26	44	13	100%
IU	6	12	56	26	100%
100%	11	11	54	25	100%
All	27	22	33	18	100%
First entry in 2005					
10%	25	16	39	20	100%
20-40%	23	19	44	14	100%
50-90% not IU	15	20	51	14	100%
IU	5	7	61	28	100%
100%	7	7	62	25	100%
All	19	17	44	20	100%

We acknowledge the point that there may be some impact before that age at first entry, but there is no way to estimate how much or for how long. We believe that the Commission should consider these factors and use its collective wisdom when considering the adequacy of VA compensation.

2.3.3 Comparison by SMC groups

Table 11 shows the earnings ratios for male service-disabled veterans by SMC group.[28] Those who are 0-percent disabled with SMC K have an earnings ratio near parity except for older ages at first entry. This is similar to what we found with the 10-percent disabled veterans. For those who are 100-percent disabled with SMC S, L, M, N, or O, their earnings ratio by age at first entry is very similar to the earning ratio of the 100-

28. We do not have a comparable table for females because there is insufficient data.

percent disabled veterans without any SMC. They are below parity at younger ages at first entry and well above for older ages at first entry.

Table 11. Earnings ratio by rating group and age at first entry (men)[a]

Age at first entry	0% with SMC K	100% with SMC S, L, M, N or O	100% with R1 or R2	100% with not SMC
25	0.96	0.85	1.54	0.83
35	0.97	0.78	1.40	0.77
45	0.95	0.80	1.44	0.80
55	**0.97**	**0.99**	**1.78**	**1.01**
65	1.12	2.40	4.38	2.42
75	1.27	5.58	9.85	5.38

a. Values for average age at first entry are in bold type.

The exception is for those 100-percent disabled veterans with SMC R1 or R2. The earnings ratios for these veterans are well above parity. We caution, however, that one should not necessarily infer that these veterans are overcompensated for lost earning capacity. They may need the SMC they receive to pay for nursing home, assisted living, or home care costs associated with their service-connected disabilities. These costs can be substantial. For example, the average cost in 2006 for a private room in a nursing home was $75,000 annually and $67,000 for a semi-private room [12]. Assisted living costs average $36,000 annually [13], and home health aide averages $19 per hour [12]. The average VA disability compensation for those with R1 or R2 was $70,527 compared to $28,311 for the 100-percent disabled without any SMC. Hence, the difference in the compensation levels could easily be consumed by nursing home or assisted living costs.

2.3.4 Comparisons for physical v. mental primary disability

The earned income profiles showed substantial differences between the earned income losses of those whose primary disability was a physical compared to mental condition. Given these differences, we computed the earnings ratios for these two groups of veterans by rating group (see table 12). For those rated anything but IU (10 percent, 20-40 percent, 50-90 percent not IU, or 100 percent), the earnings ratios are smaller with a mental primary condition for those with first entry between the ages of 25 and 55. We conclude from this that there is more parity and a physical v. mental primary condition. The exception is IU. These service-disabled veterans have a slightly higher earnings ratio if their primary condition is a mental v. physical one. Why the difference?

Table 12. Earnings ratio by rating group and age at first entry for physical v. mental primary disabilities (men)[a]

Age at first entry	Physical primary disabilities					Mental primary disabilities				
	10%	20-40%	50-90% not IU	IU	100%	10%	20-40%	50-90% not IU	IU	100%
25	0.99	1.02	1.10	0.75	0.94	0.86	0.83	0.88	0.77	0.75
35	0.99	1.02	1.08	0.71	0.89	0.85	0.82	0.84	0.74	0.69
45	**0.96**	**0.99**	**1.04**	0.76	0.91	**0.81**	**0.78**	**0.82**	0.80	0.73
55	**0.93**	**0.97**	**1.06**	**0.99**	**1.08**	**0.79**	**0.77**	**0.88**	**1.07**	**0.95**
65	0.98	1.17	1.71	2.56	2.37	0.86	1.04	1.50	2.80	2.40
75	1.04	1.58	3.13	6.08	5.30	0.93	1.57	2.84	6.81	5.61

a. Values for average age at first entry are in bold type.

To understand why, we must understand what is different between the earnings ratios of the two groups. The two things that vary are earned income losses and mortality rates. The data show that the earned income losses are consistently higher for those with a mental primary condition than those with a physical one. In contrast, there is not a consistent pattern for mortality.

Table 13 shows by rating group and age at first entry that the life expectancy in years of those with a physical primary condition is less than that for those with a mental primary condition. For those with first entry at age 25 in the 10-percent disabled group, the life expectancy is 77.7 years if they have a physical condition and 76.1 years if they have a mental condition. So the life expectancy is 1.6 years less for those with a mental condition.[29] We find that life expectancy is higher for those with a physical condition unless they are IU or 100-percent disabled. In these cases, the life expectancy is higher for those with a mental condition. This is an interesting observation in and of itself in that mental conditions tend to have a higher mortality rate except for the most severely disabled.

29. Note that differences in life expectancy decrease for older ages at first entry. This occurs because life expectancy estimates are conditional on having survived to a certain age. In other words, for those that survive to age 75, life expectancy of non-service-disabled veterans is also getting relatively high, so differences due to disability have less impact.

Table 13. Difference in life expectancy between those with physical v. mental primary conditions by rating group and age at first entry

Age at first entry	10%	20-40%	50-90% not IU	IU	100%
25	1.6	2.9	3.0	-2.8	-7.8
35	1.5	2.6	2.6	-2.7	-6.4
45	1.3	2.2	2.2	-2.4	-4.9
55	1.0	1.5	1.6	-2.1	-3.5
65	0.6	0.9	1.0	-1.8	-2.2
75	0.2	0.2	0.5	-1.4	-1.2

Clearly mortality rates differ between these groups, but why would that impact the earnings ratios? The reason has to do with the number of years they receive VA compensation. So among those with IU status entering at age 25, veterans with a mental primary condition live on average 2.8 years longer than those with a physical condition. This means they receive VA compensation of approximately $28,300 for 2.8 years longer than those with a physical primary condition. This additional compensation is the reason for the difference in the earnings ratios of these two groups as it can substantially make up for part of earned income losses.

By the same token, those with a physical primary condition entering at age 25 with a 10-percent disability receive VA compensation for 1.6 years longer than those with a mental condition. However, this additional VA compensation does not have a great impact on the earnings ratio because it is only about $1,300 annually. The result is that the differences in earned income dominate and drive this earnings ratio.

2.3.5 Comparisons by body system

This section looks more specifically at earnings ratios by body system. We show here the earnings ratios for those male service-disabled veterans with a musculoskeletal (table 14) and a PTSD (table 15) primary disability.

Table 14. Earnings ratio for those with a musculoskeletal disability by rating group and age at first entry (men)[a]

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
25	1.00	1.03	1.11	0.79	1.06	1.05
35	1.01	1.04	1.09	0.75	1.00	1.04
45	**0.99**	**1.02**	**1.07**	0.80	1.01	1.01
55	**0.97**	**1.01**	**1.10**	**1.05**	**1.16**	**1.01**
65	1.02	1.21	1.72	2.69	2.44	1.33
75	1.08	1.60	3.10	6.31	5.06	1.98

a. Values for average age at first entry are in bold type.

Our general findings do not change when looking at specific body systems. There are differences between physical and mental primary conditions. Those who are IU have earnings ratios well below 1 for first entry between 25 and 45 years for either musculoskeletal or PTSD. However, one difference between musculoskeletal and all physical primary conditions combined is that there is rough parity overall for those entering before age 55 for musculoskeletal, whereas it is slightly below parity for all physical conditions combined. PTSD is well below parity at the average age at first entry except for the most severely disabled.

Table 15. Earnings ratio for those with a PTSD by rating group and age at first entry (men)[a]

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
25		0.85	0.94	0.85	0.84	0.96
35		0.82	0.90	0.76	0.75	0.87
45	**0.74**	**0.78**	**0.87**	0.83	0.79	0.85
55	**0.70**	**0.78**	**0.93**	**1.11**	**1.03**	**1.00**
65	0.76	1.11	1.65	3.00	2.75	2.28
75	0.85	1.76	3.30	7.59	6.90	5.27

a. Values for average age at first entry are in bold type.

Earnings ratios for the other body systems are in appendix D. Generally the findings are in line with what we showed for physical v. mental primary conditions with some variation. Within the physical primary conditions, for example, the earnings ratios are a little smaller for auditory and endocrine compared to the overall average. Similarly, genitourinary and cardiovascular condition earnings ratios are a little larger.

2.4 Summary

The earnings analysis for service-disabled veterans resulted in several consistent observations and findings. First, average employment rates and earned income of service-disabled veterans are less than for non-service-disabled veterans. These values vary by age, disability rating group, and body system. As expected, earned income losses increase with the disability rating. Losses for those with IU status are comparable to losses for those with a 100-percent rating.

Second, the differences from the comparison groups in employment rates and earned income are substantially less for those whose primary disability is a physical condition rather than a mental condition.

Third, we found that VA compensation generally makes up for average lifetime earned income losses; however, there are exceptions. The parity of VA compensation to earned income losses—as measured by an earnings ratio—depends on rating level, IU status, and age at first entry into the system. Generally there is parity at the average age at first entry for all rating levels and IU status. However, if a veteran first enters the system later in life, the VA compensation is above parity because most of the prime working years are past. But if a veteran enters early in life, VA compensation does not provide parity for the most severely disabled (IU and 100 percent).

Fourth, earnings ratios are different for those with a physical compared to a mental primary disability. Generally, those with a mental primary condition are below parity at the average first entry age for those who are not IU or 100-percent disabled. There is some variation by body system, but generally each individual component body system follows the patterns of physical v. mental primary disabilities.

Fifth, increases in the present value of lifetime earned income losses associated with higher disability levels also reflect increased mortality associated with more severe disabilities. Additionally, mortality rates differ between physical and mental primary conditions. In all disability groups, mortality rates are higher than rates for non-service-disabled peers.

3 Veterans quality-of-life survey

The Commission tasked us with answering "[h]ow well do benefits provided to [service-disabled] veterans meet implied Congressional intent to compensate for impairment in quality of life due to service-connected disabilities?"[30] To do this, we needed measures of service-disabled veterans' quality of life. Quality-of-life estimates are not something that is available in administrative data. We used a survey to service-disabled veterans to get quality-of-life estimates.[31]

Specifically, we used the survey to provide various estimates of health-related quality of life and overall quality of life. We chose these measures because other surveys use them. This means we can compare service-disabled veterans to the U.S. population. The first two sections of this chapter present the results for these quality-of-life measures. The next section takes these quality-of-life measures and combines them with the information from the earnings analysis to see how well quality of life lines up with implicit quality-of-life payments.

The survey also provides information for two analytic questions for which there are no data from other sources:

- Do service-disabled veterans not comply with recommended medical treatment because they are concerned that it might lead to a change in their disability benefits?
- To what degree does the VA disability compensation provide a disincentive to work?

Separate sections of this chapter show the results for these two questions.

30. See Statement of Work, research question 2.

31. Appendix E shows the results for the individual survey questions, and appendix F contains the complete survey instrument for the Veterans Survey. See appendix G for information about survey design and sampling plan. Appendix R shows the non-response analysis conducted by ORC Macro (who fielded the Veterans and Survivors Surveys). The non-response analysis covers both the Veterans and Survivors Surveys.

3.1 Health-related quality of life

This section reports our findings for health-related quality of life. Principally this consists of reporting on how overall physical health and overall mental health vary by age, rating, body system, and other characteristics relative to U.S. population norms. In addition, we present some information about how various subscales or components of physical and mental health vary by these same characteristics. Before we present the results, we describe the measures used to compute these health scales and subscales.

3.1.1 Health scales

The questions on health-related quality-of-life that we used in the Veterans Survey and Survivors Survey are based on two closely-related health surveys, the SF-12™ and the SF-36™, the latter of which is "the most widely-used health survey throughout the world" [14]. Both of these health surveys have their origins in the Medical Outcomes Study (MOS), which was a multi-year study of variation in physician practice styles and patient outcomes. The MOS had a core survey of 116 items for measuring health-related quality-of-life. Because part of the study required relatively quick screening of a large number of patients, a 20-item "short form" (SF) survey, called the SF-20, was developed using 20 of the 116 questions. When some weaknesses were identified in the SF-20, an improved 36-item survey (the SF-36™) was developed [15]. The SF-36™ can be used to construct eight subscales measuring various dimensions of health, as well as a physical component summary (PCS) score and a mental component summary (MCS) score [16]. The eight subscales are listed in table 16. Subsequently, an even shorter health survey, the SF-12™, was developed. This shorter survey can "explain at least 90% of the variance in SF-36 physical and mental health summary measures" using only 12 of the questions from the SF-36™ [17].

Standard algorithms are used to calculate the subscales and summary scores from each individual's responses to the SF-12™ and SF-36™. These algorithms are designed to produce scores that can be used for comparisons across groups of people. When applied to data from the general U.S. population, the algorithms produce scores with means of 50 and standard deviations of 10. Note that higher scores indicate better health. This means that a group with a mean score of 45 for a particular subscale or summary score has worse health on average than the general U.S. population (for the aspect of health measured by that subscale or summary score). Also note, though, that the size of the difference between two scores does not have any clear interpretation. Thus, if one group has an average score of 40 and another group has an average score of 42, we can say that health is better in the latter group, but we cannot say "how much" better it is.

Table 16. SF-12 and SF-36 questions and health scales

Subscale	Question content[a]
Physical functioning (PF)	Vigorous activity; **moderate activity**; lift or carry; **climb several flights**; climb one flight; bend, kneel, stoop; walk more than a mile; walk several hundred yards; walk one hundred yards; and bathe or dress self
Role physical (RP)	Cut down time spent; **accomplished less**; **limited in kind**; and difficult performing
Bodily pain (BP)	Pain severity and **pain impact**
General health (GH)	**Health in general**; get sick easier; healthy as anybody; health to worsen; and health is excellent
Vitality (VT)	Full of life; **lot of energy**; feel worn out; and feel tired
Social functioning (SF)	Social impact I and **social impact II**
Role emotional (RE)	Cut down; **accomplished less**; and **did work less carefully**
Mental health (MH)	Very nervous; felt down; **felt calm**; **felt downhearted**; and been happy

a. This table shows the SF-12 questions in bold type.

For the Survivors Survey, we chose to measure health-related quality of life using the most recent version of the SF-12™, which is version 2 (SF-12v2™)[32]. Compared to the first version, the second version has improvements such as more detailed response categories for some items and simplified response categories for others [14]. We based our analysis of survivors' health-related quality-of-life on the physical and mental summary scores from the SF-12v2™.

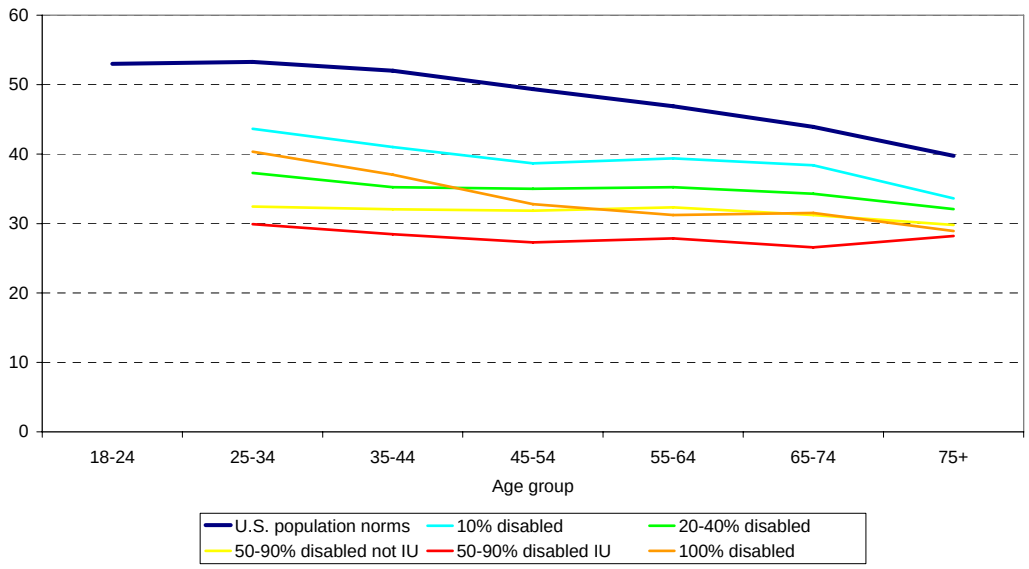
For the Veterans Survey, we used two short-form health surveys that are based on the SF-12™ and the SF-36™ and that have been developed specifically for use among veterans [18]. The Veterans RAND 36-Item Health Survey (VR-36), formerly called the Veterans SF-36, is very close to the SF-36™ but has more detailed response categories for some questions. Like the SF-36™ it allows calculation of eight subscales and two summary scores. The Veterans RAND 12-Item Health Survey (VR-12), formerly called the Veterans SF-12, is a subset of questions from the VR-36 and allows calculation of physical and mental health summary scores. For our analysis of veterans' health-related quality-of-life, we used the VR-12 to calculate physical and mental summary scores. We also included eight additional questions from the VR-36 that would allow us to calculate the following five subscales: role physical, bodily pain, social functioning, role emotional, and mental health. (Because of concerns about the length of the survey, we did not include all questions from the VR-36, which meant that we could not calculate all eight of the subscales.)

32. SF-12v2™ Health Survey (Standard, U.S. Version 2.0), copyright 1994, 2002 by QualityMetric Incorporated and Medical Outcomes Trust. All rights reserved.

3.1.1.1 Physical and mental component summaries

This section shows the health-related quality of life for service-disabled veterans as measured by the physical and mental component summaries (PCS and MCS). We present the findings generally and then work down to more granular levels. We begin with looking at the physical component summary for all service-disabled veterans by rating and age group (see figure 26). The dark blue line shows the PCS for the U.S. population. Overall it has a mean of about 50, but declines by age from about 53 to 40 between the 18-24 and 75+ age groups. This is logical as we expect physical health to decline with age. However, we don't find the decline in the PCS to be as pronounced for disabled veterans as it is for the population norms. One possible explanation for this is that the effects of old age tend to come earlier for those with a service-connected disability. Hence, while the difference between the PCS for the U.S. population and the service-disabled veterans decreases with age, we should not conclude that service-disabled veterans are getting healthier. Rather we suspect that the general population is catching up to them so to speak as the effects of old age become more prevalent.

Figure 26. Physical component summary (PCS) by age group



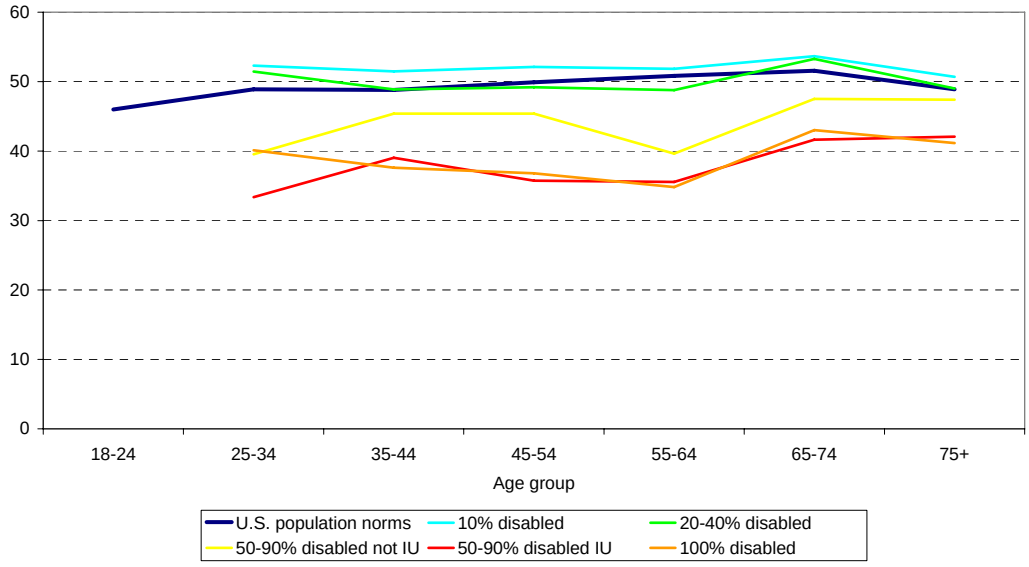
When looking at the earned income analysis, we expected to find that differences between the earned income of service-disabled veterans and their non-service-disabled peers would increase as the rating or severity of the disability increased. This is exactly what we found. We expected to find the same pattern for health-related quality of life.

Generally, this pattern holds, but it certainly isn't universal. For all rating groups, the PCS is lower than the population norm. And the PCS is lower for the 20-40 percent

group than the 10-percent group; and for the 50-90 percent group compared to the 20-40 percent group. The exception is that the health-related quality of life for the 100-percent disabled is not universally lower than for the other rating groups, and it is even higher than for the 20-40 percent group for the young age groups. This unusual pattern can be explained as we show later in this section. Also, we find that the health-related quality of life of those with IU is universally lower than for any other rating group including the 100-percent disabled.

Figure 27 shows the mental component summary for all service-disabled veterans by rating and age group. With the PCS, we found that it was lower than the population norm for all rating and age groups. This is not true for the MCS. It is essentially the same as the population norm for the 10-percent and 20-40 percent groups. Where we find differences from the population norm is for those rated 50 percent or more. The largest differences are for those rated 100-percent disabled and those with IU status.

Figure 27. Mental component summary (MCS) by age group



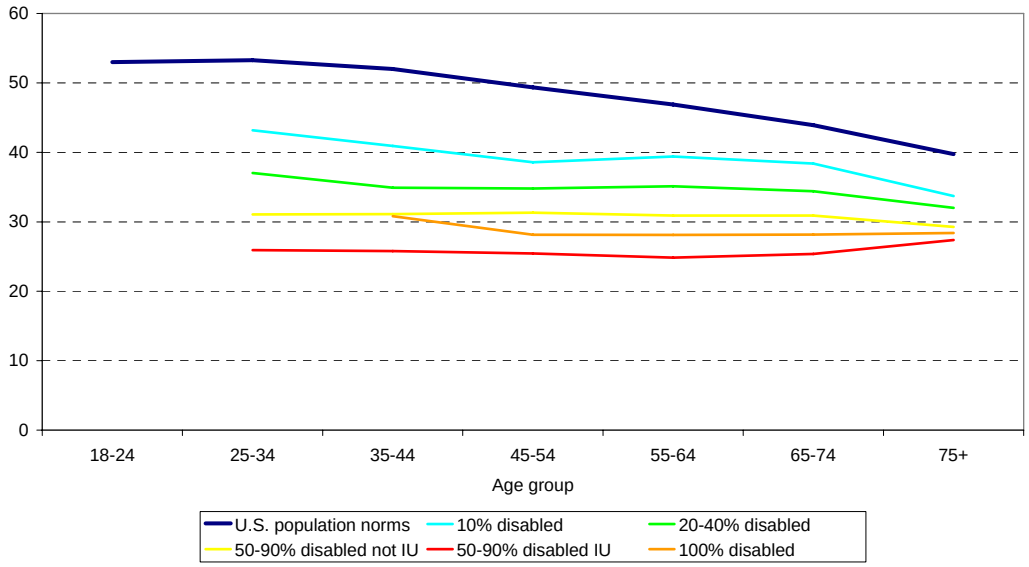
One interesting fact is that the mental component summary doesn't decline with age as the physical component summary does. This is true for the population norm as well as service-disabled veterans. Furthermore, the MCS summary for those rated 50 percent or more increases substantially for the older age groups relative to the 55-64 group. This is somewhat curious as is the PCS pattern for the 100-percent disabled.

With the earnings analysis, we found that earned income losses were substantially different for those with physical versus mental disabilities. We suspected that the same thing might be happening with health-related quality of life. In other words, if the mix

of disabilities varies by rating group, this could explain the curious findings with the physical and mental component summaries. In fact, the mix of body systems does change substantially across the rating groups. For example, those whose primary disability is a musculoskeletal diagnosis account for 48 and 53 percent of the 10- and 20-40-percent disabled, respectively, whereas those with a mental primary diagnosis make up 5 and 7 percent of these groups, respectively. In contrast, mental diagnoses account for 60 percent of the 100-percent disabled (without SMC) compared to only 8 percent for musculoskeletal. Hence, if the PCS and MCS patterns vary by physical and mental diagnosis, we could easily observe these curious overall patterns even when the patterns are inherently logical for physical and mental disabilities separately.

Physical primary disabilities. To look at this question, we computed the physical and mental component summaries separately for those with physical compared to mental primary disabilities. Figure 28 shows the physical component summary for those whose primary disability is in a "physical" body system.[33]

Figure 28. PCS by age group for those with a primary physical condition



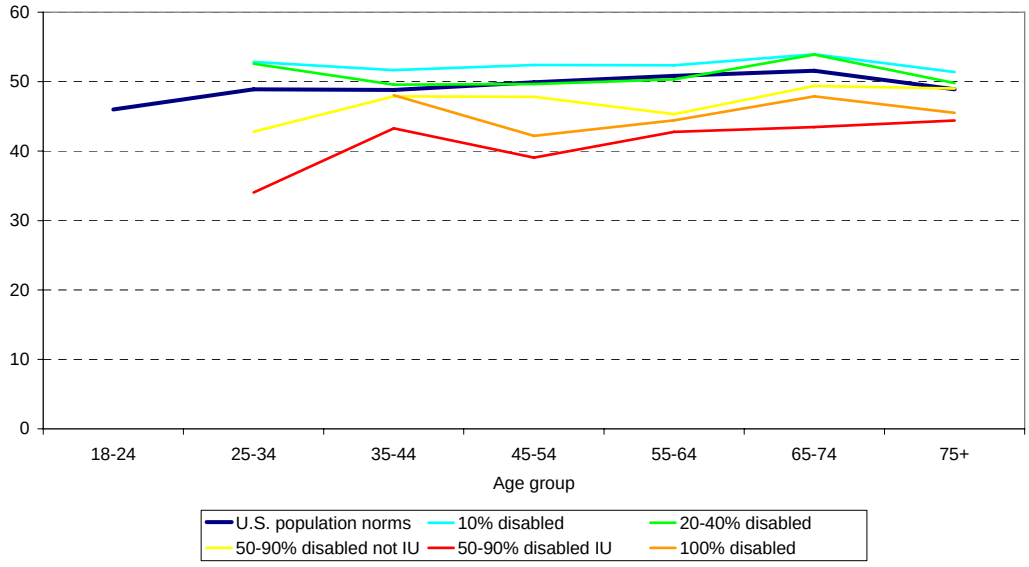
As before, we observe an impact on physical health for each rating group and the impact is greater as the rating increases. Immediately, we see that the strange pattern we observed for the 100-percent disabled when we look at all conditions goes away when we just look at physical conditions for those with a primary physical disability. It is

33. The physical body systems include all of the body systems except PTSD, mental (not PTSD), and the three SMC groups. Mental includes PTSD and mental not PTSD.

worth pointing out that the physical component summary is lowest for IU. Also, for those rated 50 percent or more, the score does not seem to vary with age. It starts low and stays low. This may be an indication that severe disabilities effectively bring on the problems of age sooner.

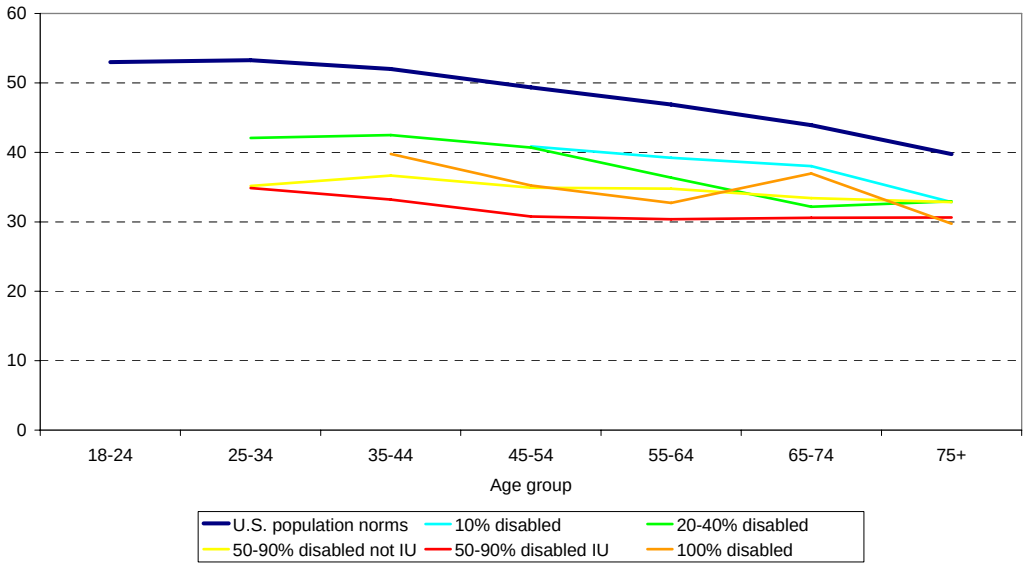
Looking at the mental component summary for those with a primary physical condition, the patterns we observe are that there are effectively no differences between those rated 10-40 percent and the population norm (see figure 29). Similarly, there is little to no difference for those rated 50-90 percent who are not IU. The only meaningful differences are in the mental component summary for the 100-percent and IU groups with IU being the lowest. To summarize, for those with a primary physical condition, we find that there is a physical quality-of-life (health) impact for all rating groups, but there is generally not a mental quality-of-life impact for the not severely disabled (not 100 percent or IU).

Figure 29. MCS by age group for those with a primary physical condition



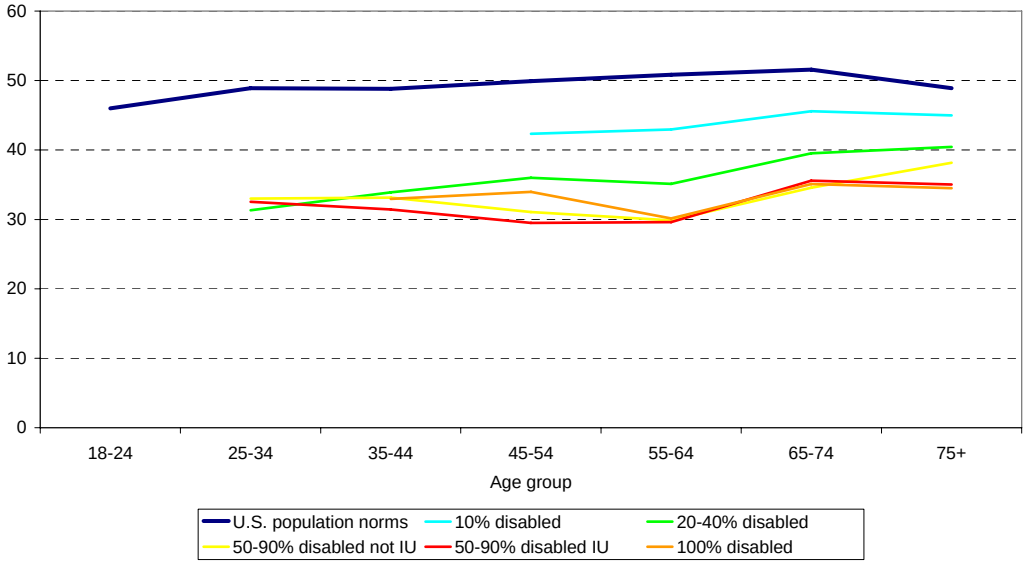
Mental primary disabilities. We now examine the results for those whose primary disability is a mental condition. As figure 30 shows, the physical component summary does not decrease systematically as the rating increases, as it did for those with a primary physical condition. But what is striking is that there is a physical impact for each rating group, including the 10-percent group. In contrast, we did not observe that there was a mental impact for those with a primary physical condition (except for the severely disabled). Again, those with IU had the lowest physical quality of life.

Figure 30. PCS by age group for those with a primary mental condition



Looking at the mental component summary for those with a primary mental condition, we observe a significant mental quality-of-life impact for every rating and age group (see figure 31). Specifically, the gap in the mental component summary for the disabled relative to the population norms is consistent even for the 10-percent group. The values for those rated 50-90 percent, 100 percent, and IU are very close together at a low level.

Figure 31. MCS by age group for those with a primary mental condition



The other curiosity we noted when looking at all conditions (physical and mental) together was the rise in the mental component summary in the older age groups for the 100-percent and IU groups. While we still observe this pattern somewhat when we look at physical and mental primary conditions separately, the rise is not as large.

Body systems. The benefit of presenting the information for all physical conditions or all mental conditions is that there is much more data to provide precision in the quality-of-life estimates. This is particularly important for younger age groups where the number of observations is low. That said, the results by body system may be of interest, so we present these results in appendix H. The evaluation or interpretation of these is much as we describe here for physical and mental primary conditions.

SMC groups. What is unique are the results for the SMC groups. Figure 32 shows the physical component summary for the three SMC groups. For each group there is a physical quality-of-life impact. The impact is relatively small for the 0-percent with SMC K compared to the impacts for those who are 100-percent with SMC S, L, M, N, or O. As expected, the physical quality of life is lowest for the 100-percent with SMC R1 or R2 as they are the most severely disabled group.

Figure 32. PCS by age group by SMC group

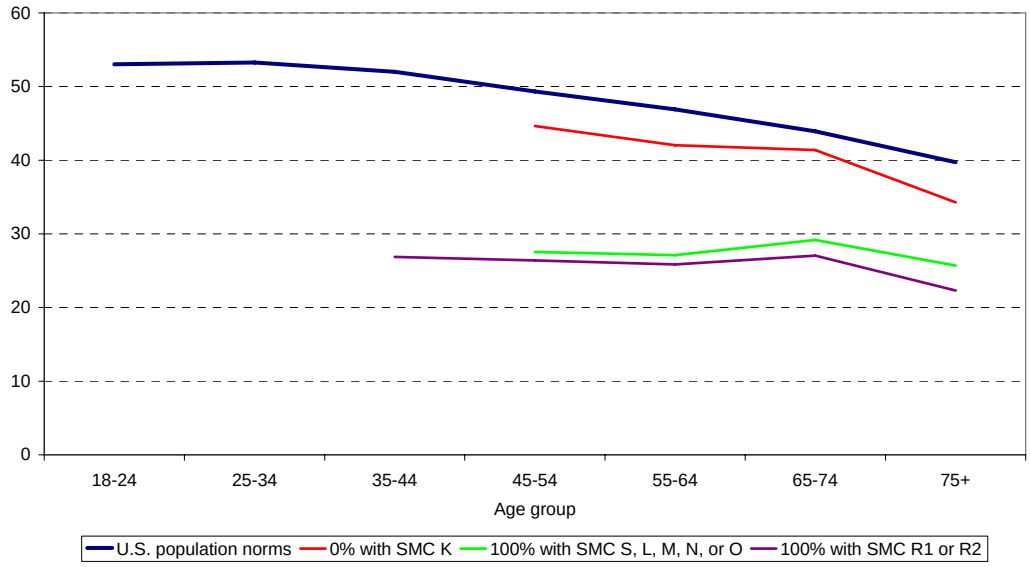
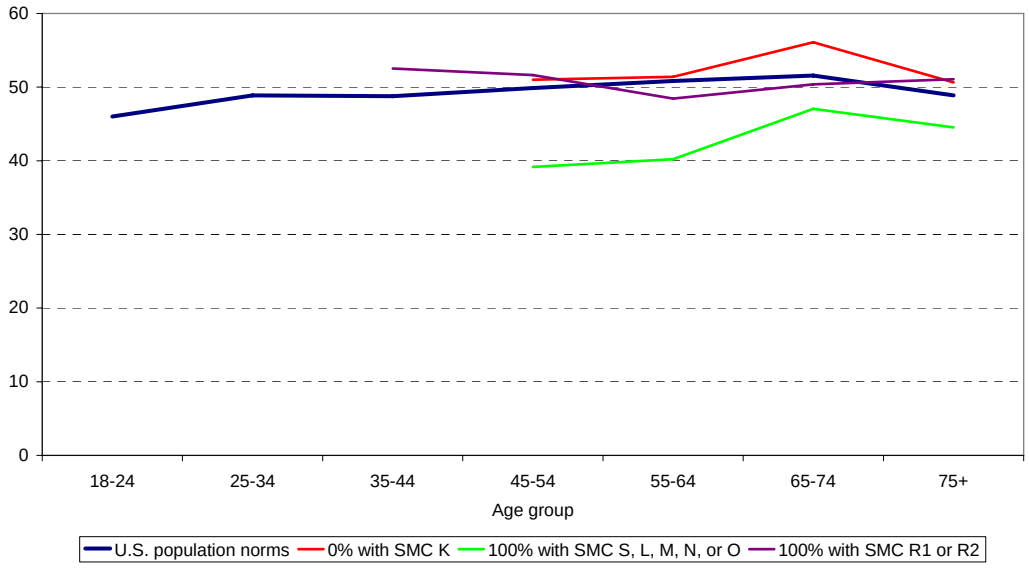


Figure 33 shows the mental component summary for the SMC groups. Not surprisingly, the mental quality of life impact is less than the physical impact. What is surprising is that those rated 100-percent with SMC R1 or R2 do not have a mental quality-of-life impact relative to the population norm while those rated 100-percent with SMC S, L, M, N, or O do. We don't have an explanation for why this would be the case.

Figure 33. MCS by age group by SMC group



3.1.1.2 Health subscales

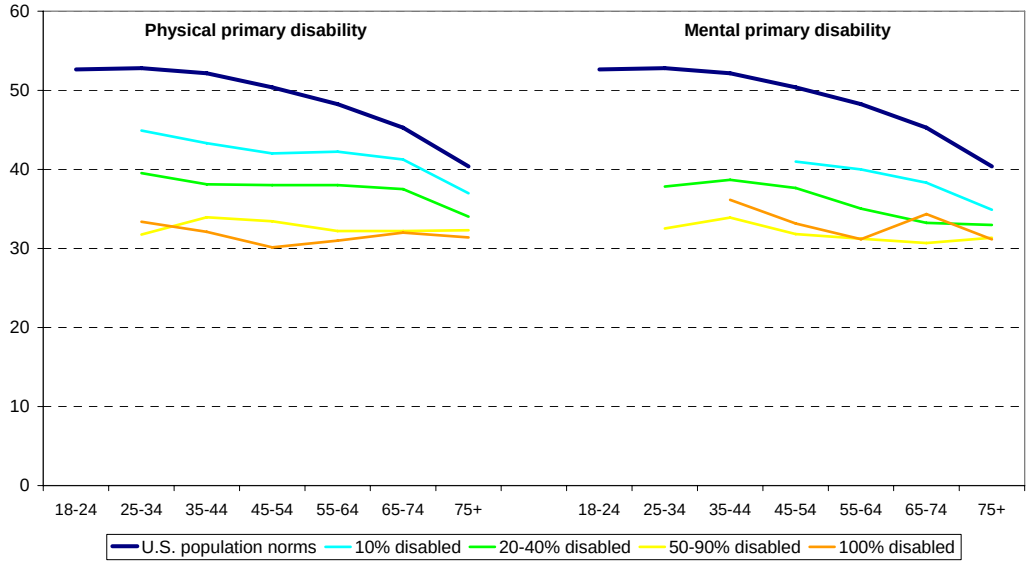
This section shows the results for the five health subscales from on the SF-36 questions. Specifically, we computed the following subscales:

- Physical health subscales
  - Role-physical (RP)
  - Bodily pain (BP)
- Mental health subscales
  - Social functioning (SF)
  - Role-emotional (RE)
  - Mental health (MH)

Subscale results. Table 16 shows the questions that these scales are based on. As with the physical and mental component summaries, we find that the subscale results are consistently different between physical and mental conditions. Additionally, we find that the results are consistent between the two physical subscales and among the three mental subscales. Given this, we present in this section the results for one physical and one mental subscale. Results for the other three subscales are in appendix I.

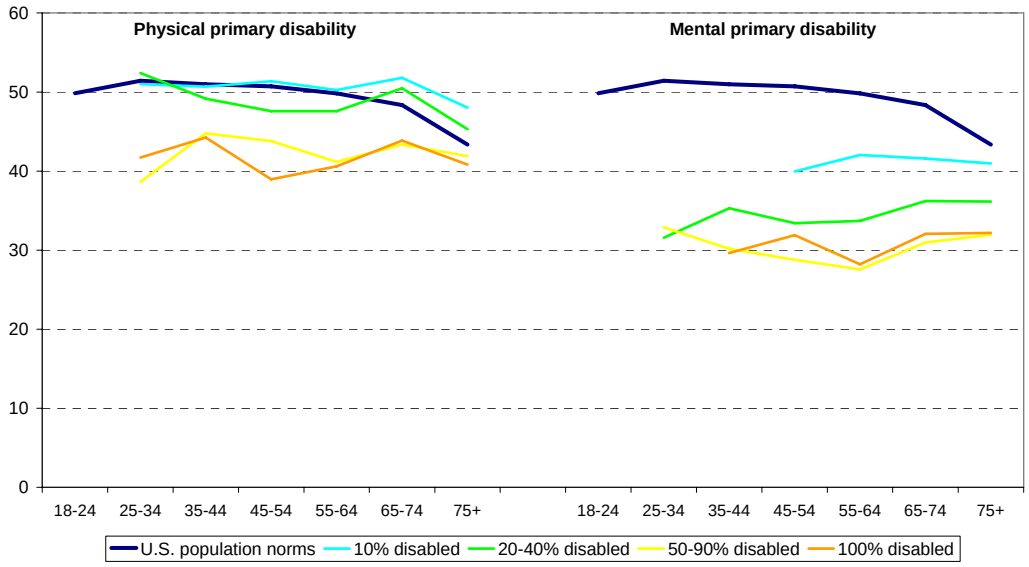
Comparing the scores for the role-physical subscale, we find a quality-of-life impact for those with either a physical or mental disability as figure 34 shows. Additionally, the physical quality-of-life impact is about the same for those with a mental condition as it is for those with a physical condition. This is consistent with the physical component summary.

Figure 34. Role-physical subscale by rating and age groups for physical and mental primary conditions



Turning to the role-emotional subscale, we see that for those rated up to 40-percent disabled with a primary physical condition, there does not appear to be a mental quality-of-life impact as measured by the role-emotional subscale (see figure 35). In contrast, there is a substantial impact for those with a mental primary condition. The figure shows that for any rating group, the impact is substantially greater for those with a mental primary condition. The findings with the role-physical and role-emotional subscales highlight the fact that those with a mental primary disability have both an impact on the quality of life as measured by these and other measures of physical and mental health. Those with a physical primary condition on average only have a physical quality-of-life impact, but not a mental impact. The exception is for those who are severely disabled. However, even for the severely disabled, the impact is greater for those with a mental primary condition.

Figure 35. Role-emotional subscale by rating and age groups for physical and mental primary conditions

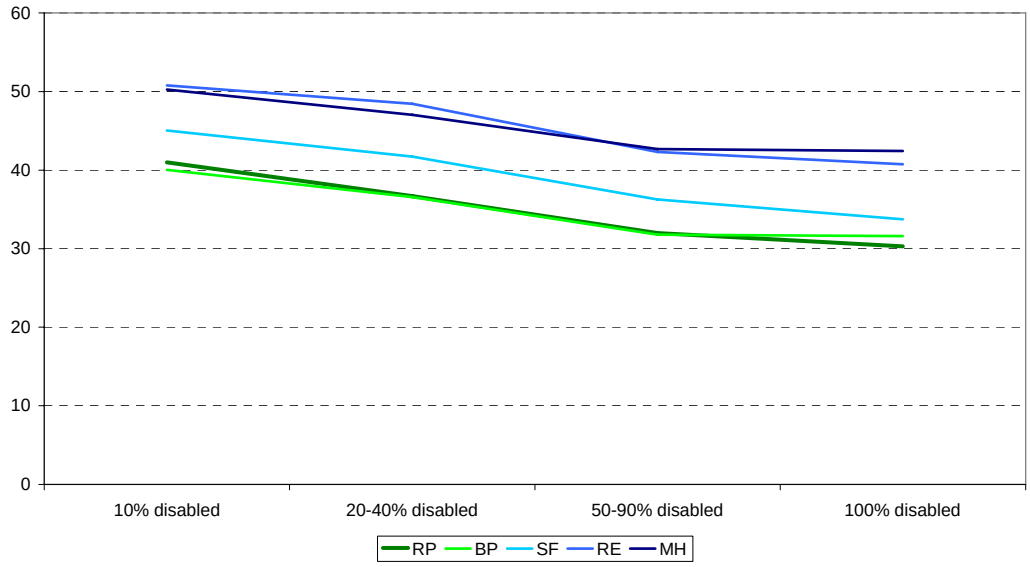


Subscales by body system. To this point we've shown that the patterns we observe for physical and mental primary conditions and physical and mental health summary scores or subscales are consistent. In particular, we've pointed out that except for the most severely disabled with physical primary conditions, there is not a "mental" health impact as measured by MCS or its subscales. This is true with the exception of the social functioning (SF) subscale.

This subscale is a measure based on questions that deal with the degree to which physical or emotional problems interfere with normal social activities with family, friends, neighbors, etc. We find that there is a significant impact in this measure of mental quality of life regardless of whether the primary diagnosis is a physical or mental condition. But, as with everything else, the impact is larger for those with a mental compared to a physical primary diagnosis.

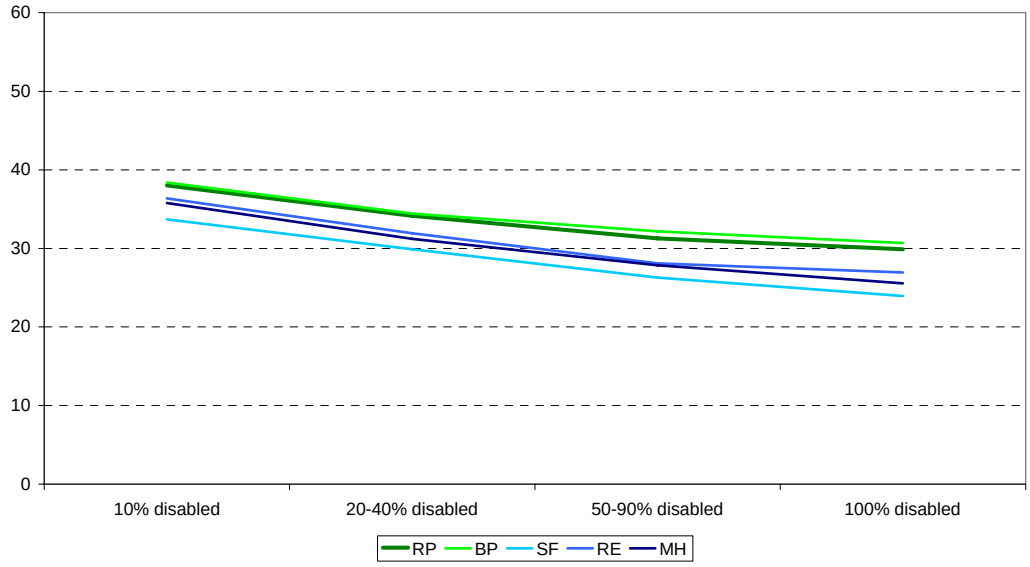
To look at this further, we computed the five subscales for each body system and rating group. This section shows those results for musculoskeletal and PTSD. The results for the other body systems are in appendix I. Figure 36 shows the subscales for those whose primary disability is a musculoskeletal condition. The two subscales for aspects of physical health are shown in green. Clearly there is an impact when we consider U.S. population norms of about 50. The three blue lines show the mental health subscales. There doesn't appear to be any impact of the role-emotional (RE) and mental health (MH) subscales for those rated 10-40 percent. However, there is an impact on the social functioning subscale for each rating group.

Figure 36. Health subscales for those with a musculoskeletal primary diagnosis by rating group



Turning to PTSD, we find as before, that there is both a mental and physical quality-of-life impact. The mental health impacts are greater, and the social functioning subscale has the lowest values of any of the five subscales (see figure 37).

Figure 37. Health subscales for those with a PTSD primary diagnosis by rating group



3.1.2 Summary of health-related quality of life

Several findings consistently presented themselves as we analyzed the survey data. They are the following:

- For those with a "physical" disability (primary disability is a physical condition), there is a statistically significant impact on physical health as measured by PCS, but there is not an impact on mental health as measured by MCS (except for the most severely disabled).
- For those with a "mental" disability (primary disability is a mental condition), there is a statistically significant impact on physical and mental health for all rating groups as measured by PCS and MCS.
- The patterns we observe for PCS and MCS hold for the various physical and mental health subscales.
- Patterns for physical and mental health are consistent across physical body systems. Similarly, they are consistent among PTSD and other mental conditions.
- While overall mental health as measured by MCS was generally the same as U.S. population norms for those with a physical primary condition, the social functioning subscale of mental health was significantly less. This is consistent across all physical body systems.
- Of the three mental health subscales we measured, social functioning consistently had the greatest decrement from U.S. population norms across all body systems.
- Those with IU status report physical and mental health that is generally less than that observed for those that are 100-percent disabled.

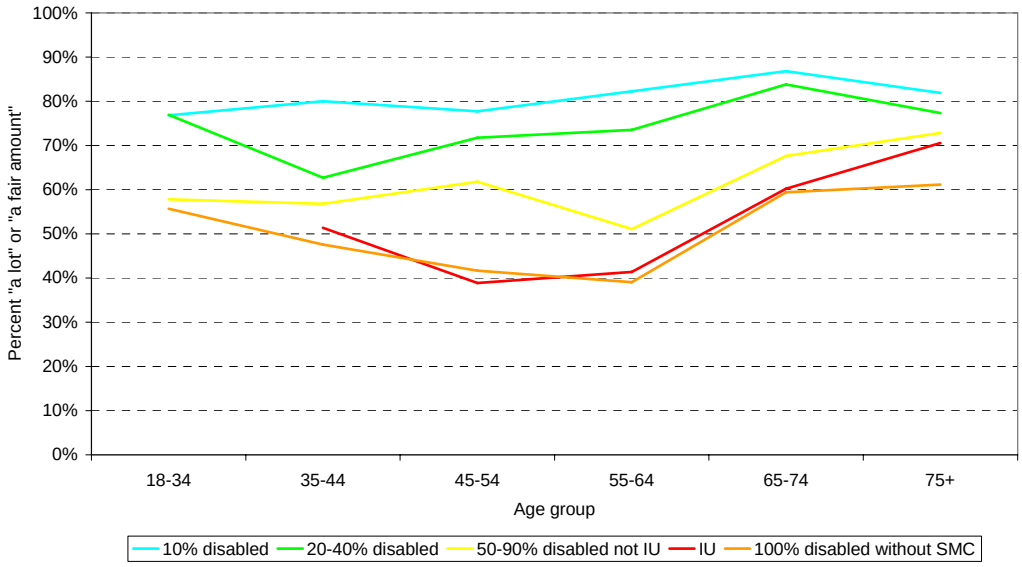
3.2 Overall quality of life

The survey asked several questions related to overall quality of life. Specifically, it asked about the satisfaction veterans got from life overall, the city/place they live in, hobbies, family, friendships, and their health/physical condition. Additionally, it asked questions regarding their general financial well-being and the fairness of VA compensation. In this section, we show the results for satisfaction with life overall and the financial questions. Results for the other satisfaction measures are in appendix J.

3.2.1 Life satisfaction overall

The survey asked respondents about their overall life satisfaction. Respondents indicated whether they had a lot, a fair amount, some, a little, or no life satisfaction. Figure 38 shows the percentage of service-disabled veterans with "a lot" or "a fair amount" of satisfaction with their lives.

Figure 38. Satisfaction with life overall by rating and age groups



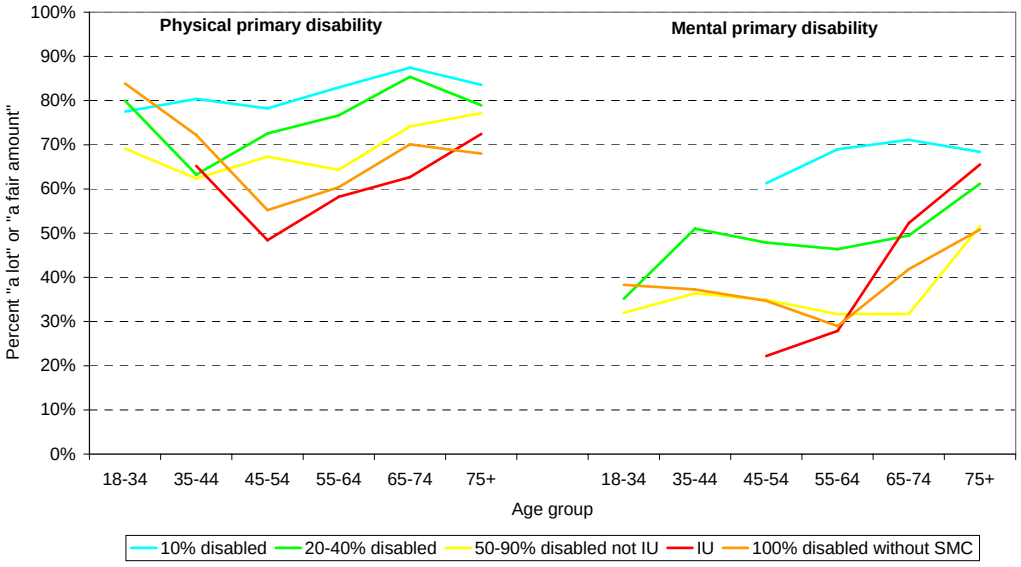
Unlike the physical and mental health-related quality-of-life measures, there are no population norms to compare the responses of service-disabled veterans against. This means that we can only compare across the rating groups. We observe substantial drops in overall life satisfaction as rating level increases from 10 percent to 20-40 percent and from 20-40 percent to 50-90 percent groups. The results are consistent in that life satisfaction is lower the higher the rating group, with IU and 100-percent disabled having about the same level overall.

As with earned income losses and health-related quality of life, there are differences by whether the primary disability is a physical or mental condition as figure 39 shows. Overall life satisfaction is less for those with a mental primary disability. This is consistent with our measure of health-related quality of life. It is also consistent with [19], which found that patients with PTSD were less satisfied with life relative to a comparison group.

Generally, the results show that life satisfaction is lower the higher the disability rating (although there are some oddities in the younger age groups). The exception is IU be-

ing less than 100-percent disabled for those with a physical primary disability. This is consistent with the health-related quality-of-life measures.

Figure 39. Satisfaction with life overall by rating and age groups for physical compared to mental primary disabilities



3.2.2 Financial well-being and fairness of VA compensation

The Commission is concerned with the financial well-being of service-disabled veterans, so we asked about veterans' general financial picture. The survey asked whether the respondents were "pretty well satisfied," "more or less satisfied," or "not satisfied at all" with their financial situation. Figure 40 reports the percentage of service-disabled veterans who are "pretty well satisfied" with their financial situation. We do not have population norms for this question.

Two observations are worth mentioning. First, less than 30 percent of those under age 65 reported being pretty well satisfied. This figure was generally in the range of 30-50 percent for those age 65 years or more. This is logical given that older people have had a lifetime to work to provide financial stability. Second, the results are somewhat of a mixed bag when comparing across rating groups. While the 10-percent group typically has the highest percentage indicating that they were pretty well satisfied, 100-percent or IU groups did not have the lowest percentage.

Figure 40. Satisfaction with family/personal finances by rating and age groups

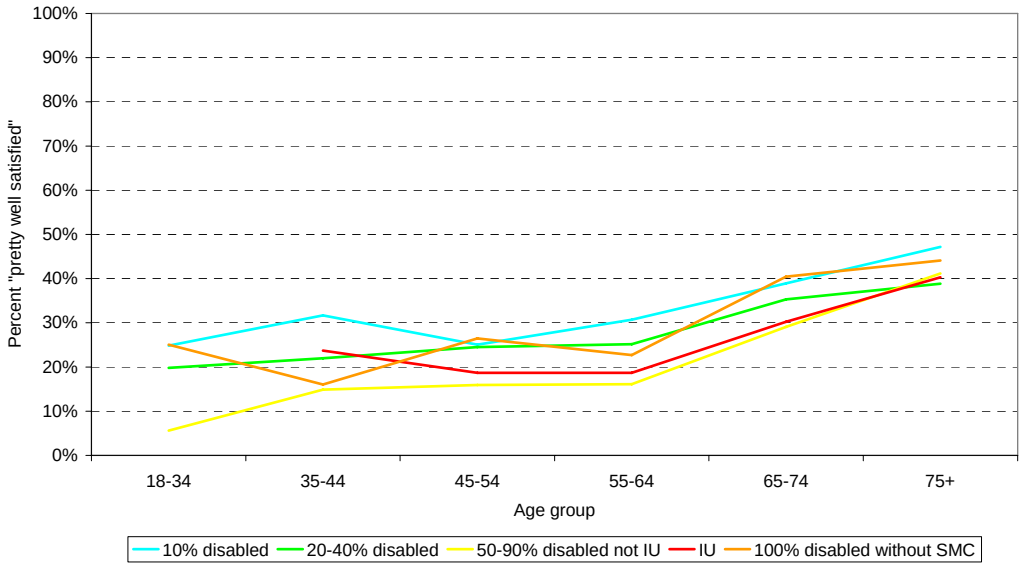
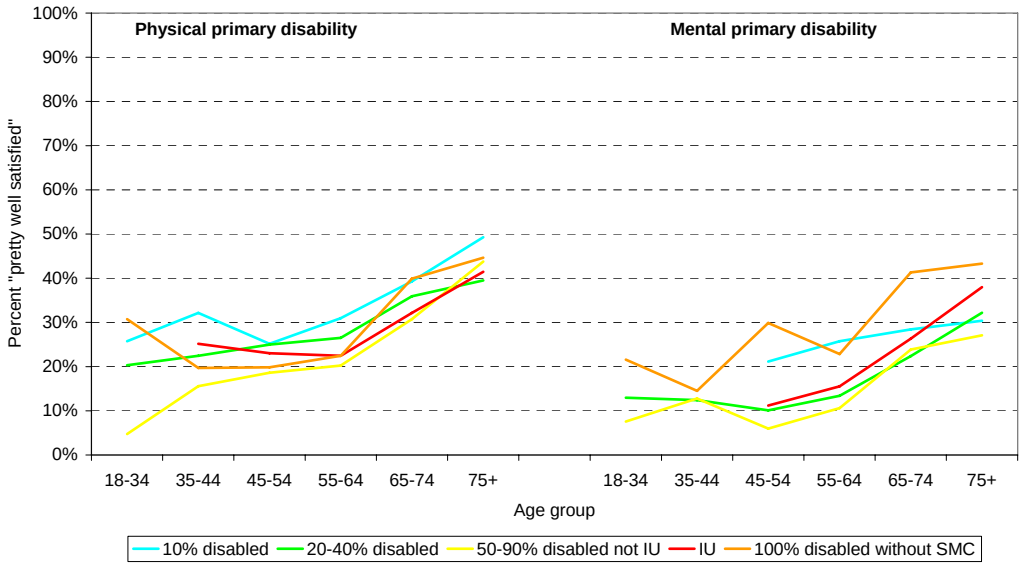


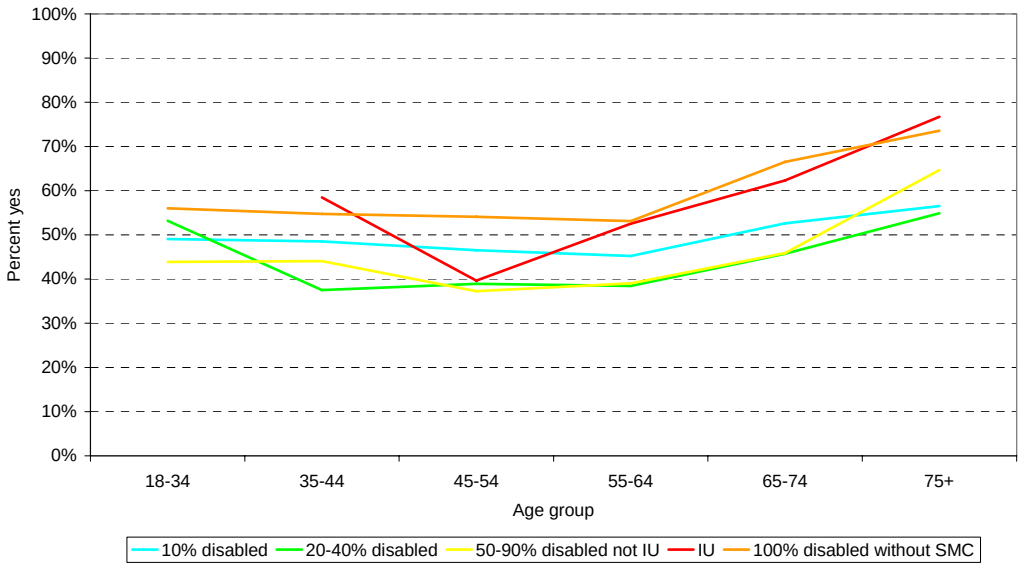
Figure 41 shows these same results for physical compared to mental primary disabilities. Still there is a pattern of rising satisfaction with age and the results do not systematically change with the rating groups for either physical or mental conditions. Additionally we see that the percentage that are pretty well satisfied is a little higher for those with a physical condition, but the difference is not striking.

Figure 41. Satisfaction with family/personal finances by rating and age groups and physical compared to mental primary disability



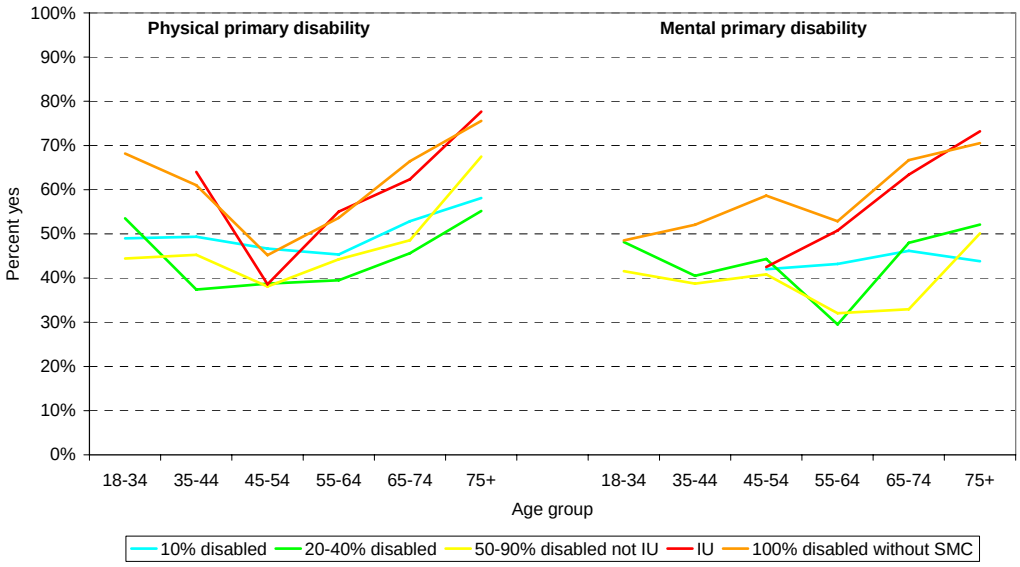
We now turn to the question of service-disabled veterans' perceptions about the fairness of VA compensation in terms of compensating them for potential earnings losses. Figure 42 shows these results. First note that those in the 100-percent or IU groups had the highest percentage saying that VA compensation fairly compensated for potential lost earnings. The group with the lowest percentage was the 20-40 percent group. This is somewhat peculiar. One possibility is that these veterans may not think that the 20-40 percent compensation is unfair, but they may be unhappy that they weren't rated higher than they were.

Figure 42. Fairness of VA compensation for lost earnings by rating and age groups



Looking at the results by physical compared to mental primary disabilities, we find the same patterns that we observed overall. But, unlike with overall financial well-being, we do not see a meaningful difference across physical and mental disabilities between the percentages that think VA compensation fairly compensates for potential lost earnings (see figure 43).

Figure 43. Fairness of VA compensation for lost earnings by rating and age groups and physical compared to mental primary disability



3.3 Implicit quality-of-life payments

Now that we've presented the results for (1)earned income losses relative to VA compensation, (2) health-related quality of life, and (3) overall quality of life, we can put all of these results together. The purpose is to see whether there is an implicit quality-of-life payment and whether this implicit payment is consistent across various groups of veterans, which we define by age at first entry, rating group, and primary disability body system.

What is an implicit quality-of-life payment? The congressional intent of VA compensation is to "[replace] average impairment in earning capacity." If the current level of VA compensation is equal to earned income losses, there is no implicit payment or compensation for lost quality of life. If VA compensation exceeds earned income losses, there is a positive implicit quality-of-life payment. Similarly, if VA compensation is less than earned income losses, then it fails to meet the congressional intent to replace earning capacity by essentially making a negative quality-of-life payment.

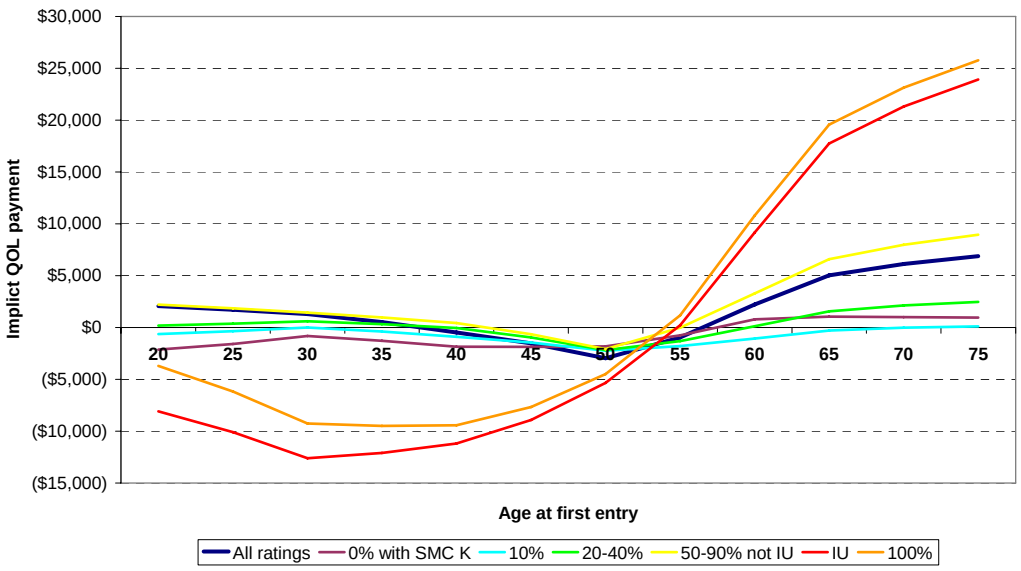
The earnings analysis chapter showed that, on average, VA compensation meets the congressional intent for service-disabled veterans as a whole and by rating group. Because VA compensation and earned income losses were roughly equal, there was no

implicit quality-of-life payment overall. This was based on estimates using the average age at first entry, which occurs in the 50s. However, if first entry occurs earlier or later in life, the story changes somewhat.

3.3.1 Payments overall and by rating group

Figure 44 shows the implicit quality-of-life payments by rating group and age at first entry for men.[34] To understand how to interpret this figure, consider the dark blue line. It represents the average implicit quality-of-life payment for all ratings combined. For first entry at age 20, the quality-of-life payment is about $2,100 annually, and for first entry at age 50, it is a negative $2,400. If a person enters at age 20, the implicit quality-of-life payment is $2,100 annually for the rest his/her life. Note that it does not decrease to a negative payment of $2,400 at age 50 and then increase to a positive payment of $6,900 at age 75. The estimates in the figure show that average annual implicit quality-of-life payment for the reminder of life based on the entry age.

Figure 44. Implicit quality-of-life payment by rating group and age at first entry (men)



Looking at figure 44, it seems clear that for those rated 0 to 40 percent, there is virtually no—positive or negative—implicit quality-of-life payment. It is generally close to 0 and of a relatively small magnitude. This is also true for those rated 50-90 percent (not IU) except for first entry at older ages where there is a positive quality-of-life payment.

34. Appendix K has comparable figures from women.

Looking at those with IU or rated 100-percent disabled, we see a relatively large negative quality-of-life payment for entry at younger ages and a relatively large positive payment for entry at older ages. Yet for the average age at first entry in the 50s, it is essentially even—no quality-of-life payment—but changes significantly for the severely disabled when we move away from the average age at first entry.

The concept of implicit quality-of-life payments may not be intuitive, so we present in table 17 the same underlying data in a different way. To understand the information in the table, consider those rated IU as an example. On average these veterans receive average VA compensation of $28,352 annually.[35] If they first received IU status at age 25, they would need compensation of $38,436 annually for the reminder of their lives to compensate for or just make up for average earned income losses. Because VA compensation is $28,352 annually, they are receiving a negative implicit quality-of-life payment of $10,084 annually ($28,352 less $38,436).

Table 17. Actual VA compensation compared to that which would provide parity with earned income losses by rating group and age at first entry (men)

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
Average actual VA compensation (annual)						
All ages	1,288	3,991	11,280	28,352	30,723	8,933
Annual compensation (annuity) that would provide parity with earned income losses						
25	1,644	3,618	9,429	38,436	36,880	7,200
35	1,670	3,665	10,302	40,449	40,212	8,402
45	2,740	4,940	11,918	37,272	38,392	10,448
55	3,079	5,295	11,291	28,127	29,539	9,885
65	1,575	2,427	4,691	10,600	11,150	3,908
75	1,170	1,528	2,322	4,440	4,956	2,042

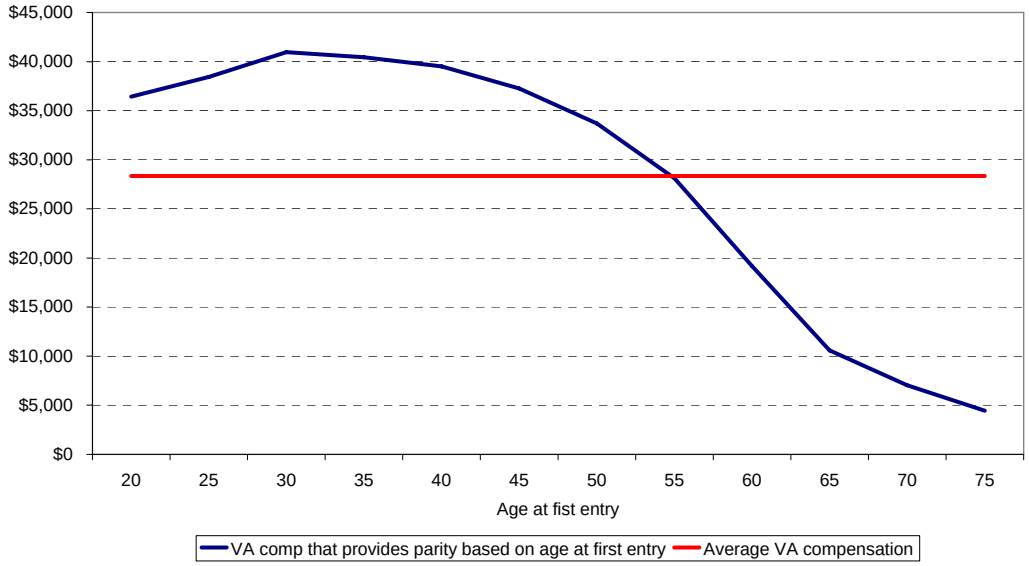
We observe that those who first receive IU status at age 55 would need $28,127 annually to replace average earned income losses. This figure is comparable to the VA compensation they receive—$28,352—meaning that these veterans receive an implicit quality-of-life payment of $225 annually.

For those who first receive IU status at age 65, an annuity of $10,600 would replace their average earned income losses. Consequently, their implicit quality-of-life payment is $17,752 annually. Hence, there can be large differences in implicit quality-of-life pay-

35. This is the compensation level as of 1 December 2005, which is the date our VA CPMR data extract.

ments depending on the age at first entry. Again, the differences are most pronounced for the severely disabled. As another way to view the data in table 17, figure 45 graphically displays the data for those with IU status as we just discussed. If the annuity necessary to replace average earned income losses (blue line) exceeds the average VA compensation (red line), there is implicitly a negative quality-of-life payment and vice versa.

Figure 45. Actual VA compensation compared to that which would provide parity with earnings losses (men with IU status)

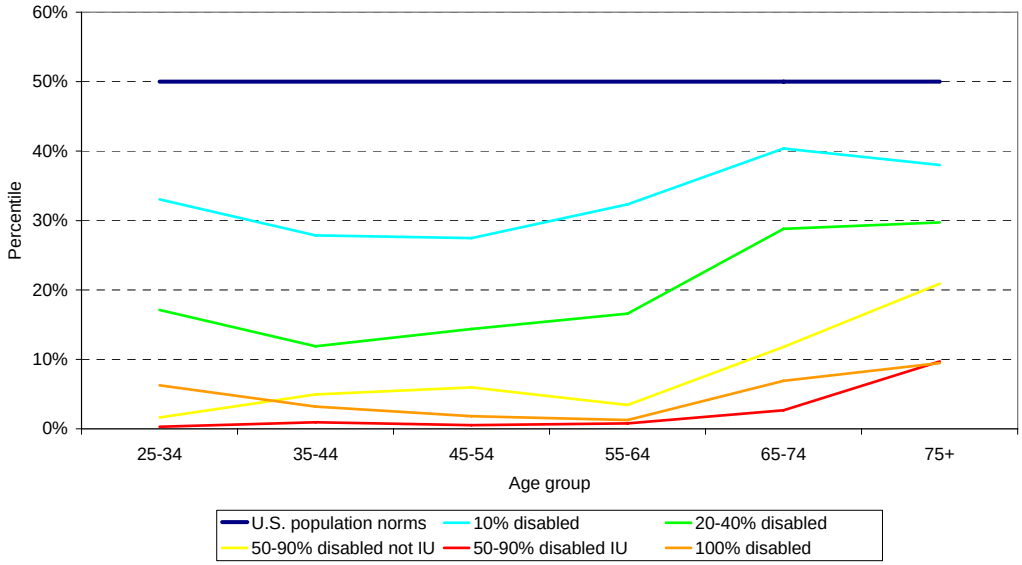


We want to add to the information on implicit quality-of-life payments the survey findings for health-related quality of life. The challenge is that we have separate measures for physical and mental health, so we need a way to combine the measures for simplicity. One way to do this is to simply add these scores together (this gives each equal weight). Furthermore, we can make the comparison more meaningful by translating the values into percentiles. Given that these health scores have by construction a mean of 50 and a standard deviation of 10, we can translate these scores into a percentile. That is, what percentage of the population would have a lower score? Keep in mind that this does not tell us how much better or worse health is between groups. It tells us the ranking only.

Figure 46 shows the percentiles for male service-disabled veterans for the physical and mental component summaries combined. Note that by construction, the U.S. population norm is the 50th percentile. We also see in the figure that the percentile generally rises after age 65 years. We also find that the downward progression of the percentile with increasing disability severity is logical. The result is that the percentiles for health-

related quality of life are extremely low for those with IU or a 100-percent disability. Specifically, it is below the 10th percentile for all groups and well below the 5th percentile for other age groups.

Figure 46. Percentile for health-related quality of life (men)



Finally, we combined the earned income analysis and the survey results to see whether there was consistency between what we observed with earned income losses and the results from the survey. Table 18 brings together the information and makes the comparison for those with a 10-percent compared to a 100-percent disability.[36] Looking first at the 10-percent group, we observe that generally there is parity between earned income losses and VA compensation. This means that there is no implicit quality-of-life payment to compensate for decrements in the health-related quality of life or overall life satisfaction.

Turning to the 100-percent group, we have negative implicit quality-of-life payments for younger first entry and positive payments for older first entry. So while there is implicit compensation for decrements in health-related quality of life and overall life satisfaction at older first entry, there is nothing for younger first entry.

36. To see the data for the other rating groups (i.e., 20-40 percent, 50-90 percent, IU, and 100 percent), see appendix L.

Table 18. Summary of earnings and quality-of-life analyses for 10-percent compared to 100-percent disabled (men)

	Age at first entry					
	25	35	45	55	65	75
	10% disabled					
Annual VA compensation	$1,288	$1,288	$1,288	$1,288	$1,288	$1,288
Annual earned income loss	$1,644	$1,670	$2,740	$3,079	$1,575	$1,170
Earnings ratio	0.99	0.99	0.96	0.93	0.97	1.03
Implicit QOL payment	($355)	($382)	($1,452)	($1,790)	($286)	$119
Overall health percentile[a]	33%	28%	27%	32%	40%	38%
Overall life satisfaction[b]	77%	80%	78%	82%	87%	82%
	100% disabled					
Annual VA compensation	$30,723	$30,723	$30,723	$30,723	$30,723	$30,723
Annual earned income loss	$36,880	$40,212	$38,392	$29,539	$11,150	$4,956
Earnings ratio	0.87	0.80	0.83	1.04	2.50	5.60
Implicit QOL payment	($6,157)	($9,488)	($7,669)	$1,185	$19,573	$25,767
Overall health percentile[a]	6%	3%	2%	1%	7%	9%
Overall life satisfaction[b]	56%	48%	42%	39%	59%	61%

a. The comparison group value is 50%.
b. There is no population norm for this measure.

3.3.2 Payments for physical v. mental primary disabilities

Table 19 shows the data used to compute implicit quality-of-life payments for those with physical compared to mental primary disabilities. The VA compensation by rating group is about the same regardless of whether the primary disability is a physical or mental condition. Consequently, the way to read the information in the table is to compare the annuity that replaces average earned income losses for those with a physical primary condition to the average annuity for those with a mental one.

Looking at first entry age of 45, for example, the average VA compensation is about $1,300 annually for those with a 10-percent disability. The annuities to replace average earned income losses are about $2,500 and $7,700 for primary physical and mental conditions, respectively. So even though VA compensation does not quite make up for earnings losses for those with a physical primary condition, it is well short for those with a mental primary condition. The pattern holds for all ages at first entry for those rated 10 percent, 20-40 percent, and 50-90 percent (not IU). The comparisons for the severely disabled (IU and 100 percent) are more comparable across physical and mental primary conditions.

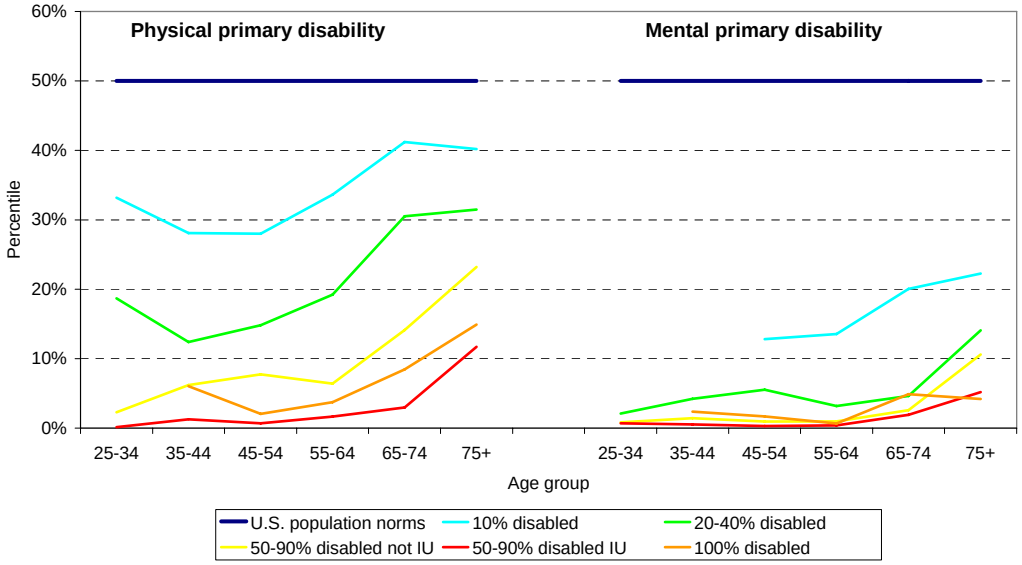
Table 19. Actual VA compensation compared to that which would provide parity with earned income losses for physical v. mental primary disability (men)

Age at first entry	Physical primary disabilities					Mental primary disabilities				
	10%	20-40%	50-90% not IU	IU	100%	10%	20-40%	50-90% not IU	IU	100%
Average actual VA compensation (annual)										
All ages	1,288	3,944	11,343	28,421	28,703	1,294	4,629	11,084	28,253	28,034
Annual compensation (annuity) that would provide parity with earned income losses										
25	1,492	3,170	7,581	38,954	31,694	6,708	11,339	15,766	37,801	38,915
35	1,503	3,185	8,351	41,051	34,510	6,855	11,864	17,521	39,494	41,857
45	2,543	4,385	10,100	37,995	33,286	7,676	12,603	17,825	35,902	39,234
55	2,915	4,826	9,934	28,798	25,782	6,549	10,744	14,571	26,567	29,926
65	1,526	2,313	4,341	10,878	9,989	2,692	4,264	5,861	9,753	11,424
75	1,142	1,487	2,205	4,547	4,427	1,591	2,181	2,793	3,970	4,878

The results by body system mirror those of physical compared to mental primary conditions with some variation. But because the results are largely the same, we don't present the results here. (See appendix K for this information.)

Figure 47 shows the percentiles for male service-disabled veterans for the physical and mental component summaries combined for those with physical compared to mental disabilities. As with all disabilities combined, we find that the veterans' percentile generally rises after age 65 years for either physical or mental conditions and a logical downward progression of the percentile with increasing disability severity. What is clear from this figure is that percentile for health-related quality of life is substantially lower for those with a mental disability. Again, this does not tell us how much worse a person's health is. It is simply a relative ranking.

Figure 47. Percentile for health-related quality of life (men)



Finally, we combined the earned income analysis and the survey results to see whether there was consistency between what we observed with earned income losses and the results from the survey. Table 20 brings together the information and compares a 10-percent physical primary disability to a mental one. It also makes the same comparison for those who are 100-percent disabled.

It is clear from this comparison that those with a mental condition fare worse. They are below parity for earned income losses giving them a negative implicit quality-of-life payment. On top of this, they have lower health-related quality of life than those with physical conditions (14 percent compared to 24 percent at entry age 55) and lower overall life satisfaction (69 percent compared to 83 percent at the same age).

Table 20. Summary of earnings and quality-of-life analyses for 10- and 100-percent disabled for physical compared to mental primary disabilities (men)

	Age at first entry					
	25	35	45	55	65	75
10% physical primary disabled						
Annual VA compensation	$1,288	$1,288	$1,288	$1,288	$1,288	$1,288
Annual earned income loss	$1,492	$1,503	$2,543	$2,915	$1,526	$1,142
Earnings ratio	0.99	0.99	0.96	0.93	0.98	1.04
Implicit QOL payment	($204)	($215)	($1,255)	($1,627)	($238)	$147
Overall health percentile[a]	33%	28%	28%	24%	41%	40%
Overall life satisfaction[b]	77%	80%	78%	83%	87%	84%
10% mental primary disabled						
Annual VA compensation	$1,294	$1,294	$1,294	$1,294	$1,294	$1,294
Annual earned income loss	$6,708	$6,855	$7,676	$6,549	$2,692	$1,591
Earnings ratio	0.86	0.85	0.81	0.79	0.86	0.93
Implicit QOL payment	($5,414)	($5,560)	($6,381)	($5,255)	($1,398)	($296)
Overall health percentile[a]	n/a	n/a	13%	14%	20%	22%
Overall life satisfaction[b]	n/a	n/a	61%	69%	71%	68%
100% physical primary disabled						
Annual VA compensation	$28,703	$28,703	$28,703	$28,703	$28,703	$28,703
Annual earned income loss	$31,694	$34,510	$33,286	$25,782	$9,989	$4,427
Earnings ratio	0.94	0.89	0.91	1.08	2.37	5.30
Implicit QOL payment	($2,992)	($5,807)	($4,583)	$2,921	$18,714	$24,276
Overall health percentile[a]		6%	2%	4%	8%	15%
Overall life satisfaction[b]	84%	72%	55%	60%	70%	68%
100% mental primary disabled						
Annual VA compensation	$28,034	$28,034	$28,034	$28,034	$28,034	$28,034
Annual earned income loss	$38,915	$41,857	$39,234	$29,926	$11,424	$4,878
Earnings ratio	0.75	0.69	0.73	0.95	2.40	5.61
Implicit QOL payment	($10,881)	($13,823)	($11,200)	($1,892)	$16,611	$23,157
Overall health percentile[a]		2%	2%	1%	5%	4%
Overall life satisfaction[b]	38%	37%	35%	29%	42%	51%

a. The comparison group value is 50%.
b. There is no population norm for this measure.
n/a There was insufficient data to estimate an entry for this cell.

3.4 Compliance with recommended medical treatment

We now turn from quality of life to examining the other issues we explored in the survey. The first is compliance with recommended medical treatment. Not following recommended medical treatment is common among the general population. Reasons for not following recommended treatment include cost of the treatment, pain associated with it, difficulty getting to the treatment, wait time for treatment, don't like to see health care providers, expect to get better without it, not convinced the treatment will work, side effects, conflicting advice from providers, etc. The point is that not following treatment is common among veteran and non-veteran, disabled and non-disabled populations.

Another reason service-disabled veterans might have for not following recommended medical treatment is a concern that doing so might impact their disability benefits. Clearly, with a large population of service-disabled veterans, there will be some who do not comply with treatment for this reason. The question is: what proportion of service-disabled veterans does this behavior apply to?

The survey asked a series of questions designed to answer this question. A series of questions is necessary because just coming out and directly asking the question would likely influence the result. In other words, the survey must indirectly approach the question, to avoid making the intent of the question obvious.

First, we asked whether during the past 12 months the veteran had at least one visit to a doctor or other health care professional. The idea behind this question is that if veterans never had a medical visit, they didn't have any recommended treatment to fail to comply with. Not surprisingly, almost all—93.8 percent—of those answering the survey indicated that they had a medical visit during the last 12 months (see table 21).

Second, for those that said they had a medical visit, we asked whether any of these were related to a service-connected disability. The intent of this question was to limit the sample to those who had the possibility to comply or not with a recommended medical treatment for a diagnosis for which they are receiving VA compensation. Of those asked this question, 72.9 percent said they had a medical visit related to a service-connected disability. Combining this with the 93.8 percent that had a medical visit, we estimate that 68.4 percent of the survey respondents had a medical visit related to their service-connected disability.

Third, for those who had a medical visit for a service-connected disability, we asked whether during the last 12 months, a doctor or other health care professional recommended a treatment related to their service-connected disability that they decided not

to accept or take at the time it was first offered. Those who answer yes to this question are candidates for failure to comply with a recommended medical treatment. We found that 8.2 percent of those asked this question said yes. Putting that figure in context of the entire service-disabled population, we estimate that 5.6 percent of service-disabled veterans failed to comply with a recommended medical treatment when it was first offered.

Table 21. Percentage not complying with recommended medical treatment

Survey question	% of those asked the question	% of total population that was surveyed
Have you had at least one medical visit in the last 12 months?	93.8%	93.8% (+/-0.74%)
If yes, were any medical visits related to your service-connected disability?	72.9%	68.4% (+/-1.31%)
If yes, did you decided not to accept or take at that time the recommended treatment?	8.2%	5.63% (+/-0.73%)
If yes, did you turn down the recommended treatment because getting it might have ended up changing your disability benefits?	4.6%	0.26% (+/-0.16%)
Have you had at least one medical visit in the last 12 months?	93.8%	93.8% (+/-0.74%)
If yes, were any medical visits related to your service-connected disability?	72.9%	68.4% (+/-1.31%)
If yes, during the past 12 months, did you start a course of treatment but end up not following it exactly or not complete it?	9.8%	6.69% (+/-0.73%)
If yes, were any of these treatments related to your service-connected disability?	70.5%	4.71% (+/-0.65%)
If yes, did you not exactly follow or complete a treatment because getting it might have ended up changing your disability benefits?	5.5%	0.26% (+/-0.21%)
Overall percentage not complying with recommended treatment		0.45% (+/-0.24%)

Fourth, for group who failed to comply with a recommended medical treatment for their service-connected disability, we read them a list of common reasons why people might turn down treatment. One of these reasons was that changing the treatment might have impacted their disability benefits. Respondents were asked to indicate all reasons that applied. The result was that 4.6 percent indicated that concern over the impact on their disability benefits was a reason they did not accept the treatment. In context of the entire service-disabled population, only 0.26 percent didn't accept the recommended treatment over concern the treatment might have on their disability benefits.

Of course, turning down recommended medical treatment the first time it was offered is not the only way people don't comply with recommended medical treatment. Some start a treatment, but don't end up following it exactly or completing it. Consequently, for those who had a medical visit for a service-connected disability, we asked whether during the last 12 months they started a treatment but didn't follow it exactly or complete it. For those asked this question, 9.8 percent said yes. In context, of the entire service-disabled population, we estimate that 6.7 percent started but did not exactly follow or complete a recommended medical treatment.

It is necessary to identify whether or not this failure to exactly follow or complete a recommended medical treatment was related to a service-connected disability. For 70.5 percent of those asked this question, it was. This means that 4.7 percent of the population fits into this group.

Finally, for those saying that they didn't exactly follow or complete a recommended medical treatment that was related to a service-connected disability, 5.5 percent indicated that concern over the impact on their disability benefits was a reason they did not exactly follow or complete it. Again, in context of the entire service-disabled population, only 0.26 percent didn't exactly follow or complete the recommended treatment over concern the treatment might have on their disability benefits.

To summarize, we estimate that only 0.45 percent of the service-disabled population do not accept, exactly follow, or complete a recommended medical treatment over concern that following the treatment might result in a change in their disability benefits. This is consistent with IOM's review of the literature that found "compensation does not in general serve as a disincentive to seeking treatment" [8].[37]

These estimates are for the entire service-disabled population. We checked to see whether the results would change substantially for any particular group of service-disabled veterans. First we compared the results with those with a physical v. mental primary disability. We found that 0.7 percent of those with a physical primary disability didn't accept, exactly follow, or complete a recommended medical treatment out of

37. Further, IOM found that "in spite of concerns that disability compensation for PTSD may create a context in which veterans are reluctant to acknowledge or otherwise manifest therapeutic gains because they have a financial incentive to stay sick, the preponderance of evidence does not support this possibility."

concern for the impact it might have on their disability benefits. For those with a mental primary disability, the figure is 0.6 percent.[38]

Similarly, we compared those 50-90 percent disabled without IU to those with IU. The figure for those without IU was 0.4 percent compared to 0.2 percent with IU. While the figure without IU is double the IU figure, both are extremely small. Additionally, this is a reflection of the fact that as the disability rating rose, veterans seemed less likely to be concerned that complying with medical treatment might impact their disability benefits. In short, we found that compliance with recommended medical treatment is not a concern.

3.5 Disincentives to work

It is well established in the economic literature that income from one source provides a disincentive to engage in employment activities [20, 21]. What we don't know is to what degree this is an issue for service-disabled veterans. We used the survey to look at this question.

As with the question of compliance with recommended medical treatment, we did not want to ask the whole sample this question. Rather we wanted to limit the question to those that it applied to. So to whom does it apply? Clearly the question is not relevant for those who are working full-time. They are fully engaged in employment activities. For those who are working part-time, it may apply if they are working part-time because full-time employment is not necessary because they have disability benefits. Similarly, for those who are not working or are retired, some might choose to work or look for work if they were not receiving disability benefits. Specifically, we looked at the disincentives to work for four groups of service-disabled veterans:

- Those who are retired and under 65 years old.
- Those who work part-time but want to work full-time.
- Those who work part-time and don't want to work full-time.
- Those who are not working and are not retired.

38. Note that these estimates of 0.6 and 0.7 percent are both higher than the population figure of 0.5 percent. This occurs because we exclude the three SMC groups for the physical v. mental comparison.

The survey results were consistent for each of these groups. Approximately one-quarter indicated that they would be working/looking for work or working/looking for full-time work (see table 22) if they did not have disability payments. This is true whether we look at the whole sample or just those under age 65.

Table 22. Percentage of service–disabled veterans who would be working/looking for work or working/looking for full-time work, by current employment status

Current employment status	Percentage[a]	Percentage for those <65[a]
Retired and <65 years old	22.9% (+/-2.1%)	22.9% (+/-2.1%)
Works part-time but wants full-time work	26.9% (+/-6.6%)	26.4% (+/-6.9%)
Works part-time and doesn't want full-time work	26.8% (+/-6.4%)	30.3% (+/-9.0%)
Not working and not retired	29.2% (+/-7.0%)	30.0% (+/-8.8%)

a. The margin of error represents the 95-percent confidence interval.

While these findings are consistent, it would be misleading to think that one-quarter of the service-disabled population would be working more if not for their disability benefits. Why? Because the estimates from table 22 are for very specific groups—not the whole population. We did not ask this question of those who are over 65 years old or those that are employed full-time. As table 23 shows, this accounts for 61 percent of the service-disabled population overall. For those with IU or rated 100-percent disabled, the employed and those who are retired and 65 or more years old represent a much smaller fraction—between 30 and 38 percent.

Table 23. Distribution of service-disabled veterans by employment status and disability rating

Group	0% (with SMC K)	10%	20-40%	50-90% not IU	IU	100% (no SMC)	100% (with SMC)	Total
Retired 65+	27.0%	30.3%	25.4%	26.1%	37.6%	27.3%	34.9%	28.2%
Retired <65	20.4%	14.8%	19.7%	31.0%	54.7%	59.9%	55.9%	26.3%
Full-time	39.6%	42.7%	40.7%	28.8%	0.4%	2.9%	3.0%	32.9%
Part-time	8.1%	5.4%	7.6%	7.8%	0.1%	2.2%	1.2%	5.9%
Not empl.	4.8%	6.7%	6.6%	6.3%	7.2%	7.6%	5.0%	6.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

If we look at the percentage of the population answering yes to the question of whether they'd be working/looking for work or working/looking for full-time work to all those who are in the labor force or retired and under age 65, we get a better feel for how common this issue is for service-disabled veterans. (This includes everyone who is not retired and more than 65 years old.) As table 24 shows, we estimate that 12 percent of the service-disabled population would be working/looking for work or work-

ing/looking for full-time work if not for their disability benefits. And if we limit our analysis to the population that is under age 65, the estimate is still 12 percent. In other words, the prevalence of this issue is not one-quarter, it is about one-eighth.

Table 24. Percentage who would be working/looking for work or working/looking for full-time work (labor force and retired under age 65) if not for their disability benefits

Rating group	Percentage[a]	Percentage for those <65[a]
0% disabled with SMC K	9.5% (+/-3.7%)	10.0% (+/-4.0%)
10% disabled	6.9% (+/-1.5%)	7.0% (+/-1.6%)
20-40% disabled	11.4% (+/-2.1%)	11.1% (+/-2.2%)
50-90% disabled not IU	18.3% (+/-2.4%)	17.7% (+/-2.4%)
IU	16.3% (+/-3.5%)	15.4% (+/-3.4%)
100% disabled (no SMC)	19.5% (+/-2.2%)	19.6% (+/-2.3%)
100% disabled (with SMC)	22.9% (+/-4.3%)	22.7% (+/-4.3%)
Total	12.4% (+/-1.1%)	12.2% (+/-1.1%)

a. The margin of error represents the 95-percent confidence interval.

We also find that the prevalence of this issue varies by rating group. Generally, it is higher for those with a higher rating. For example, it is lowest for the 10-percent disabled (7 percent) and highest for those who are 100-percent disabled with SMC (23 percent). Again, limiting the population to those who are under age 65 provides very similar estimates.

Last, we looked to see whether there were different responses it the disincentive question for those with physical compared to mental primary disabilities. The results show that there are some differences by physical v. mental primary disability, but they are not as clear cut as other differences between these groups like earned income and quality of life. For those with a rating of 40 percent or less, we find that a higher percentage of those with a mental compared to physical primary condition would be working/looking for work or working/looking for full-time work if not for their disability benefits (see table 25). For those rated 50-90 percent disabled (including IU), there is no statistically significant difference between physical and mental primary conditions. But, for the 100-percent disabled, we find that a higher percentage of those with a physical compared to a mental condition would be working/looking for work or working/looking for full-time work if not for their disability benefits.

Table 25. Percentage who would be working/looking for work or working/looking for full-time work (labor force and retired under age 65) if not for their disability benefits

Rating group	Physical primary disability		Mental primary disability	
	Percentage[a]	Percentage for those <65[a]	Percentage[a]	Percentage for those <65[a]
10%	6.7% (+/-1.6%)	6.8% (+/-1.7%)	12.1% (+/-4.1%)	11.3% (+/-4.3%)
20-40%	11.1% (+/-2.2%)	10.7% (+/-2.3%)	15.6% (+/-3.1%)	15.9% (+/-3.2%)
50-90% not IU	19.3% (+/-5.9%)	18.4% (+/-2.9%)	15.7% (+/-4.1%)	15.6% (+/-4.1%)
IU	18.2% (+/-5.0%)	16.5% (+/-4.8%)	14.6% (+/-4.6%)	14.6% (+/-4.6%)
100%	23.6% (+/-2.0%)	23.4% (+/-2.1%)	17.4% (+/-3.2%)	17.7% (+/-3.2%)
Total	11.6% (+/-1.2%)	11.3% (+/-1.3%)	15.7% (+/-1.8%)	15.8% (+/-1.9%)

a. The margin of error represents the 95-percent confidence interval.

Finally, However, we must noted that even within the 12 percent average, it could be that these individuals felt that they would have no choice but to work more if they had no VA benefits and that it might be very difficult for them to actually increase their work efforts.

3.6 Summary

The analysis of the Veterans Survey yielded several key findings. First, for service-disabled veterans with a primary physical disability, we found that their physical health scores (PCS) were below population norms for all disability levels and that the scores were in general lower as the disability level increased. In addition, having a primary physical disability was not generally associated with reduced mental health as measured by MCS. Mental health scores for those with a primary physical disability were close to population norms, although those who are severely disabled had slightly lower mental scores.

Second, for service-disabled veterans with a primary mental disability, we found that both the physical and mental component summary scores are well below population norms. This is true for each of the rating groups. This is a distinction from those with a primary physical condition, who[39] (except for the severely disabled) did not have MCS scores below population norms.

39. This is consistent with [22], which found that anxiety disorder patients have a poorer quality of life.

Third, we found that veterans failing to comply with recommended medical treatments because they felt it might impact their disability benefits does not appear to be an issue, as less than one percent of those surveyed indicated that this was a motivation for them (0.45 percent).

Fourth, the survey results indicated that only 12 percent of the service-disabled veterans indicated that they might work, or work more, if it were not for the existence of their VA benefits. Hence, we find that VA compensation providing a disincentives to work is not an issue.

This chapter also showed the combination of earnings and quality-of-life analyses. We found that there is a negative implicit quality-of-life payment for those with a severe disability (IU or 100 percent) who enter the VA system at a young age. For this same group who first enter at an older age, there is a positive implicit quality-of-life payment.

4 Surviving spouses

We conducted a parallel analysis for surviving spouses. This included analyses of earned income and quality of life. Because the analyses paralleled what we did for veterans, we don't repeat the entire analytic approach and sampling plan strategy here. For more detail on that, see the previous chapters covering the earnings and quality-of-life analyses for veterans and the master database document [5].

4.1 Survivor population

Before we present the results of the earned income analysis and the Survivors Survey, it is important to understand something about the surviving spouse population. Because the Commission's focus is on surviving spouses receiving Dependency Indemnity Compensation (DIC), when we refer to survivors, we mean those receiving DIC.

DIC is a monthly benefit paid to eligible survivors. Eligible survivors include those whose deceased spouse (1) died while on active duty, (2) died as a result of a service-related injury/disease, or (3) was receiving or was entitled to receive VA compensation for a service-connected disability that was totally disabling.[40] As of December 2005, about 302,000 survivors were receiving DIC.

Generally, the surviving spouse population is substantially older than the general U.S. adult population. As table 26 shows, 69 percent of survivors are at least 65 years old and 92 percent are at least 50 years old. The fact that the survivor population is mostly 65 or more years old is not surprising given that widows/widowers in general are older. Of particular interest given the current war are the surviving spouses under age 40 years. These "young" survivors account for about 3 percent of the surviving spouse popula-

40. For those whose spouse did not die while on active duty or as a result of a service-connected disability, there are other requirements dealing with the length of time the veteran dealt with a totally disabling service-connected condition and whether he or she was a prisoner of war. Additionally, there are eligibility rules about the marriage requirements that define a surviving spouse. See www.va.gov for more information about eligibility for DIC.

tion. Accordingly, we created a separate group for the quality-of-life survey to look specifically at young survivors.

Table 26. Survivor population distribution by age

Age group	Percent
18-29	1%
30-39	2%
40-49	5%
50-60	16%
61-64	7%
65 or more	69%
Total	100

The Commission was also concerned with how survivors fare—both in terms of earnings and quality of life—in the years immediately following the veteran's death. To study this we stratified the survivor data into those for whom the deceased veteran died less than 5 years ago or more than 5 years ago. Approximately, 24 percent of survivors' veteran spouses died less than 5 years ago.

Additionally, the Commission wanted to see if there were differences between survivors by whether or not the military retirement (pension) benefits were offset for the Survivors Benefits Plan (SBP). Without this SBP offset, the pension benefit would stop when the veteran died. Approximately 17 percent of survivors had an SBP offset, and we tailored both the earnings and quality-of-life analyses to allow us to report earned income and quality-of-life measures for those with and without an SBP offset. Appendix G details our analysis and sampling plan for survivors.

4.2 Earned income analysis

We began the analysis by comparing earned income losses with the DIC that surviving spouses receive from VA. Specifically, we explore how DIC provides "a partial replacement for income lost due to the death of a service member or veteran in service-related circumstances" [4].

There are two issues here. First, the law does not define what partial replacement means. Second, income lost due to the death of a veteran is likewise not well defined. In light of these issues, we—in consultation with the Commission—compare the earned income of surviving spouses to that of their peer group, which consists of widows and widowers in the general population who are not receiving DIC. In other

words, this peer group consists of all those whose spouses have died. Some of these survivor peers had a non-veteran spouse, while others may have had a spouse who was a veteran, but who nevertheless did not qualify for DIC.

To estimate earnings for this peer group, we used the CPS data for widows and widowers. The 2004 CPS file contains 8,316 records for widows and widowers who are 18 or more years old and who are not receiving VA survivor benefits. For the 301,637 survivors receiving DIC as of 1 December 2005, we have estimated earnings just as we did with veterans—using SSA and OPM earnings data. Benefits for survivors and their peers are from the Hay Group data. Earnings and benefits combined make up "earned income." This section presents the findings for survivors overall as well as by (1) years since the veteran's death and (2) whether or not they had an offset for the Survivor Benefits Plan (SBP).

4.2.1 Employment rates and earned income findings

As we found with service-disabled veterans, we find differences between surviving spouses and their peer group. This is true for both employment rates and earned income. Figure 48 shows the employment rates for female surviving spouses. (Appendix M shows the results for male survivors.) The blue line shows the employment rate for survivors and the pink line for the peer group of widows. As an additional comparison point, the figure also shows the employment rate of females generally in the U.S. population. In either case, the employment rate of survivors is consistently below the peer group as well as the general U.S. population.

Note that this figure shows the employment profile by age group, but survivors are mostly over 65 years old (69 percent). Further, 92 percent are age 50 or older. Overall, 8 percent of survivors are employed and, for those who are less than 65, 21 percent are employed.

We find similar results when we look at earned income (see figure 49). Visually, earned income is lower relative to the peer group earned income than we found for employment rates. This is due to the combined effect of lower employment rates and lower average earned income for those who are employed. The combined effect magnifies the earned income differences when we look at average earned income for all survivors—employed or not.

Figure 48. Employment rates for surviving spouses (women)

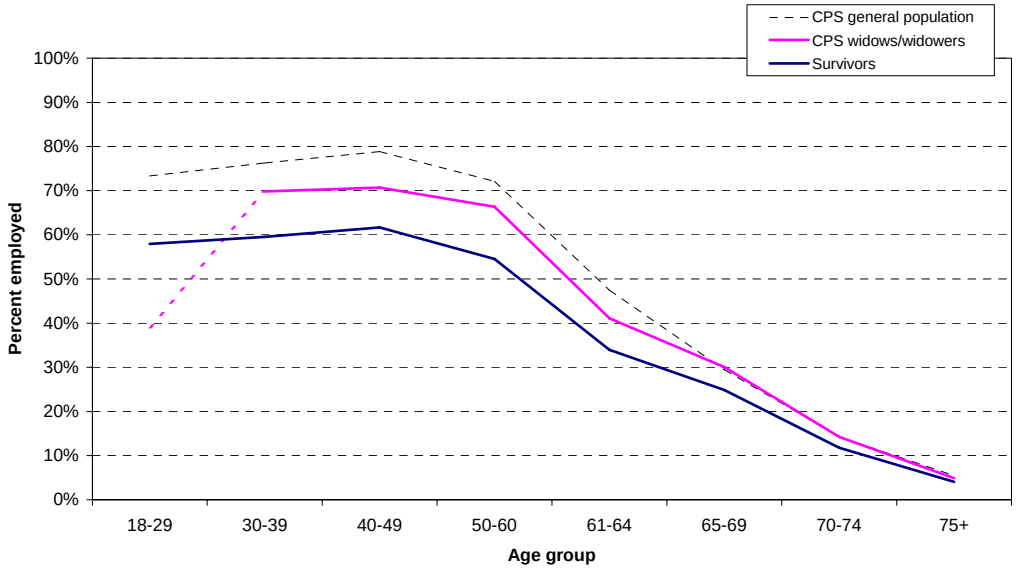
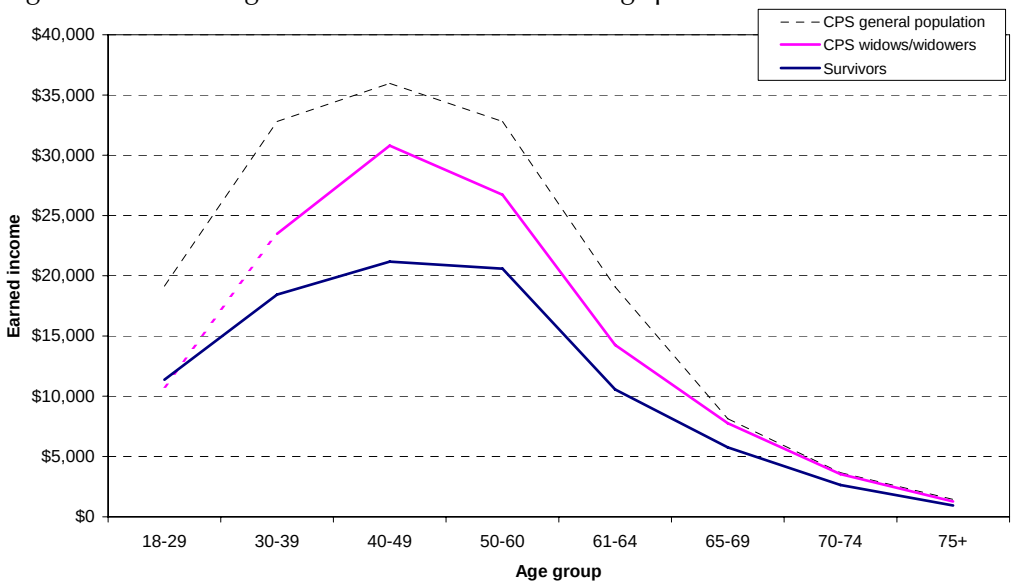


Figure 49. Average earned income for surviving spouses

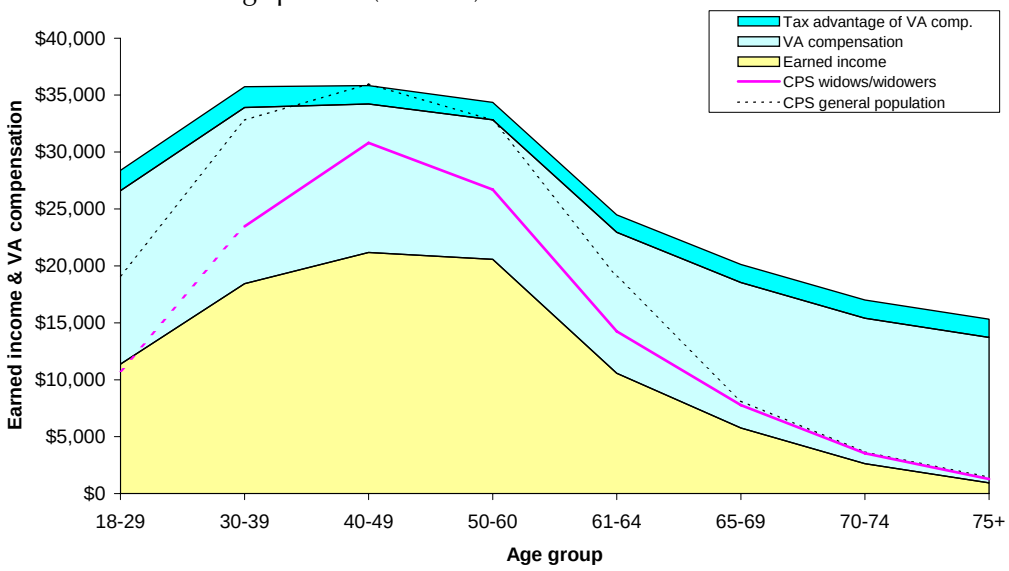


Again, most of the survivors are on the older end of this profile. Consequently, the average earned income is about $6,500 annually across all survivors and $31,100 for those survivors who are employed. For the survivors under age 65, the average earned income is $18,000 across all survivors and $35,300 for those who are employed.

Finally, we layer onto earned income the taxable equivalent of VA compensation to see visually how well DIC makes up for lost earning capacity. The result is that DIC more

than makes up for earned income losses for every age group. This is true regardless of whether we compare the earned income of survivors to the peer group or to the general U.S. population (see figure 50).

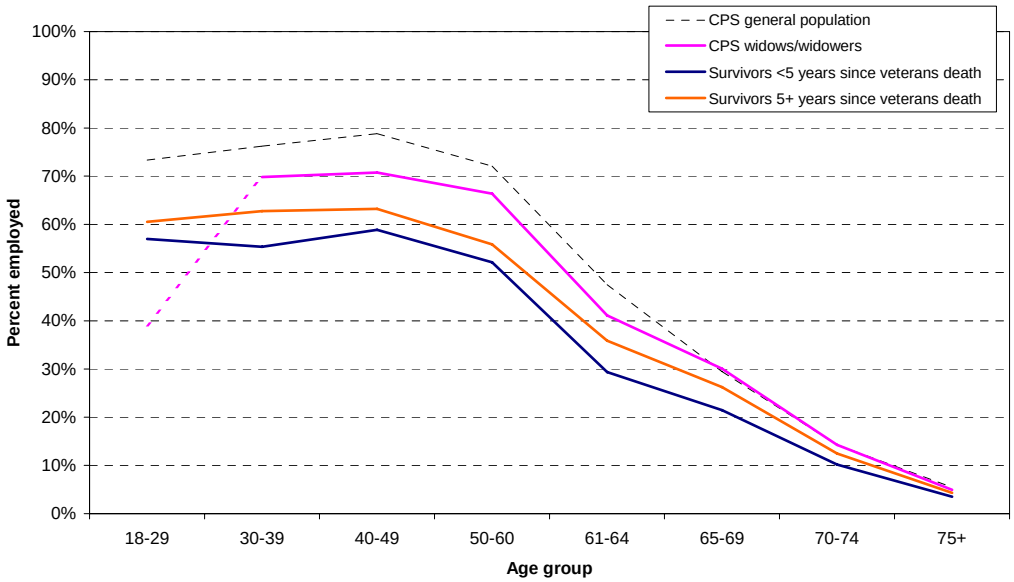
Figure 50. Average earned income and the taxable equivalent of VA compensation of surviving spouses (women)



4.2.2 Impact of years since the veteran's death

One concern is the economic impact on the surviving spouse during the transition period immediately following the veteran's death. To look as this, we grouped survivors by less than 5 years or 5 or more years since the veteran's death. For 24 percent of survivors, it has been less than 5 years since the veteran's death. As figure 51 shows, survivors whose veteran spouse has died within the last 5 years have employment rates that are consistently below those who spouse died 5 or more years ago. This is true for any age group.

Figure 51. Average employment rates for surviving spouses by years since the veteran's death (women)

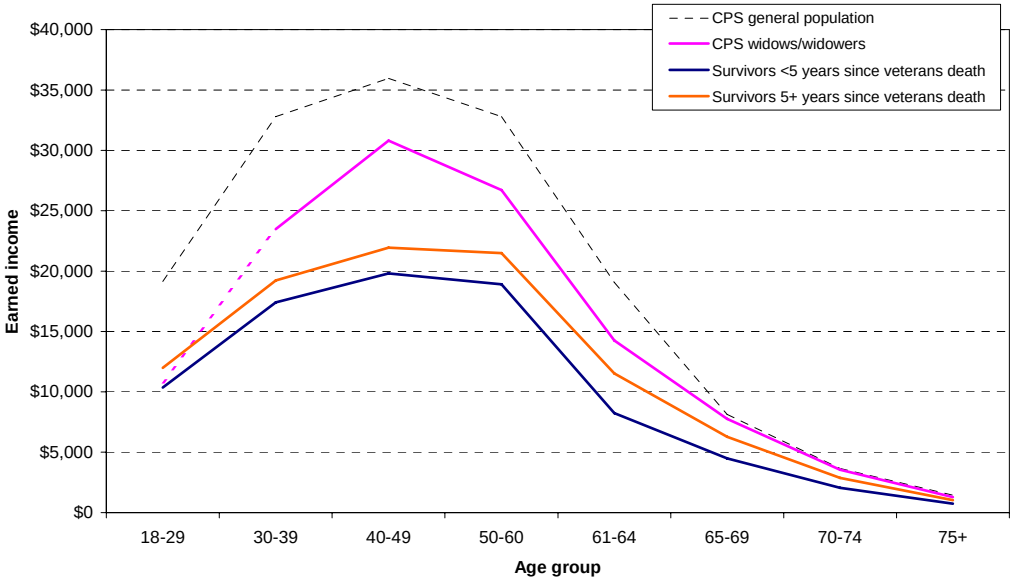


We observe similar patterns with earned income (see figure 52). Here again, the average earned income of survivors within 5 years of the veteran's death is lower than for those whose veteran spouse died 5 or more years ago.[41]

Note that the earned income profiles for those with less than 5 years since the veterans' deaths are notional. These profiles assume that the earned income of these survivors remains at the level (i.e., those with less than 5 years since the veterans' death) for the rest of their lives. In reality, of course, all survivors who continue to receive DIC will move out of this group after 5 years. So what information can we draw from these estimates? These estimates are useful because they show that the economic impact on survivors is deeper in the 5 years immediately following the veteran's death than for those whose veteran spouse died at least 5 years ago. The Commission should consider this factor when reviewing the adequacy of DIC.

41. This finding is consistent with the economic impact of other major life changes. For example, [23] found that family income typically recovers by 5 years after a divorce or job loss. Similarly, [24] found that post-birth income recovery (income returning to trend) occurred approximately 5 years past the point the child enters school.

Figure 52. Average earned income for surviving spouses by years since the veteran's death (women)



4.2.3 Impact of SBP offset

We also grouped surviving spouses by whether or not the military retirement (pension) benefits were offset for the Survivors Benefits Plan (SBP). Without this SBP offset, the pension benefit would stop when the veteran died. SBP acts somewhat like an insurance plan. Pension benefits are reduced prior to the veteran's death so that when the veteran dies, his/her pension benefits will continue for his/her spouse following the veteran's death.

Comparing survivors' employment rates for those with an SBP offset to those without, we found that survivors in their 20s and 30s with an SBP offset had lower employment rates than those without the offset. For the 40s age group and beyond, there is no meaningful difference between the employment rates (see figure 53). This difference may simply be a result of those who paid into SBP having more resources allowing more of them to remain out of the workforce while raising young families.

Figure 53. Average employment rates for surviving spouses by with and without SBP offset (women)

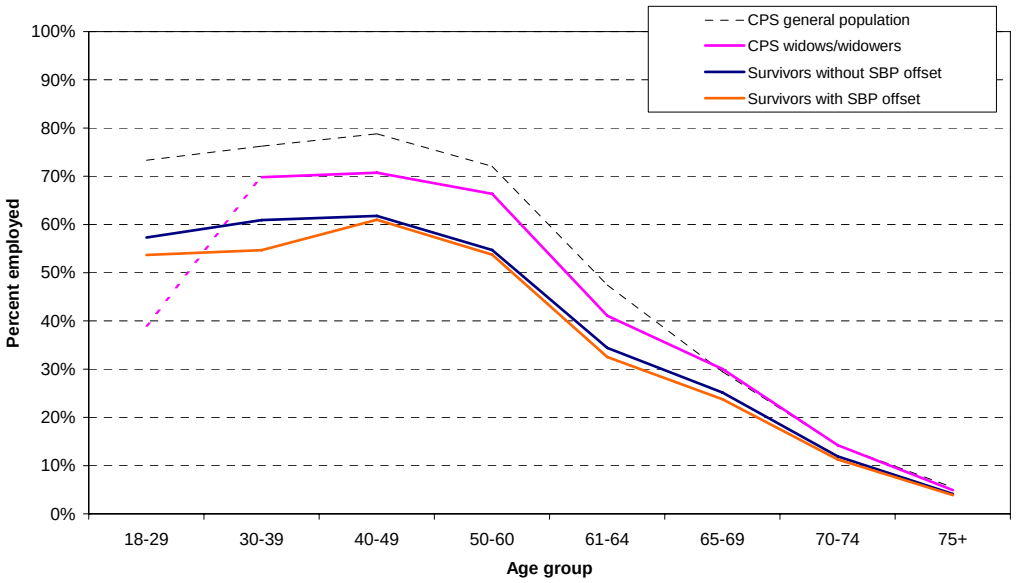
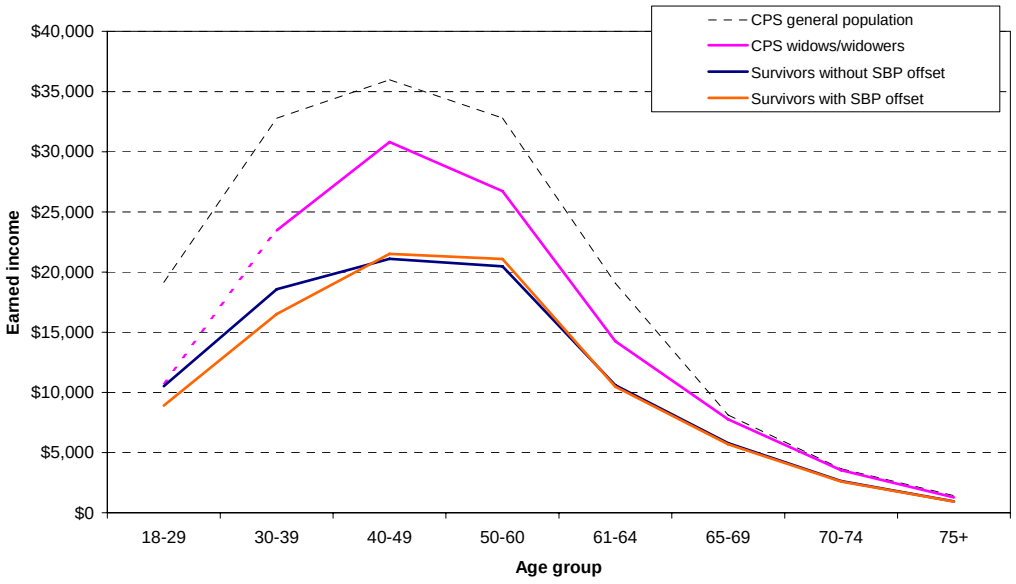


Figure 54 shows a similar pattern for average earned income. Those with the SBP offset earn less on average in their 20s and 30s than those without it. Afterwards, there are no meaningful differences in earned income between these two groups.

Figure 54. Average earned income for surviving spouses by with and without SBP offset (women)



4.2.4 Comparison of earned income losses and DIC

As with the earned income profiles for service-disabled veterans and their peers, we were able to determine how DIC provides "a partial replacement for income lost due to the death of a service member or veteran in service-related circumstances." As with veterans, we focused on average not individual earnings losses. The methodology that we used was the same as for veterans.

We made this comparison overall—for all survivors—as well as for groups of survivors defined by the years since the veteran's death and whether he/she had an SBP offset. Note that in all of our comparisons we don't combine male and female veterans. This is necessary because the earned income profiles are substantially different for men and women, and the gender mix is not constant across age groups. For example, men account for 0.56 percent of surviving spouses overall and 4.30 percent of those under age 30 but only 0.36 percent of those 50 years and older. Hence, combining the genders would bias our results.

As with veterans, the age at which benefits start is an important factor. We used the survivor's age at the time of the veteran's death for an estimate of when benefits start. Table 27 shows the average age at the veteran's death by survivor group, which is 51 years for the population of survivors receiving DIC in either 2000 or 2005. Of course, these are averages. The distribution of ages is broad as appendix N shows.

Table 27. Surviving spouse's average age at veteran's death

Group	2000	2005
<5 years since veteran's death	62	63
5+ years since veteran's death	44	48
Without SBP offset	50	50
With SBP offset	58	58
All	51	51

For all groups of surviving spouses (less than or more than 5 years since the veteran's death and with or without an SBP offset), DIC plus earned income exceeds the earned income of their peer group. Again, because the goal of DIC—that is to provide "a partial replacement for income lost due to the death of a service member or veteran in service-related circumstances"—is not well defined, we cannot determine definitively whether DIC is about at the right level.

4.3 Results from Survivors Survey

The Survivors Survey was conducted to obtain information about the effects on survivors from their spouses' disability and death, beyond the information available from an analysis of survivors' earnings. The basic purpose of the additional information is to develop a fuller understanding of whether the current survivor benefits provide sufficient compensation. The survey results that we have chosen to present in this section are the ones that most directly address that goal. To see the results from all questions on the Survivors Survey, refer to appendix O.[42]

In brief, the results discussed in this section indicate that the effects of a service-member's disability and/or death on his or her survivor often included increased worrying, the need to provide care to the veteran, negative effects from caregiving on the survivor's physical health and participation in social activities, a significant decrease in financial resources in the year after the service member's death, and possibly negative effects (from unspecified causes) on the survivor's physical and mental health.[43] However, because survivors' overall financial satisfaction is no worse than that of the general population, and nine out of ten survivors are satisfied with their DIC payments, VA compensation levels do not seem to be problematic.

4.3.1 Basic characteristics of survivors

Knowing the following basic characteristics about survivors provides a useful background for understanding other results from the Survivors Survey:

42. Note that some estimates provided in this section differ slightly from the results presented in appendix O. This is due to differences in the treatment of missing data. The purpose of appendix O is to indicate exact survey responses, and so it includes the proportion of values that were missing due to respondents' inability or unwillingness to provide information. In contrast, the purpose of this section is to provide population estimates, and so responses with missing values were excluded from the calculations. Such exclusion is appropriate under the assumption that those respondents were an unbiased subset of all the respondents and that therefore excluding them does not affect the final results. Appendix P contains the complete survey instrument.

43. On average, survivors have lower physical and mental health than the general population, but the survey data do not allow us to determine whether that is due to their experiences and situation as survivors or to other factors.

- **Age**. Most (96 percent) survivors are age 50 or older. Almost one third (31 percent) are age 80 or older.[44]
- **Gender**. Overall, more than 99 percent of survivors are female, although that proportion is lower in the younger age groups. Among survivors younger than age 40, 95 percent are female.
- **Marital status**. Most survivors are single. Only 2 percent are currently remarried.
- **Active-duty death**. Overall, for about one-fourth (24 percent) of survivors, their spouse died on active duty. That proportion is notably higher, though, for survivors under age 40, for whom 78 percent had a spouse whose death occurred while on active duty.
- **Years since spouse's death.** There is a wide range among survivors in the number of years since their spouse died. For about one third of them (32 percent), it has been 9 or fewer years since their spouse's death. For another almost equally large group (29 percent), it has been 30 or more years.
- **Survivor's age at time of spouse's death**. There is also a lot of variation in the age of survivors at the time when their spouse died. Specifically, 27 percent of survivors were under age 40, 38 percent were ages 40 to 59, 32 percent were ages 60 to 79, and 2 percent were age 80 or older.[45] This information is especially useful in understanding survivors' experiences in the year after their spouses' death, which depended to some extent on the survivors' age at that point.

4.3.2 Effect of veteran's and service member's disability and death

In this section, we begin by looking at survivors whose spouse did not die on active duty, describing the effects that the spouse's disability had on the survivor in the period before the spouse's death. We then examine all survivors and the short-term effects of their spouses' deaths. We also compare survivors' levels of health status and satisfaction to the levels in the general population for additional information on how survivors might have been affected over the longer term.

44. Note that this is more than the 92 percent we reported at the beginning of this chapter. The difference is that the former percentage was based on age in 2004 and the latter was based on age at the time of the survey, which was fielded in late 2006 and early 2007.

45. On average, it has been 21 years since the veteran died.

4.3.2.1 Effects of disability before veteran's death

In some situations where a service member did not die on active duty but instead was a disabled veteran, the veteran's spouse needed to provide care to him or her. Table 28 shows that different survivors provided different amounts of care. For about 43 percent of survivors, the veteran's service-connected disability was not severe enough to require anyone to care for some of his or her needs. For the remaining 57 percent of survivors, the veteran did require someone to help with his or her needs. This latter group can be separated into two subgroups: (1) survivors who provided a "significant" amount of care (44 percent of all survivors) and (2) survivors who might have provided some care but not a "significant" amount (12 percent of all survivors). Note that our definition of a "significant" amount of care is providing care for 4 or more hours per day at least 5 days per week for at least 2 years.

Table 28. Extent of caregiving by survivors

Need for care and extent of caregiving	Percentage
Veteran did not require care	43.4
Veteran required care	
Spouse provided a significant amount of care	44.5
Spouse did not provide a significant amount of care	12.1
Total	100.0

Source: Survivors Survey, questions A1 and A2.

The Survivors Survey tried to determine some specific areas in which caregiving might have affected survivors, including survivors' physical health. Based on answers to a direct question about how much caring for the veteran affected the survivor's physical health, there was no effect on physical health for 37 percent of survivors who provided any care but a negative effect for 57 percent of that group. Not surprisingly, the effect on the survivor was related to the amount of caregiving. Among those who provided significant care, the proportion who experienced a negative effect was 61 percent, whereas that proportion was 44 percent among those whose spouse needed care but the survivor's level of caregiving was not significant.

Similarly, the effect of caregiving on the survivor's participation in social activities was also related to the amount of caregiving. Among those survivors who provided any care, participation decreased for 83 percent. That proportion was 86 percent for survivors who provided significant care but only 70 percent for survivors not providing significant care.

For survivors whose spouse needed care, regardless of whether the survivor provided any care, the survey asked about the effect of the veteran's disability on the survivor's

mental or emotional health. Among those survivors, 86 percent "worried more about things" than they otherwise would have. The two most common concerns among those who worried more were "managing day-to-day affairs and decisions" (65 percent) and maintaining their spouse's morale (64 percent).

Regarding survivors' education/training and employment, the Survivors Survey tried to determine whether there were any effects of the veteran's disability during the period before the veteran's death. If there were any effects, the survey also asked about whether they were due to the survivor's caregiving duties and/or any reduction in the veteran's earnings due to his or her disability. Overall, the veteran's disability affected the survivor's education/training in the period before the veteran's death for only 11 percent of survivors. For 45 percent of those affected, one of the effects was that the survivor got less education/training because of caregiving activities. Other effects on the survivor's education/training came from the veteran's reduced earnings, including less education/training because of the need for the survivor to earn money (32 percent of those affected), less education/training because of inability to afford tuition for the survivor (21 percent of those affected), and more education/training so that the survivor could get a better-paying job (18 percent of those affected).[46]

Compared to the proportion of survivors (11 percent) for whom the veteran's disability affected the survivor's education/training, more survivors (33 percent) experienced an effect on their employment. The effects came from different sources for different survivors. The effect came only from caregiving for 15 percent of those affected and only from the veteran's reduced earnings for 17 percent of those affected. For most of those affected (55 percent), the effect came from both of those factors. It came from neither of those factors for 13 percent of those affected. We also know that, among the survivors experiencing an effect on their employment, 14 percent increased their work intensity and 68 percent decreased their work intensity.[47]

46. In the survey, respondents could report multiple types of effects on their education/training.

47. An "increase in work intensity" is defined as any of the following changes: started working, continued working but increased hours, switched to a more demanding job, or switched to a higher-paying job. A "decrease in work intensity" is defined as any of the following changes: stopped work entirely, continued working but decreased hours, switched to a less demanding job, or switched to a lower-paying job.

4.3.2.2 Effects after veteran's or service member's death

One of the changes for survivors after a veteran's death is a reduction in total family income due to the discontinuation of the veteran's disability payments from VA. Similarly, after the death of a service member on active duty, the family income for the survivor declines due to the loss of his or her spouse's military earnings. Although all survey respondents are DIC recipients, the DIC benefit payment is not a full replacement for that lost income. Thus, the Survivors Survey asks about financial changes for the survivor in the year after the service member's or veteran's death.

Table 29 provides information on changes in survivors' overall financial situation in the year after the veteran's or service member's death. Almost half (49 percent) of survivors experienced a change in their overall financial situation that included "a dramatic decrease in financial resources."

Table 29. Change in survivors' overall financial situation

Type of change	Percentage
No change in financial situation	26.6
Change in financial situation	
Included dramatic decrease in financial resources	48.7
Did not include dramatic decrease in financial resources	24.8
Total	100.0

Source: Survivors Survey, questions B16 and B17

The survey also provides information on the changes in employment that some survivors made in the year after their spouse's death, as shown in table 30. Among survivors who were not employed (i.e., "not doing any work either for pay or profit ... [including] work in a family business or farm") before or at the time of their spouse's death, 16 percent started work. Further, that proportion shows definite patterns by the age of the survivor at the time of veteran's death. In particular, very few survivors (less than 2 percent) ages 65 and older started work, which is not surprising, considering the availability of Medicare and Social Security benefits and the customary retirement age of 65. On the other hand, more survivors in the younger groups might have felt a financial pressure to begin earning money, and this is reflected in the fact that, among survivors who were not employed, 28 percent under age 40 and 21 percent ages 40 to 64 started work in the year after the veteran's or service member's death.

Table 30. Employment changes for survivors not employed before spouse's death

Age of survivor at time of spouse's death	Percentage of survivors who started work in the year after spouse died
All ages	15.8
Ages <40	27.8
Ages 40-64	20.9
Ages 65 and older	1.9

Source: Survivors Survey, question B3

Survivors who were employed before or at the time of the veteran's or service member's death made different types of changes to their employment. It does not appear that a large proportion of survivors felt compelled to work more to make up for reduced family income. Only 18 percent had a clear increase in work intensity, and a larger proportion (30 percent) actually had a clear decrease in work intensity.[48] Of course, some of the decrease in work intensity might not be a reflection of the survivor's financial situation. Instead, it might be a temporary involuntary decrease resulting from the personal obligations that arise in adjusting to a spouse's death.

Another adjustment that some survivors needed to make after their spouse's death was moving to a different place to live. Some (9 percent) had to move because they no longer qualified for military housing. That proportion is 11 percent for survivors who were less than 40 years old at the time of their spouse's death, 7 percent for ages 40 to 64, and less than 2 percent for ages 65 and older. A larger proportion (30 percent) had to move for financial reasons, and that proportion did not vary much across age groups.

48. As mentioned above, an "increase in work intensity" is defined as any of the following changes: started working, continued working but increased hours, switched to a more demanding job, or switched to a higher-paying job. A "decrease in work intensity" is defined as any of the following changes: stopped work entirely, continued working but decreased hours, switched to a less demanding job, or switched to a lower-paying job.

4.3.2.3 Health status

The previous discussion of measures of health status in the section on the Veterans Survey includes a description of the SF-12v2™, which is what the Survivors Survey used.[49] In brief, we used the responses to the 12 questions in the SF-12v2™ to construct a summary score for physical health and a summary score for mental health for each survey respondent. We then compared the survivors' summary scores with the summary scores for women in the U.S. population.[50]

Table 31 shows those comparisons. Specifically, it shows the mean scores for survivors and for the general population. Higher scores indicate better health, but the actual magnitudes of the scores have no direct interpretation in terms of physical or mental functionality. We present the comparisons only by age group, because, as the results show, summary scores vary by age. Because survivors on average are older than the general U.S. population, a comparison that aggregated all ages would not be very useful. In particular, it would not tell us whether the differences between survivors and the general population were due simply to the fact that survivors as a group are older.

For all comparisons where the difference between survivors and the general population is statistically significant, the results in Table 31 show that survivors have worse health. Overall, this means that survivors as a group have either the same or worse health status than the general population, depending on the age group and the dimension of health being measured (physical or mental).

49. SF-12v2™ Health Survey (Standard, U.S. Version 2.0), copyright 1994, 2002 by QualityMetric Incorporated and Medical Outcomes Trust. All rights reserved.

50. Men are omitted from these comparisons because of the very small number (21) of male respondents to the Survivors Survey.

Table 31. Physical and mental health status: comparison with general population

Health measure and age group	Means		Difference is statistically significant
	Survivors (women only)	U.S. population (women only)	
Physical summary score			
Ages 18-24	n.r.	52.97	
Ages 25-34	54.21	52.71	
Ages 35-44	45.58	51.26	*
Ages 45-54	46.80	48.20	
Ages 55-64	40.33	46.28	*
Ages 65-74	37.05	43.60	*
Ages 75 and older	33.32	39.53	*
Mental summary score			
Ages 18-24	n.r.	44.33	
Ages 25-34	45.49	47.22	
Ages 35-44	41.68	47.59	*
Ages 45-54	45.16	49.64	*
Ages 55-64	47.76	50.14	*
Ages 65-74	49.91	51.05	
Ages 75 and older	49.71	49.09	

Sources: For survivors, female respondents to the Survivors Survey, questions E1-E12 and the SF-12v2™ scoring algorithm. For the U.S. population, Table 11.4 (Norms for Females by Age Group) in John E. Ware, Jr., et al. *How to Score Version 2 of the SF-12 Health Survey*, QualityMetric Incorporated (Lincoln, Rhode Island) and Health Assessment Lab (Boston, Massachusetts), September 2005.
Notes: Results for survivors ages 18-24 are "not reportable" (n.r.) because our sample contained only 13 respondents in that age group. An asterisk (*) indicates that the difference between survivors and the general population is statistically significant at a confidence level of 95 percent.

Although these comparisons definitely show that differences in health status exist, we cannot necessarily conclude that there is something about being a survivor that is the cause of those differences. It's certainly possible that the experience of losing a spouse, and for some survivors the additional experience of coping with the spouse's disability, resulted directly in worse physical and mental health. In fact, that possibility is supported by some of the Survivors Survey results discussed earlier. However, it is also possible that survivors on average might simply have more characteristics that are generally associated with lower physical and mental health status. In that case, they would have worse physical and mental health than the general population regardless of their experiences related to being a survivor.

4.3.2.4 Satisfaction

The Survivors Survey asked a number of direct questions about survivors' satisfaction with various aspects of their lives. When asked about their satisfaction with their overall life, 74 percent of survivors indicated that they had a lot or a fair amount of satisfaction (see table 32). Unfortunately, there are no population norms to compare this result to. Generally, the level of overall satisfaction is consistent across age groups in the range of 72 to 76 percent. The exception is the 35-49 age group that had overall life satisfaction levels of 54 percent.

Table 32. Satisfaction from life overall

	Percentages				
Amount of satisfaction from life overall	Ages 18-34	Ages 35-49	Ages 50-64	Ages 65-89	All
A lot	34.7	24.3	32.4	32.8	32.8
A fair amount	37.0	29.6	43.5	41.9	41.3
Some	20.9	30.0	16.5	16.5	17.3
A little	6.5	15.3	5.9	7.1	7.1
None	0.9	0.8	1.7	1.6	1.6
Total	100.0	100.0	100.0	100.0	100.0

The question wording and the response options for the question about financial satisfaction were exactly the same in the Survivors Survey as in a nationally representative survey called the U.S. General Social Survey. This allows us to compare satisfaction levels of female survivors with those of women in the general U.S. population (see table 33).[51] As with the results on health status in the previous section, we present the comparisons only by age group because satisfaction levels vary by age and survivors on average are older than the general U.S. population.

The results of this comparison show that, for all age groups, there are smaller proportions of survivors with the lowest level of satisfaction ("not satisfied at all") compared to the general population. This of course means that overall there are larger proportions of survivors with the highest and middle levels of satisfaction, although for two age groups (35-49 and 50-64), the general population has a higher proportion with the highest level of satisfaction. Taken together, these results do not indicate that survivors have lower financial satisfaction than the general population.

51. Men are omitted from these comparisons because of the very small number (21) of male respondents to the Survivors Survey.

Table 33. Satisfaction with financial circumstances: comparison with general population

Financial satisfaction, by age	Percentages		Difference is statistically significant
	Survivors (women only)	U.S. population (women only)	
Ages 18-34			
Pretty well satisfied	33.7	21.7	*
More or less satisfied	55.4	45.0	*
Not satisfied at all	10.9	33.3	*
Total	100.0	100.0	
Ages 35-49			
Pretty well satisfied	19.4	24.2	*
More or less satisfied	53.9	43.9	*
Not satisfied at all	26.7	31.9	*
Total	100.0	100.0	
Ages 50-64			
Pretty well satisfied	24.4	32.3	*
More or less satisfied	51.4	41.0	*
Not satisfied at all	24.3	26.7	*
Total	100.0	100.0	
Ages 65-89			
Pretty well satisfied	47.6	42.0	*
More or less satisfied	45.2	43.1	
Not satisfied at all	7.3	14.9	*
Total	100.0	100.0	

Sources: For survivors, female respondents to the Survivors Survey (question F8). For the U.S. population, female respondents to the U.S. General Social Survey since 1990 (specifically 1990, 1991, 1993, 1994, 1996, 1998, 2000, 2002, and 2004).
Note: An asterisk (*) indicates that the difference between survivors and the general population is statistically significant at a confidence level of 95 percent.

Considering satisfaction more broadly, based on a survey question about their satisfaction from life overall, most (but certainly not all) survivors seem to be faring reasonably well. Specifically, about three-quarters (74 percent) of them get "a lot" or "a fair amount" of satisfaction from life overall. However, the remainder get only "some" satisfaction (17 percent), "a little" satisfaction (7 percent), or no satisfaction (2 percent).

4.3.3 Survivors' attitudes about compensation

Instead of survivors' responses to questions about the financial effect of a service member's disability and death, an alternative basis for understanding the adequacy of cur-

rent survivors' compensation is simply survivors' satisfaction with their benefits. Accordingly, the Survivors Survey included some direct questions about satisfaction with a number of different types of benefits.

4.3.3.1 Satisfaction with DIC

The survey provides evidence of good levels of satisfaction with DIC payments. A large majority (89 percent) of survivors are satisfied or very satisfied with their DIC benefit. Among the 9 percent who are dissatisfied or very dissatisfied, most (87 percent) cited the amount as a reason for dissatisfaction ("expecting to receive more benefit" and/or "the amount of the benefit").

4.3.3.2 Satisfaction with SBP

Some survivors are eligible for Survivor Benefit Program (SBP) payments as a beneficiary of their spouse. However, the SBP benefit is reduced dollar-for-dollar by the amount of any DIC payment.[52] This reduction is often referred to as an *offset* and is a potential reason for dissatisfaction with SBP, even though the survivor receives a refund of the premium costs associated with the amount of the SBP payment that has been offset by DIC. Survey results show some dissatisfaction due to the offset, but far more survivors are satisfied with SBP overall than dissatisfied. According to the survey, 71 percent of survivors who are eligible for SBP are satisfied or very satisfied with the program. Among the 24 percent who are dissatisfied or very dissatisfied, 57 said specifically that the offset was one of the reasons for their dissatisfaction. An additional 34 percent of the dissatisfied did not cite the offset but said that their reasons for dissatisfaction included "expecting to receive more benefit" and/or "the amount of the benefit." Clearly, without the offset, the SBP payment would be higher, and presumably so would satisfaction levels.

4.3.3.3 Satisfaction with other benefits

The Survivors Survey also asked about the use of, and attitudes toward, some additional benefits for which survivors are eligible. Survey results show that use of health care benefits and satisfaction with education and home loan benefits are all high. Almost three-fourths of survivors (72 percent) receive health care under the CHAMPVA (Civilian Health and Medical Program of the Department of Veterans Affairs) or TRICARE programs. In addition, about one-third (34 percent) of survivors report that they

52. A dollar of DIC payment is more valuable to the survivor than a dollar of SBP payment because the DIC payment is non-taxable, unlike SBP payments.

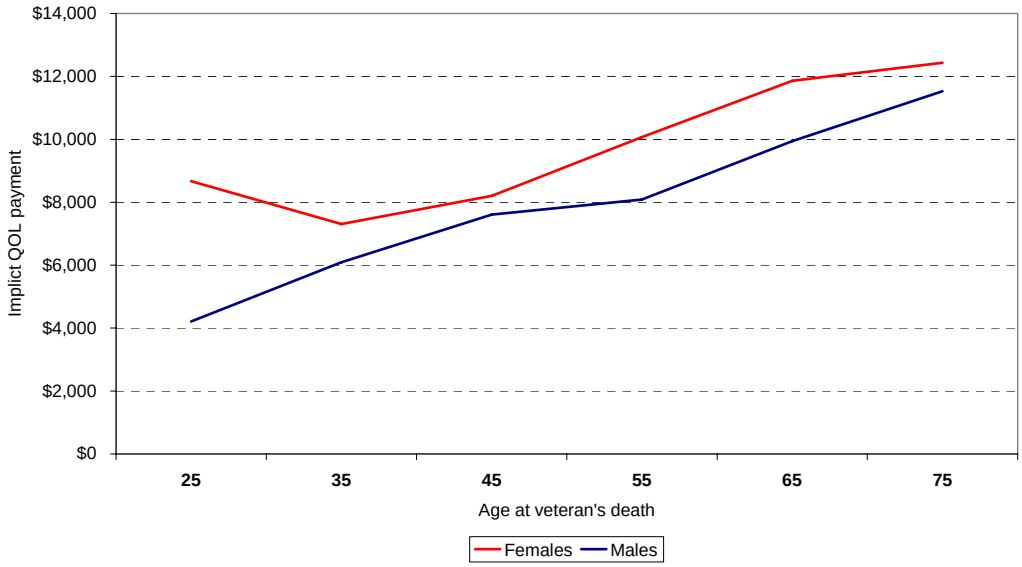
and/or their children have received financial aid from VA's Survivors' and Dependents' Educational Assistance program, and the vast majority of them (91 percent) said that they were satisfied or very satisfied with it. Similarly, 17 percent of survivors report that they have made use of VA's Home Loan Guaranty program, and 97 percent were satisfied or very satisfied.

4.4 Implicit payments for quality of life

Now that we've presented the results for earned income losses relative to DIC and their health-related quality of life, we can put all of these results together. The purpose is to learn whether there is an implicit quality-of-life (QOL) payment and whether it is consistent across the various survivor groups.

Figure 55 shows the implicit quality-of-life payment for female and male surviving spouses by their age when their veteran spouse died. It is a positive implicit payment at every age.

Figure 55. Implicit quality-of-life payments by gender and age at veteran's death



We find the same pattern of positive implicit quality-of-life payments for the various groups of survivors. Table 34 compares the annuity that would just replace average earned income losses between surviving spouses and their peers. These data are the basis for figure 55. As previously discussed, the figures for those within 5 years since the veteran's death are notional because no one remains in this group indefinitely. The

point is the earned income losses for surviving spouses in the years immediately following the veteran's death are larger on average than several years after.

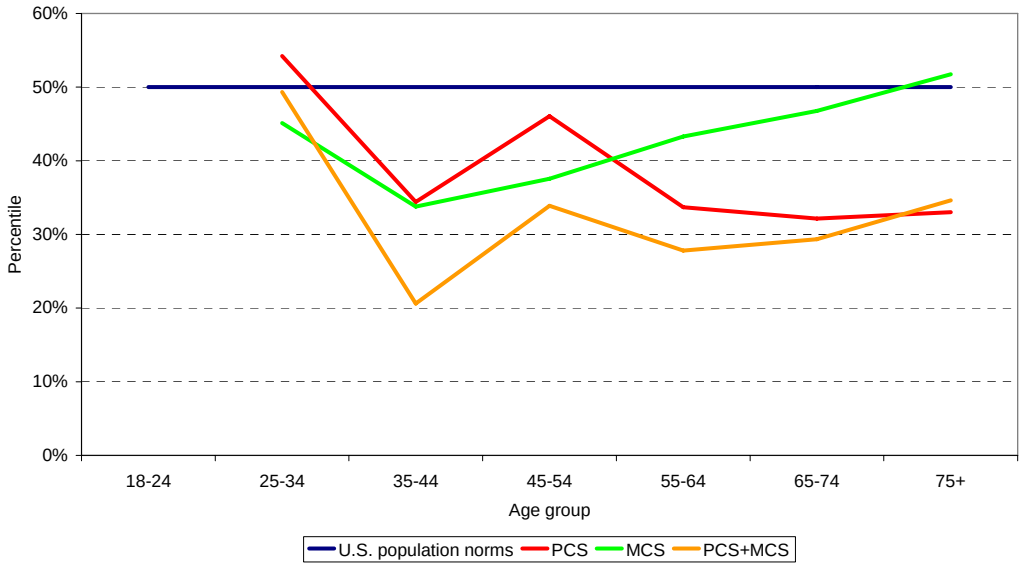
Table 34. Actual DIC compared to that which would provide parity with earned income losses

Age at veterans' death	Female surviving spouses					All male surviving spouses
	All	<5 years since vet. death	5+ years since vet. death	Without SBP offset	With SBP offset	
Average actual DIC (annual)						
All ages	12,729	12,771	12,715	12,719	12,749	13,043
Annual compensation (annuity) that would provide parity with earned income losses						
25	4,064	5,145	3,417	4,203	4,905	8,850
35	5,402	6,580	4,744	5,411	5,578	7,235
45	4,770	6,018	4,140	4,813	4,536	5,508
55	2,854	4,014	2,314	2,874	2,731	5,025
65	945	1,547	700	937	971	3,250
75	294	482	218	292	302	1,517

Table 31 showed the physical and mental component summaries for survivors. Given that these health scores have by construction a mean of 50 and a standard deviation of 10, we can translate these scores into a percentile. That is, what percentage of the population would have a lower score? Keep in mind that this does not tell us how much better or worse health is between groups. It tells us the ranking only.

Figure 56 shows the combined percentile for female surviving spouses for the physical and mental component summaries. Note that by construction, the U.S. norm is the 50th percentile. It also shows the percentiles for when we combined the physical and mental component summaries into a single overall health measure giving the physical and mental component summaries equal weight. In doing so, we find that the survivors' physical percentile falls with age; that is, it gets. relatively worse compared to the population norm. But the mental percentile increases with age and is about the same as the population norm for those who are 65 or more years old. For the physical-mental composite or overall health measure, the percentile is about the 30th percentile for most age groups.

Figure 56. Percentile for health-related quality of life (women)



Finally, we combined the earned income analysis and the survey results to see how consistently the implicit quality-of-life payment from DIC tracks relative to overall health status from the survey (see table 35). As we showed previously in this chapter, there is an implicit quality-of-life payment because DIC provides more than parity for average earned income losses. This implicit payment generally gets larger with age. This pattern bears some, but not perfect, correlation to the overall health percentile. It is about the same as population norms for the youngest group, but lower for all other age groups.

Table 35. Summary of earnings and health-related quality-of-life analyses

	Survivor's age at the time of the veteran's death					
	25	35	45	55	65	75
Annual DIC	$12,729	$12,729	$12,729	$12,729	$12,729	$12,729
Annual earned income loss	$4,064	$5,402	$4,770	$2,854	945	294
Overall health percentile[a]	49%	21%	34%	28%	29%	35%

a. The comparison group value is 50%.

4.5 Summary

There are several consistent observations and findings from the earnings analysis for surviving spouses. First, their average employment rates and earned income are consistently below those of their peer group. Second, there is a larger impact on average employment rates and earned income in the first 5 years following the veteran's death compared to those survivors whose veteran spouse died 5 or more years ago. Third, there are differences in the employment rates and earned income by whether the deceased veteran's pension had an SBP offset. For those with the offset, their employment rates and earned income were less than those without the offset, but the difference only exists for those under age 40. Finally, DIC is greater than average earned income losses for all surviving spouses of all ages at the time of the veteran's death, including when we group them by years since the veteran's death or by SBP offset.

Turning to the survey, the results indicate that the effects of a service member's disability and/or death on his or her survivor often included increased worrying, the need to provide care to the veteran, negative effects from caregiving on the survivor's physical health and participation in social activities, a significant decrease in financial resources in the year after the service member's death, and possibly negative effects (from unspecified causes) on the survivor's physical and mental health. However, because survivors' overall financial satisfaction is no worse than that of the general population, and nine out of ten survivors are satisfied with their DIC payments, VA compensation levels do not seem to be problematic. Additionally, current DIC levels provide an implicit quality-of-life payment of $7,000 to $12,000 annually depending on the survivor's age at the time of his/her veteran spouse's death.

5 Raters and VSOs surveys

As part of its mandate to "carry out a study of the benefits under the laws of the United States that are provided to compensate and assist veterans and their survivors for disabilities and deaths attributable to military service" [25], the Commission directed CNAC to gather information regarding the benefits determination process by conducting surveys of Veterans Benefits Administration (VBA) rating officials and accredited Veterans Service Officers (VSOs) of National Veterans Service Organizations (NVSOs). The conduct, findings, and conclusions of these surveys are documented in full elsewhere [2]. This chapter provides a brief summary of that document.[53]

5.1 Background, purpose, and scope

Early in its deliberations, the Commission developed a set of 31 research questions [26] to guide its work and ensure that it produced a "comprehensive evaluation and assessment of benefits" as called for in its charter [27]. Commission members decided that developing comprehensive answers to several of those questions would require insights and perspectives from those on the "front lines" of the benefits determination/disability rating process who have first-hand experience with it. This would require surveying those who determine benefits through this process or assist claimants with this process.

VBA rating officials, who apply available evidence to existing laws and regulations to determine eligibility for disability benefits—and to the existing disability Rating Schedule to rate degree (or percentage) of compensable disability—were expected to be able to provide insights into the challenges involved in carrying out the laws and regulations, and applying the Rating Schedule, to reach such determinations. VBA rating officials were also expected to provide insights into the Rating Schedule, rating process policies and regulations, and medical and related evidence in guiding those

53. Unlike with the Veterans and Survivors Surveys, we did not conduct a non-response analysis for the rater's and VSO's surveys. Conducting this analysis is impossible because we do not know the demographics of those who did not respond to the surveys. Further, potential bias is less of a concern because we sampled the entire population and achieved very respectable response rates.

determinations, from the perspective of those responsible for making those determinations. Accredited VSOs, who assist veterans and their survivors to prepare, present, and prosecute their disability compensation claims, were expected to be able to provide insights into the benefits determination and claims rating process, as well as the benefits needs of claimants and the challenges faced by both claimants and those who assist them through the process, from the perspective of those providing such assistance. Both raters and VSOs were also expected to be able to provide insights from their respective perspectives on such specific issues as coordination between the Department of Defense (DOD) and the VBA regarding the claims process, the VBA's "duty to assist" veterans with the process, and separately rating the impact of a disability on lost earning capacity and quality of life.

The VDBC directed CNAC to develop coordinated surveys of VBA rating officials (both Rating Veterans Service Representatives [RVSRs] and Decision Review Officers [DROs]) and of accredited VSOs of NVSOs, to conduct the surveys over the Internet and to direct the surveys at the complete census of rating officials and of accredited VSOs of large NVSOs, rather than at samples of these populations.

5.2 Method

5.2.1 Survey development and approvals

We reviewed the direction received from the Commission regarding the rater and VSO surveys [28] in developing an initial set of issues for the surveys, and then met with Commission staff to identify the specific issues we would include. We next reviewed previous surveys of rating officials, especially the March 2005 survey conducted by the Office of the Inspector General (OIG) of the Department of Veterans Affairs (DVA) [29], to become familiar with question format and content previously used with this survey population. We also visited a Veterans Affairs Regional Office (VARO) during which we observed the workings of the benefits determination process, and met and spoke with Regional Office (RO) managers, rating officials, and VSOs to learn about the process from their perspectives. We then developed draft surveys for raters and VSOs, which the Commission and its staff reviewed.

On our behalf, Commission staff arranged for cooperation from VBA to allow rating officials to take the survey "on the clock" while at work. VBA also provided us the email addresses of all rating officials. Commission staff also requested cooperation and support for the survey from seven large NVSOs, of which six agreed to assist us by providing email addresses of their accredited VSOs.

5.2.2 Survey content

The purpose of the rating official and VSO surveys was to gather insights from those who work on the front lines of the benefits determination and claims rating process, and to use those insights to assist the Commission in carrying out its charter and answering its research questions. The focus of the surveys was on challenges in implementing the laws and regulations related to the benefits determination and claims rating process, perspectives on how the process and Rating Schedule perform, and various specific issues of interest to the VDBC.

More specifically, between them the surveys contained the following subjects:

- Demographic and other background characteristics (e.g., years of experience as a rating official or VSO, age, veteran status)
- Training, proficiency, and resources (e.g., perceived training adequacy, useful knowledge, skills and abilities (KSAs), perceived proficiency on useful KSAs)
- Greatest challenges (top three challenges in performing job)
- Deciding, rating, or assisting specific types of claims (e.g., issues related to deciding/rating or assisting claims involving each of the body systems and significant condition types within body systems)
- Deciding or establishing specific criteria related to a claim (getting evidence to support various criteria)
- Performance of the rating process (e.g., how well the process is perceived to work, perceptions of RO performance on various specific aspects of the process)
- Performance of rating process participants (VSO rating of rating official performance and vice versa, assessment of veterans' expectations of the process)
- Some specific issues of special interest to the Commission (separately rating disability's impact on quality of life and lost earnings capacity, perceptions of computerized decision support tools, perceptions of adequacy of total compensation package)

A copy of both survey forms can be found in [2].

5.2.3 Survey protocol

We conducted both surveys over the Internet using a Web-based survey engine to collect responses. We obtained email addresses for all targeted respondents (rating offi-

cials at all VAROs and accredited VSOs at the six NVSOs that endorsed the VSO survey) and created unique links for each one to use to access their respective survey (rater or VSO) on the survey Web site. As directed by the Commission, rather than sampling from the targeted populations of rating officials at all VAROs and accredited VSOs affiliated with the NVSOs that endorsed the survey, we sent invitations to participate in the surveys to both entire populations. Participation was voluntary, and responses were confidential. We only report aggregated responses attributable to groups of respondents no smaller than 50 members.

We sent an initial email launching the VSO survey on December 6, 2006, and we launched the rating official survey on December 18, 2006. We sent several reminder emails to non-respondents who neither completed the survey nor indicated to us that they were ineligible (not being a rating official or an accredited VSO). Both surveys ran until January 31, 2007.

5.2.4 Survey analysis

We constructed separate data files for each survey, as well as a file that combined rater and VSO responses to questions that were identically worded and coded on both individual surveys. We used standard statistical techniques to assess whether there were any significant differences in how different types of respondents answered the survey questions.

When we analyzed the raters survey, we looked for whether responses varied by perceived training adequacy, perceived proficiency, years of experience as a rater, respondent role (RVSR or DRO), and veteran status. The smaller number of responding VSOs did not support similar breakdowns for that survey. When we analyzed the combined rater-VSO data file, we looked for whether responses varied by respondent type (rater vs. VSO). In all analyses, we included only those respondents who were eligible to respond to a particular survey question.

5.3 Concluding observations

The purpose of these surveys was to provide the Commission with insights and perspectives from those on the front lines of the benefits determination process—VBA rating officials (RVSRs and DROs) at the 57 VAROs, who rate and otherwise decide disability claims, and National Veterans Service Organization Service Officers (VSOs) who assist veterans and their survivors, especially at VAROs, to prepare, present, and prosecute disability claims. The findings presented in the previous section portray a picture of a benefits determination process that is difficult to use by some categories of raters, diffi-

cult to assist by many VSOs, and difficult to navigate or understand by most veterans and survivors.

The findings identify several problematic issues related to the benefits determination process that bear on the challenges inherent in implementing, assisting, and navigating the process and that are thus relevant to the deliberations of the Commission.

- Both raters and VSOs identify additional clinical input on rating teams as potentially useful, especially from physicians of appropriate specialties and from mental health professionals. VSOs identify rehabilitation specialists and medical records specialists as other potentially useful sources of input.
- There is a relatively wide range of perceived training adequacy, perceived proficiency in KSAs relevant to the performance of the rater's role, and years of rating experience among rating officials that appears to be related to raters' ability to implement the process and their ease at rating and otherwise deciding claims. Raters who feel less well-trained or less proficient and those who have fewer years of rating experience generally find the process more problematic.
- Raters' perceptions regarding their training adequacy and their KSA proficiency are both somewhat related to their perceptions of the availability of the resources they need to decide a claim such as computer system support, information and evidence, time, and administrative/managerial and clerical support. As perceived training adequacy and KSA proficiency increase, so does perceived resource availability.
- In many respects, rating or otherwise deciding mental disorder claims is generally more problematic than rating or deciding physical condition claims. Both raters and VSOs see claims with mental disorder issues, especially PTSD, as requiring more judgment and subjectivity than claims with physical condition issues. Raters and VSOs also indicate that it is less likely that mental disorder issue claims rated by different raters at the same VARO would receive similar ratings. Raters and VSOs also both indicate that deciding the various criteria of a claim is more problematic for mental disorder than for physical condition claims.
- A significant majority of raters indicate that more specific decision criteria or more specific evidence regarding individual unemployability (IU) would be helpful and that the criteria for IU are too broad.
- Rating physical conditions in several body systems or subsystems also appear problematic. Raters identified neurological and convulsive disorders, musculoskeletal disorders (especially involving muscles), and disorders of special

sense organs (especially eyes), along with mental disorders (especially PTSD), as the most difficult to rate, the most difficult to apply the Rating Schedule to, and the most time consuming to rate.

- Time to rate or otherwise decide a disability claim is a scarce resource and a major challenge for raters; it is also a challenge for VSOs and their veteran and survivor clients to get claims decided in a timely manner. Time appears to be most challenging when deciding complex claims, and raters report that they see claims getting more complex over time.
- A large majority of raters reported that they had insufficient time to rate or otherwise decide a claim, and both raters and VSOs reported that there was too much emphasis on speed relative to accuracy.
- Obtaining needed evidence, especially given the challenge and scarcity of time and the insufficiency of many medical examinations (in particular from private examiners according to raters), is a challenge in its own right.
- Separately rating the impact of a disability on quality of life and lost earnings capacity was not supported by a majority of either raters or VSOs. The use of computerized decision support technology was not supported by raters; however, raters reported that the use of standardized assessment tools and more specific criteria for rating and deciding mental health issues—especially PTSD—would be useful.
- The process is difficult for most veterans and survivors to understand and navigate. Assisting clients to understand the process and the evidence needed for it is a major challenge for VSOs. A majority of VSOs further report that they disagree that the process is satisfactory to most of their clients. A majority of both raters and VSOs indicate that they believe veterans have unrealistic expectations of the claims process and the benefit they should receive.
- Overall, most raters and VSOs report that they believe that the claims rating process generally arrives at a fair and right decision for veterans. Further, in general, raters and VSOs assessed the performance of their VSOs (and each other) as good; however, most raters reported that they believe VSOs inappropriately coach their clients.

In summary, there are some specific issues that emerged from these findings that reflect challenges inherent in the benefits determination process and that appear pertinent to the charter of the Commission.

6 Comparing disability program operations

The VDBC was also interested in operational aspects of the veterans disability compensation program. In particular, they asked us to compare the VA's program with other federal disability compensation programs in order to determine whether there are any useful practices that VA could adopt to improve its own operations. This section describes that effort. We begin with a description of the methods that we used, followed by basic information on each of the disability programs that we examined. We then discuss specific aspects of VA operations that have been identified as problematic and the approaches that the other disability programs take in those areas.

6.1 Methods

Our first task was to identify the major criticisms of operations in the VA disability program. To do that, we reviewed a variety of publicly available sources that discussed problems with VA performance. Those sources included reports from the Government Accountability Office (GAO), reports from the VA Office of the Inspector General (OIG), and congressional testimony. We also used the results of the Commission's site visits. After identifying the major criticisms of VA, we then spoke with the relevant VA staff to get the most current information on the areas being criticized. The people that we interviewed worked in VBA's Compensation and Pension Service, VBA's Office of Employee Development and Training, the Board of Veterans' Appeals, and the Office of the General Counsel. We conducted those interviews in December 2006 and January 2007.

Our next task was to determine whether VA could address some of the criticisms using "lessons" from other federal disability compensation programs. The following is a list of those programs, including brief descriptions:

- The Social Security Disability Insurance (SSDI) program and the Supplemental Security Income (SSI) program. The Social Security Administration (SSA) administers both of these programs. SSDI provides replacement income for workers who have a long-term disability that prevents them from working. SSI is a program that provides a monthly benefit payment for low-income people who are elderly, blind, or disabled.

- Workers' compensation under the Federal Employees' Compensation Act (FECA). The Office of Workers' Compensation Programs (OWCP) in the Department of Labor (DOL) administers this program. It applies to federal employees with job-related injuries, and benefits include income replacement for earnings loss due to any resulting inability to work.

- Disability retirement for federal employees. This disability benefit is provided through the Federal Employee Retirement System (FERS) and the Civil Service Retirement System (CSRS). A federal employee's eligibility for one system or the other basically depends on when he or she was hired. The Office of Personnel Management (OPM) administers both of these systems, and both provide payments to employees who cannot work due to a disability.

- Medical retirement and disability severance for military service members. The military's Disability Evaluation System (DES) is administered by the Department of Defense (DOD) and the individual service branches. The program is for military service members who become medically unfit to perform their duties. Medical retirement applies when the service member has at least 20 years of service or has a disability rating of 30 percent or higher. Otherwise, service members receive a lump sum disability severance payment.

VA's program and the other disability programs can provide multiple types of compensation, including benefits for dependents, medical benefits, and vocational rehabilitation. Therefore, we had to decide on a focus in order to keep the scope of the analysis manageable. We chose to focus only on monetary benefits and, furthermore, only on the monetary benefits that are paid to the disabled individual.

It is important to understand a major barrier in the task of determining possible lessons to be learned from other disability programs. In particular, we found that there were no formal evaluations of the effectiveness of specific practices in other programs, at least not in the areas identified as problematic for VA. This meant that we had to use a less stringent standard than formal evaluations. Our alternative approach was first to determine whether a program used a practice different from VA's and then to make a judgment about whether there was a reason that the other program's practice might be an improvement over VA's.

To obtain information about the other federal disability programs, we used sources similar to those we used for VA, particularly GAO reports, congressional testimony, and

personal interviews. The interviews were conducted January to March 2007, and we spoke with staff in the following offices:

- SSA's Office of Income Security Programs, Office of Quality Performance, Office of the Inspector General, Office of Strategic Management, Office of Human Capital Planning, Office of Training, and Office of Telephone Services
- The national office and selected District Offices (DOs) in DOL's Office of Workers' Compensation Programs
- The Disability, Reconsideration, and Appeals Group and the Quality Assurance Group in OPM's Center for Retirement and Insurance Services
- The Office of the Under Secretary of Defense for Personnel and Readiness, the Army Physical Disability Agency, the Navy Physical Evaluation Board, and the Air Force Disability Evaluation Division

6.2 Disability program descriptions

There are many differences across the disability programs in terms of purpose, administrative processes, eligibility, benefits, and size, all of which we discuss below. It is important to be aware of these differences because they determine the potential applicability for VA of lessons from the other programs.

6.2.1 Application and appeals process

Each disability program has different administrative processes for filing claims and making appeals. This section summarizes the basic steps in applying for compensation in the various programs.

For VA disability compensation, the applicant begins by filing a claim with one of VA's 57 Regional Offices (ROs). VA staff then ensure that all the necessary information is available for a Rating Veterans Service Representative (RVSR) to make a decision on the claim. If the applicant disagrees with the RVSR's decision, then he or she can file a Notice of Disagreement with the RO and request a review of the decision by a Decision Review Officer in the RO. To pursue a claim further, the applicant files an appeal with VA's Board of Veterans' Appeals (BVA). Subsequent appeals go outside the VA (to the U.S. Court of Appeals for Veterans Claims, then the U.S. Court of Appeals for the Federal Circuit, and then the Supreme Court).

For SSDI and SSI, SSA is currently switching to a new claims system, which is called the Disability Service Improvement (DSI) process. It began gradually implementing DSI across the country by region in summer 2006. The system that DSI is replacing works as follows. An applicant first files a claim with one of the SSA field offices, which then verifies the applicant's non-medical eligibility. Then the state's Disability Determination Service (DDS) makes a decision on disability. (DDSs are state agencies that are fully funded by the federal government.) If the applicant disagrees with the initial DDS decision, he or she can then request reconsideration at the DDS. A further appeal goes to SSA's Office of Disability Adjudication and Review (ODAR), and that decision can then be reviewed by SSA's Appeals Council. After that, there can be review by federal courts, starting with a lawsuit in a federal district court and potentially ending in the Supreme Court. The changes under DSI are that the first appeal is not reconsideration at the DDS but instead at the federal level by a Federal Reviewing Official. Under DSI, the next appeal still goes to ODAR, but SSA's Appeals Council is being phased out. There is no change to federal-level appeals.

For FERS and CSRS, the disability compensation process begins when the federal agency where the applicant works forwards the disability application to OPM. The Disability Division in OPM then issues a decision. The applicant can then request reconsideration by OPM, and if the applicant wants to appeal that decision, he or she can go to the Merit Systems Protection Board, which is outside of OPM.

For FECA claims, the federal agency where the applicant works submits the claim to one of the 12 DOs throughout the country. If the applicant wants to appeal the DO decision, there are three options: the Branch of Hearings and Review (BHR), reconsideration at the DO, and the Employees' Compensation Appeals Board (ECAB). Technically, the applicant can pursue these three options in any order, but in practice it is easiest for the applicant to first go to BHR and then to DO reconsideration and then to ECAB.

For the DES, each service uses a slightly different process, but the basic approach is the following. An injured service member is referred to a Medical Treatment Facility (MTF) by a commanding officer or physician. At the MTF, a Medical Evaluation Board (MEB) determines whether the service member meets the medical standard for retention in the military. If he or she does not, then the case goes to the service's Informal Physical Evaluation Board (IPEB) for a decision about the level of disability. If the service member disagrees with the IPEB decision, he or she can then request a hearing and decision by the service's Formal Physical Evaluation Board (FPEB). (The service member and/or representatives can attend the FPEB but not the IPEB.) Appeals beyond the FPEB are allowed, but the exact appellate bodies differ by service.

6.2.2 Program eligibility and benefit determination

As already mentioned, the various disability compensation programs have different criteria for determining eligibility and benefit levels. This section describes those aspects of each of the disability programs, starting with a summary of the target population and purpose of each program in table 36. Recall that the discussion in this section is limited to monetary benefits for the disabled person only. It does not address benefits for dependents or survivors, nor does it address non-monetary benefits.

Table 36. Program coverage and purpose of compensation

Program	Program coverage: Disabled people within this population	Purpose of compensation
VA	Veterans	Full replacement of average earnings loss
SSDI	Most workers (excludes federal employees and some state and local government employees)	Partial replacement of earnings
SSI	People with low income and assets	Income supplement
FERS/CSRS	Federal employees	Partial replacement of earnings
FECA	Federal employees	Partial replacement of earnings and/or short-term compensation for permanent physical loss
DES	Military service members	Compensation for shortened military career

The VA disability compensation program has already been discussed extensively in this report, but descriptions of selected program elements are repeated here to help with the cross-program comparisons. The purpose of the VA program is of course to compensate disabled veterans for earnings lost due to their disability, although there is no mechanism for calculating individual-specific earnings losses. A disability is defined as either an injury or a disease that resulted from service or as a pre-existing injury or disease that was aggravated by service. A veteran can have multiple disabilities, each of which is assigned a rating reflecting its severity. The combination of the disability ratings for all disabilities determines a veteran's level of compensation.

The purpose of the SSDI program is to provide partial replacement of earnings if someone is unable to work because of a disability. Disability is defined as the inability

to engage in "substantial gainful activity" (SGA) due to long-term physical or mental impairment, where SGA is defined as earnings above a certain amount. Both eligibility and compensation levels depend on an individual's earnings history.

SSI is an income supplement for people who are elderly (at least 65 years old), blind, or disabled and who have low income and assets. The disability definition is the same as for SSDI. Benefit levels depend on the level of income and assets.

The purpose of the FERS and CSRS programs is to provide partial earnings replacement for federal employees who are unable to perform their jobs due to disease or injury. The benefit amounts are based on each individual's earnings history.

Disability compensation under FECA provides partial replacement of earnings for federal employees who are unable to work due to employment-related injuries and occupational diseases or due to employment-related aggravation of pre-existing conditions. It also provides short-term compensation for permanent loss, or loss of use of, certain parts and functions of the body. Compensation for inability to work is based on pre-injury earnings (if disability is total) or the difference between pre- and post-injury earnings (if disability is partial). The additional compensation for permanent physical loss is based on an individual's degree of loss and on his or her earnings.

The DES provides compensation for service members who must separate from the military because they have become unfit to perform the duties of their office, grade, rank, or rating due to physical or mental impairment that occurred during service. As with the VA program, the disability is assigned a rating, although the criteria in DES can differ somewhat from VA's. If a service member has at least 20 years of service, or a disability rating of at least 30 percent, then he or she is eligible for medical retirement, which includes an annuity based either on the disability rating and "retired base pay" (the average of the highest 36 months of basic pay) or on years of service and retired monthly base pay. Other service members receive a single severance payment, which is based on monthly base pay and years of service.

Table 37 summarizes some of the information that each program needs to ascertain to make decisions about eligibility and benefit levels. The amount and type of information needed for each program are important determinants of how difficult and time-consuming it is to process and resolve a claim. The VA, FECA, and DES programs all require that a disability be a consequence of an individual's job in order to be eligible for compensation. The connection between employment and disability is straightforward to demonstrate sometimes, but not always, especially for VA cases in which the injury or disability occurred many years previously. One factor that counterbalances this

complication for the VA program, though, is that it does not require a decision about how much the disability affects a particular veteran's employment and earnings.

Table 37. Selected aspects of determining eligibility and benefits

	Eligibility: Depends on whether disability is a result of employment	Eligibility: Depends on whether disability affects employment	Compensation: Depends on individual work history	Compensation: Depends on severity of disability
VA	Yes	No[a]	No[a]	Yes
SSDI	No	Yes	Yes	No
SSI	No	Yes	No	No
FERS/CSRS	No	Yes	Yes	No
FECA	Yes	Yes	Yes	No[b]
DES	Yes	Yes	Yes	Yes

a There are some minor exceptions (e.g., IU).
b The exception is short-term compensation for permanent physical loss.

6.2.3 Program statistics

Table 38 shows the relative sizes of the disability programs and the levels of benefits that they provide. The SSA programs (SSDI and SSI) are clearly the largest in terms of recipients. VA is next in size after the SSA programs, followed by FERS/CSRS, and then FECA and DES. Note that the information on average monthly disability payments is a bit more difficult to use for comparison, because the DES figures are somewhat outdated, the FERS/CSRS amount includes vocational rehabilitation, and there was no average available for FECA.

With respect to annual workload, SSA receives a larger number of claims than VA. SSA received 2.240 million SSDI claims and 2.180 million SSI claims in FY2004 [35], whereas VA received 788,000 in FY2005 [30]. As mentioned before, though, the time required to decide and resolve a claim depends on how complex the design of the program is. For example, although the VA program does not need to know a claimant's earnings history, it does need to determine service-connection and severity for each disability, and each claim can have multiple disabilities.

Table 38. Program size and payments

Program	Disability recipients	Total annual disability payments	Average monthly disability payment
VA[a]	2.6 million in FY2005	$23.4 billion in FY2005	$750 in FY2005
SSA[b]			
SSDI only	5.5 million in Dec. 2005	$67.0 billion in 2005	$1,015 in Dec. 2005
SSDI & SSI	0.9 million in Dec. 2005	$8.4 billion in 2005	$678 in Dec. 2005
SSI only	2.9 million in Dec. 2005	$20.7 billion in 2005	$558 in Dec. 2005
FERS/CSRS[c]	231,000 in FY2004	$3.6 billion in FY2004 (includes voc. rehab.)	$1,305 in FY2004 (includes voc. rehab.)
FECA[d]	85,000 for July 2005 to June 2006	$1.7 billion for July 2005 to June 2006	Not available
DES[e]	92,000 in FY2004	$1.27 billion in FY2000	$1,088 in FY2000

a. From [30]. Average payment is a CNAC calculation (total annual payments divided by the number of recipients).
b. From [31]. SSDI statistics refer only to workers. Total disability payments are a CNAC calculation (the payments from December 2005 multiplied by 12).
c . From [32]. Total disability payments are a CNAC calculation (monthly average multiplied by 12 multiplied by the number of recipients).
d. From personal communication with OWCP staff.
e . Number of disability recipients comes from [33]. Disability payments come from [34]. Except for the number of recipients, these program statistics refer to medical retirement only (not lump sum disability severance). It is unclear whether the count of number of recipients includes lump sum recipients.

6.3 Specific dimensions of disability program operations

Based on the sources described above, we identified the following areas as the focus of most recent criticism of VA disability compensation operations:

- Basic performance measures (timeliness, accuracy, and consistency)
- Physical consolidation of offices
- Balancing quality and quantity in employee performance
- Training (evaluation, standardization, emphasis)

- Claimant representation
- Staff turnover

In this section, we summarize the problems cited with the VA program and consider whether there are any potential lessons for VA to learn from the other disability compensation programs.[54]

6.3.1 Basic performance measures

For any disability compensation program, three important measures of performance in claims processing are timeliness, accuracy, and consistency. They are also a focus of criticism for VA disability compensation, which we discuss in this section.

6.3.1.1 Timeliness

Compared to the other disability programs, VA performance in terms of timeliness is poor. The average time for VA to complete a claim (without appeals) in FY2006 was 177 days [36].[55] In comparison, the average for SSDI was 88 days in FY2006 [37], and OPM staff report that the FERS/CSRS average is currently 38 days.

Although we were not able to obtain an average for the FECA program, we do have some related measures of timeliness. For FECA in 2002, 96 percent of claims for traumatic injury were adjudicated within 45 days, 91 percent of claims for basic occupational disease were adjudicated within 90 days, and 76 percent of claims for extensive occupational disease were adjudicated within 180 days [38].

Averages were also not available for the DES program, but we were able to obtain these results for FY2005 from [33]:

54. A recent report [6] has also recommended that raters in the VA program have better access to medical expertise, based on the fact that their decisions require understanding medical evidence and sometimes "weighing conflicting medical opinions." That report also makes the point that the other disability programs make more use of medical expertise in reaching disability decisions than does VA. Because that report describes in detail the role of health care professionals in the various disability compensation programs, that information is not included here.

55. This refers to the time between VA's receipt of the claim and the veteran's notification of VA's decision. The figure 177 days represents the average for "rating-related actions" for compensation and pension combined.

- Army (both MEB and PEB): 13 percent of claims were completed within 30 days, 32 percent in 31-60 days, 35 percent in 61-120 days, and 21 percent in 120 days or more.

- Navy (PEB only): 58 percent of claims were completed within 30 days, 26 percent in 31-60 days, 9 percent in 61-120 days, and 6 percent in 120 days or more.

- Air Force (PEB only): 53 percent of claims were completed within 30 days, 22 percent in 31-60 days, 15 percent in 61-120 days, and 9 percent in 120 days or more.

Because of the differences across programs in the work required to process a claim, it is difficult to say whether VA's timeliness problems are due to the complex nature of its disability decisions, staffing shortages, low productivity, or some other factors. To know how best to address its problems with timeliness, it would be useful for VA first to disaggregate that 177-day average so that it understands what stages of the claims process are contributing most to the total processing time.

With respect to specific strategies to improve timeliness, VA already does make use of "Tiger Teams" to deal with cases that are designated as high priority at any given time, such as very long-standing cases or cases where the veteran is very old or terminally ill. Because the success of those teams comes from the fact that they are made up of the most experienced staff, unfortunately the Tiger Team approach is not something that VA can replicate on a larger scale (i.e., there are not enough experienced employees to staff a large number of Tiger Teams). VA might also learn from SSA's new Quick Disability Determination (QDD) process, which involves using a predictive model to identify cases with a relatively high probability of being granted benefits and then trying to act on those cases within 20 days [39].

6.3.1.2 Accuracy

Accuracy is another major dimension of the quality of claims processing, and VA's accuracy rate in 2006 was 88 percent [36].[56] VBA measures accuracy using its Systematic Technical Accuracy Review (STAR) program, which determines accuracy at the national and RO levels based on the review of at least 120 claims per RO annually. VA's accuracy rate seems low, especially in comparison with the overall accuracy rate for

56. This rate is based on whether all issues in the claim were addressed, whether the claim was developed in compliance with the Veterans Claims Assistance Act, and whether the rating decision, effective date, and payment date were correct.

SSDI, which is 96 percent [40]. (We were not able to obtain overall accuracy rates for the other programs.) However, when comparing VA's accuracy to SSDI's, it is important to recall that there are differences between the programs in their requirements for processing a claim. In particular, the fact that VA has to rate the severity of a disability creates more potential for error than the yes-or-no disability decision that is required for SSDI.

Regarding specific quality review practices in other programs, SSDI has two types of quality reviews. In its "pre-effectuation review," SSA uses a profiling system to identify the most error-prone types of claims, and then 50 percent of those claims are selected for review [41]. There is also a separate, smaller quality review effort that reviews a random sample of cases from each DDS.

In the program for FERS and CSRS, OPM staff report that their official quality review process includes drawing a random sample of all claims (both disability and non-disability) and distinguishing between substantive errors (affecting monetary payments) and procedural errors. However, that process analyzes accuracy only for all claims and does not have results available just for disability cases.

For FECA claims, OWCP does not measure system-wide accuracy [38]. Instead, OWCP staff say that some individual DOs use accuracy as an explicit performance measure for individual employees.

In the DES, each service has its own approach to quality review. The Army takes a monthly 30-percent sample of cases for review, and there are also mandatory reviews of certain pre-specified types of cases. The Navy's approach consists of sending the case to the senior medical officer on the Council of Review Boards. The Air Force has no formal accuracy measure or accuracy review process.

In comparing other programs' practices with VA's, the only practice that is substantively different from VA's is SSA's focus on the most error-prone cases. Incorporating this element would require expanding VA's STAR program, but it could be worthwhile because it would result in a disproportionately large gain in accuracy for any given increase in the number of reviews.

6.3.1.3 Consistency

Measuring consistency in disability programs is difficult, and none of the programs currently has the components that GAO recommends for that task: "(1) the use of multivariate regression analysis examining disability decisions along with controlling factors to determine whether the decisions are consistent and (2) an in depth inde-

pendent review of a statistically valid group of case files to determine what factors may contribute to inconsistencies" [33].

VA currently has no measure of consistency [42], although a study that includes recommendations for ways to improve consistency has recently been completed [43]. One problem is that the STAR data do not contain a sufficient number of cases to determine consistency by type of disability across ROs. One of VA's strategies is to "promote consistency through training and communication" [44], although it appears that that approach is not sufficient. Two studies have documented variation across states in average disability compensation payments, and the state-level differences cannot all be attributed to state-level differences in the characteristics of the population of disabled veterans [43, 44]. In addition, a survey by an NVSO of its National Service Officers in November 2003 indicated that respondents thought there were consistency problems across ROs [46]. Recommendations for improving consistency include standardizing raters' training, increasing the standardization of medical examinations, increasing the number of claims reviewed, consolidating the rating process into fewer locations, and developing metrics for monitoring consistency [43].

There have also been criticisms of SSA regarding consistency. One source of inconsistency across SSA claims examiners seems to be simply the nature of the task of determining medical eligibility. In an evaluation of SSA's quality assurance processes, [41] found that "many people ... believe that expert adjudicators could reasonably disagree on medical eligibility for an unknown number of cases because of subjective factors. Some say the share of such 'close call' cases is almost zero, but others say it could be as high as 20 percent; most suggested 5 to 10 percent." Consistency across locations (specifically DDSs) is also a concern [47], although an element of SSA's new DSI process should help address it. As described previously, the DSI changes include moving the first appeal from the state level to the national level. The centralization of decision-making at the national level earlier in the appeals process is expected to help ensure consistency.

Among the other programs, FECA and DES do not measure or analyze consistency system-wide, although Navy staff indicated that having only one location for processing of Navy claims does help ensure consistency. The FERS/CSRS program does not need to be concerned with inconsistency across locations because it has only one location.

Clearly, physical consolidation is viewed as a way to reduce inconsistency in disability programs, and it is an approach that is already being considered by VA, as discussed in the next section.

6.3.2 Physical consolidation

VA disability compensation claims are currently processed in 57 ROs, and GAO has recommended that VA consolidate some of its disability compensation operations to improve the quality of claim processing [48].[57] VA reports that it does in fact have plans to consolidate some of its disability claims processing in the future, based in part on past successes in consolidating some other areas of operations.

Similar to VA, SSA has 52 DDS offices throughout the nation for making initial disability decisions. In addition, SSA has about 1,300 Field Offices that accept the claims and do preliminary processing before passing them on to the DDSs, where the decisions about disability are made. SSA technically is more consolidated than VA in making disability decisions because it decides more claims in slightly fewer offices. However, because the DDSs are essentially state government entities, they are more independent in the management of their processes than are VA's ROs, which could be expected to contribute to greater inconsistency across offices than in VA.

Both VA and SSA have already taken some steps to consolidate elements of disability claims processing. For example, VA has one office for remands from the Board of Veterans' Appeals and only two offices that do rating for claims from the Benefits Delivery at Discharge (BDD) program. In SSA's new DSI process, the first level of appeal has been moved from the state DSSs into a single federal office.

It's not surprising that the other disability programs all have a greater degree of consolidation than VA and SSA, simply because their programs are so much smaller. FERS/CSRS has just one office, with only about 30 people processing disability claims there. FECA has 11 District Offices plus a National Headquarters, although because each office has considerable flexibility in the management of its operations, consistency across offices is still potentially a concern. In the DES, the services have consolidated into a total of only five locations (the Army has three locations, the Navy has one location, and the Air Force has one location).

57. Across the 57 ROs, "large performance variations and questions about decision consistency persist. For example, in fiscal year 2004, the average time to decide a rating-related claim ranged from 99 days at one office to 237 days at another, and accuracy varied across regional offices ... VBA and others who have studied claims processing have suggested that consolidating claims processing into fewer regional offices could help improve claims processing efficiency, save overhead costs, and improve decision accuracy and consistency" [48].

In summary, VA's plans to do some consolidations are in accordance with general thinking about the effects of consolidation on consistency. Given the VA program's size, though, we would not expect it to consolidate down to the small number of offices in the FECA, FERS/CSRS, and DES programs. Although consolidation would be expected to improve the quality of claims processing, the disadvantage would be that there would be less in-person access for some veterans, and that is a trade-off that VA would need to evaluate.

6.3.3 Balancing quality and quantity in employee performance

Another criticism of VA is the emphasis on quantity over quality in its performance evaluations of individual employees [46, 49]. The claim is that this creates incentives for RVSRs to make decisions that are not always fully backed by evidence, which ultimately leads to more appeals, remands, and backlogs in the system. However, according to congressional testimony and personal communication with VA, there are in fact well-defined standards for both quantity and quality of individual performance [50]. Specifically, a sample of claims is reviewed by supervisors each month based on standardized quality guidelines, and the production standards for RVSRs and DROs vary by the number of disabilities per claim. One potential problem with VA's timeliness standards, though, is that each RO can set its own standard for the minimum number of claims at a higher level than the national standard, and there is evidence that VA raters still feel productivity pressure. In a national survey, 80 percent of raters said having enough time to process a claim was one of their top three challenges [2]. In addition, when asked to rate the availability of time to decide a claim, 54 percent of raters said availability of time was fair or poor. Raters also were asked about the relative importance of accuracy and speed at their RO, and 10 percent said accuracy was more important than speed, 20 percent said both were equally important, and 70 percent said speed was more important.

VA is not the only disability program facing this issue, although there do not seem to be any lessons that could be applied from other programs. A 2001 report on SSA disability evaluations indicated that employees there also felt that the emphasis on productivity had a negative impact on accuracy [41]. We did not find any indication that SSA is using any strategies to ensure that individual employees do not neglect quality in favor of quantity. For the FECA program, "unmanageable caseloads" are a problem for every office [38], and OWCP staff report that both timeliness and accuracy are considered in performance evaluations. The program takes an approach to performance standards that is similar to VA's in that the timeliness standards vary with the complexity of the claim. Claims in the simplest category are expected to take only 45 days, whereas claims in the most complex category are allowed to take 180 days.

The fact that VA employees report feeling a conflict between quality and quantity, despite VA's attempts to include both elements in the performance standards for individuals, indicates that VA's current approach is not sufficient. However, the other disability programs do not seem to be able to offer any lessons that VA could use. This could mean that there are simply no obvious management strategies that will address the issue, implying that VA instead might have to consider reducing its quantity standards in order to attain its quality goals.

6.3.4 Training

6.3.4.1 Evaluation of training

VA has also received criticisms in the area of staff training. One of the specific issues is that VA does not have plans to evaluate the effect of its Training and Performance Support System (TPSS) on the accuracy or consistency of claims processing overall [51]. When we raised this particular issue with VA staff, they had two responses. The first was that each TPSS module already receives two evaluations of its effectiveness while it is being developed. The first evaluation occurs in the early stages of module development, and the second evaluation, which occurs near the end of the development process, is based on testing the module on staff who are new to working in the disability compensation program. VA also responded that a rigorous evaluation of the overall effectiveness of TPSS would require a complex methodology for which they do not currently have the resources. For example, the evaluation would need both a treatment group of people receiving the training and a control group of people not receiving the training.

Examination of the other disability programs shows that VA certainly is not lagging behind in its training efforts. None of the other programs seems to have any formal evaluation of their training either.

6.3.4.2 Standardization of training

Congressional testimony has indicated the need for VA to have nationally standardized training throughout all its ROs [49, 52]. However, VBA's recent focus on training seems to be addressing this concern. Specifically, for staff involved in VA disability compensation, at least 75 percent of the required 80 hours of annual training must come from a centralized curriculum. This "Centralized Training Curriculum" on the C&P Intranet Training Site includes modules for RVSRs, VSRs, appeals, and field ex-

aminers.[58] In addition, any training created by the ROs must be submitted to Compensation and Pension Services for approval.

Despite this criticism of VA's training, no other disability program has VA's level of standardization. In the SSA and FECA programs, some national guidance is provided, but the local offices (i.e., DDSs for SSA and DOs for FECA) are responsible for their own training, and many are dissatisfied with the materials from their respective national offices [38, 53]. The DES program is only in the early stages of discussing standardization across services. (Standardization is not relevant for the FERS/CSRS program, since there's only one office.)

6.3.4.3 Emphasis on training

Another training-related difficulty for VA is that the disability compensation staff feel a need for more training and that training seems to be sacrificed in order to accomplish short-term production goals [2, 45, 49, 54]. A survey of RVSRs and DROs in 2005 by VA's OIG indicated that VA has not placed a high priority on training [45]. In addition, in a different survey of raters, 30 percent said one of the three greatest challenges in their work was getting needed training [2]. VA's recently-imposed minimum of 80 hours of training per year should help to address this complaint. However, there do not seem to be any lessons or training standards in this area that VA can take from the other disability programs, since we did not find any system-wide training requirements in the other programs.

6.3.5 Claimant representation

There are a number of private national veterans' service organizations that have been established to help veterans in various matters, including assistance with filing disability claims. However, there has been concern about the quality of some veterans' representatives [55, 56]. Although some NVSOs have very highly qualified representatives, there is wide variation across NVSOs in how well-trained their representatives are. This occurs even though NVSOs have to submit their plans for training and monitoring their representatives to VA. The reason for the variability is that accreditation of each representative is based only on the NVSO's statement that he or she is qualified.

58. Examples of modules are the following: original claim for compensation, original claim for pension, dependency benefit, medical terminology, musculoskeletal system, introduction to PTSD, and certifying a claim to BVA.

Clearly there is room for VA to do more to ensure high-quality representation, but VA staff have indicated that it is not VA's philosophy to control the NVSOs, and there are currently no resources allocated for increased oversight. Examination of the other disability programs shows that VA in fact already has the highest level of involvement in claimant representation. Although SSA and OWCP require fee approval, they do not have qualification standards. The FERS/CSRS and DES programs do not have any involvement in external representation for claimants.

6.3.6 Staff turnover

For the VA program, high staff turnover creates a problem for the quality of claims processing by lowering the overall level of expertise [54, 57]. Our survey of VA raters found that whether a respondent felt "very well-trained" was correlated with experience [2]. Specifically, among raters with 10 or more years of experience, 79 percent felt very well-trained, whereas only 29 percent felt that way among raters with less than 2 years of experience. The St. Louis RO provides an example of the general experience levels of staff. In that office, one-third of VSRs and one-fourth of RVSRs have less than 1 year of experience [54]. Interestingly, VA disability examiners (VSRs and RVSRs) hired in FY2000 had an attrition rate of 15 percent after one year, which was actually slightly lower than the rate for all new federal employees (17 percent) [57]. Nevertheless, regardless of how turnover for VA employees compares with turnover for other federal employees, minimizing turnover is especially important for VA because of the training time required for claims processing (18-36 months to train a VSR) [54]. As the first step to reducing turnover, GAO has recommended that VA collect data on why employees resign [57].

VA is not the only disability program facing the problem of high staff turnover. For SSA, more than half of DDS directors said turnover is too high, with large workloads and low pay cited as important factors contributing to turnover [53]. VA actually does well in this area compared to SSA. In FY2000-2002, "DDS examiner turnover was about twice that of Veterans Benefits Administration (VBA) disability examiners (VSRs and RVSRs). For example, DDS examiner turnover averaged 13 percent over fiscal years 2000 to 2002, compared with 6 percent for VBA disability examiners" [53]. The result for SSA is that 37 percent of claims representatives in 2006 had been in their position for less than 3 years [58]. According to one interview respondent, SSA's approach to staff retention has not been to tailor their efforts to specific positions. Instead, they are trying to make SSA a desirable place to work in general by emphasizing certain management practices, such as good communications. Although an improved work environment would certainly be desirable, it seems likely that VA would be interested in a more focused approach to reducing staff turnover in its claims processing staff.

As for the other programs, officials working with FECA claims also felt there were problems with high turnover, with large caseload as the most commonly reported reason for turnover [38]. The DES faces the unique problem of regular rotations by military staff, although that problem is partly mitigated by the fact that some positions are held by civilians. Most military staff remain only about 3 years [33].

6.4 Summary

Except for the very important issue of timeliness, VA does not appear to be underperforming in comparison with other disability programs. Recent training improvements seem promising for improving VA timeliness in the long term, but any effects will not be seen for a while. Some of VA's problems with timeliness could simply be the logical result of a complex program design, with multiple disabilities per claim, the need to determine service connection (sometimes many years after separation), and the need to assign a disability rating to each disability. In order for VA to develop a focused strategy to improve timeliness, it will first need to determine what stages of the claims process are contributing most to the total elapsed time needed to complete a claim.

7 Lump sum options

The Commission asked CNAC to provide a study of the issues involved in offering a one-time lump sum payment instead of the current lifetime monthly compensation payments to selected disabled veterans. This topic is of interest because of the potential benefits both to veterans and to the VA. A complete discussion of these issues is documented in [3]. This chapter provides a brief summary of that document.

In conducting this study, we explored the following questions:

- What are the advantages and disadvantages of a lump sum program to both disabled veterans and VA?
- What can we learn from other government lump sum programs?
- What are the key elements in the design of a lump sum program?
- Who would be eligible for a lump sum (i.e., which diagnoses and disability ratings)?
- What would be the cost and savings of a lump sum program?

Throughout this report, a repeated theme is the close connection between how the lump sum program would be designed and what its ultimate effects would be. For most elements in the design of a lump sum program, it is not clear which of several alternative approaches would best meet the dual goals of serving veterans better and reducing costs for VA. Note that the purpose of this analysis was to present the facts surrounding lump sums. Some of these facts support a lump sum program while others do not. Accordingly, we make no recommendations for or against a lump sum payment in place of current disability payments.

7.1 Potential advantages and disadvantages

In conducting this analysis, we assumed that the goal of a lump sum program was to better serve disabled veterans and to do this at a lower cost than the current compensation program.

7.1.1 Advantages for veterans

There are a number of ways in which a lump sum program could serve disabled veterans better. One advantage is that some veterans might find a lump sum more useful than monthly payments. A second advantage would arise if the program were designed so that the lump sum was optional, because having the flexibility of a choice is generally considered inherently beneficial. A third advantage for veterans would be reduced administrative interactions with VA, which could improve the timeliness of claims processing overall, assuming VA staffing levels would not be reduced.

7.1.2 Advantages for VA

VA could also benefit from establishing a lump sum program. Savings in VA compensation costs would be generated if each lump sum were less than the present discounted value[59] of the veteran's lifetime monthly payment. Savings in VA administrative costs could arise simply from having fewer veterans in the system generating the routine costs associated with monthly payments. In addition, if lump sum recipients were not allowed to apply for re-rating of their disabilities, or if the circumstances for re-rating were restricted, then the costs of processing those applications would be eliminated or reduced.

7.1.3 Concerns about veterans' welfare

Despite the potential advantages of a lump sum program, there are some key areas of concern about possible negative effects on veterans' financial welfare. One concern is that the lump sum should be "fair" in comparison with lifetime monthly compensation payments. A related concern is the treatment of cases where a disability worsens. Another concern is that some veterans' "unwise" use of their lump sums might jeopardize their basic financial welfare.

59. *Present discounted value* is a method for expressing the value of future payments in terms of their value in the present. It accounts for the fact that a particular amount of money is worth less (in terms of purchasing power) in the future than that same amount is worth today because of inflation. It also accounts for the fact that a sum of money received today can be invested.

7.2 Government programs with a lump sum

VA could draw on the experience of other government lump sum programs, both U.S. and foreign, for the design of a lump sum program.[60] In looking at the various U.S. federal lump sum programs and other countries' programs for their disabled veterans, we found that basically no program was directly comparable to a potential VA lump sum program. Nevertheless, some useful information can be obtained from some of them.

7.2.1 U.S. federal lump sum programs

Among the U.S. federal programs for injury or disability, the Department of Defense (DOD) disability severance program could provide useful information on the use of lump sum payments by recipients. In addition, it would be instructive to know the reasons for designing that program so that the younger and less-disabled receive only a lump sum and the others receive only an annuity.

Among the U.S. federal programs for retirement or separation, the Career Status Bonus (CSB), Selective Separation Benefit (SSB), and Voluntary Separation Incentive (VSI) programs all provide information useful for estimating the personal discount rates[61] of military personnel, although we expect that that population is not entirely comparable to the population of disabled veterans.

7.2.2 Other countries' programs for disabled veterans

The compensation programs for disabled veterans in Canada, the United Kingdom, and Australia have limited applicability for a VA lump sum program. The primary reason is that those three countries have separate compensation for economic losses and non-economic losses, and the lump sum is paid only for the latter.[62] Thus, these coun-

60. A lump sum program would require congressional authorization before VA could implement it, so technically VA would not be designing the program. However, it is not obvious how much of the program design would be determined by legislation as opposed to VA regulations. When discussing program design in this report, we chose to refer only to VA for simplicity, but that choice should not be interpreted as a recommendation about the extent of VA's role.

61. The *personal discount rate* reflects each individual's rate of *time preference*, which is the general tendency to prefer receiving a particular amount of money now to receiving an equivalent amount in the future.

62. Examples of non-economic losses are pain, suffering, and lower quality of life.

tries have chosen to rely on annuities to compensate for economic losses, which is what VA compensation is intended to do. From that we can infer that, although each country sees advantages to lump sum compensation in some situations, for purposes of addressing economic losses, they all have apparently decided that those advantages do not outweigh the potential disadvantages.

Nevertheless, the United Kingdom's program could provide useful information about methods for calculating lump sums that incorporate the expected deterioration of a condition. After the United Kingdom's program has been in place longer, it could also show how much administrative savings can be realized when re-evaluation of the severity of disabilities is allowed only in "exceptional circumstances." Because Australia's program offers a choice between a lump sum and an annuity, it could provide information to estimate the personal discount rates of disabled veterans.

7.3 Elements in lump sum program design

Some elements in the design of a lump sum program would be especially important in determining the program's ability to achieve its goals. We list the main design alternatives here.

- Would the program be elective or mandatory?
- Would the basis for program eligibility be combined disability ratings or the ratings for individual disabilities?
- Would eligibility be for only newly compensable[63] veterans or disabilities, or would it also be for all veterans or disabilities for which compensation is currently paid?
- Would eligibility be for only certain types of disabilities or for all disabilities?
- How would the possibility of a condition deteriorating after receipt of the lump sum be addressed? Options include the following: (1) incorporating that possibility into the lump sum, (2) offering the lump sum only for disabilities with a "low" probability of deteriorating, and (3) allowing applications for re-rating and additional compensation.
- How much less should the lump sum be than the present discounted value of each veteran's expected lifetime monthly compensation? (Veterans choosing

63. *Newly compensable* is a term used in this report to describe the veterans or disabilities for whom/which disability compensation was not paid in some previous time period.

the lump sum would be satisfied with lower amounts because of time preference.[64])

7.3.1 Changes in disability ratings

One of the biggest challenges in designing a lump sum program is deciding how to handle situations where a disability for which a lump sum payment has been made worsens over time. To help inform how increased impairment should be best addressed in the design of a lump sum program, we analyzed changes in disability ratings over time.

To do this, we used the Compensation and Pension Master Record (CPMR) data files for December 2000 and December 2005 from the Veterans Benefits Administration (VBA). Because our interest was in the ratings for specific disabilities and not in veterans' overall ratings, we analyzed disabilities, not veterans. We used the disabilities that veterans had in 2000 and tracked those disabilities to 2005. These are some of our findings:

- A major finding is that overall, 5 percent of disabilities had an increase in rating between 2000 and 2005, and the average increase was 26 percentage points.
- In analyzing disabilities by body system, we found that skin, auditory, eye, gynecological, and hemic/lymphatic disabilities had the lowest proportions (less than 2 percent) of disabilities with an increase in rating. Post-traumatic stress disorder (PTSD) had the highest proportion (28 percent) with a rating increase, and it also had one of the highest average increases (36 percentage points).
- For our disability-specific analysis, we also found considerable variability. For example, hypertension cases rated at 10 percent had only a 1.5 percent probability of a rating increase over 5 years, whereas cases of major depressive disorder rated at 10 percent had a 24 percent probability.

The results above pertain only to changes between 2000 and 2005, whereas ideally we wanted to consider changes over a longer time period to show the type of analysis required in designing a lump sum program. Therefore, for three diagnoses (knee impairment, hypertension, and PTSD), we calculated the probability that the disability

64. *Time preference* is the general tendency to prefer receiving a particular amount of money now rather than receiving an equivalent amount in the future.

rating would exceed a certain level over a certain number of years, which ranged from 15 to 50 years into the future. For example, for a 25-year-old male veteran with a knee impairment rated at 10 percent, we estimate that there is a 14 percent probability that the disability will worsen to a rating of 30 percent or higher by age 75.

If VA were to use a lump sum instead of current disability compensation, the main conclusion from our analysis of re-rating of disabilities is that each diagnosis should be considered individually with respect to eligibility for a lump sum offer because each has different probabilities of worsening. The overall finding that 5 percent of disabilities increased in ratings between 2000 and 2005 by an average of 26 percentage points conceals significant variation across body systems and diagnoses.

7.4 Savings in compensation payments

If VA used a lump sum, VA savings in compensation payments would come from paying lump sums that are less than the present discounted value of expected lifetime monthly payments. We estimated savings in compensation for specific disabilities and also total savings in compensation.

7.4.1 Savings in compensation for specific diagnoses

To provide examples of what savings might be within specific diagnoses, we selected seven diagnoses with "low" re-rating probabilities and a variety of body systems. We used those with "low" re-rating probabilities because lump sum payments may be problematic for those with "high" re-rating probabilities.

Our estimates of average savings per case ranged from 9.9 percent to 20.7 percent, depending on the sample and diagnosis. The 9.9 percent savings (for all cases of scars on head, face, or neck) translated into an average of $2,735 per case. The 20.7 percent savings (for newly compensable eligible cases of radius impairment and scars on head, face, or neck) translated into averages of $6,138 and $5,176 per case, respectively.

Note that these savings would not occur immediately, i.e., at the time the lump sum is paid. Instead, they would be achieved over time through the annuities that would no longer have to be paid to lump sum recipients.[65] Also note that these savings estimates

65. For the seven diagnoses that we selected with "low" re-rating probabilities, we estimated the average break-even point (i.e., the number of years for cumulative savings to exceed the lump sum) among the lump sum recipients. Those estimates ranged from 11 to 14

are for specific diagnoses and should not be applied to total disability compensation in order to obtain an estimate of total savings. The reason is simply that savings vary by diagnosis.

We also show how the savings estimates change as our assumptions about the lump sum program design and about external economic factors (e.g., the interest rate) change. For example, our baseline savings estimates use the assumption that the lump sum would be offered only for disabilities rated at 10 or 20 percent.[66] To show the effect of changing that assumption, we re-calculated those estimates assuming lump sum offers for only 10-percent ratings and for 10-, 20-, and 30-percent ratings.

7.4.2 Total savings in compensation payments

In addition to these savings estimates for selected diagnoses, we estimated total costs and savings over a 10-year period. Note that our costs and savings estimates are a function of what we defined as "eligible" diagnoses and ratings, assumptions about the percentage of veterans who would take the lump sum, and the number of veterans each year who begin receiving VA compensation. Changes in those assumptions would result in different estimates.

For these estimates, we assumed that eligibility for a lump sum offer was limited to disabilities that were in diagnosis codes with less than a 2-percent probability of rating increase over 5 years and that were rated at 10- or 20-percent. Among these disabilities, we assumed that 50 percent of the lump sum offers would be accepted. Forecasting the number of newly compensable veterans and disabilities that will receive disability compensation each year is difficult, particularly in light of the ongoing Global War on Terrorism (GWOT). As an estimate, we used the average number of newly compensable disabilities per year for 2001-2005.

Given all of these assumptions, we estimated that if VA offered a lump sum for only newly compensable disabilities, compensation costs would be $545 million higher in the first year compared to costs if no lump sums were offered. Note that the net cost

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years, depending on the diagnosis and on whether we assumed all eligible cases or only the newly-compensable eligible cases were offered a lump sum.

66. We assume that eligibility is limited to these lower disability ratings because it is possible that concerns about some veterans' potential "unwise" use of lump sums would preclude a program design that offers a lump sum for disabilities with higher ratings. Note that other analyses of potential savings from a VA lump sum program have also assumed that eligibility is limited to 10- and 20-percent ratings [59 - 60].

(rather than a savings) occurs because the lump sum represents the present discounted value of lifetime payments. So, even though in the long run the lump sum is less costly for the government, the costs in the first year are higher because future compensation liabilities are basically shifted to the current year. Looking out to the tenth year, a lump sum program would still result in a net cost of $88 million for that year. This is because the cost of the lump sums exceeds the savings from removing some veterans from the annuity program. We estimated that it would take 25 years for the program to break even.

Similarly, if VA offered a lump sum for all eligible disabilities, not just the newly compensable ones, we estimated that the net cost in the first year would be $6.7 billion. However, unlike the case where the lump sum was only offered for newly compensable disabilities, annual savings would start in the second year of the program. These annual savings would be $461 million by the tenth year, but due to the magnitude of the net costs in the first year, there would still be a cumulative net cost of $3.6 billion in the tenth year. We estimated that it would take 17 years to break even.

7.5 Administrative savings

Administration represents an important area of potential savings from establishing a lump sum program. In fact, if the lump sums were calculated simply as the present discounted value of monthly payments over the veteran's expected lifetime, without incorporating a personal discount rate to account for time preference, then administration would be the *only* source of savings from a lump sum program.

Lack of detailed data was the greatest challenge in estimating administrative savings from a lump sum program. We addressed this by assembling the available data, making a number of assumptions, and then showing how the savings estimates change when some of those assumptions change.

According to our assumptions, all the additional administrative costs for each lump sum recipient (i.e., providing financial counseling and processing lump sum claims) would be incurred in the first year of that person's eligibility for a lump sum, whereas administrative savings would be achieved over time in the form of a reduction in repeat claims. We estimated that it would take 5 to 7 years to recover the administrative costs of a lump sum payment for a new recipient and 16 to 24 years to recover the costs for a current recipient of disability compensation. As for aggregate administrative costs, we estimated that the break-even period would range from 14 to 16 years. Thus, it is clear

that net administrative savings from a lump sum program would not be seen immediately.[67]

Note that lack of appropriate data prevented us from estimating the one-time administrative costs of setting up a new program. Such costs would include developing the necessary regulations, modifying data systems, and training staff. Those costs could be substantial, which would mean it would take years to recover them using the savings generated from other aspects of the lump sum program.

7.6 Estimating personal discount rates

An important element in the design of a lump sum program would be the method for calculating the lump sum, which would determine a significant amount of the savings that the program would generate and allow VA to estimate the number of veterans who would choose a lump sum. Accounting for veterans' time preference (using a personal discount rate) in calculating the lump sums would result in savings for VA in total compensation paid. Therefore, in designing the program, it is important to use personal discount rates that result in lump sums low enough to generate savings but high enough to provide "fair" compensation and attract enough takers.

Although a number of studies of personal discount rates have been done, none of their results are directly applicable to the population of disabled veterans. Therefore, if a lump sum program is seriously considered, VA would need to conduct a separate study to estimate the personal discount rates specifically applicable to disabled veterans in order to design an effective lump sum approach to disability compensation. Either a survey or a pilot study could be used to collect data for those estimates.[68]

67. Combining the estimates of compensation savings and administrative savings yields break-even periods of 24 years for a program offering a lump sum for only the newly-compensable eligible disabilities and 17 years for a program offering a lump sum for all of the eligible disabilities.

68. Experimental methods are also used to estimate personal discount rates, but we do not consider this to be a good approach in this case.

Regardless of whether a survey or pilot study would be used, the fundamental information being collected would be the same, i.e., whether disabled veterans prefer a given lump sum to a given annuity, and if so, at what discount rate relative to the future annuity stream.[69] Therefore, the choice between a survey and a pilot study would depend on the relative importance of the following concerns:

- Cost. Concern about cost favors a survey. A pilot study would be much more expensive, at least in the short run, because actual lump sums would need to be paid.
- Accuracy. Concern about accuracy favors a pilot study. A survey would be less accurate because respondents would be faced with only hypothetical choices.
- Potential complaints about fairness. Concern about perceptions of fairness favors a survey, since a pilot study would require offering different lump sums to people of the same age and with the same disability and rating.

7.7 Summary

A lump sum program for disabled veterans has potential advantages both for veterans and VA. Veterans could benefit from having more choice about how to use their compensation and from having reduced administrative interactions with VA. VA could potentially reduce its costs for compensation payments and administration. However, whether a lump sum program would in fact produce these benefits, without having any negative effects on veterans' welfare, depends on the program design.

Design elements include whether the lump sum is optional, who and which disabilities are eligible, what happens if the rating worsens, and other factors. The decisions made about these design elements could change the program significantly making it not advantageous to veterans and/or VA. For example, which disabilities (diagnoses, combination of diagnoses, and rating levels) are eligible for a lump sum is a huge issue. As our analysis shows, re-rating occurs frequently—5 percent of diagnoses were re-rated between 2000 and 2005. The re-rating rates varied highly across diagnoses.

Similarly, a mandatory rather than optional lump sum removes any economic welfare benefits for veterans. With a mandatory lump sum, VA must pay a lump sum equivalent

69. The important information needed in a VA study would be correct estimates of the personal discount rate, which would be used to develop a viable benefit option. In addition, forecasting models would be needed to estimate how many veterans would be likely to choose a lump sum option if it were offered so that estimates for budgetary requests could be made.

of the present discounted value of the annuity to be "fair" to veterans. In doing so, it removes essentially all cost savings for VA. The potential for savings is a key advantage of a lump sum program. However, the upfront costs and lengthy break-even times are disadvantages that may be extremely difficult to overcome from a budgetary standpoint.

8 IU, mortality, and SSDI

The Commission asked CNA to conduct an analysis of those service-disabled veterans receiving the individually unemployable (IU) rating. This analysis was triggered by 90-percent growth in the number of veterans with IU from 117,000 in 2000 to 223,000 in 2005. In the process of conducting this analysis, we explored the mortality rates of those with and without IU. Similarly, we looked at patterns by IU status for those service-disabled veterans receiving Social Security Disability Insurance (SSDI) payments. We documented our findings on these issues in [10]. This chapter provides a summary of the key findings.

8.1 Background

If a service-disabled veteran is unable to work at "substantially gainful employment" (that is, earn more than the poverty level for a single person), he/she may be granted IU status depending on his/her disability rating. Generally, to receive an IU designation, a service-disabled veteran must have one disability rated 60 percent or more or one disability rated at least 40 percent and a combined disability rating of at least 70 percent.

Those with an IU rating receive disabled compensation *as if they were 100-percent disabled*. In other words, the IU designation is a way in which VA can correct for shortcomings of the ratings schedule to compensate service-disabled veterans at the 100-percent level if they truly are unemployable as a result of their service-connected disabilities. Given the minimum rating requirements, those with IU are almost exclusively rated 60- to 90-percent disabled. Because the purpose of IU is to compensate at the 100-percent level, there is no financial benefit to getting IU status if the rating is 100 percent.

The change in disabled compensation from 60 to 100 percent or from 90 to 100 percent is substantial. VA compensation for a veteran without dependents rated 60-percent disabled is $901 per month compared to $2,471 per month for someone rated 100-percent disabled. Similarly, monthly compensation is $1,483 for the 90-percent disabled. This is near $1,000 less per month that for the 100-percent disabled. Given these substantial increases in VA compensation from getting IU status, there was some concern that people were gaming the system to get the additional compensation, particu-

larly in light of the 90-percent increase in the IU population between 2000 and 2005. Consequently, we analyzed the factors that were associated with the IU population increase. Before showing those findings, the next section goes over some of the population characteristics of those with an IU designation.

8.2 IU population characteristics

In December 2005, 223,000 or 8 percent of the 2.7 million service-disabled veterans drawing disability compensation from the VA had an IU rating. As we already alluded to, a veteran needs to be rated between 60 and 90 percent to be eligible for IU status.[70] A natural question then is what percentage of the population in this rating range has IU status? As table 39 shows, the percentage increases with the rating level. For those rated 60-percent disabled, 21 percent have IU status. This percentage increases to 70 percent for those rated 90-percent disabled. Overall, 44 percent of those rating 60- to 90-percent disabled have an IU designation.

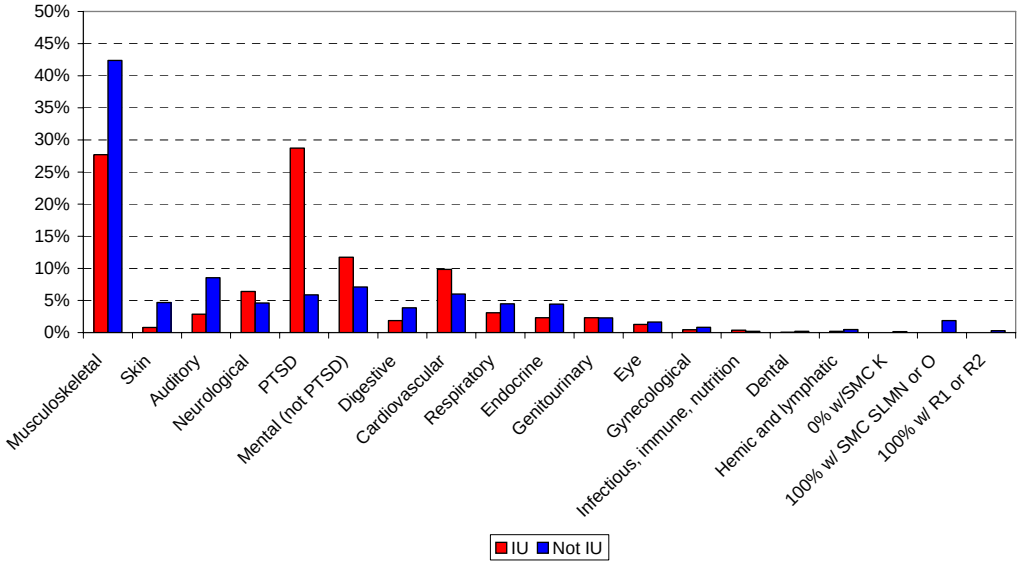
Table 39. Percent of total population with an IU designation by combined degree of disability (2005)

Combined rating	Males	Females	Total
60	22	8	21
70	51	34	50
80	60	43	58
90	71	60	70
60-90	45	29	44

Those with IU differ from the overall service-disabled population in that they disproportionately have a primary mental disability. For those without an IU designation, 42 percent have a musculoskeletal primary disability and 6 percent have PTSD as their primary disability and 7 percent have another mental condition as their primary disability. In contrast, 28 percent of those with IU have musculoskeletal primary disability, but 29 and 12 percent have a PTSD or another mental condition, respectively, as their primary disability (see figure 57).

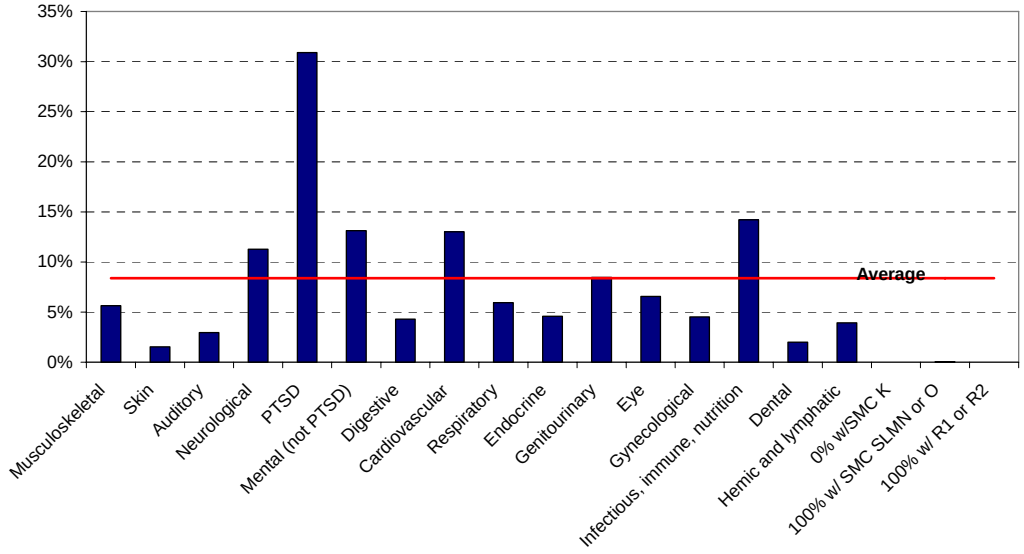
70. They could have IU status and be 100-percent disabled, but there is no point in getting IU status with a 100-percent rating because it would not change disability compensation.

Figure 57. Distribution of service-disabled veterans by IU status and body system



Another way to look at the distribution is look at the percent of those with IU by body system of the primary disability. As figure 58 shows, those with IU account for 31 percent of those with PTSD as their primary condition compared to an average across all body systems of 8 percent. We also observe that those whose primary condition is in the neurological, mental, cardiovascular, or infectious/immune/nutrition body systems are disproportionately IU compared to the average.

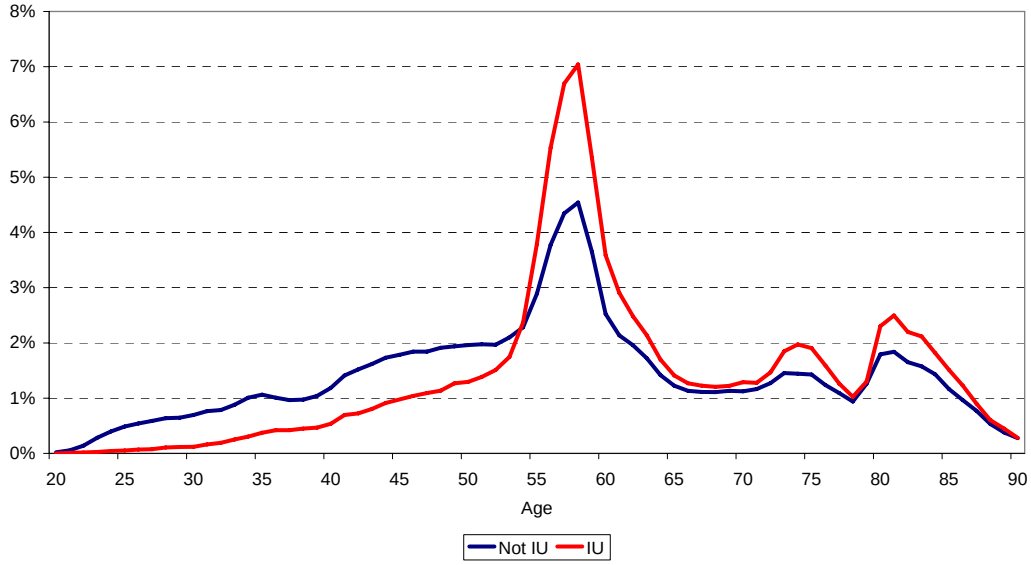
Figure 58. Percentage with IU status by body system



For those body systems where the percentage of service-disabled veterans with IU is substantially above the average, this is perhaps an indication that the rating system does not work well for some conditions. IU is designed to make those veterans who are unable to work in a gainful way eligible for disability benefits at the 100-percent level. One would hope that the rating schedule works well in most cases—meaning service-disabled veterans get the rating they need so that the IU rating is not necessary. In the case of PTSD with nearly a third getting IU, it seems that the rating system does not work well.

Another way in which those with IU differ from those without IU is in age. The average age of those with IU is 63 compared to 58 for those without IU. This is driven by the Vietnam cohort that has a disproportionate number of people with IU as figure 59 shows.

Figure 59. Age distribution by IU status (2005)



8.3 Drivers of IU population growth

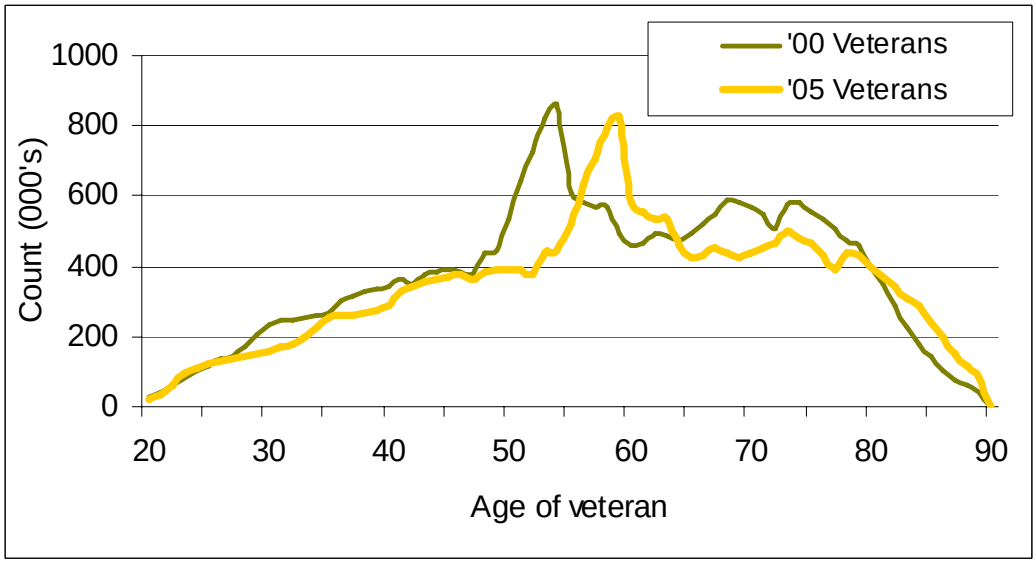
With the population characteristics as a background, we now turn to looking at the drivers of 90-percent growth in the IU population between 2000 and 2005 even though the number of those receiving disability compensation increased by only 15 percent and veteran population declined by 8 percent over the same period. This rapid increase raises the question of whether service-disabled veterans are gaming the system to get IU status for the additional benefits.

To examine this question, we looked to see what portion of the increase in the IU population is a result of demographic changes in the underlying veteran population and what portion is associated with an increase in prevalence. In other words, what portion of the growth is due to a higher percentage of veterans in the same disability-and-age demographic getting IU status? We found that vast majority of the growth in the IU population is due to demographic changes in the veteran population. While there are some changes in prevalence, they are small compared to the demographic changes.

Because a combined rating of 60 to 90 percent is necessary for IU status, that is the segment of the service-disabled population that in relevant to IU. But, before we look at the growth in that population, consider the changes in the overall veteran and ser-

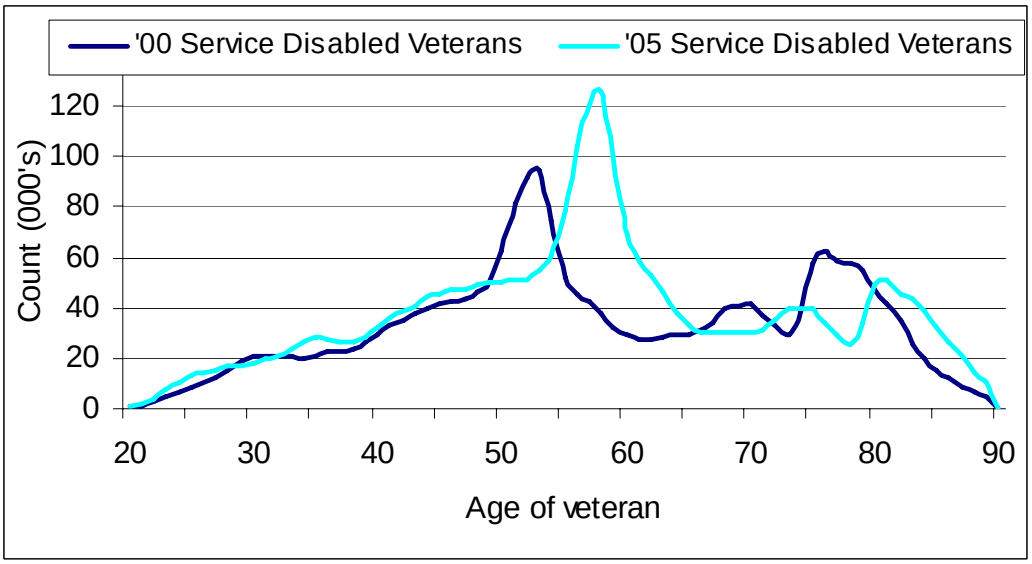
vice-disabled veteran populations. Figure 60 shows the number of veterans by age in 2000 and 2005. Overall, the number of veterans decreased by 8-percent. The Vietnam cohort is the most obvious group in the population and was approaching 60 years old in 2005.

Figure 60. Veteran population (2000 and 2005)



The movement of this demographic through the system resulted in large increases in the number of veterans receiving disability compensation from VA as figure 61 shows. While the total number of Vietnam veterans declined, the number of them receiving disability compensation from VA increased substantially between 2000 and 2005. Hence, while the total number of veterans decreased, the number of disabled receiving disability compensation from VA increased, presumably as a result the complications of advancing age in combination with their service-connected disabilities.

Figure 61. Disabled veterans receiving VA compensation (2000 and 2005)



While the number of service-disabled veterans increased by 15 percent between 2000 and 2005, the number of those rated 60- to 90-percent disabled increased much more. Again, this is the group that could get an IU rating. We show the increase in this critical group of service-disabled veterans by various rating-and-age combinations in table 40. For example, the number of those rated between 60 and 90 percent and who are 51-61 years old increased by 114 percent between 2000 and 2005. The largest increase of 259 percent was for the 90 percent group aged 62-65 years. Overall, the growth in this population was 76 percent. This means that if the prevalence or probability of getting an IU rating for those in the 60-90 percent group was the same in 2005 as it was in 2000, we'd see a 76-percent increase in the IU population just from the demographic changes alone.

Table 40. Percent growth in the disabled population receiving VA compensation between 2000 and 2005 by age and disability rating

Combined rating	Age groups						
	<40	40-50	51-61	62-65	66-70	71+	Total
60	60	47	77	73	-11	15	41
70	85	44	122	162	3	35	73
80	104	72	155	200	11	49	94
90	110	95	179	259	35	81	120
Total	62	63	114	70	9	33	76

To look at prevalence, we compare the portion of each rating-and-age group that has an IU rating in 2000 and 2005. If this percentage increases, prevalence has increased. Table 41 shows our findings. Looking at those under age 40 years, the percentage with IU was 20 percent in 2000. This percentage was only 18 percent in 2005. So for this group, prevalence decreased. Similarly, we observed a decrease in prevalence for the 40-50 age group, but for all of the other age groups, prevalence increased between 5 and 12 percentage points between 2000 and 2005.

Table 41. Percent of all severely service-disabled veterans rated IU by age and disability rating (2000 and 2005)

Year	Combined rating	Age groups						
		<40	40-50	51-61	62-65	66-70	71+	Total
2000	60	11	15	19	31	28	27	22
	70	31	37	47	47	47	45	43
	80	44	49	54	63	61	56	54
	90	58	64	65	73	73	69	67
	Total	20	27	39	37	33	41	
2005	60	7	13	18	24	31	31	21
	70	29	33	55	54	53	58	50
	80	39	42	59	65	67	68	58
	90	53	56	68	74	78	80	70
	Total	18	24	45	45	38	53	

Overall, we found that the 90-percent increase in the IU population can be decomposed into two effects. First, the growth in the 60- to 90-percent disabled population, and second, the prevalence or probability that a veteran will have an IU rating. The growth in the 60- to 90-percent disabled population alone accounts for a 76-percent increase in the IU population. We estimate that the increase in IU prevalence accounts for another 8-percent increase in the IU population. Combining these effects results in the 90-percent increase in the IU population.

8.4 Employment rates and earned income

We presented in the veterans' earnings analysis chapter the employment rates and earned income of service-disabled veterans with an IU designation. However, because IU is such an important issue given the growth in the 90-percent growth in the IU

population, we compare in this section the employment rates and earned income of those with IU to those designated 100-percent disabled. We compare the IU to the 100-percent disabled because IU and 100-percent disabled receive the same compensation. Figures 62 and 63 show their average employment rate and average earned income. Across all ages, the values for those with IU are less than the values for the 100-percent disabled. This may somewhat be an artifact of the income restriction—not being able to work above the poverty level to get IU whereas the 100-percent disabled have no income restriction.

Figure 62. Average employment rate of IU and 100-percent disabled veterans (men)

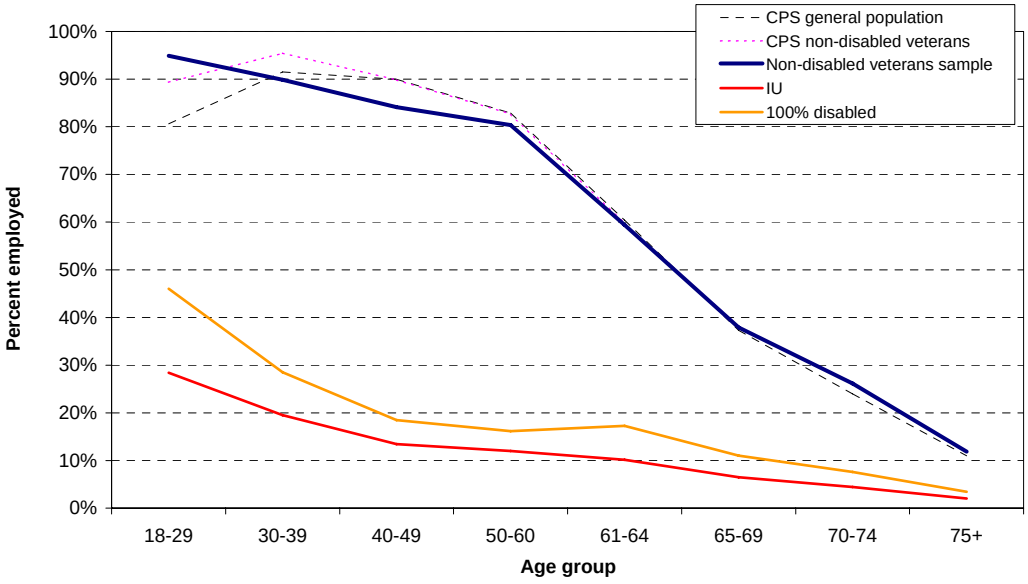
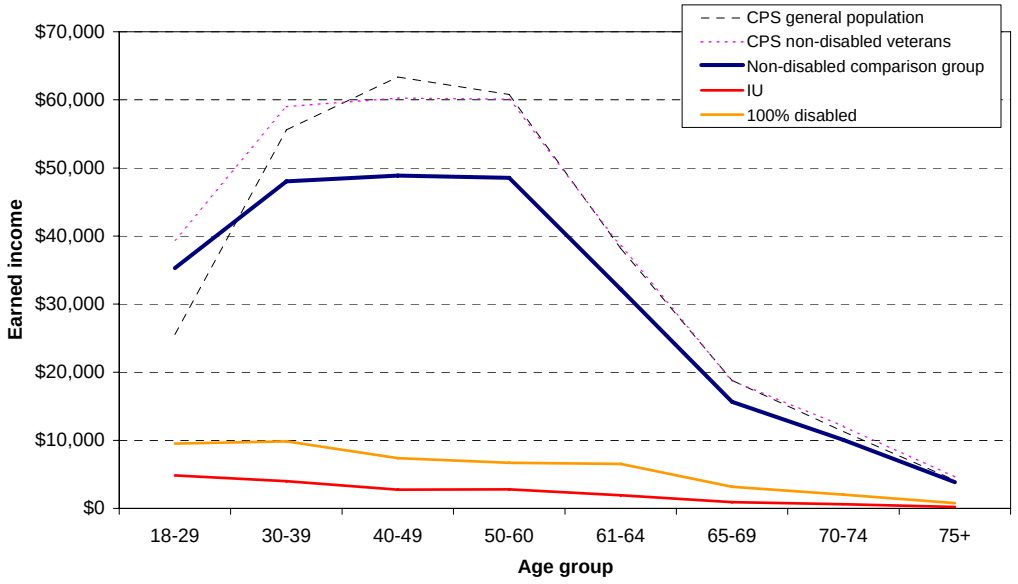


Figure 63. Average earned income of IU and 100-percent disabled veterans (men)



We found in both the earnings and quality-of-life analyses that type of disability matters. Accordingly, we show in figure 64 the average employment rate for those with a physical primary disability compared to those with a mental primary disability for both IU and the 100-percent disabled. The result is that employment rates for those with IU status are about the same regardless of whether the primary disability is a physical or mental condition.

The results also show that the 100-percent disabled with a mental primary condition have employment rates at about the same level as the IU groups. The group that is different is the 100-percent disabled with a primary mental condition. This group has an employment rate that is generally more than twice that of the other groups. A possible explanation for this is that IU status and mental disabilities have employment criteria that may drive this result.

Figure 64. Average employment rate of IU and 100-percent disabled veterans for physical compared to mental primary disabilities (men)

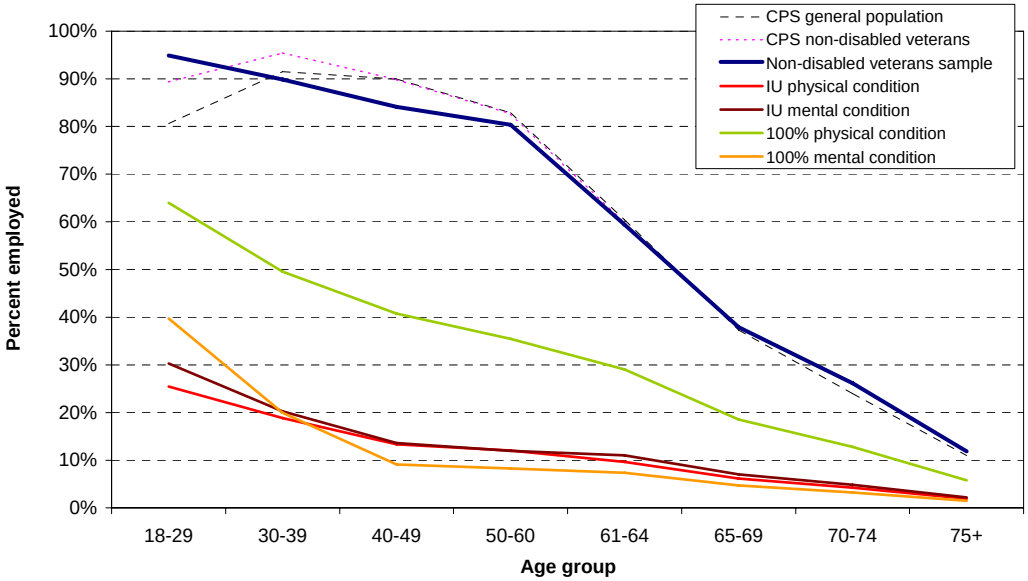
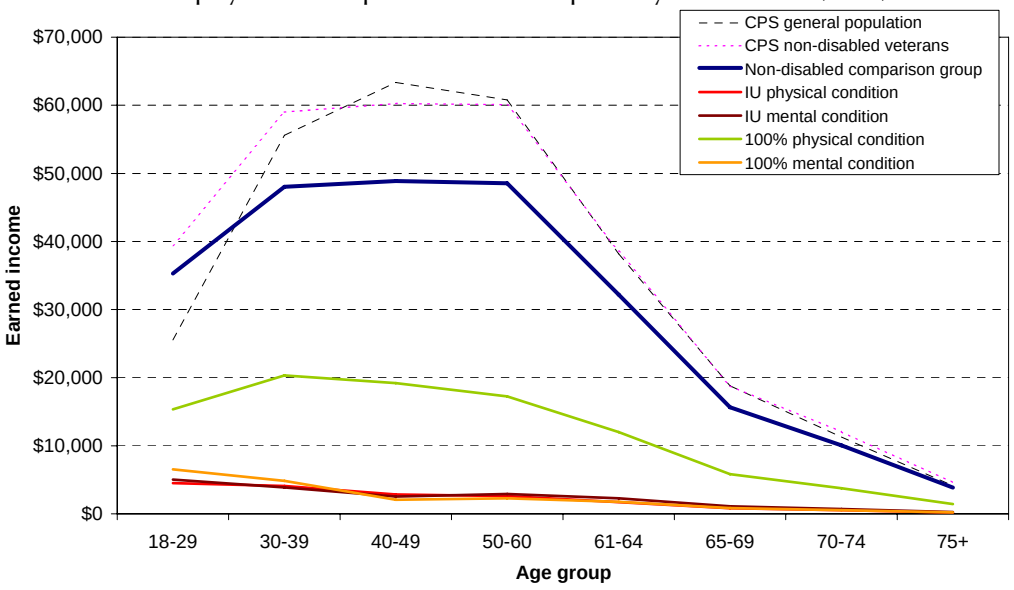


Figure 65 shows the average earned income for the IU and 100-percent disabled by physical and mental primary conditions. The results mirror those of the employment rates. The average earned income is about the same for both IU groups as it is for 100-percent disabled with a mental primary condition. The average earned income is substantially higher for those with a 100-percent physical primary disability than for the other three groups.

Figure 65. Average earned income of IU and 100-percent disabled veterans for physical compared to mental primary disabilities (men)



8.5 Mortality rates

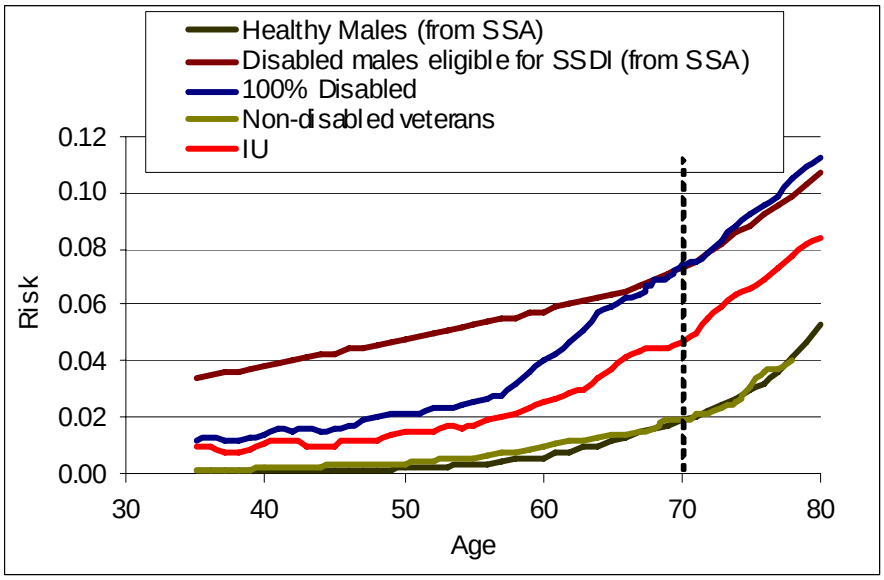
We now turn to the question of mortality. Do service-disabled veterans have higher mortality rates than those who are not service disabled? Do those with IU have higher mortality rates than those of comparable ratings that are not IU? The answer to both of these questions is yes. We briefly discuss differences in life expectancy in the veteran's earnings analysis chapter. In this section, we address the issue directly. The results are quite striking.

We estimated the mortality rates of service-disabled veterans by looking at the mortality patterns of those receiving VA compensation on 1 December 2000. We obtained from the Social Security Administration (SSA) its Death Master File. Using this file, we were able to identify which service-disabled veterans were alive on 31 December 2000 and those that died over the 1 January 2001 to 21 December 2005 time period. From this we constructed mortality rates.

As a first comparison, we compared the service-disabled veterans to various groups in the general population. Figure 66 shows the specific mortality rates. As a lower bound comparison, this figure shows the mortality rates of "healthy males" from SSA. An up-

per bound comparison is disabled males that are eligible for SSDI payments. This is a relatively unhealthy or severely disabled group.

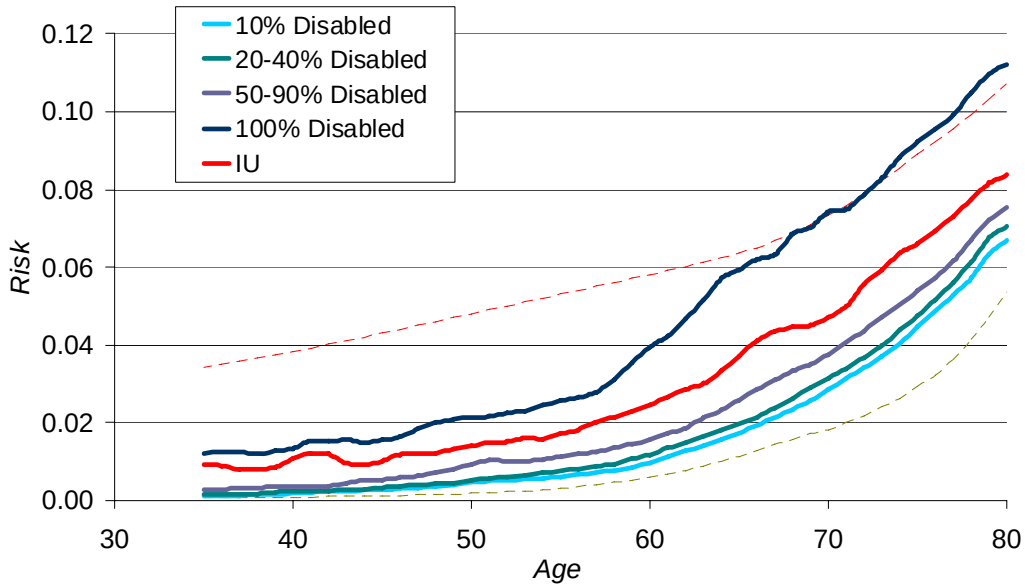
Figure 66. Mortality rates for the general population and service-disabled veterans



Comparing our estimates of non-service-disabled veterans mortality rates, we find that they are at about the same level as SSA's rates for healthy males (see figure 66). This figure also shows the mortality rates for those with a 100-percent disability. The mortality rates for those 65 or older in this group are essentially the same as the rates for disabled males eligible for SSDI. The fact that our estimates for non-service-disabled and 100-percent disabled match up with SSA estimates for healthy and very disabled individuals provides a lot of confidence in our mortality estimates for service-disabled veterans.

Looking at the mortality rates by rating level, we find the consistent pattern we observed in the earnings and quality-of-life analyses—mortality rates increase systematically with the rating level (see figure 67). Note that even for the 10-percent disabled, mortality rates are significantly higher than for healthy males or non-service-disabled veterans. Also the mortality rates are higher for those with IU than those rated 50-90 percent. Hence, there appears to be something clinically that is different about those who are IU, at least as measured by mortality.

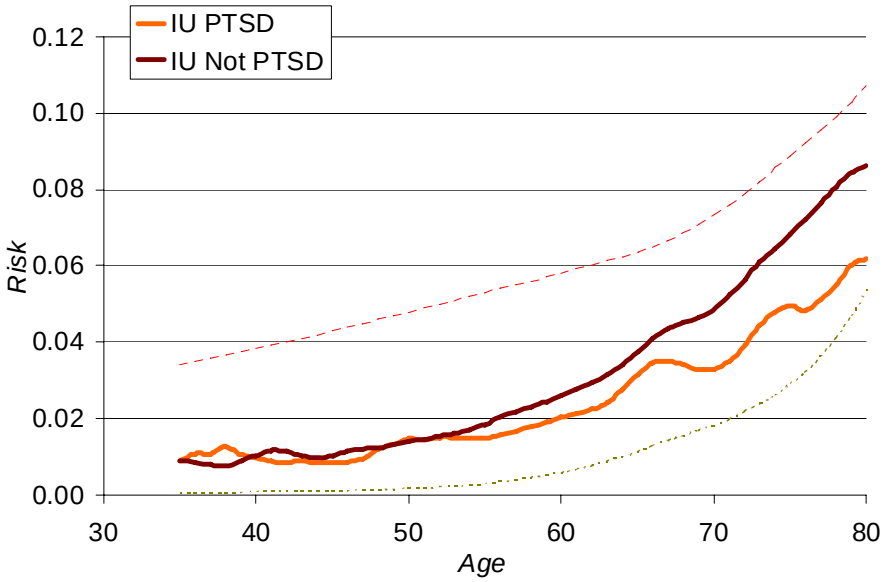
Figure 67. Mortality rates for service-disabled veterans by rating group



Note: the dotted lines are SSA's estimates for healthy males and disabled males eligible for SSDI.

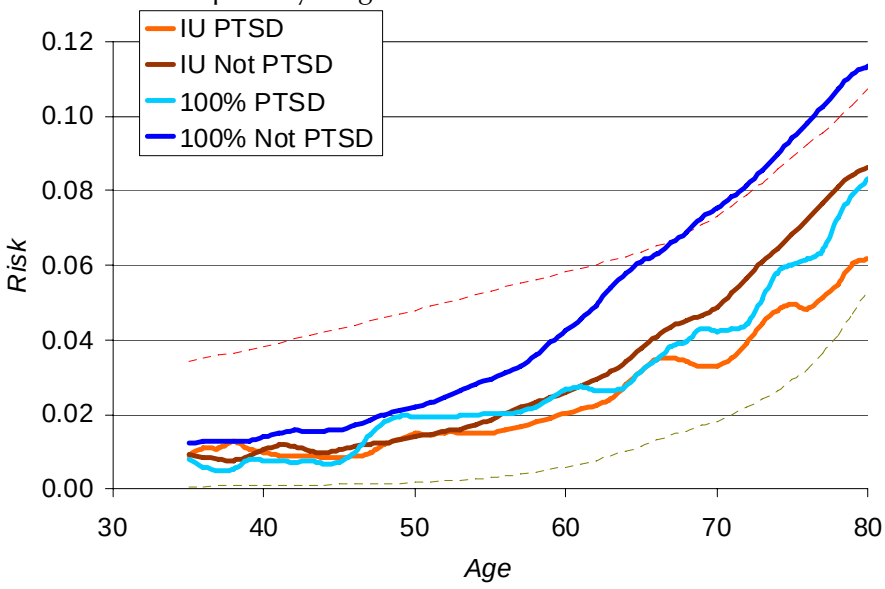
Turning to IU, we explored whether mortality rates varied by type of condition. Specifically, we looked to see whether those whose primary condition is PTSD have a different mortality rate. As figure 68 shows, those with PTSD have a lower mortality rate than those with other primary conditions.

Figure 68. Mortality rates for IU veterans by primary diagnosis



Taking this a little further, we did the same thing for those with a 100-percent disability (see figure 69). Again we found that mortality rates are less for those whose primary condition is PTSD than for those with some other condition. But in either group, mortality is substantially higher than for the non-disabled.

Figure 69. Mortality rates for IU and 100-percent disabled veterans by primary diagnosis



8.6 SSDI

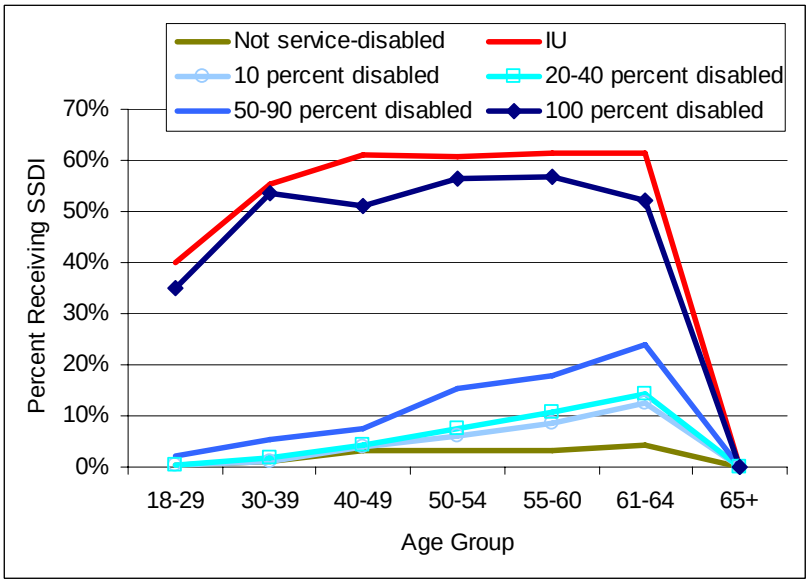
Another item that we looked at was Social Security Disability Insurance (SSDI). SSDI is similar to IU in that eligibility is determined in part by employability. SSDI is designed to provide income to individuals unable to work because of a disability until their condition improves and to guarantee income if their condition does not improve. Disabled veterans may qualify for SSDI payments in addition to their other compensation.

To be eligible for SSDI, an individual must meet conditions on age, work history, income, and medical condition. An individual must be under age 65 to receive SSDI payments. At age 65, the disability benefit converts to a retirement benefit. Individuals who earn more than a limit are ineligible for SSDI. In 2005, the limit was $830 a month–$9,960 per year. Qualifying for SSDI typically requires a medical determination that the individual is unable to work. The final determination of eligibility is made by a state agency where the individual resides, and it usually involves a review of the individual's medical records.

Overall, about 61 percent of those with the IU rating receive SSDI benefits. For comparison, just over 10 percent of the disabled population not rated IU, and about 2.4 percent of the non-service-disabled population, receive SSDI benefits.

Figure 70 reports SSDI participation rates broken out by combined degree of disability. There, the population of veterans rated IU most closely resembles the population of veterans rated 100-percent disabled. For all age groups, the fraction of veterans receiving SSDI compensation is higher for those rated IU than for those rated 100-percent disabled

Figure 70. Percent with SSDI by rating group



8.7 Summary

To summarize the analysis surrounding IU, we first found that certain body systems are prone to IU ratings—PTSD in particular. This may be an indication of a failure of the rating schedule for certain diagnoses. Second, the growth in the IU population is mostly a function of demographic changes. The implication is that the growth is not due to gaming the system to get IU status. Third, average employment rates and earned income are consistent between IU and 100-percent disabled with a mental primary diagnosis. Fourth, mortality rates show that there is something clinical to the disability ratings including IU. Finally, about three-fifths of those with IU participate in SSDI.

9 DOD/VA disability rating comparisons

To assess the consistency of DOD and VA disability ratings, the Commission asked CNAC to study the issue. During the course of the Commission's work, this issue first came to the forefront when "The Commission became concerned with the consistency of DOD and VA disability ratings because of anecdotal allegations presented by individuals to the Commission, a 2002 RAND study, and the 2006 GAO report assessing the DOD Disability Evaluation System" [61]. This chapter presents the results of our analysis, which focused on the following questions:

- What fraction of those with a DOD disability rating come into the VA compensation system?
- How do combined ratings from DOD and VA compare?
- How do individual disability ratings from DOD and VA compare?
- Do DOD and VA rate the same conditions?

Even if DOD and VA rate veterans exactly the same, the benefits disabled veterans receive differ between the two systems. Compensation from VA is based primarily on the rating, with disability benefits increasing with the rating. For those that VA rates as 30 percent or more disabled, veterans may also receive additional compensation for spouses, children, dependent parents, and aid & assistance. Also, disabled veterans may receive special monthly compensation (SMC) for certain disabilities.

Compensation from DOD comes as a lump sum severance payment or a disability pension. Disabled veterans receive the severance payment if they have a disability rating of less than 30 percent and they have less than 20 years of service. Those with at least 20 years of service or at least a 30 percent disability, receive a disability pension. The severance amount is a function of years of service not disability level. The disability pension amount is a function of years of service and disability level.[71] Given the distinction

71. Disability severance is calculated as two months base pay times the number of years of service (rounded to the nearest year). Disability pension is calculated as the greater of 2.5 percent times years of service or disability percentage times base pay. The disability pensions are capped at 75-percent of basic pay.

between those receiving a lump sum or a disability pension, looking at those rated 0-20 percent by DOD is critical.

To summarize, our analysis supports several findings. First, we estimated that roughly four-fifths of those who receive a DOD disability rating end up in the VA compensation system in less than 2 years. Second, for those disabled veterans rated in both systems, the combined disability rating received from VA is substantially higher on average than from DOD. This is mainly because on average VA rates more conditions than DOD does, but even at the individual condition level, VA gives on average higher ratings than DOD does. Third, while DOD and VA rate many of the same conditions, there are some systematic differences. There are some conditions that VA rates that DOD infrequently rates.

Note that we are not passing judgment on which system—VA or DOD—more accurately rates the service-connected disabilities of disabled veterans. That is a clinical judgment and out of our expertise. Further, even if we had that expertise, the data we have from VA and DOD would not support such an analysis. That would require a survey of the medical records for individual disabled veterans to make a medical judgment of the correct rating. With this in mind, the sections that follow present our results in detail for the comparison between DOD and VA disability ratings.

9.1 Overlap between DOD and VA

The three military departments provided data to us through the Commission on all final disabled separations for calendar years 2000-2006. This includes all those with a disabled severance and permanent disabled retirements. Note that permanent disabled retirements include the temporary disabled retirements that were finalized (went permanent) during the 2000-2006 period. About 83,000 separated from the military with a DOD disability over this period (see table 42). The majority, 61 percent, of these were in the Army.

Given the distinction between DOD severance and disability pension, we wanted to know how many had a rating of less than 30 percent from DOD. Overall 81 percent of those separating had a disability rating from DOD between 0 and 20 percent. While there was some variation by service, the vast majority of all DOD disabled ratings were between 0 and 20 percent. The Navy had the lowest fraction (64 percent) and the Army the highest (87 percent).

It is interesting to note that the Army and the Marine Corps had the lowest percentage of disability ratings between 30 and 100 percent. Our expectation was that these two

services would be the highest given the prevalence of ground forces in these Services. But, this is not what we observed. It appears that the higher ratings are more a function of years of service.

Table 42. DOD disability separations by combined disability rating (2000-2006)[a]

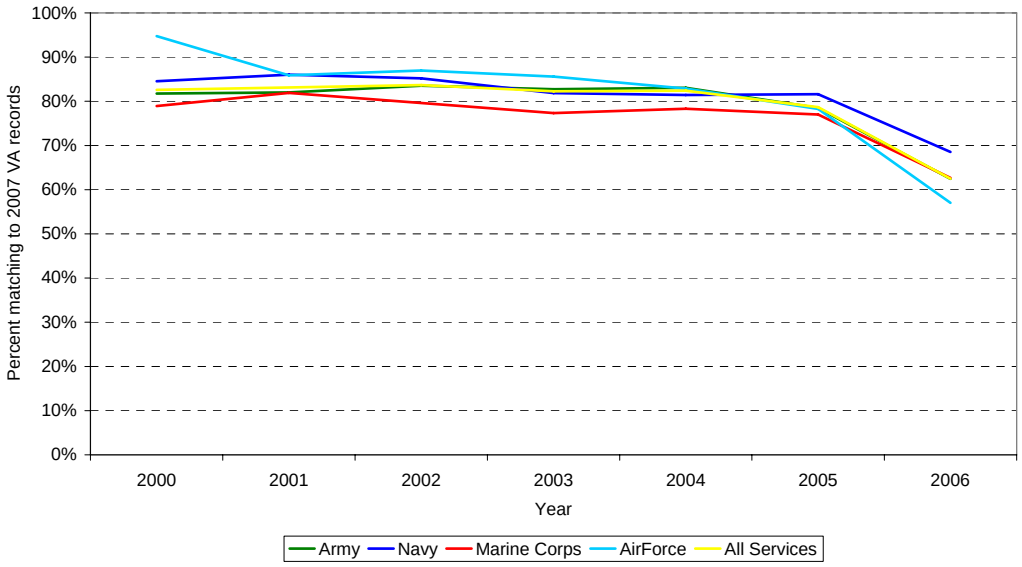
Rating	Army	Navy	Marine Corps	Air Force	Total	Percent
0%	13,646	402	350	389	14,787	17.8%
10%	23,801	5,910	5,667	4,933	40,311	48.6%
20%	6,860	2,294	1,753	1,540	12,447	15.0%
0-20%	**44,307 (87%)**	**8,606 (64%)**	**7,770 (82%)**	**6,862 (73%)**	**67,545**	**81.4%**
30%	3,062	2,080	751	1,310	7,203	8.7%
40%	1,163	1,150	412	475	3,200	3.9%
50%	537	387	152	264	1,340	1.6%
60%	562	451	135	150	1,298	1.6%
70%	213	163	66	74	516	0.6%
80%	149	87	30	35	301	0.4%
90%	65	34	13	15	127	0.2%
100%	618	497	189	174	1,478	1.8%
30-100%	**6,369 (13%)**	**4,849 (36%)**	**1,748 (18%)**	**2,497 (27%)**	**15,463**	**18.6%**
Total	50,676	13,455	9,518	9,359	83,008	100.0%
Percent	61.0%	16.2%	11.5%	11.3%	100.0%	

a. Includes all disability severance, permanent disability pensions (including temporary disability pensions that went permanent during the 2000-2006 period).

We now consider the percentage of those receiving a DOD disabled rating who end up in the VA compensation system. To answer this question, we merged the DOD disability data with the VA data by Social Security number (SSN). We found that roughly 65,500 (79 percent) of the 83,000 DOD disability records matched the 2007 VA compensation data. The lowest match rate was for the 2006 data. Only 62 percent of these matched VA data. This is not surprising given that it takes time to apply for and receive a VA rating.

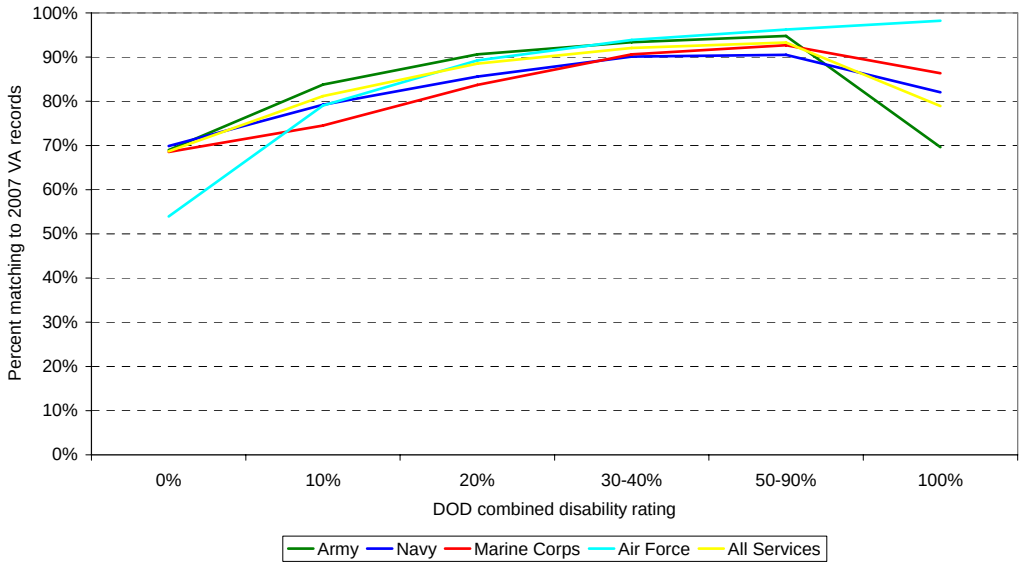
If we look back 2 years to 2005, we find that 79 percent of these matched VA data. And, looking back to 2000, 83 percent of these DOD disabled separations matched VA data. Essentially, the fraction matching VA data appears to be relatively stable, averaging 82 percent for those separating from DOD 2 or more years ago (see figure 71). This patterns is consistent for each of the services. Each has a match rate of near four-fifths for DOD disability separations between 2000 and 2005.

Figure 71. Percentage of DOD disability separations matching 2007 VA compensation data by calendar year of DOD separation



While this is a consistent overall match rate, we wanted to see whether it varied by disability rating. We found that it does as figure 72 shows. The match rate for those with a 0-percent disability rating from DOD is 69 percent. The match rate consistently rises as the rating increases up to a match rate of 93 percent for those with a 50- to 90-percent rating. The exception is that it falls to 79 percent for those with a 100-percent rating from DOD. Why would this occur? Those rated 100 percent by VA can't get a higher rating from VA, so the only financial motivation is if they expect VA compensation to be higher than their DOD disability pension.

Figure 72. Percentage of DOD disability separations matching 2007 VA compensation data by DOD combined disability rating[a]



a. For DOD separations between 2000 and 2005.

9.2 Comparison of combined disability ratings

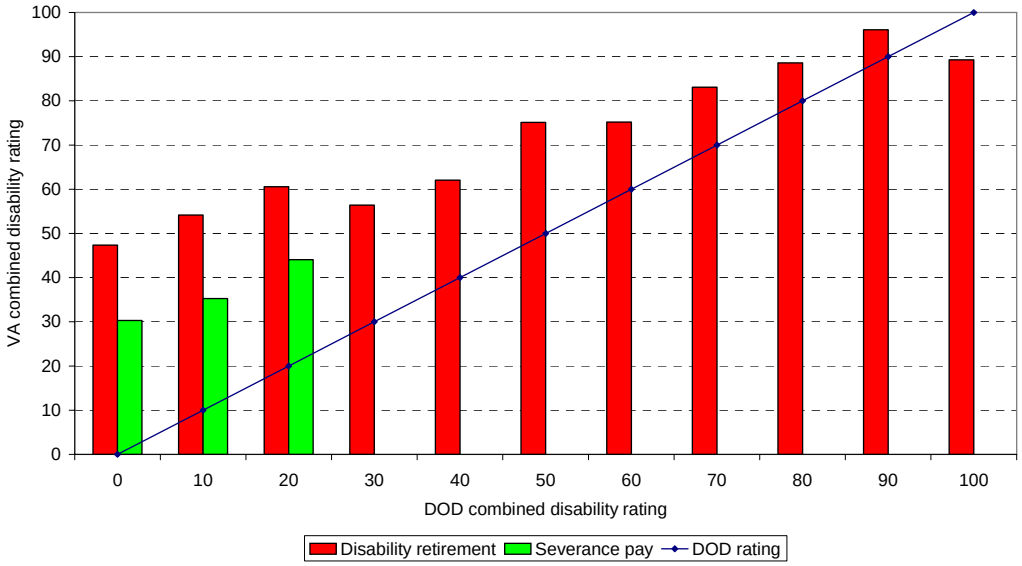
We now turn to the question of how similar the combined disability ratings given by DOD and VA are. We make these comparisons on an individual basis. That is, the comparison is average individual combined ratings differences and not differences in average aggregate ratings. In other words, for 65,500 disabled veterans with a DOD disability separation between 2000 and 2006 who are also in the 2007 VA compensation data, we compared their combined DOD rating to the combined rating they received from VA.

We found substantial differences in combined disability ratings between DOD and VA as figure 73 shows.[72] To understand how to read this figure, consider two examples. First, for those receiving a 0-percent rating from DOD, the red bar shows the average VA combined rating for those with a DOD disability pension. This group's average VA rating was 47 percent. Similarly, the green bar shows the average VA combined rating

72. Note that while this figure does not show separate results for each service, the results by service are virtually the same.

for those who received disability severance from DOD. This figure is 30 percent. Hence, the VA combined disability rating was 47 and 30 percentage points higher than the DOD combined disability rating for those with a DOD disability pension and severance pay, respectively.

Figure 73. Comparison of DOD and VA combined disability ratings



Why is there a difference (47 compared to 30 percent) in the average VA combined rating for those with a DOD disability pension compared to severance pay? Because the only way a veteran can get a disability pension with a 0-percent rating is to have at least 20 years of service, we suspect that the difference in the average VA rating they receive is a function of the disabilities that come with age.

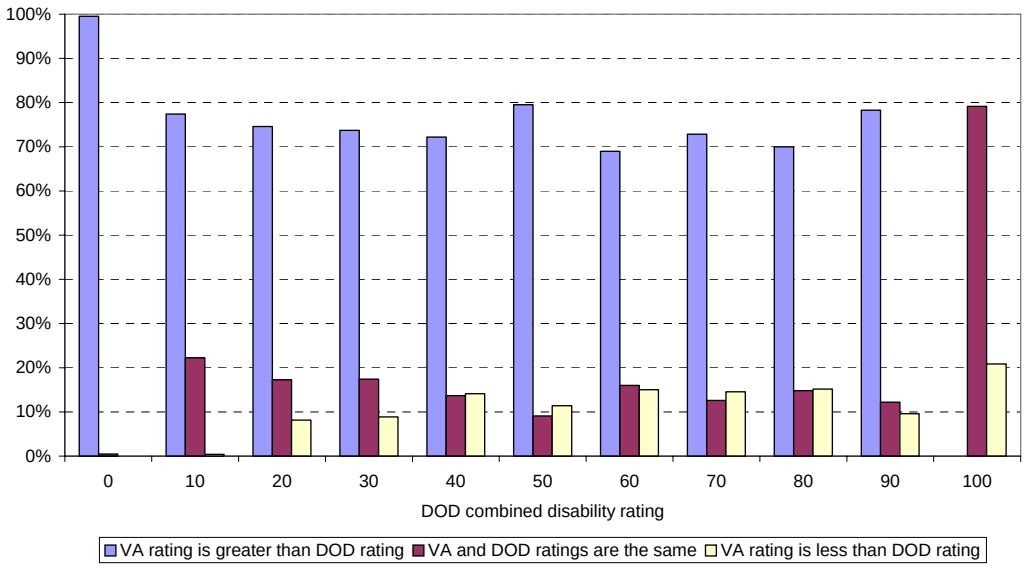
Second, consider those with a 30-percent DOD combined disability rating. The red bar shows that the average VA rating for this group was 56 percent. Note that these all received a DOD disability pension because by definition, severance pay is only for those with a rating less than 30 percent. The blue line in the figure is shown for convenience only. It shows the DOD combined disability rating from the horizontal axis. The difference between the VA and DOD ratings is the portion of the red bar above the blue line. In this example, the VA rating is 26 percentage points higher than the DOD rating (56 -30 percent).

Note that for every rating level between 0 and 90 percent, the average VA rating exceeds the DOD rating. Generally, the difference between the two decreases as the DOD rating increases. This is logical because the maximum rating is 100 percent, so the higher the DOD rating, the smaller the opportunity for a ratings increase from VA.

This is the reason why the VA rating for those getting a 100-percent rating from DOD is less than the DOD rating. If the veteran receives a 100-percent rating from DOD, the best he/she can get is a 100-percent rating from VA. Some get less so the VA average will be less for this group.

Figure 73 highlights the fact that on average the combined rating from VA is higher than from DOD, but that is not true for each individual. This raises the question: what fraction receives a lower rating from VA than from DOD? Figure 74 shows this information.[73] To understand this figure, consider those with a 20-percent combined rating from DOD. The blue bar shows that 75 percent of these veterans receive a higher combined rating from VA. The red bar shows that 17 percent receive the same combined rating from both systems. And the yellow bar shows that 8 percent receive a lower rating from VA.

Figure 74. Percentage of those receiving a larger, the same, or smaller combined disability rating from VA compared to DOD



Looking at those rated 10-percent disabled by DOD, less than half of one percent receive a lower rating from VA. This group represents the largest share of disabled veterans in either the DOD or VA systems. Looking across the groups from 20- to 90-percent disabled, we see that between 8 and 15 percent of disabled veterans receive a lower rat-

73. Note that while this figure does not show separate results for each service, the results by service are virtually the same.

ing from VA than from DOD. So while ratings are higher on average from VA than from DOD, it is not universally true for every individual.

Because less than 30 percent is the cutoff for getting disability severance compared to a disability pension from DOD, we wanted to see what proportion of those who got a 0-20 percent rating from DOD got a rating in the same range from VA. As table 43 shows, 61 percent of those who received a 0-20 percent rating from DOD would have received a disability pension if DOD had given them the same rating that VA did. Conversely, only 7 percent of those with a 30- to 100-percent DOD rating would have received a disability severance if DOD had given them the same rating that VA did. While we point out this difference, we note that DOD is only required to rate those conditions that are unfitting, whereas VA rates all conditions that are service connected.

Table 43. Comparison of DOD and VA combined disability ratings

DOD combined disability rating	VA combined disability rating		
	0-20%	30-100%	Total
0-20%	39%	61%	100%
30-100%	7%	93%	100%

9.3 Explaining differences between DOD and VA ratings

Although the differences between VA and DOD ratings are substantial, we note again that we are not making any judgments about which system is correct. We are simply illustrating the differences we observe. Given that there are differences, what are the possible explanations for them? First, assuming that DOD and VA rate each individual condition consistently, VA must rate more conditions. Second, assuming that DOD and VA rate the same conditions, VA must rate the individual conditions higher than DOD. The answer is mostly that VA rates more conditions than DOD, but there is a degree to which VA rates some conditions higher than DOD. We show our findings for each of these questions in this section.

9.3.1 Number of diagnoses rated by DOD and VA

To begin with, we looked at the number of diagnoses or disabilities DOD rated for each of the 83,000 veterans rated by DOD between 2000 and 2006. In 83 percent of the cases, DOD rated only one disability (see table 44). And it rated three or more disabilities in about 4 percent of cases. The Air Force tended to rate more disabilities than the

other services. It rated only one disability in 72 percent of cases or 11 percentage points lower than the overall average.

Table 44. Percentage of veterans by the number of disabilities rated by DOD

Number of disabilities[a]	Army	Navy	Marine Corps	Air Force	All Services
All					
1	83%	85%	89%	72%	83%
2	14%	11%	8%	22%	14%
3	3%	3%	2%	5%	3%
4+	1%	1%	1%	NA	1%
DOD disability pension					
1	64%	73%	69%	63%	67%
2	24%	18%	21%	26%	22%
3	8%	6%	7%	11%	8%
4+	4%	3%	3%	NA	3%
DOD severance					
1	86%	92%	94%	76%	87%
2	12%	7%	5%	21%	12%
3	2%	0%	0%	3%	1%
4+	0%	0%	0%	NA	0%

a. The Army data caps the number of disabilities at four. The Air Force cap is three.

Another difference is that those receiving a disability pension had more disabilities rated than those with severance pay. This is not surprising given that a disability pension means the veteran had at least a 30-percent rating or at least 20 years of service. Either way it makes sense as those who are more disabled generally have more comorbidities and those who are older generally have more disabilities.

We next added on information about the number of disabilities rated by VA. To do this, we limited the data to those veterans in both the DOD and VA data. As table 45 shows, the VA rated more conditions on average for this group than DOD did. This is true for those with 1, 2, 3, or 4 disabilities from DOD. For example, the 53,178 veterans with one condition rated by DOD have on average 3.8 conditions rated by VA. In other words, VA rated 2.8 more disabilities. Similarly, those who had two conditions rated by DOD averaged 5.3 conditions from VA or 3.3 more than DOD. These findings are consistent across each of the services.

For the conditions that DOD and VA both rated and rated them exactly the same, differences in the number of disabilities rated explain most of the differences in the combined disability ratings between DOD and VA.

Table 45. Average number of VA disabilities by the number of DOD disabilities

Number of DOD disabilities	Number of veterans	Average number of VA disabilities	Difference between VA and DOD	Number of DOD disabilities	Number of veterans	Average number of VA disabilities	Difference between VA and DOD
All Services				**Navy**			
1	53,178	3.8	2.8	1	9,182	3.9	2.9
2	9,711	5.3	3.3	2	1337	5.4	3.4
3	2078	6.3	3.3	3	335	6.3	3.3
4+	534	7.1	3.1	4+	143	7.1	3.1
Army[a]				**Marine Corps**			
1	32,356	3.8	2.8	1	6,392	3.7	2.7
2	6,031	5.3	3.3	2	707	5.4	3.4
3	1170	6.4	3.4	3	140	6.1	3.1
4	329	7.1	3.1	4+	62	7.1	3.1
				Air Force[a]			
				1	5,248	4.3	3.3
				2	1,636	5.0	3.0
				3	433	5.9	2.9

a. The Army data caps the number of disabilities at four. The Air Force cap is three

9.3.2 Differences in DOD and VA ratings of specific diagnoses

Looking at ratings differences between DOD and VA for individual conditions or diagnostic codes, we compared for those veterans in both the DOD and VA records the first diagnostic code on the DOD record to the VA record.[74] If the same diagnostic code was also in the VA record, we compared the ratings veterans received for individual diagnostic codes to see whether DOD and VA rated a specific condition the same. In doing this, we matched 31,473 individual diagnostic codes.

As figure 75 shows, there is substantial variation in the rating given between the systems. For example, the leftmost set of bars in this figure are for those who received a 0-

74. We compared only the first DOD diagnostic code to the VA records. The reason for this is that the Air Force only provided the combined rating. If an Air Force record had more than one diagnostic code, we did not know the rating of the individual diagnostic codes. So for consistency among the services, we limited this analysis to the first diagnostic code for each of the services. Also, the "combination codes" that the services gave made matching complicated. Limiting the review to the first diagnostic code (including combination codes) simplified the analysis.

percent rating from DOD. The individual bars in this group show the number of individuals receiving various ratings from VA. About 13 percent or 440 or these received the same 0-percent rating from VA. The remaining 87 percent received a higher rating mostly at the 10-percent level. Similarly, 52 percent of those who received a 10-percent rating from DOD received the same rating from VA. Most of the rest received a higher rating from VA than from DOD. Clearly, there is substantial variation.

Figure 75. Comparison of DOD and VA ratings for individual diagnostic codes

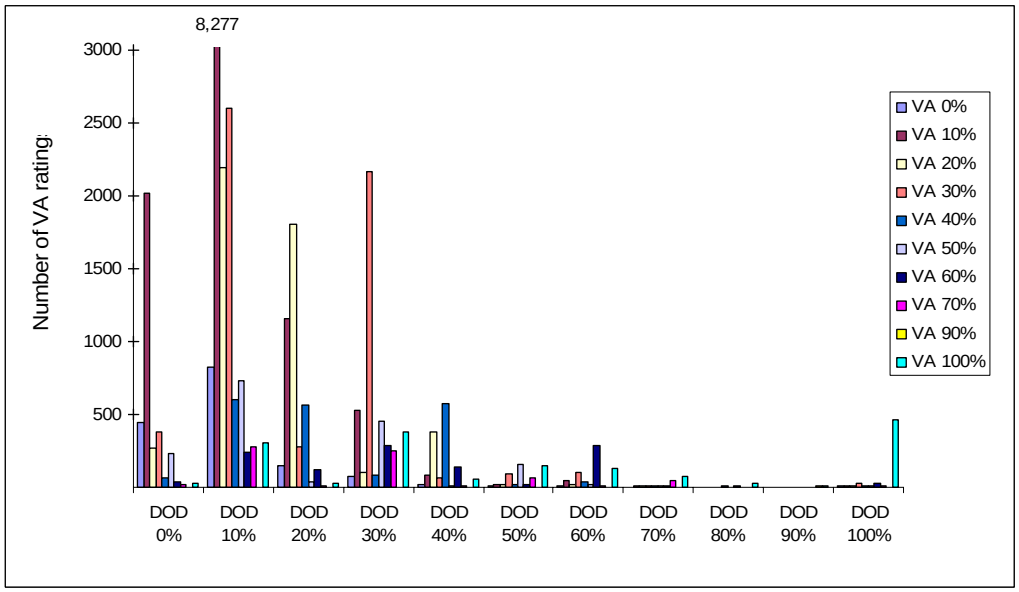


Table 46 summarizes some of the information portrayed in figure 75. It shows the average VA rating for individual diagnostic codes for those disabilities given a specific rating by DOD. For example, we matched to VA records 3,485 conditions that DOD rated as 0-percent disabled. The average VA rating for these was 16.5 percent. For the conditions rated 10-percent disabled by DOD, VA rated them as 20.6 percent on average for a difference of 10.6 percentage points. Across all of the conditions, the average ratings difference was 8.6 percentage points. VA rates conditions higher on average than DOD does, but the difference in individual ratings is not enough to explain the differences in combined ratings between DOD and VA. Those differences are largely due to VA rating more conditions.

In addition to looking at all individual conditions we matched between DOD and VA, we looked at ratings differences for specific diagnoses. These are the most common diagnoses given by DOD or diagnoses that are of particular interest to the Commission. These conditions are (in order of size) arthritis, lumbosacral or cervical strain, asthma, intervertebral disc syndrome, major depressive disorder, PTSD, diabetes mellitus, bipo-

lar disorder, migraine headaches, traumatic brain injury, knee condition, seizure disorder, and sleep apnea.

Table 46. Comparison of DOD and VA ratings for individual diagnostic codes

DOD rating	Number of conditions	Average VA rating	Difference (percentage points)
0%	3,485	16.5%	16.5%
10%	16,067	20.6%	10.6%
20%	4,143	22.1%	2.1%
30%	4,326	39.7%	9.7%
40%	1,360	37.5%	-2.5%
50%	544	59.9%	9.9%
60%	671	56.7%	-3.3%
70%	175	72.7%	2.7%
80%	93	76.9%	-3.1%
90%	36	82.8%	-7.2%
100%	573	88.9%	-11.1%
All (18.3% average)	31,473	26.9%	8.6%

These 13 conditions account for 19,397 or 62 percent of the 31,473 individual conditions that we matched between the DOD and VA records. Table 47 compares the average VA rating to the DOD rating by condition. On average, the VA rating is 9.7 percentage points higher than the DOD rating across these 13 conditions. This is similar to the 8.6-percentage-point difference we observed across all matched conditions. While these figures are similar, the differences by condition are striking. For example, the average ratings difference between VA and DOD is 2.7 percentage points for arthritis and the DOD rating is slightly higher than the average VA rating for diabetes mellitus and knee conditions. However, the average VA rating is substantially higher than the DOD rating for the mental conditions of major depressive disorder, PTSD, and bipolar disorder. Again, we are not passing judgment on which organization's ratings are most correct. We have neither the data nor the clinical expertise to do so. But we are pointing out that the VA and DOD systems are not consistent with each other in how they rate conditions, particularly mental conditions.[75]

75. Appendix Q contains figures that show the distribution of VA ratings by DOD rating for the 13 conditions in table 43.

Table 47. Difference between VA and DOD disability ratings (by condition)[a]

Condition	VA less DOD disability rating						
	0%	10%	20%	30%	40%	50%	All ratings
Arthritis	10.1	1.2	-4.5		0.7		2.7
Lumbosacral or cervical strain	12.8	4.6	-1.2				4.9
Asthma	23.4	12.7		-0.1			9.1
Intervertebral disc syndrome	15.1	10.2	7.0		2.6		8.9
Major depressive disorder	30.0	27.0		23.2		7.4	24.5
PTSD	41.0	34.0		26.0		29.1	32.8
Diabetes mellitus			4.7		-9.8		-0.8
Bipolar disorder	27.8	29.1		26.7		21.0	27.4
Migraine headaches	29.8	18.9		6.3		-4.7	14.1
Traumatic brain injury		15.1		21.2		13.0	11.9
Knee condition		3.5	-3.0	-9.5			-0.2
Seizure disorder		17.9	12.3		5.1		13.5
Sleep apnea	50.2						46.5
All 13 conditions	16.8	10.8	1.6	10.8	-4.0	12.8	9.7

a. Difference equals average VA rating less the DOD rating.

We also looked to see whether the difference between VA and DOD ratings for specific conditions is similar across the services. Generally, they appear to be consistent among the services as table 48 shows. The differences between the VA and DOD rating are generally in the range of 25 to 30 percentage points for mental conditions—PTSD, bipolar disorder, and major depressive disorder. Similarly, the differences for sleep apnea are in the range of 45 to 50 percentage points, but only the figure for the Army is statistically significant.[76]

76. Most of the observations are in the Army. There are not enough observations in the other services to compute statistical significance.

Table 48. Difference between VA and DOD disability ratings (by condition)[a]

	Army	Navy	Marine Corps	Air Force
Arthritis	3.5[b]	0.8	0.3	0.7
Lumbosacral or cervical strain	5.1[b]	4.2[b]	3.5[b]	3.9[b]
Asthma	7.4[b]	15.7[b]	11.4[b]	10.6[b]
Intervertebral disc syndrome	9.6[b]	8.1[b]	6.3[b]	5.8[b]
Major depressive disorder	27.4[b]	22.7[b]	24.5[b]	24.0[b]
PTSD	37.3[b]	31.2[b]	38.4[b]	25.1[b]
Diabetes mellitus	4.9[b]	-8.7[b]	-4.7[c]	2.7[b]
Bipolar disorder	29.2[b]	19.5[b]	29.0[b]	27.6[b]
Migraine headaches	15.2[b]	13.3[b]	11.6[b]	13.8[b]
Traumatic brain injury	16.8[b]	0.7	5.2	25.3[b]
Knee condition	-0.5	0.3	0.9	-1.7
Seizure disorder	18.2[b]	3.7[b]	8.8[b]	16.9[b]
Sleep apnea	47.4[b]	50.0[d]		45.3[d]

a. Difference equals average VA rating less the DOD rating.
b. Statistically significant at the 99-percent level.
c. Statistically significant at the 95-percent level.
d. Cannot compute statistical significance.

When we compared by *combined* disability rating, we found that roughly three-fifths of those with a disability severance would have received a disability pension if DOD had given the same combined rating as VA. As we've shown, this difference is largely a function of the average of about three additional conditions rated by VA. While we find large discrepancies between DOD and VA *combined* ratings, differences in *individual* ratings are not as striking as this section shows. Table 49 summarizes this information. Overall, we estimate that about three-fourths of the *individual* conditions rated 0-20 percent by DOD receive a VA *individual* rating in the same range. Similarly, about four-fifths of *individual* conditions rated 30-100 percent by DOD receive a VA rating in the same range.

Table 49. Comparison of DOD and VA individual disability ratings

DOD individual disability rating	VA individual disability rating		
	0-20%	30-100%	Total
0-20%	72%	28%	100%
30-100%	17%	83%	100%

9.3.3 Conditions most commonly rated by VA

The comparison has shown that VA rates more conditions than DOD and for the conditions each rates, the VA rating is higher than the DOD rating on average. There is one remaining question: What are the 10 most common conditions rated by VA but not by DOD? Table 50 shows the 10 most common conditions rated by VA that were not rated by DOD. That is not to say that DOD never rates these conditions, but that for a particular veteran, these are conditions that VA rated and DOD did not.

Table 50. Ten most common conditions rated by VA but not by DOD

Condition[a]	Rank	Rank of DOD common ratings
Tinnitus	1	<100
Lumbosacral or cervical strain	2	2
Intervertebral disc syndrome	3	4
Migraine headaches	4	9
Rheumatoid arthritis	5	1
Limited motion of ankle	6	14
Hypertension	7	<100
Limited flexion of knee	8	<100
Scars	9	<100
Superficial scars	10	<100

a. We excluded those diagnostic codes ending in "99" from the ranking.

Five of the most common conditions not rated by DOD were also among 14 most common conditions rated by VA. Again, by most common, we simply mean the conditions that VA rated that were most often not rated by DOD for a particular veteran. The other five most common conditions rated by VA but not by DOD were not among the 100 most common conditions rated by DOD. This is an indication that these five conditions commonly rated by VA are generally not rated by DOD in any case. Again, we are not saying that one system is correct and the other is wrong. We are simply pointing out the patterns we see. For those conditions that VA rated and DOD did not, the average VA rating was 13 percent.

To look at this another way, let's consider mental conditions and look at the prevalence for which both systems rate a particular veteran for the same condition. As table 51 shows, if DOD gives a specific mental condition, 75 percent of the time VA rates the same condition. But the reverse is a different story. DOD rates only 39 percent of mental conditions that VA rates. Again this is an indication that VA rates more conditions than DOD does. On average, for those PTSD conditions that VA rated and DOD did not, the average VA rating was 41 percent.

Table 51. Fraction of veterans with a specific mental condition having the same condition in both VA and DOD

Condition	DOD condition also rated by VA	VA condition also rated by DOD
PTSD	87%	33%
Mental (not PTSD)	73%	41%
All mental	75%	39%

We also note that variation in mental conditions occurs between more than the VA and DOD. It varies internally within VA. A 2005 VA Inspector General review of "state variances in disability compensation payments found that mental disorders—including PTSD—had the fourth highest variability in disability rating of the 15 body systems" and "ratings that can be independently validated (amputation, for example) were highly reliable and consistent" [8].

9.4 Summary

We found that roughly four-fifths of those who receive a DOD disability rating end up in the VA compensation system in less than 2 years. Hence, there is substantial overlap between the two systems. We also found on average that disabled veterans had substantially higher ratings from VA than from DOD. This is mainly because on average VA rates about three more conditions than DOD does. In addition, we found that even at the individual diagnosis level, VA gives higher ratings than DOD does on average. Last, while DOD and VA rate many of the same conditions, there are some systematic differences. There are some conditions that VA rates that are infrequently rated by DOD.

Note that although we found differences in combined and individual ratings given by DOD and VA, we make no judgment as to the correctness of the ratings in either system. We have neither the data nor the clinical expertise to make such judgments. What we have done is point out how the VA and DOD disability systems differ.

10 Conclusions, options, and recommendations

Our analysis covers many topics: earnings, quality of life, raters'/VSOs' perceptions, lump sum payments, comparison of program operations, and DOD disability ratings. We make some conclusions throughout this report on these topics. But, given the breadth of the analysis, we present here a list of high-level conclusions.

While we have some recommendations regarding data, we do not wish to provide the Commission with recommendations for a specific course of action as it relates to compensation for earned income and quality-of-life losses. What we do provide in this regard are various options the Commission could consider to address discrepancies in the VA compensation system. Our data recommendations pertain to certain aspects of data availability that limited the type of analyses we could perform, so we also offer recommendations for how to improve the data to better facilitate future analyses. We discuss each of these topics in turn beginning with a summary of our overall conclusions.

10.1 Conclusions

This section presents our conclusions or high-level findings. We first discuss those for earned income and quality-of-life losses and then for the other issues we explored.

10.1.1 Earnings analysis

Again, the principal question posed to us is "[h]ow well do benefits provided to [service-disabled] veterans meet the congressional intent of replacing average impairment in earning capacity?" In answer to this question, we find that VA compensation on *average* is about right relative to earned income losses. The key word is "average." It is about right given the average age at which service-disabled veterans come into the VA system, and it is about right when we consider all disability types and ratings as a whole. Average first entry is typically in the 50s and is a function of the disability severity. When we deviate from the average in some areas, we find discrepancies between VA compensation and earned income losses.

First is the issue of average age at first entry. Our analysis shows that those who enter the disability system at a younger age may be below parity. That is, the compensation they receive from VA does not make up for average earned income losses. Similarly, those who enter the system at an older age are above parity.

Second, we find that the severity of the disability matters in determining whether a group of service-disabled veterans are at parity. Again, at the average age at first entry, we find that they are close to parity for each of the various rating groups, but there are discrepancies when we deviate from the average first entry age. Specifically, those who enter at older ages are generally above parity and those who enter at a younger age and have a severe disability (IU or 100 percent) are below parity.

Third, we find that the type of disability matters when determining parity. While there are differences across each of the body systems, generally we find that the differences fit into two the categories: physical or mental disabilities. Specifically, those whose primary disability is a physical condition are at parity on average. Still age at first entry and severity of the disability matter as they do overall. Those entering later in life are above parity, while those entering early with a severe disability are below parity.

For those with a mental disability, the differences are more striking. On average they are below parity. Further, they are below parity even at the average age at first entry for those not rated IU or 100-percent disabled. While we find that those with a mental condition and a severe disability are at parity at the average age at first entry, those who enter at a younger age are well below parity.

10.1.2 Quality-of-life analysis

The veterans' survey provided information for health-related quality of life and overall life satisfaction. The results in many respects mirrored those of the earnings analysis. We found that service-disabled veterans experience a decrement in health-related quality of life compared to the U.S. population. This loss increases with disability severity.

As with earned income losses, a discriminating factor was whether the primary disability was a physical or mental condition. Those with a physical primary disability experienced a decrement in their physical health, but they did not have a decrement in their mental health except for the most severely disabled. Those with a mental primary disability experienced a decrement in both their physical and mental health.

The life satisfaction measures from the survey show that life satisfaction decreases with disability severity and that it is lower for those with a mental disability than for a physi-

cal disability. For the life satisfaction measures that have U.S. population norms, the average satisfaction levels for service-disabled veterans are below population norms.

Turning to compensation for quality-of-life losses, we point out that there are no explicit payments for quality-of-life losses. However, to the degree that VA compensation is not at parity with earned income losses, there may be an *implicit* quality-of-life payment. These implicit payments may be positive or negative. They are positive if VA compensation relative to earned income losses is above parity and vice versa; hence, the results of implicit quality-of-life payments mirror the findings on earned income losses.

10.1.3 Other analyses

With regard to the benefits determination process, we conducted surveys of VBA rating officials and accredited VSOs. The process is viewed as difficult to use. VSOs report that most veterans and survivors find it difficult to understand and comply with the process. Most raters and VSOs agree that veterans have unrealistic expectations of the claims process and benefits. They also agree that additional clinical input would be useful in conducting determinations. Raters feel that claim complexity is rising, and that more resources and time to process claims would help. Some raters feel they are not well trained and/or lack experience. Mental claims, especially PTSD, are viewed as requiring more judgment and subjectivity and as being more difficult and time-consuming, compared to physical claims. Many raters indicate that the IU criteria are too broad and that more specific decision criteria or evidence would be helpful.

The Commission is also interested in operational aspects of the veterans disability compensation program, asking us to compare the VA's program with other federal disability compensation programs to identify useful practices that VA might want to adopt. Except for the issue of timeliness, VA does not appear to be under-performing in comparison with other disability programs. Recent training improvements seem promising for improving VA timeliness in the long term, but any effects will not be seen for a while. Some of VA's problems with timeliness could result from a complex program design, with multiple disabilities per claim, the need to determine service connection (sometimes many years after separation), and the need to assign a disability rating to each disability. To improve timeliness, VA should determine which stages of the process are contributing most to elapsed time to complete a claim.

We also analyzed the feasibility of lump sum payments for at least some service-disabled veterans in lieu of the current monthly annuity. For lump sums to be effective, the likelihood of the veteran's disability worsening over time needs to be small. We found that the likelihood of rating changes over time varies greatly by diagnosis. However, the

most significant factor is that the payback period—the time it would take the government to break even—is so long (17 to 25 years) that a lump sum is not a viable option from a budgetary standpoint.

Analyzing the IU population, we first found that certain body systems are prone to IU ratings—PTSD in particular. This may be an indication of a failure of the rating schedule for certain diagnoses. Second, the growth in the IU population is mostly a function of demographic changes. The implication is that the growth is not due to gaming the system to get IU status. Third, average employment rates and earned income are consistent between IU and 100-percent disabled with a mental primary diagnosis. Fourth, mortality rates show that there is something clinical to the disability ratings including IU. Finally, about three-fifths of those with IU participate in SSDI.

The final analysis we conducted was a comparison between the disability ratings given by DOD and VA. We found that those veterans with a rating from both systems received a rating that was substantially higher on average from VA than from DOD. Most of this difference was due to the fact that VA rates on average three more conditions than DOD does. Some of the difference between the combined ratings in the two systems stems from the fact that for the diagnoses rated in both systems, VA rates them slightly higher on average than DOD does.

10.2 Options for adjusting VA compensation

Our analysis clearly shows that there are groups of veterans that are not completely compensated for earned income losses. And it shows that on average the system does not provide compensation for quality-of-life losses; for some groups it does, but on average it does not. Given these facts, we considered the available options for adjusting the VA compensation program to more equitably compensate for earned income and quality-of-life losses.

This section presents the options we considered. Specifically, we focus on options for adjusting earnings compensation for those subgroups that are not at parity. These are the groups with mental disabilities, severely disabled veterans who enter the system at a young age, and those first entering at an older age. Next we present options for quality-of-life compensation. This includes a discussion of lump sums compared to a monthly annuity and how much these payments should be. Finally, we recommend that the Commission consider grandfathering any changes to the compensation system. Doing so would prevent altering the system in a way that may negatively impact some service-disabled veterans who are dependent on the VA compensation they receive.

10.2.1 Earnings adjustments

Here we present options for adjusting compensation to improve the parity between VA compensation and earned income losses. We do this for mental disabilities and for those first entering the system at ages that are substantially different from the average age.

10.2.1.1 Adjustments for mental disabilities

We begin with discussing options for adjusting VA compensation for those whose primary disability is a mental condition. As the analysis shows, current VA compensation does not completely replace earned income losses for these service-disabled veterans. More specifically, those who are 10-percent disabled are below parity for any age at first entry. Those who are 20- to 90-percent disabled and not IU are below parity for first entry at age 55 or less. And those who are severely disabled (IU or 100-percent disabled) and enter at a younger age are below parity.

Given these deficiencies in VA compensation for mental conditions, one option is to adjust the disability ratings to a higher level.[77] For example, VA could make 30 percent the minimum rating for mental conditions. Currently, the possible ratings for mental conditions are 10, 30, 50, 70, and 100 percent. VA could adjust these ratings so that the possible ratings were 30, 50, 80, and 100 percent, for example. This upward adjustment in compensation would improve the parity between earned income losses and VA compensation. Note that this is just a notional example. We don't have clinical expertise on which to recommend rating levels. That said, what we are trying to illustrate is that an upward adjustment in rating level would improve the compensation parity for these veterans.

There are issues with changes of this kind. First, this would require re-rating everyone with a mental disability. For a system that already has a substantial backlog of claims to be processed, this is an obvious administrative burden. As of 1 December 2005, there were over 407,000 service-disabled veterans whose primary condition was a mental condition. In total, approximately 531,000 or 20 percent of the 2.67 million service-disabled veterans have a mental diagnosis. The VA would need to revisit all of these if such a change to the compensation system were made.

77. One indication that the ratings for mental conditions are too low is the high percentage of those with IU that have a primary mental condition. The VA gives IU ratings for those who cannot work in a significant or gainful way but who are not 100-percent disabled based on the ratings schedule.

Another issue is that adjusting the ratings upward for mental conditions would not do anything to improve the parity of those already rated 100-percent disabled. They cannot be rated more than 100 percent. This brings us to another alternative, which is to provide special monthly compensation (SMC) for those with mental disabilities. VA currently provides SMC for other disabilities. SMC for mental disabilities would be an extension or expansion of this type of compensation. Note that for SMC to work well for replacing earned income losses for mental disabilities, it would need to increase with disability severity.

10.2.1.2 Adjustments for younger entry

The analysis shows that veterans entering the VA system at a young age and who have a severe disability (IU or 100 percent) have on average earned income losses that exceeded their VA compensation. One way to address this issue is to design the compensation system so that the payment veterans receive depends on their age when they first enter the system. In other words, the compensation table would have different compensation values for the same rating level depending on the age when veterans are assigned a specific rating.

A similar option is to provide a SMC for younger entry for the severely disabled. This SMC would not be necessary for average or older ages at first entry. Note that for either of these compensation adjustments to provide parity, the additional compensation they receive for young first entry must not be taken away as they age. The point is that these adjustments are based on age at entry not current age.

10.2.1.3 Adjustments for older entry

The earned income analysis shows that those who first enter the system at an older age (i.e., substantially above the average age at first entry) have VA compensation that is above parity relative to earned income losses. One alternative is to set VA compensation at levels that would result in parity for these groups. We recognize that this option may not be particularly appealing as it would result in lower compensation levels than service-disabled veterans entering in these groups currently receive. Any such change would need to be grandfathered in.

Another option for adjusting compensation for those entering at an older age is to set a maximum age at which a veteran would be eligible for IU. If the purpose of the individually unemployable designation truly does relate to employment, it seems that it

should not be available at an age (such as age 70) at which the vast majority of individuals are retired.[78]

If, however, the purpose of IU were more of a correction for errors in the ratings schedule, an option would be to consider changing the ratings schedule to reduce the need for IU designations. What do we mean? VA compensates those with IU as if they were 100-percent disabled not because they are 100-percent disabled according to the ratings schedule but because VA determined that they could not engage in a substantial or gainful employment. In other words, IU is a way of making someone artificially 100-percent disabled because the ratings schedule didn't. The point is that if the ratings schedule were perfect, there would be no need for IU. IU exists as a correction for deficiencies in the ratings schedule. So if VA can correct the deficiencies of the ratings schedule, it can eliminate IU altogether. IOM points out that "raters are reminded to consider IU *only in exceptional cases*...and to first determine whether a veteran's disabilities warrant a 100 percent schedular evaluation before considering entitlement to IU" [6].

We recognize that the ratings schedule will never be perfect so there may always be some need for IU designations; the point is that improvements to the ratings schedule would reduce the need. Doing this has some advantages. First, it reduces the administrative burden of doing individual means testing.

Second, a schedular rating of 100 percent would improve the average financial picture of those designated IU in the current system. How can it do this if the IU and 100-percent disabled are compensated exactly the same? While the change would not increase VA compensation, it would allow for improved earned income on average. Because those with IU cannot have earnings above the poverty level and retain their IU benefit, they are limited in what they can earn. Our analysis shows that IU and 100-percent disabled veterans are alike in many respects including earnings losses, quality of life, and mortality rates. While they are similar in earnings losses, those who are 100-percent disabled are not restricted in how much they can work while those who are artificially rated 100 percent through IU are restricted. By correctly classifying more of those veterans as 100-percent disabled, the VA could allow veterans to improve their own financial picture by removing the means testing associated with IU status.

78. IOM recommends that "VA should conduct research on the earnings histories of veterans who initially applied for individual unemployability benefits past the normal age of retirement for benefits under the Old Age, Survivors, and Disability Insurance Program under the Social Security Act" [6]. IOM also notes that "raters are instructed to take care in distinguishing worsening disability that would have caused unemployability from unemployability due to voluntary retirement."

10.2.2 Quality-of-life adjustments

VA does not provide an explicit quality-of-life payment to service-disabled veterans, and on average it does not provide an *implicit* quality-of-life payment either. The exception is in the case of those who enter the VA compensation system at an older age.

An option for making an *explicit* quality-of-life payment is providing a lump sum or a quality-of-life annuity. This annuity could simply be an addition to the current VA compensation. The three other countries' veterans disability programs that we studied—Australia, Canada, and the United Kingdom—each provide separate compensation for economic and non-economic (quality-of-life) losses. Compensation for non-economic losses in Canada and the United Kingdom are a lump sum payment. In Australia, the default is for an annuity, but the veteran has the choice to take this compensation as a lump sum instead.

The difficult question is how much should the lump sum or annuity be? There is no way that we can quantify what it should be. That is, there is no way that we can translate the losses of health-related quality of life and life satisfaction (documented through the Veterans Survey) into a dollar amount. Because we cannot quantify it, we present benchmarks that the Commission can consider when determining the level of this type of compensation. Some of these benchmarks are the non-economic compensation provided by Australia, Canada, and the United Kingdom.

Table 52 shows these countries' maximum lump sum payments for non-economic losses for their 100-percent service-disabled veterans. The amounts for Australia and Canada are similar at $179,000 and $220,000. However, the UK amount is substantially higher at $525,000. Again, these are maximum amounts. Those with less severe disabilities receive smaller amounts. We also note that if the U.S. provided a lump sum payment for quality-of-life losses, it would need to revisit those lump sum amounts whenever a veteran's disability rating changed.

Table 52. Maximum lump sum payments for non-economic losses by country for 100-percent disabled veterans

	Australia[a]	Canada	United Kingdom
Value in the country's currency	$237,439	$250,000	£285,000
Value in U.S. dollars[b]	$178,911	$220,459	$525,369

a. The Australian lump sum is based on a weekly annuity of $259.27 (Australian dollars) assuming a starting age of 55. We used this age because it is the average age at first entry for U.S. service-disabled veterans.

b. We estimated the amounts in U.S. dollars using 2006 exchange rates. (Source: The Federal Reserve Board, "Foreign Exchange Rates and Indexes of the Foreign Exchange Value of the U.S. Dollar. See https://federalreserve.gov/pubs/supplement/2007/05/table3_28.htm)

Before proceeding further with any comparison, it is important that we point out that comparing these countries' lump sum payments with the U.S. system is not an apples-to-apples comparison. To make it an apples-to-apples comparison, we'd have to do an exhaustive review of these countries' compensation programs so that we could estimate how well they make up for economic losses and also provide compensation for non-economic losses. Clearly, we cannot do this given the time and resources expended to do that for the U.S. system. Our point is that simply because these three countries label certain compensation as non-economic compensation, we cannot assume that the compensation they provide for economic losses is just right.

Looking at the UK's lump sum we note that the UK does not provide any compensation for economic losses explicitly for its lowest four disability levels. It only provides a lump sum. The UK, then, is mixing economic compensation in what it labels non-economic compensation. For this reason, we did not pursue further the UK lump sum in our benchmark comparisons.

One thing that we wanted to know was whether there was any analysis behind the lump sum figures in these countries. This information, if it exists, is hard to find. We conducted an extensive search to see if we could find some history for how these countries arrived at the at these lump sum amounts. All that we found was that the Canadian amount was determined by "international and Canadian comparisons" for disability payments, but no specific details were provided [62]. Canada's Veteran Affairs also noted that consistency with what Canadian courts award for pain and suffering was considered.

We can get a benchmark for a quality-of-life payment in the form of an annuity by translating the lump sum values for Australia and Canada into an annuity. Table 53 shows what annuity amount is equivalent to these lump sums for various ages. At the average age at first entry (age 55), the equivalent annuities are about $15,900 and $19,600. Note that as we decrease the age at which the annuity begins, the annuity amount decreases somewhat. For example, if it were to start at age 45, the equivalent annuities would be about $12,700 and $15,700 annually.

Table 53. Annuity equivalent to lump sum amounts for 100-percent disabled veterans[a]

	Example 1	Example 2
Lump sum amount	$178,911	$220,459
Equivalent annual annuity at age 55 years	$15,866	$19,551
Equivalent annual annuity at age 50 years	$14,105	$17,381
Equivalent annual annuity at age 45 years	$12,712	$15,665

a. We computed theses annuity amounts using the mortality rates for the 100% disabled.

If the VA were to adopt these quality-of-life annuities, how would that change the earnings ratios? Table 54 shows the answer to this question, which is that the earnings ratios would increase by about 41 percent for an annuity equivalent to the size of the Australian lump sum at age 55 and by 51 percent using the Canadian lump sum. These percentages fall as the age at entry decreases largely because the annuity is smaller.

Table 54. Change in earnings ratio due to notional quality-of-life annuities (100-percent disability without SMC)

	Annuity based on a lump sum of $187,911			Annuity based on a lump sum of $220,459		
Age at first entry	Earnings ratio without QOL annuity	Earnings ratio with QOL annuity	Percent change	Earnings ratio without QOL annuity	Earnings ratio with QOL annuity	Percent change
55	1.01	1.42	41%	1.01	1.52	51%
50	0.86	1.17	36%	0.86	1.25	45%
45	0.80	1.06	32%	0.80	1.12	40%

As a final benchmark for quality-of-life losses, we computed the change in life expectancy associated with service-connected disabilities. Table 55 shows these results. We computed the difference in life expectancy as the life expectancy of the non-service-disabled compared to service-disabled veterans. For example, for those first entering the system at age 55 with a 100-percent rating, their life expectancy is 71.0 years. This is 43 percent less than the non-service-disabled life expectancy of 83.1 years.

Table 55. Percentage change in life expectancy by age at first entry and rating

Age at first entry	10%	20-40%	50-90% (not IU)	IU	100%	All ratings
25	6%	8%	13%	23%	34%	11%
35	7%	10%	15%	25%	37%	13%
45	9%	12%	18%	28%	40%	16%
55	12%	15%	21%	30%	43%	19%
65	17%	20%	24%	32%	46%	22%
75	24%	26%	28%	32%	47%	27%

10.3 Data issues and other recommendations

To a great extent, the analysis we were able to perform was a function of the data and the analyses it could and could not support. To improve the VA's ability to perform

similar analyses in the future, we offer the following data recommendations.[79] First, the VA needs periodic authorization for linking of the SSA and OPM compensation records so that it can analyze earnings of service-disabled and non-service-disabled veterans at the individual level. The purpose of this is not to do individual means testing but to facilitate analysis for finer subgroups that we were about to analyze with our more aggregated data. The aggregation of our data did not allow us to drill down and analyze groups of veterans that we did not anticipate looking at prior to submitting data requests to SSA and OPM. In particular, VA might wish to study the earned income losses for veterans with a specific diagnostic code. This could be done with individual-level data.

Second, we recommend that VA enhance its administrative databases to better facilitate analysis. This includes maintaining the original award date so that we can determine when a service-disabled veteran first came into the system. The fact that the original award date was missing and overwritten when disability ratings changed made it unreliable for analysis. It caused us to find workarounds to be able to estimate age at first entry, which was a key factor in earned income losses. It would also be useful to know the initial rating and diagnosis at time of first entry. We also recommend that VA maintain demographic information in its administrative files. Demographics are highly correlated with earnings. Hence, they are key to economic analyses. The Defense Manpower Data Center maintains personnel records for all those who are on active duty. These records contain the demographic information that the VA ought to maintain. A periodic merging of the VA administrative data with DMDC data could quickly provide demographic information for all of those new to the VA system.

Finally, we recommend that DOD and VA standardize and link their disability rating processes. Although the two systems serve different purposes, it seems the process could be greatly improved for the veterans being rated if there were a single seamless process. There is no need for veterans to be rated twice to determine disability levels.

79. Note that IOM recommends that "VA should regularly conduct research on the ability of the Rating Schedule to predict actual loss in earnings" [6].

Appendix A: Employment rates and average earned income for women

Figure 76 shows the percentage of female service-disabled veterans that are employed.

Figure 76. Average employment rate of service-disabled veterans (women)

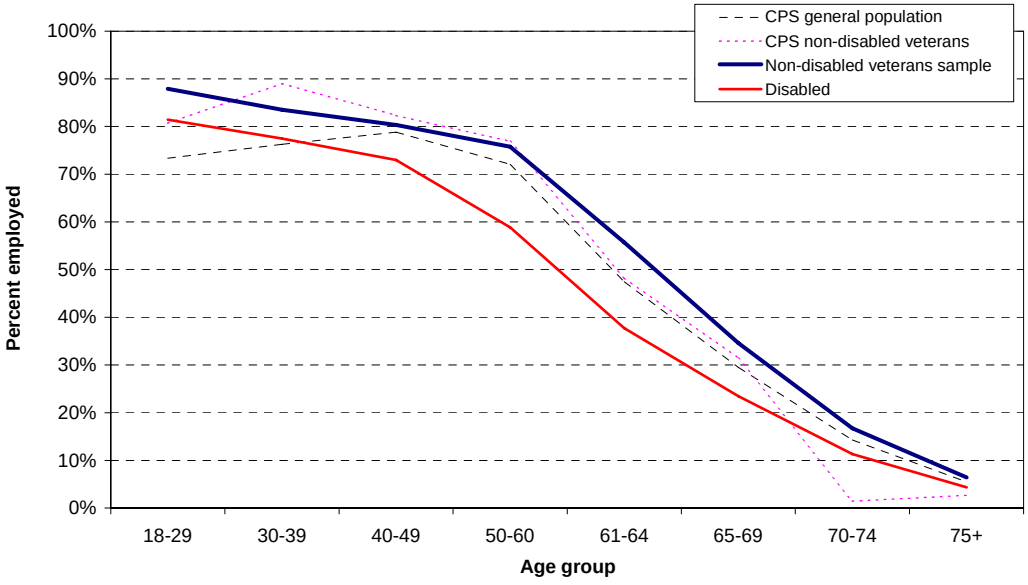


Figure 77 shows the average earned income of female service-disabled veterans.

Figure 77. Average earned income of service-disabled veterans (women)

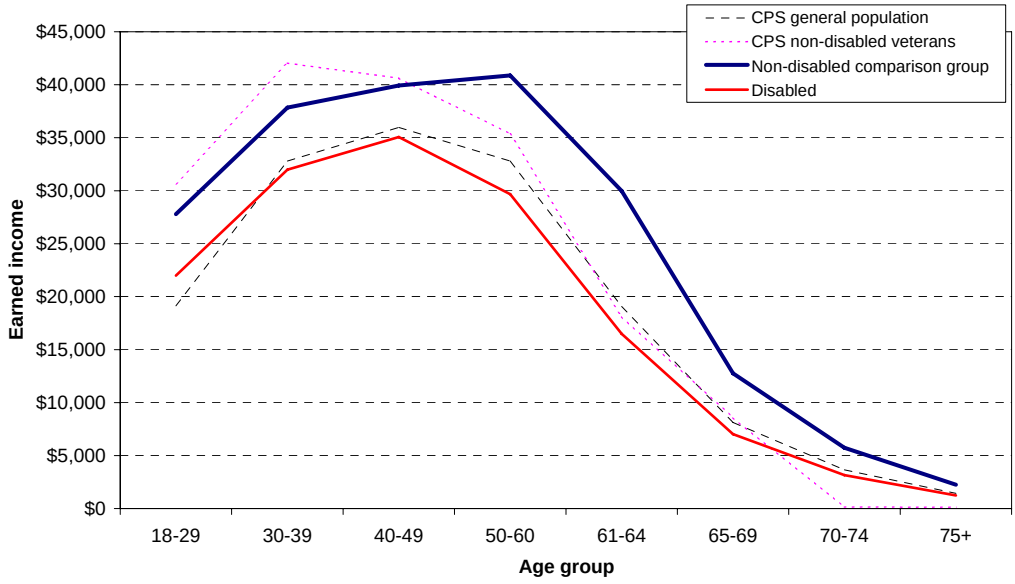


Figure 78 shows the average earned income of female service-disabled veterans plus the taxable equivalent of VA compensation relative to the average earned income of non-service-disabled female veterans.

Figure 78. Average earned income and the taxable equivalent of VA compensation of service-disabled veterans (women)

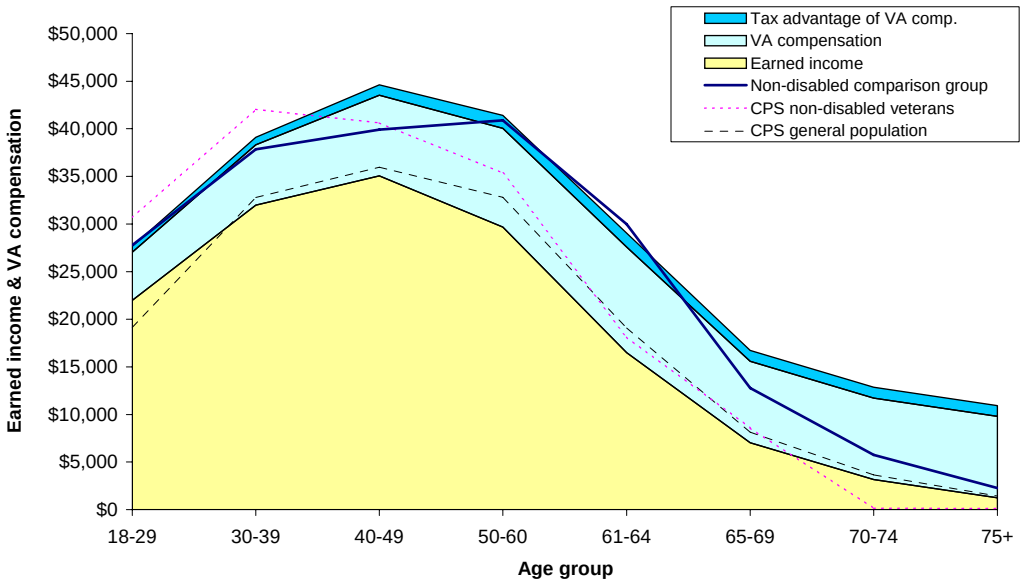


Figure 79 shows the percentage of female service-disabled veterans that are employed by rating group and IU status.

Figure 79. Average employment rate of service-disabled veterans by rating group and IU status (women)

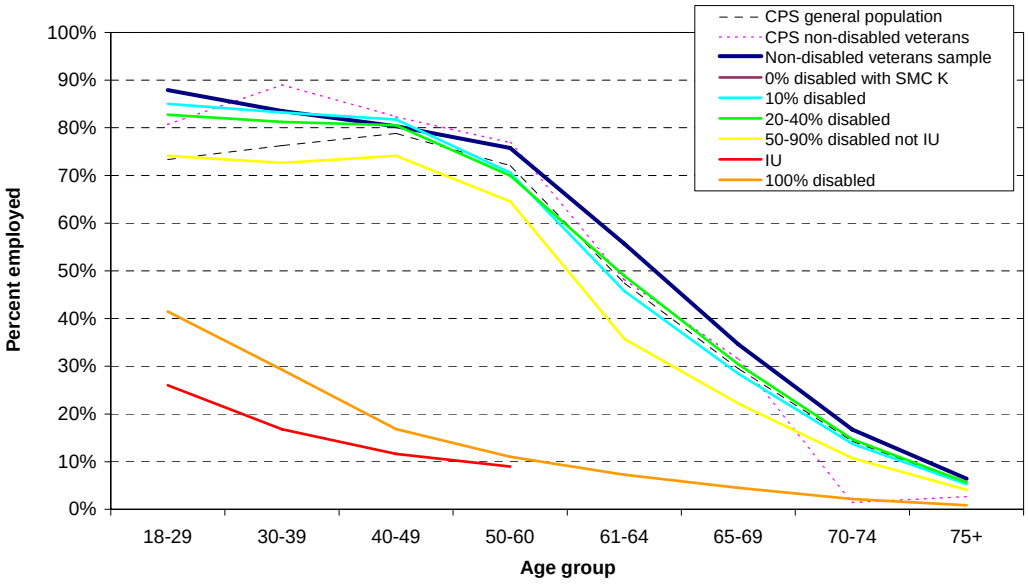
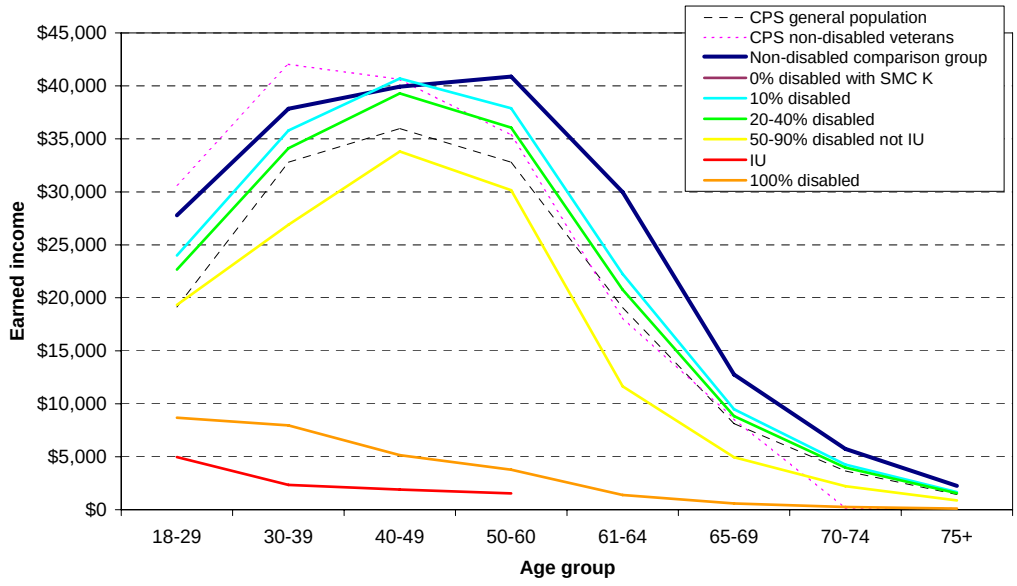


Figure 80 shows the average earned income of female service-disabled veterans by rating group and IU status.

Figure 80. Average earned income of service-disabled veterans by rating group and IU status (women)



Figures 81 - 84 show by rating group the average earned income of female service-disabled veterans plus the taxable equivalent of VA compensation relative to the average earned income of non-service-disabled female veterans. We do not show the figure for those IU due to small numbers.

Figure 81. Average earned income and the taxable equivalent of VA compensation for 10% disabled (women)

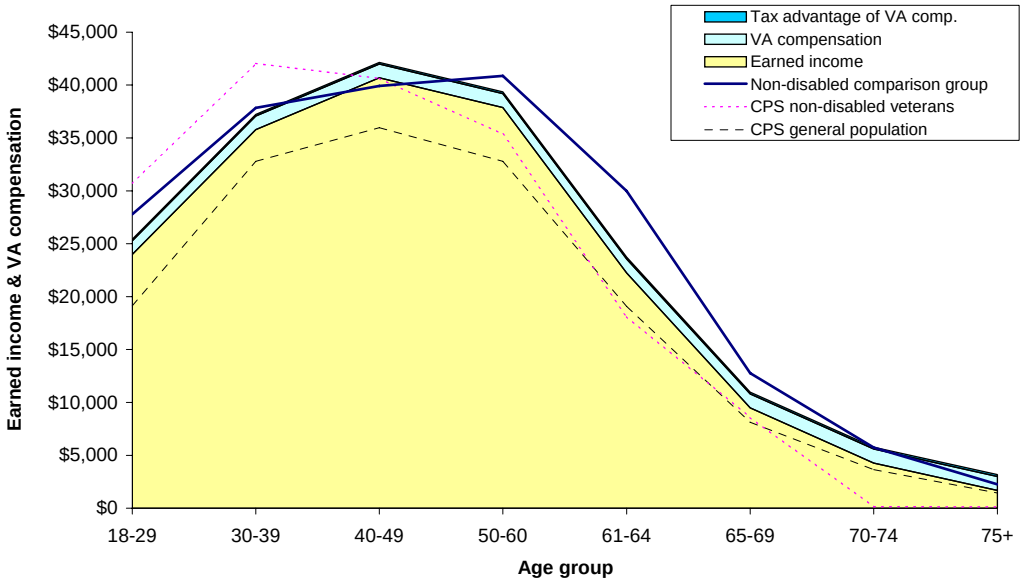


Figure 82. Average earned income and the taxable equivalent of VA compensation for 20-40% disabled (women)

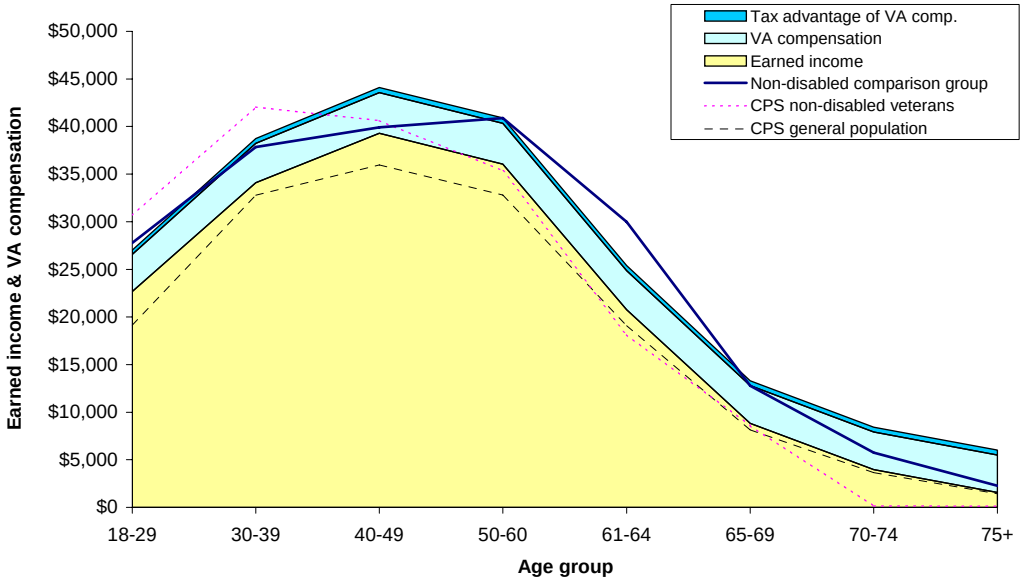


Figure 83. Average earned income and the taxable equivalent of VA compensation for 50-90% disabled (women)

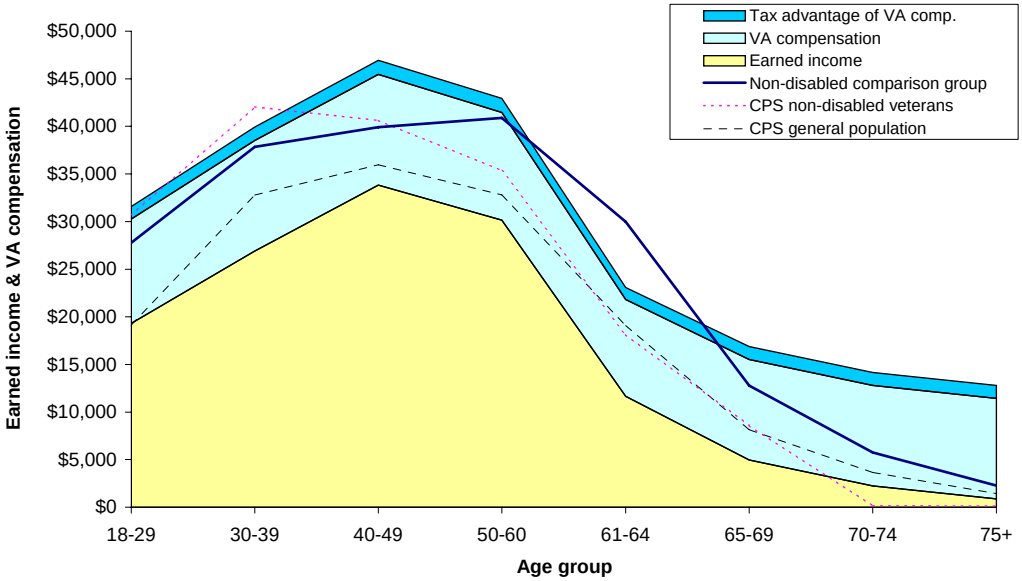


Figure 84. Average earned income and the taxable equivalent of VA compensation for 100% disabled (women)

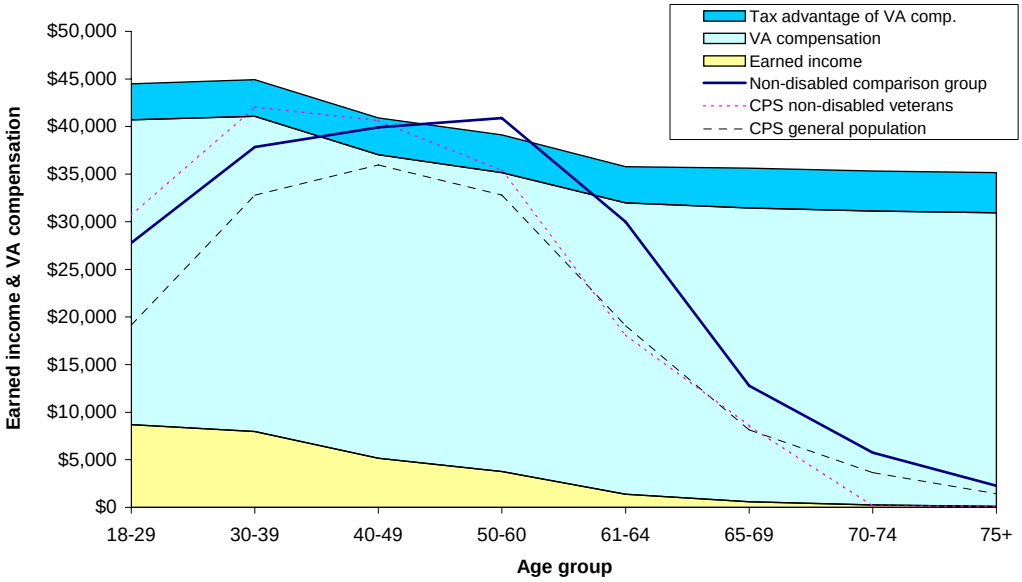


Figure 85 shows the percentage of female service-disabled veterans that are employed by SMC group.

Figure 85. Average employment rate of service-disabled veterans by SMC group (women)

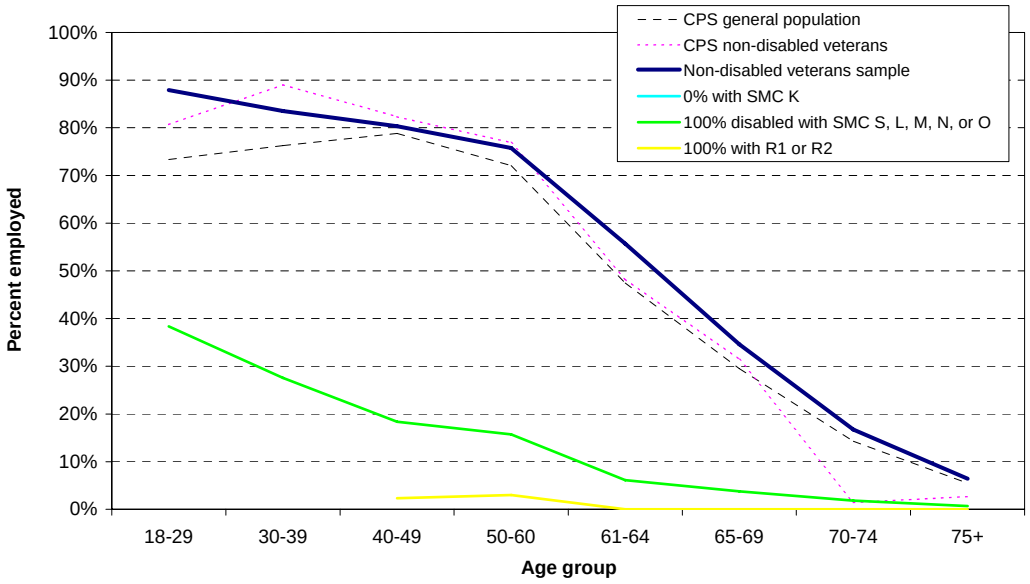
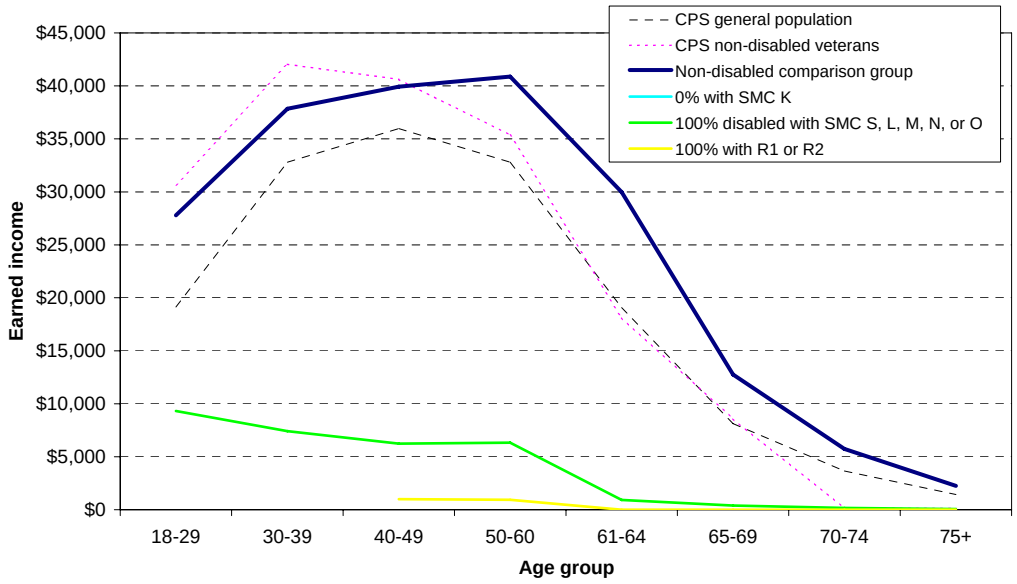


Figure 86 shows the average earned income of female service-disabled veterans by SMC group.

Figure 86. Average earned income of service-disabled veterans by SMC group (women)



Appendix B: Employment rates and average earned income by body system

Figures 87 - 99 show the percentage of male service-disabled veterans that are employed by rating group and body system except for musculoskeletal and PTSD which aredicussed in the body of the report.

Figure 87. Average employment rate of service-disabled veterans with a skin primary disability (men)

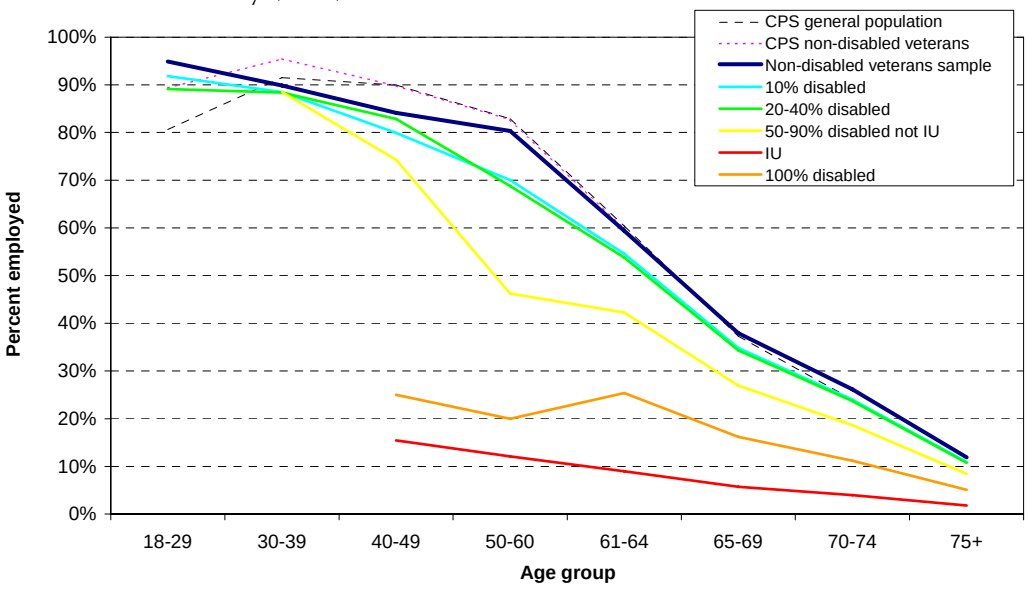


Figure 88. Average employment rate of service-disabled veterans with an auditory primary disability (men)

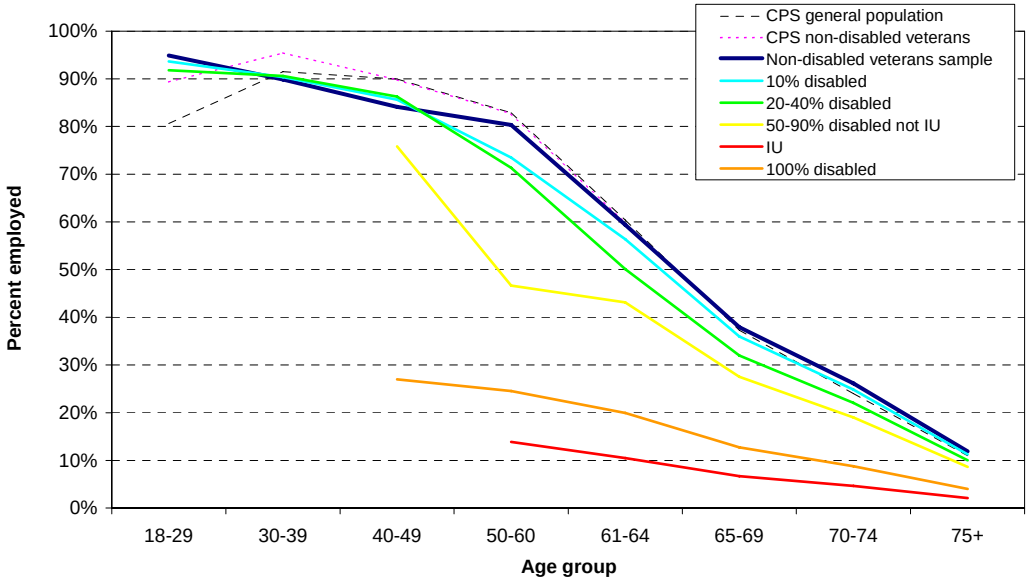


Figure 89. Average employment rate of service-disabled veterans with a neurological primary disability (men)

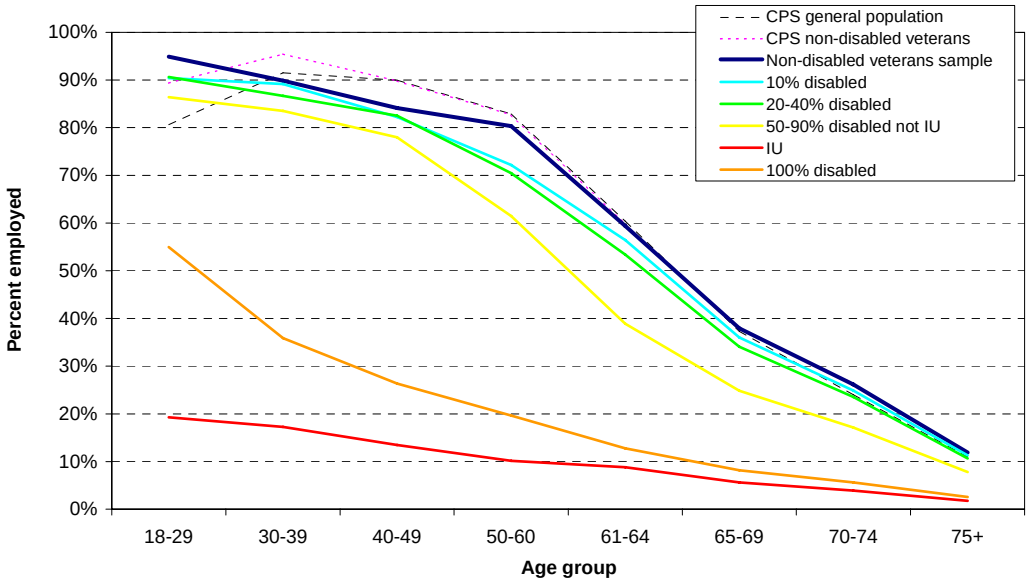


Figure 90. Average employment rate of service-disabled veterans with a mental (not PTSD) primary disability (men)

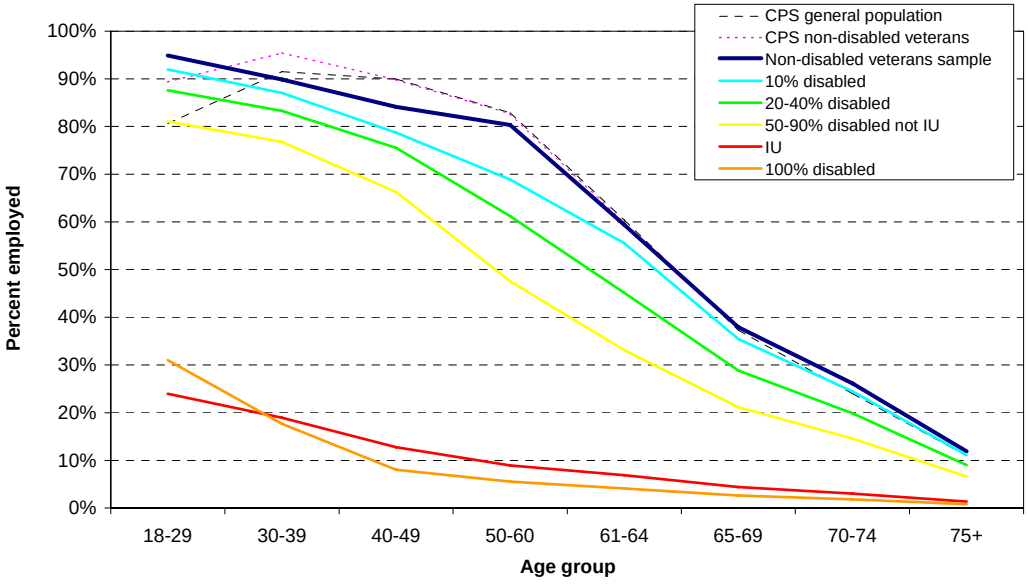


Figure 91. Average employment rate of service-disabled veterans with a digestive primary disability (men)

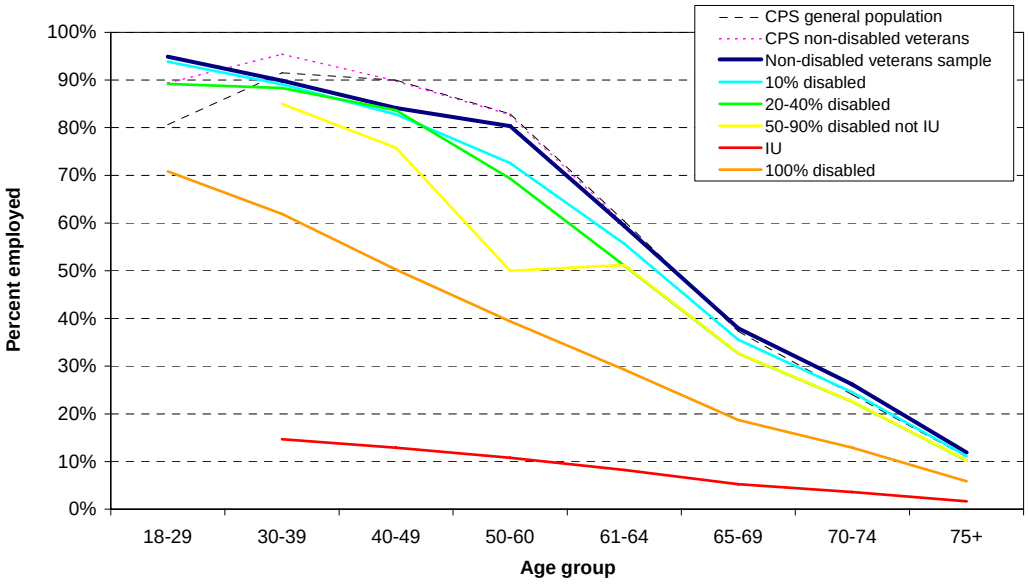


Figure 92. Average employment rate of service-disabled veterans with a cardiovascular primary disability (men)

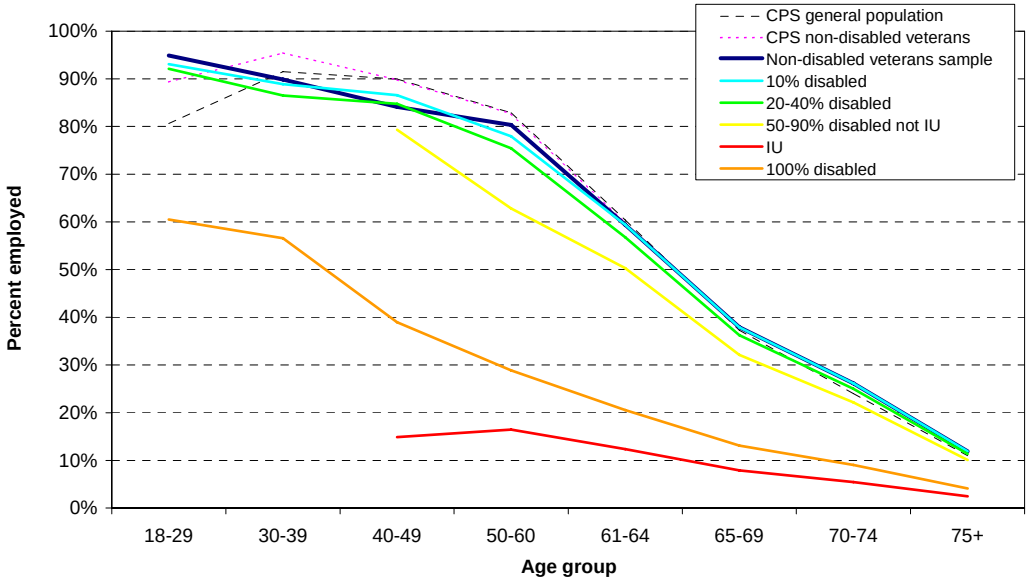


Figure 93. Average employment rate of service-disabled veterans with a respiratory primary disability (men)

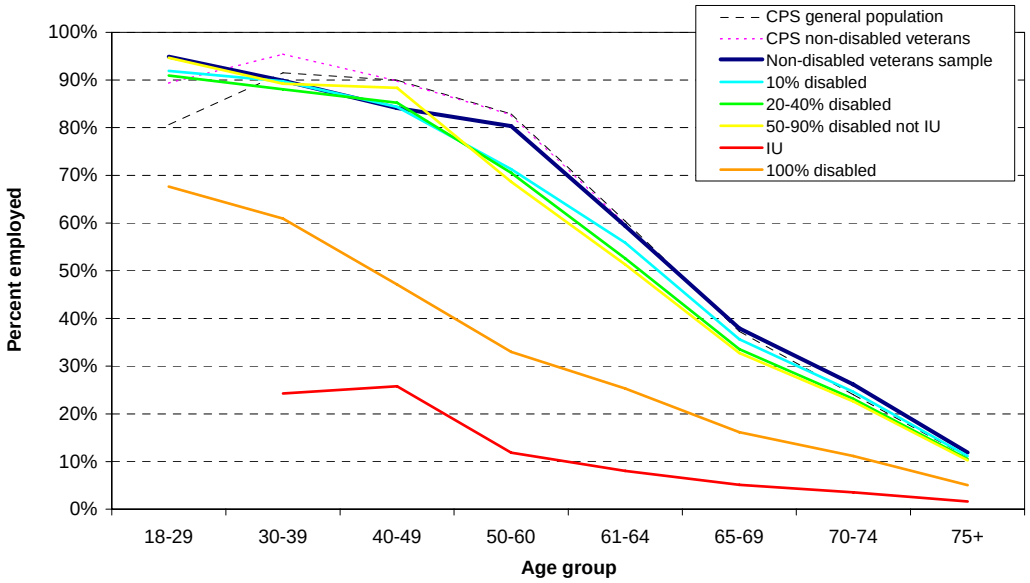


Figure 94. Average employment rate of service-disabled veterans with an endocrine primary disability (men)

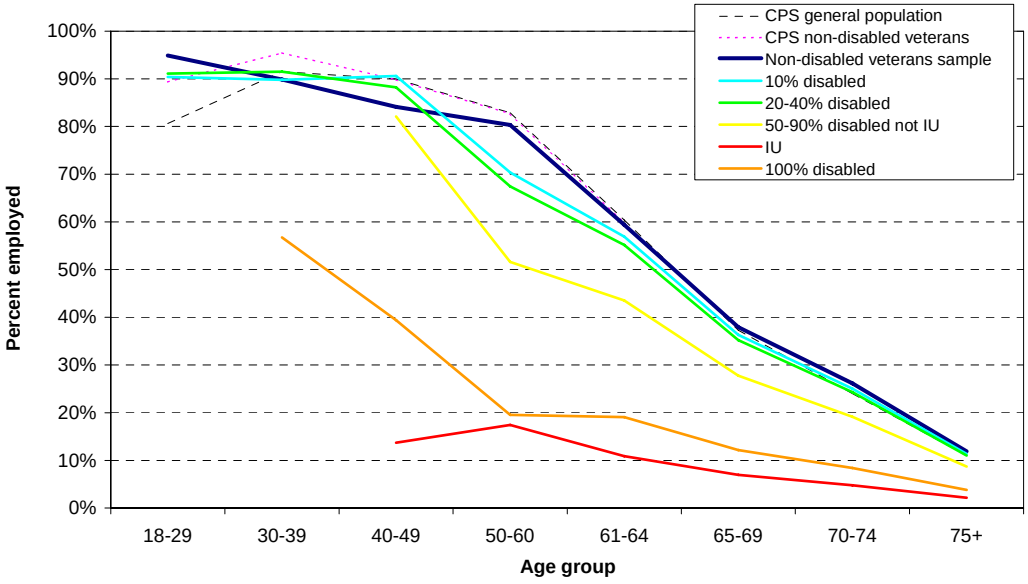


Figure 95. Average employment rate of service-disabled veterans with a genitourinary primary disability (men)

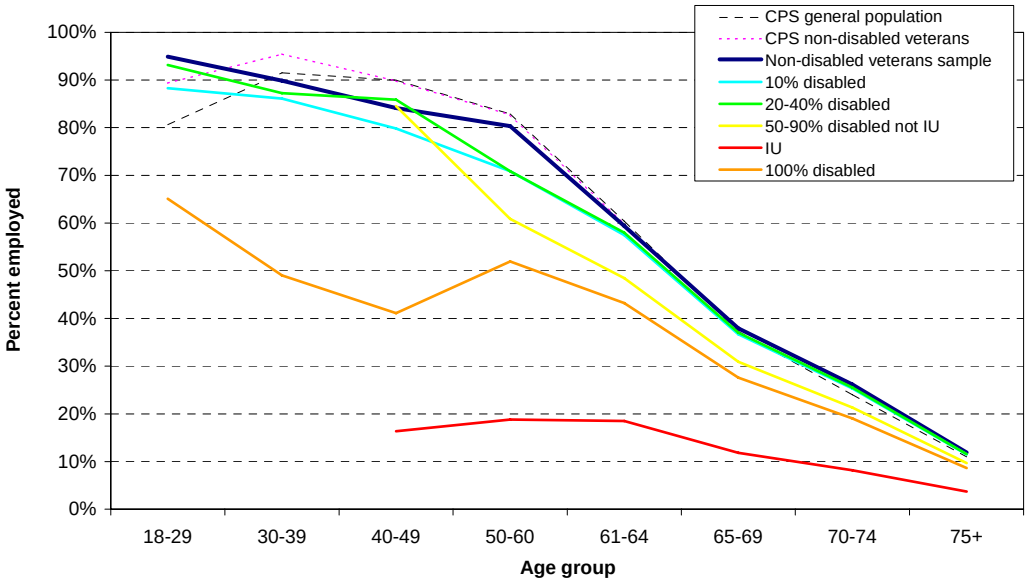


Figure 96. Average employment rate of service-disabled veterans with an eye primary disability (men)

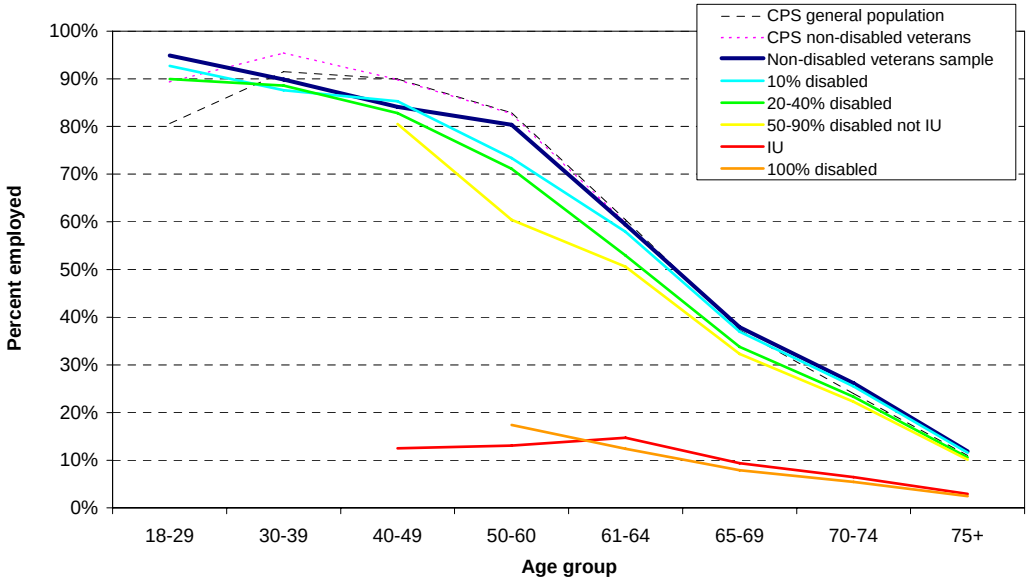


Figure 97. Average employment rate of service-disabled veterans with an infectious, immune, nutritional primary disability (men)

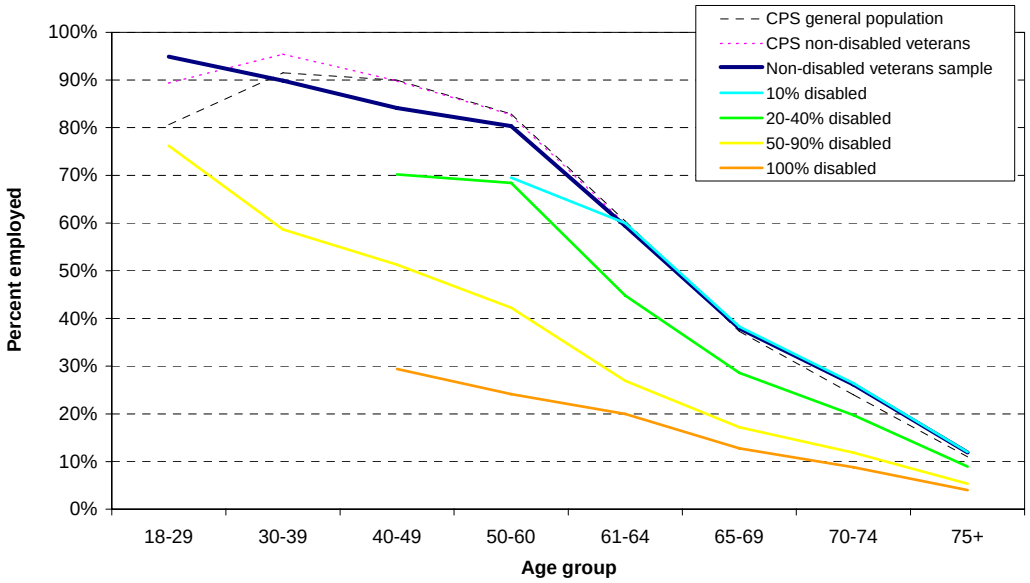


Figure 98. Average employment rate of service-disabled veterans with a dental primary disability (men)

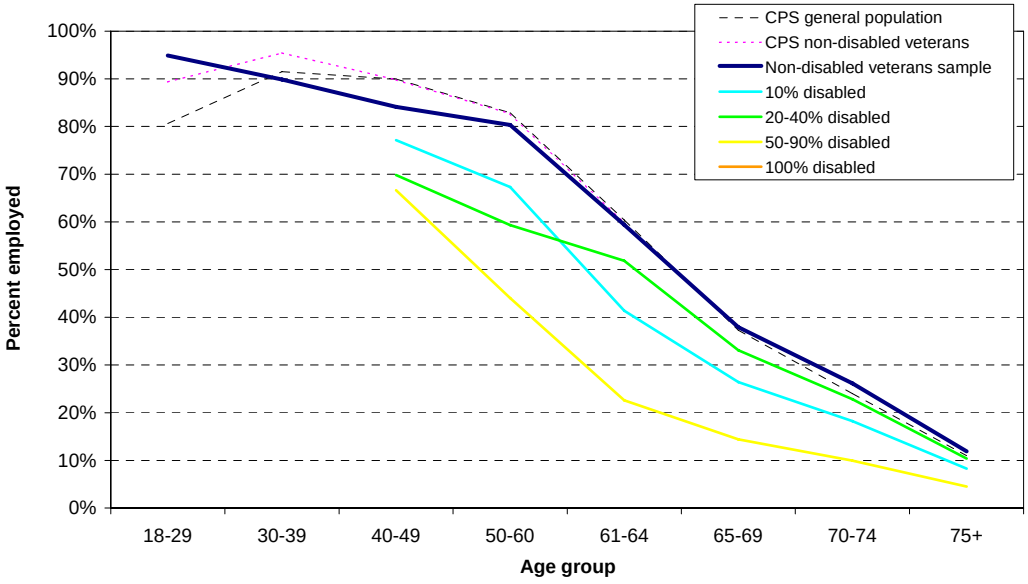
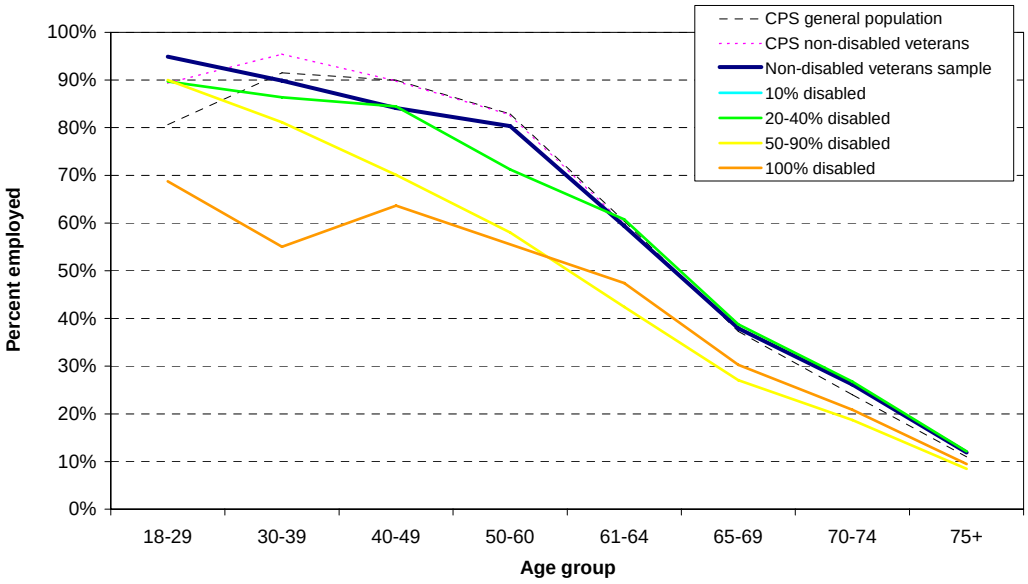


Figure 99. Average employment rate of service-disabled veterans with a hemic/lymphatic primary disability (men)



Figures 100 - 112 show the average earned income for male service-disabled veterans by rating group and body system except for musculoskeletal and PTSD, which are in the body of the report.

Figure 100.Average earned income of service-disabled veterans with a skin primary disability (men)

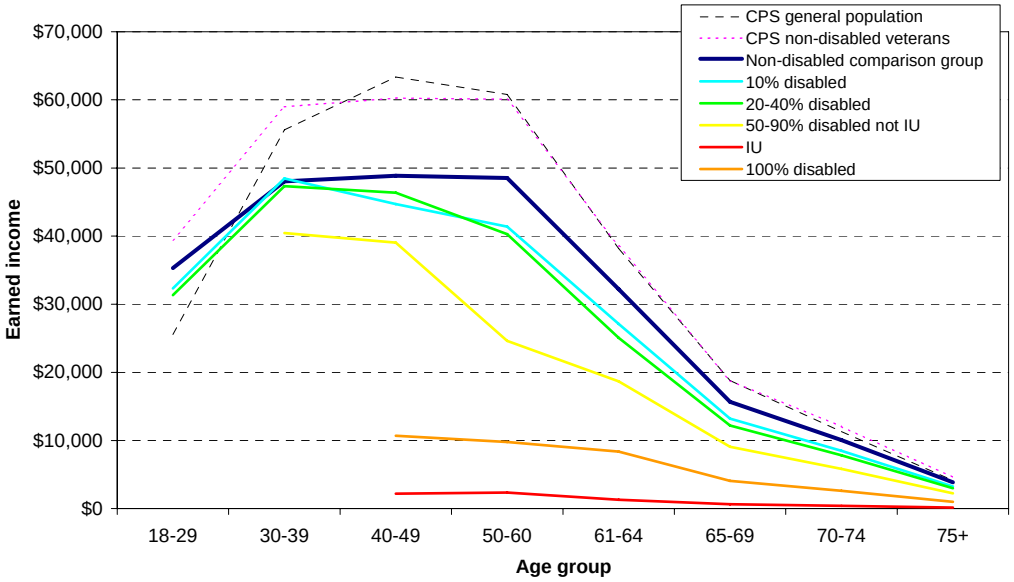


Figure 101. Average earned income of service-disabled veterans with an auditory primary disability (men)

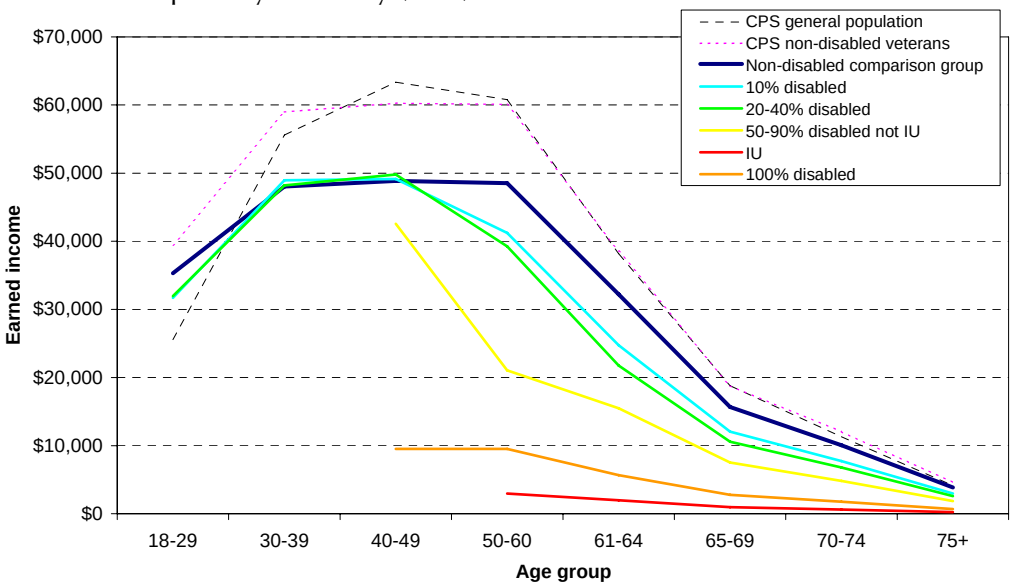


Figure 102.Average earned income of service-disabled veterans with a neurological primary disability (men)

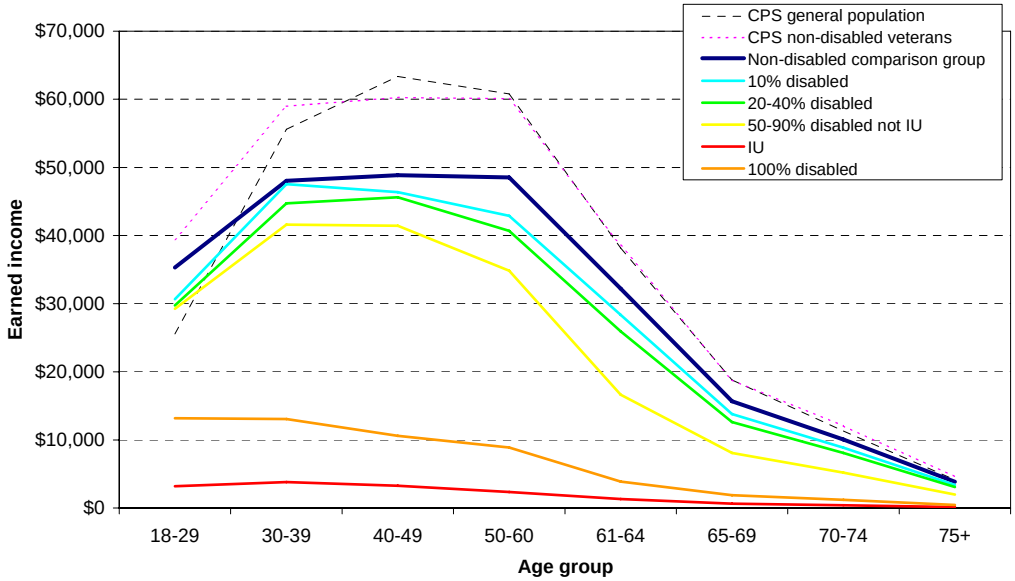


Figure 103. Average earned income of service-disabled veterans with a mental (not PTSD) primary disability (men)

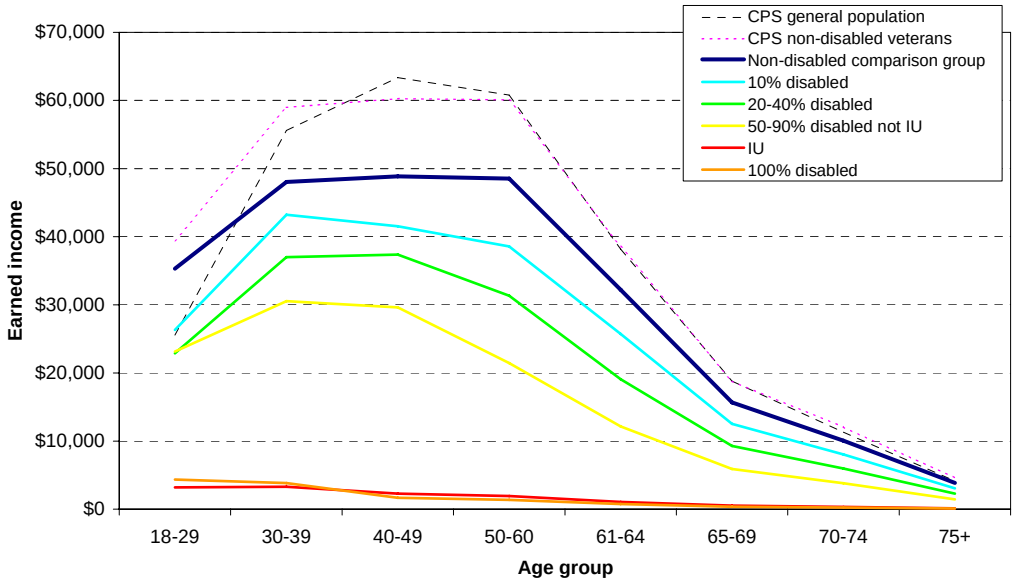


Figure 104. Average earned income of service-disabled veterans with a digestive primary disability (men)

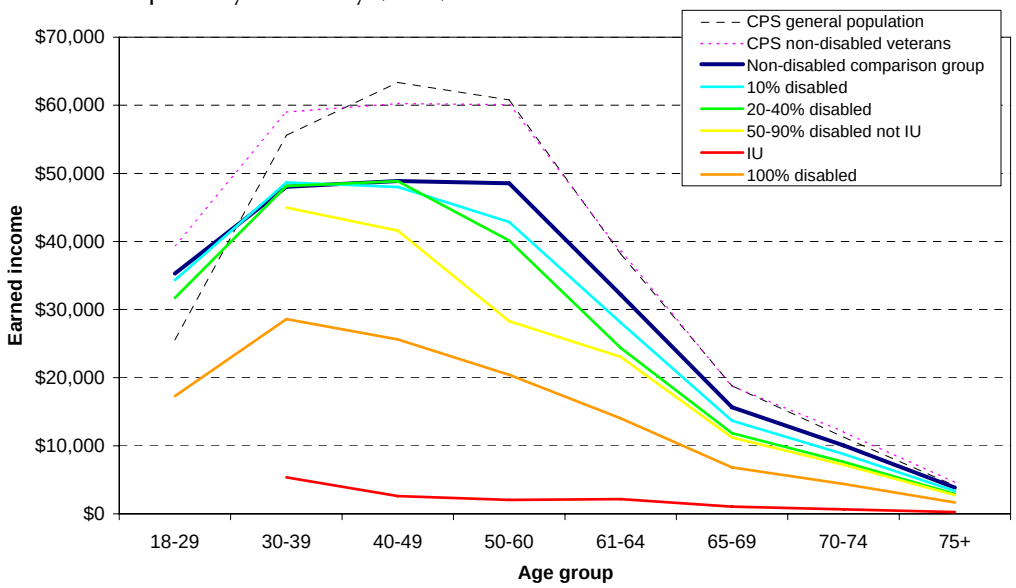


Figure 105. Average earned income of service-disabled veterans with a cardiovascular primary disability (men)

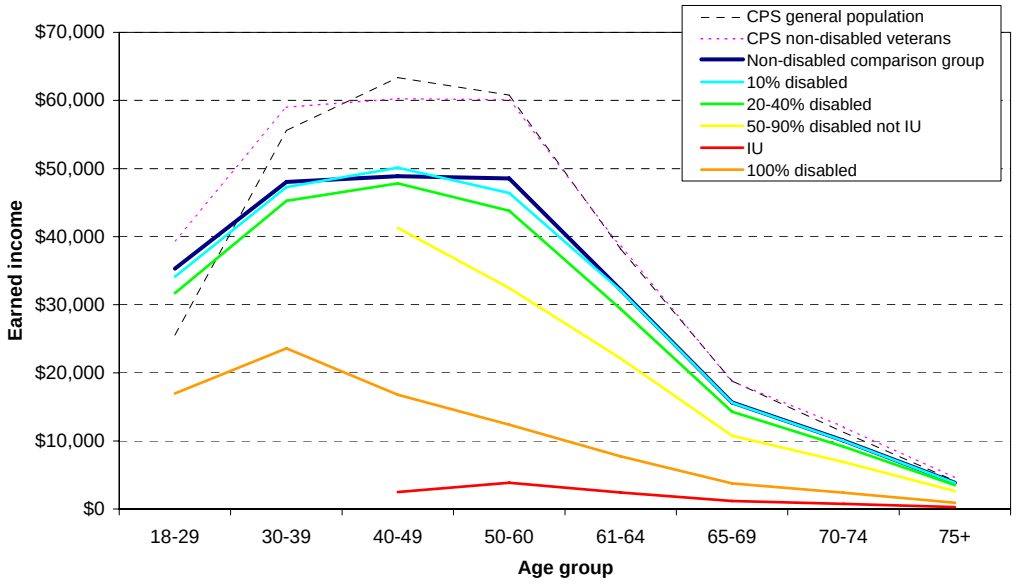


Figure 106. Average earned income of service-disabled veterans with a respiratory primary disability (men)

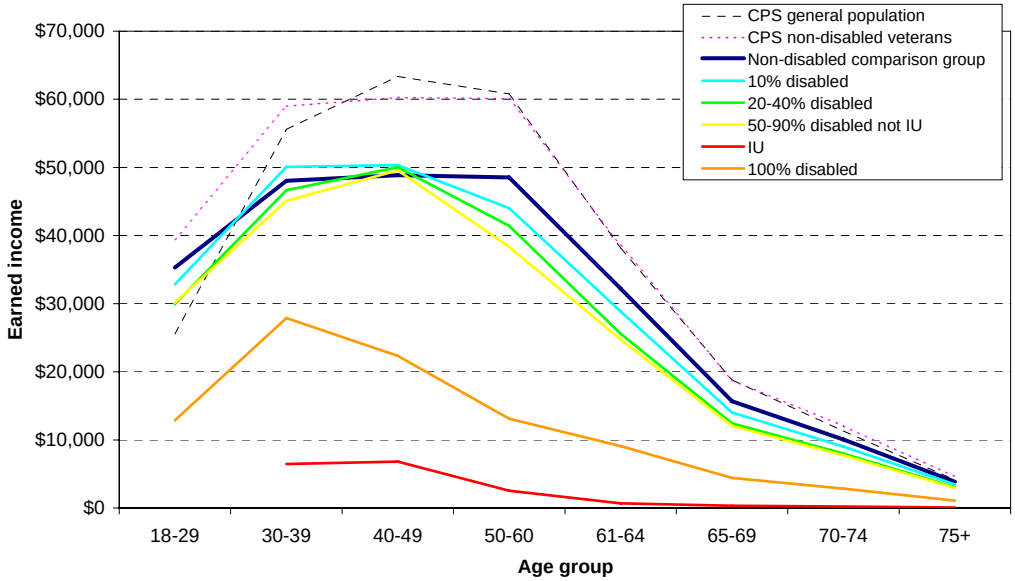


Figure 107. Average earned income of service-disabled veterans with an endocrine primary disability (men)

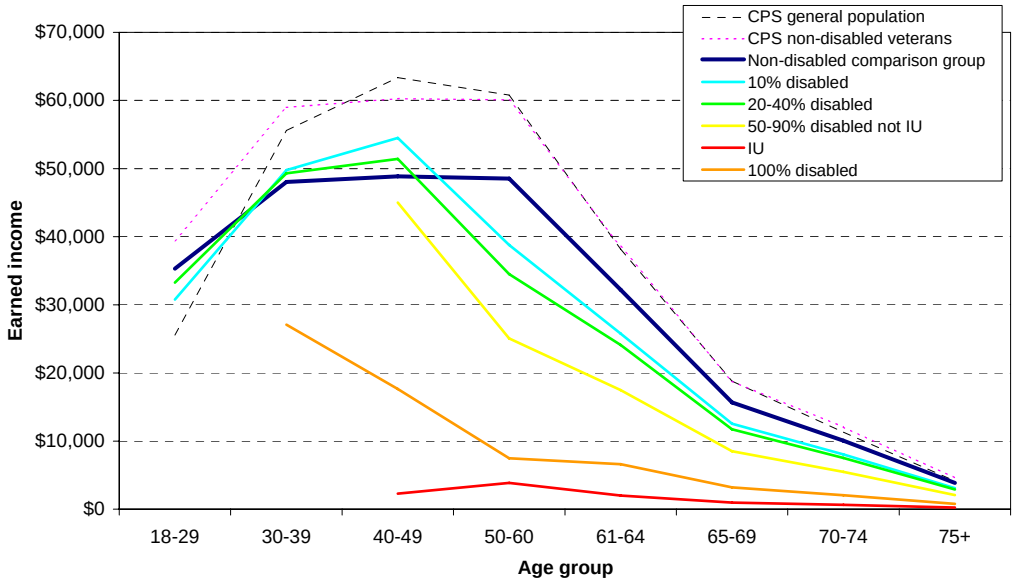


Figure 108. Average earned income of service-disabled veterans with a genitourinary primary disability (men)

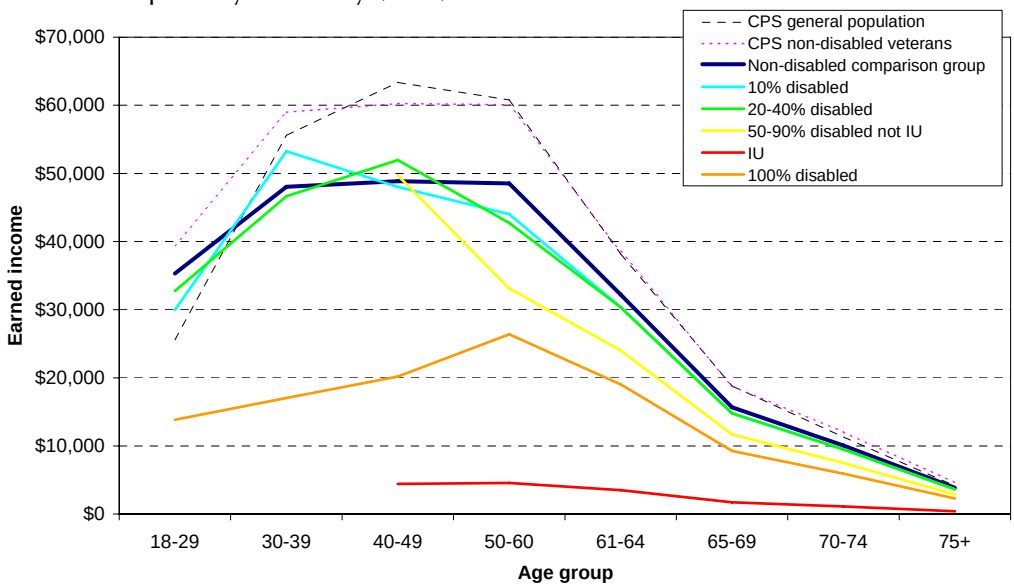


Figure 109. Average earned income of service-disabled veterans with an eye primary disability (men)

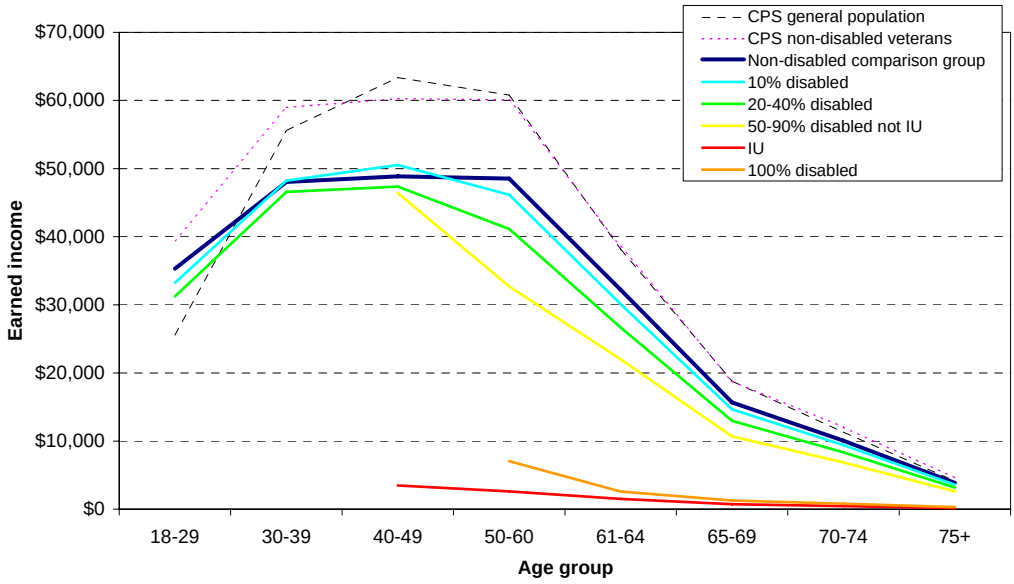


Figure 110. Average earned income of service-disabled veterans with an infectious, immune, nutritional primary disability (men)

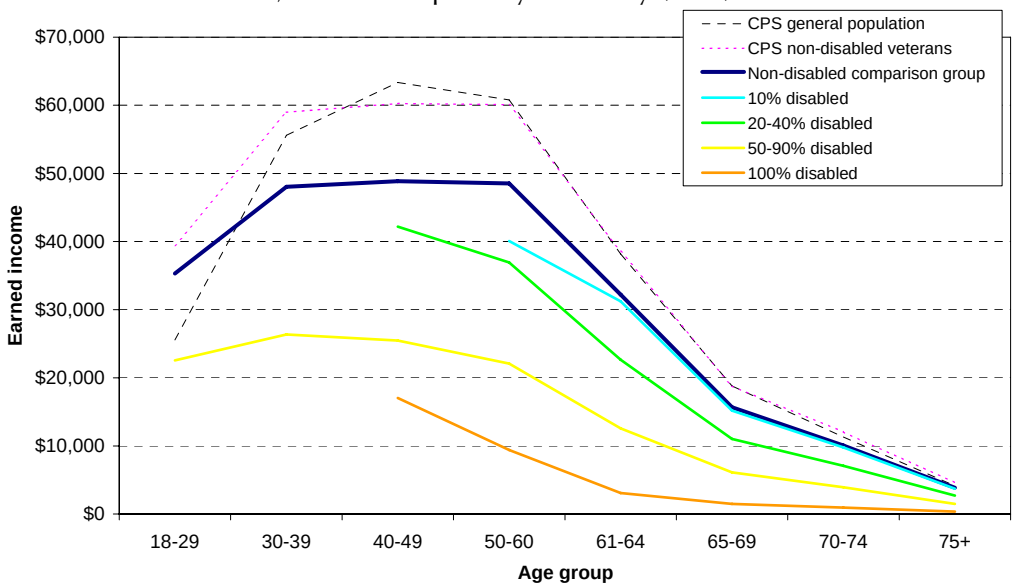


Figure 111. Average earned income of service-disabled veterans with a dental primary disability (men)

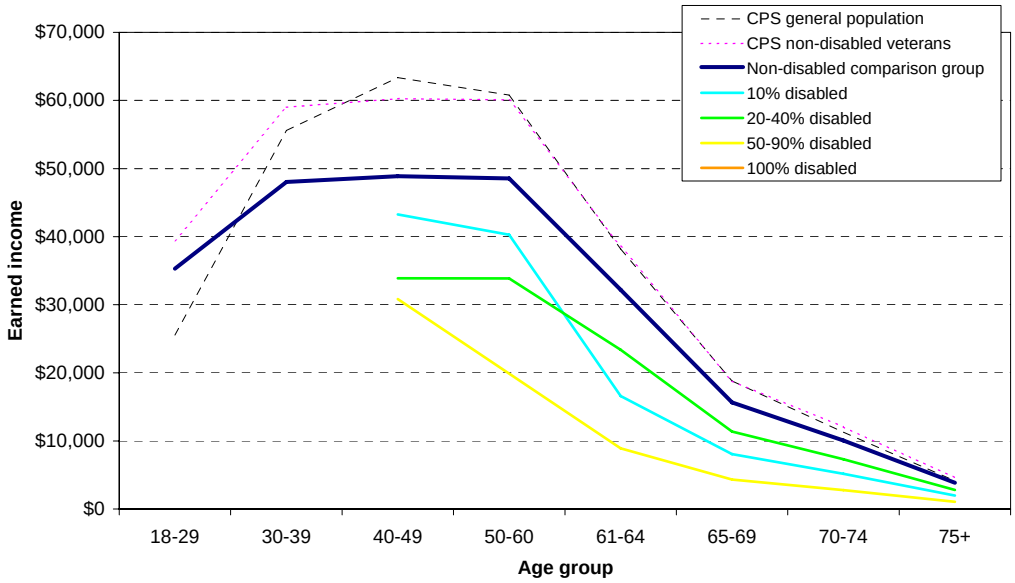
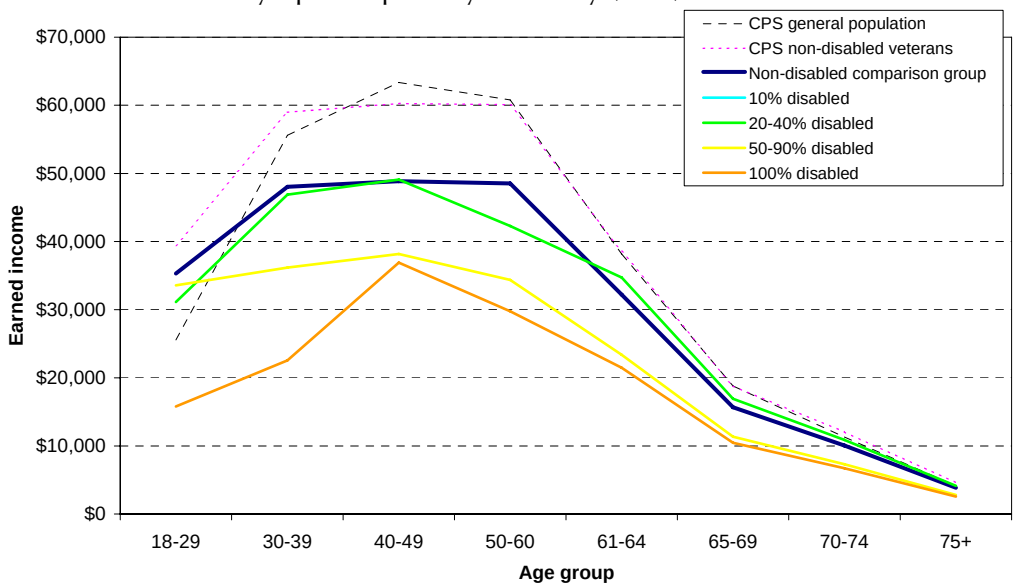


Figure 112. Average earned income of service-disabled veterans with a hemic/lymphatic primary disability (men)



Figures 113 - 124 show the percentage of female service-disabled veterans that are employed by rating group and body system.

Figure 113. Average employment rate of service-disabled veterans with a musculoskeletal primary disability (women)

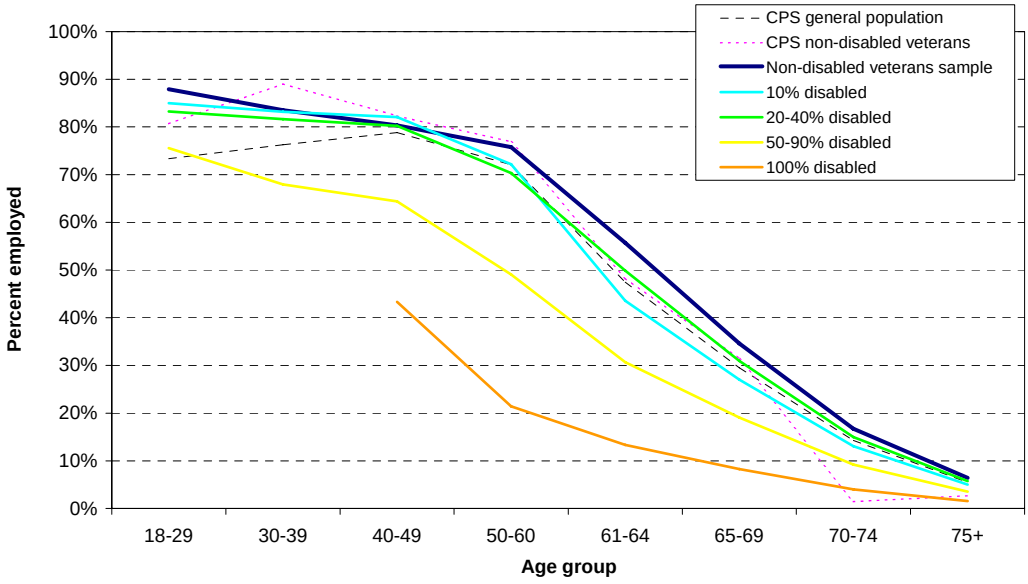


Figure 114. Average employment rate of service-disabled veterans with a skin primary disability (women)

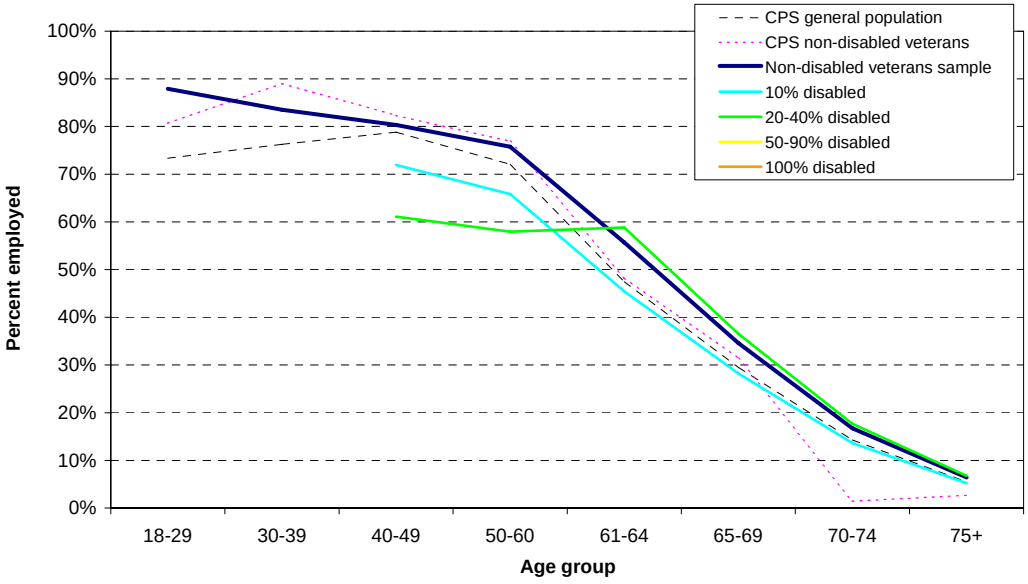


Figure 115. Average employment rate of service-disabled veterans with an auditory primary disability (women)

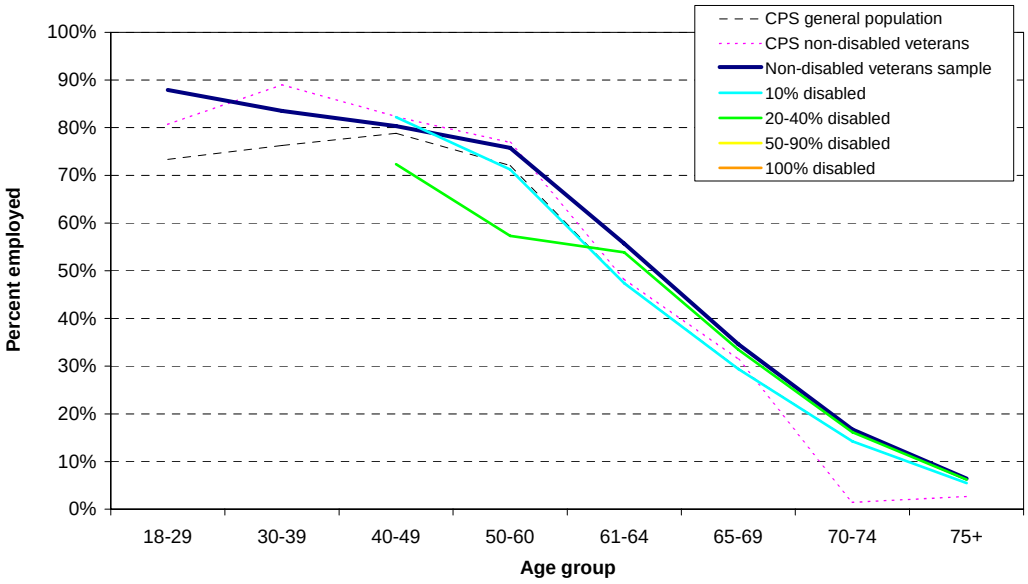


Figure 116. Average employment rate of service-disabled veterans with a neurological primary disability (women)

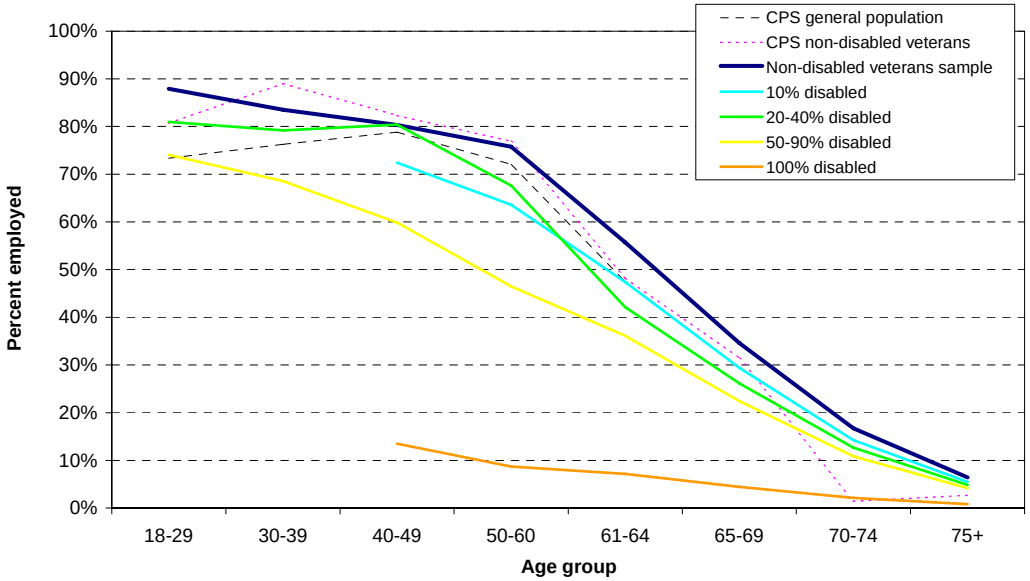


Figure 117. Average employment rate of service-disabled veterans with a PTSD primary disability (women)

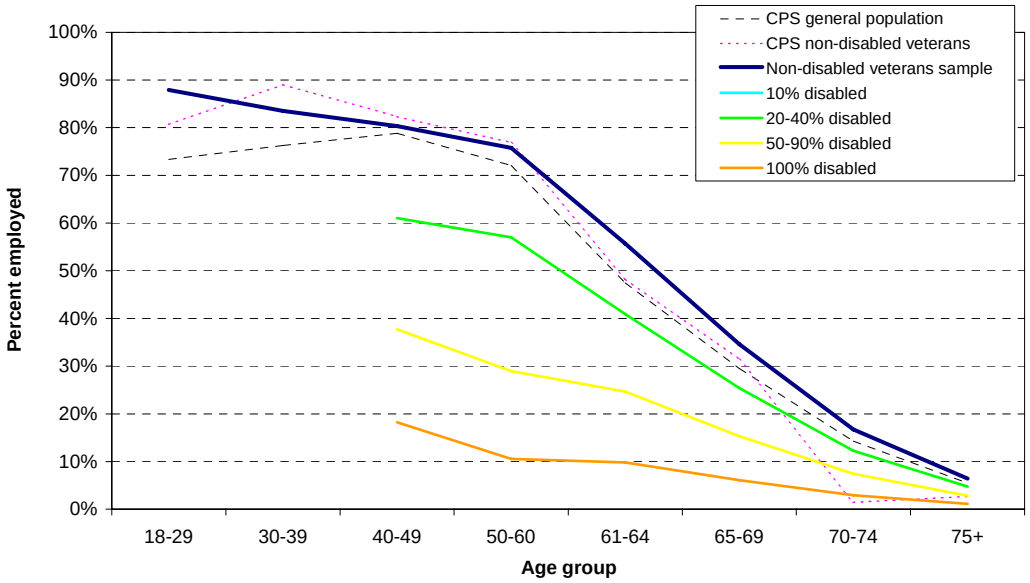


Figure 118. Average employment rate of service-disabled veterans with a mental (not PTSD) primary disability (women)

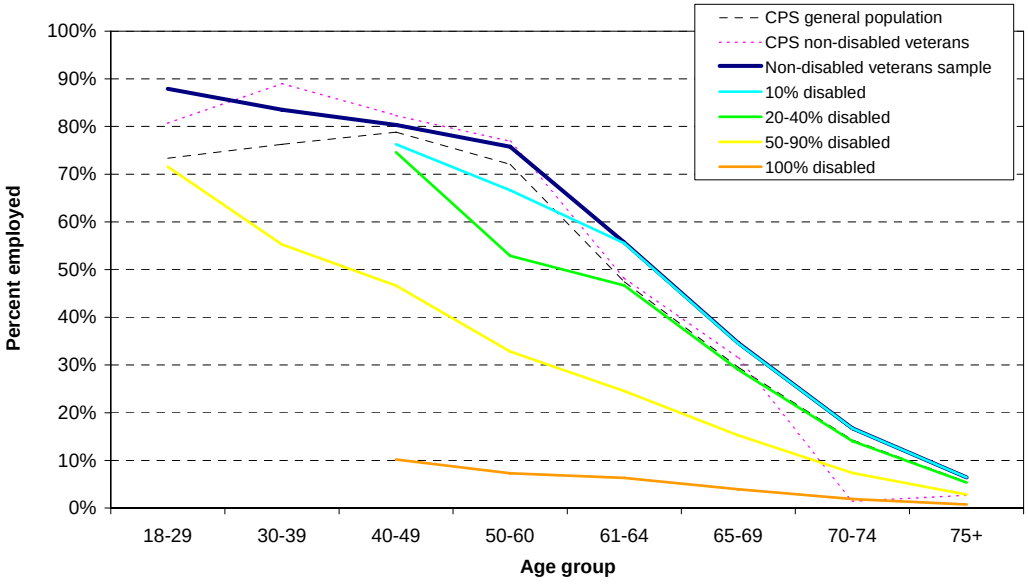


Figure 119. Average employment rate of service-disabled veterans with a digestive primary disability (women)

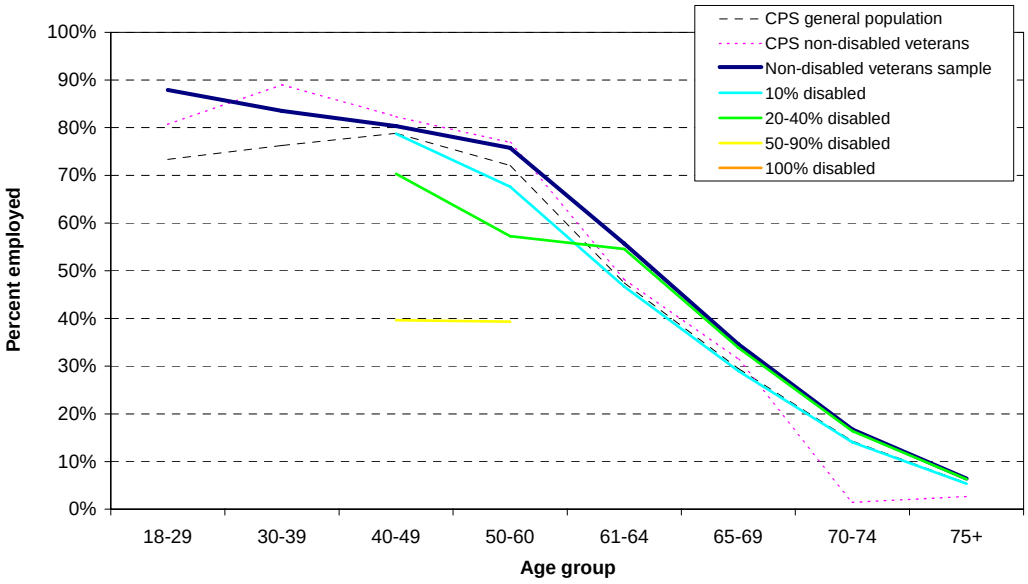


Figure 120. Average employment rate of service-disabled veterans with a cardiovascular primary disability (women)

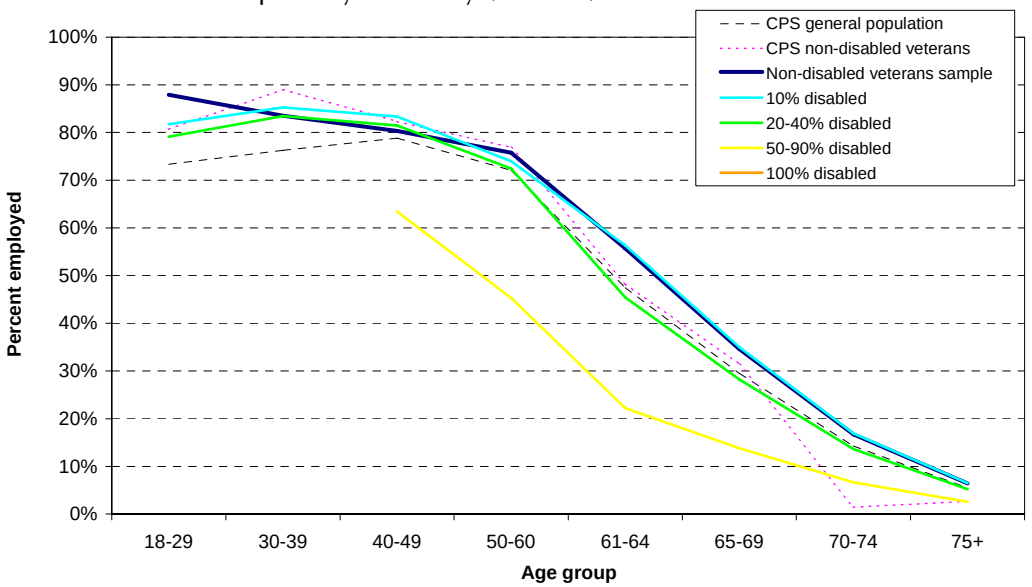


Figure 121. Average employment rate of service-disabled veterans with a respiratory primary disability (women)

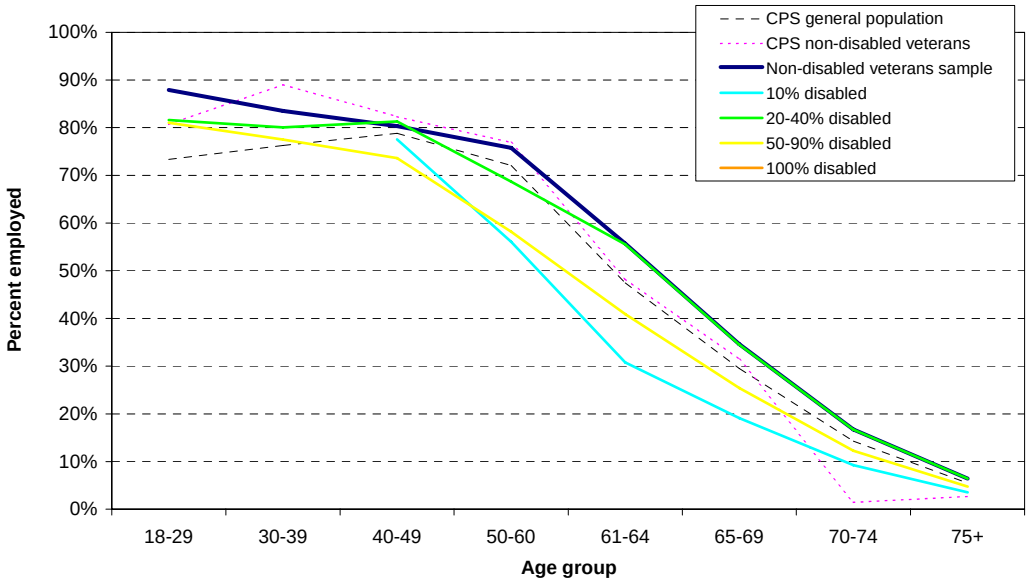


Figure 122. Average employment rate of service-disabled veterans with an endocrine primary disability (women)

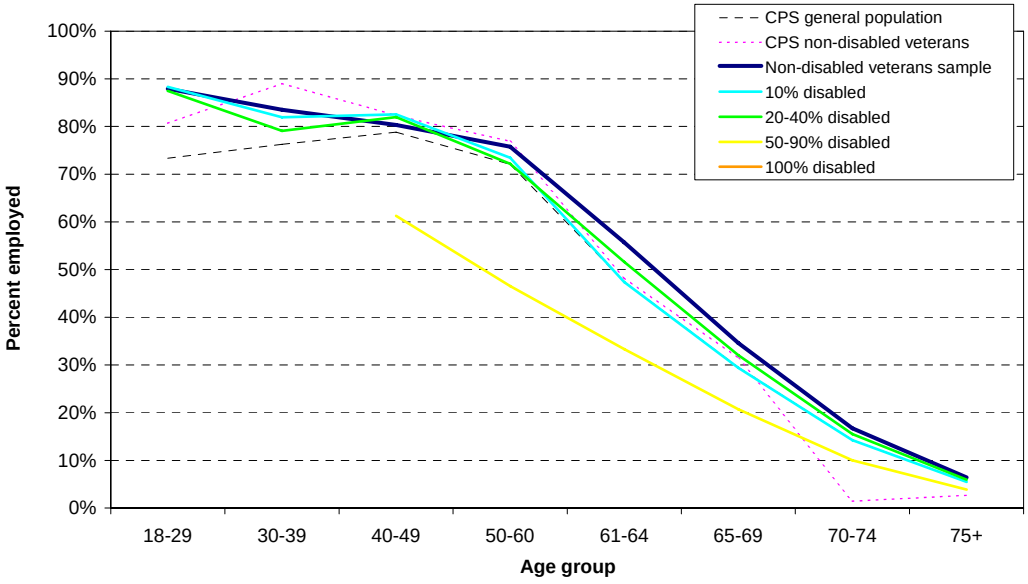


Figure 123. Average employment rate of service-disabled veterans with a genitourinary primary disability (women)

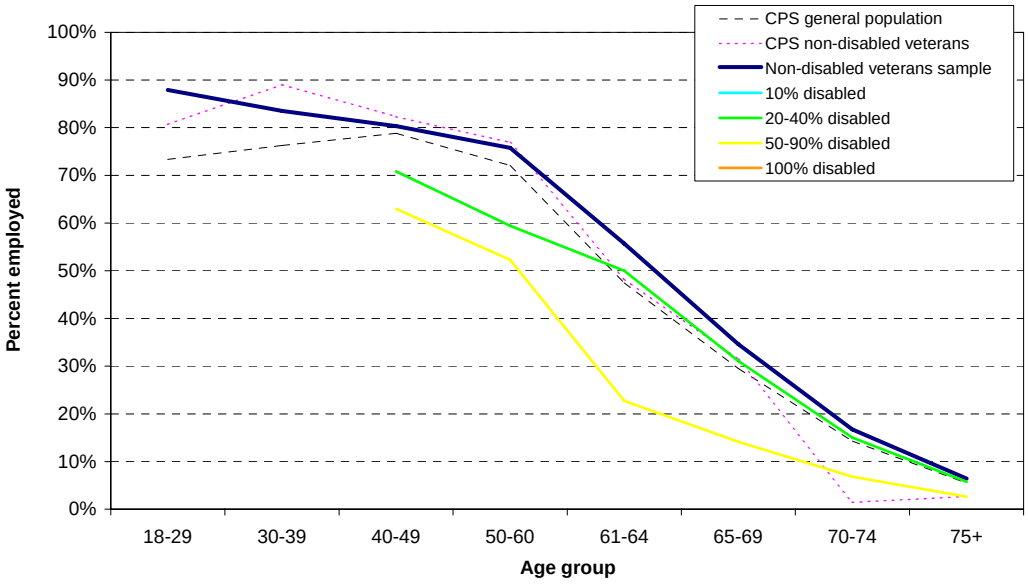
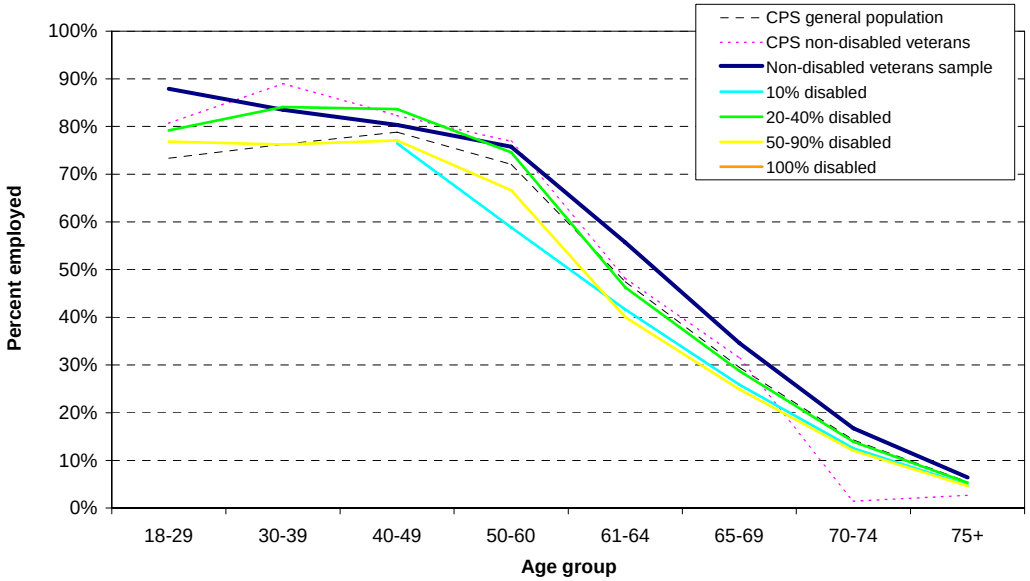


Figure 124. Average employment rate of service-disabled veterans with a gynecological primary disability (women)



Figures 125 - 126 show the percentage of female service-disabled veterans that are employed by rating group for "physical" and "mental" primary disabilities.

Figure 125. Average employment rate of service-disabled veterans with a physical primary disability (women)

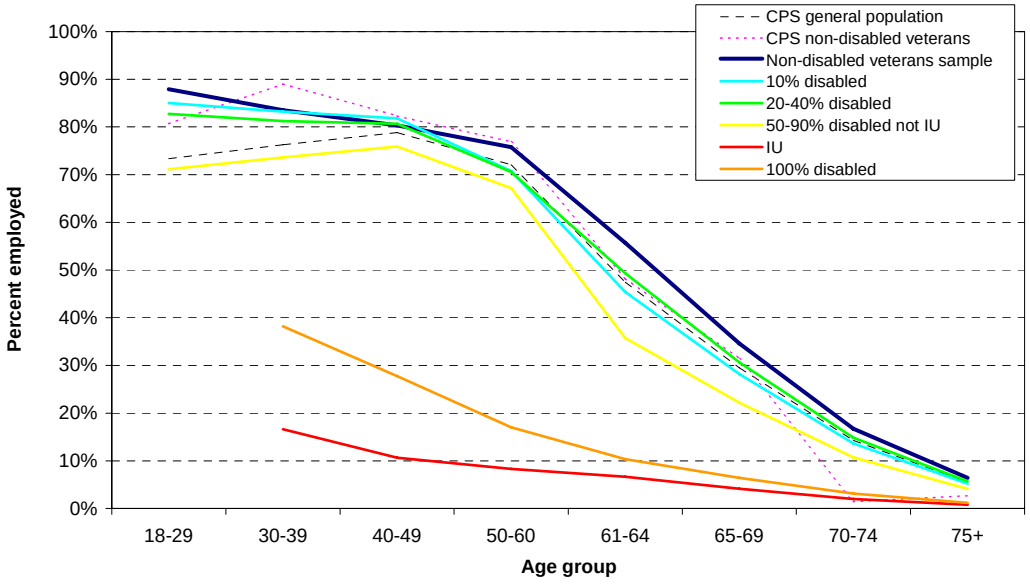
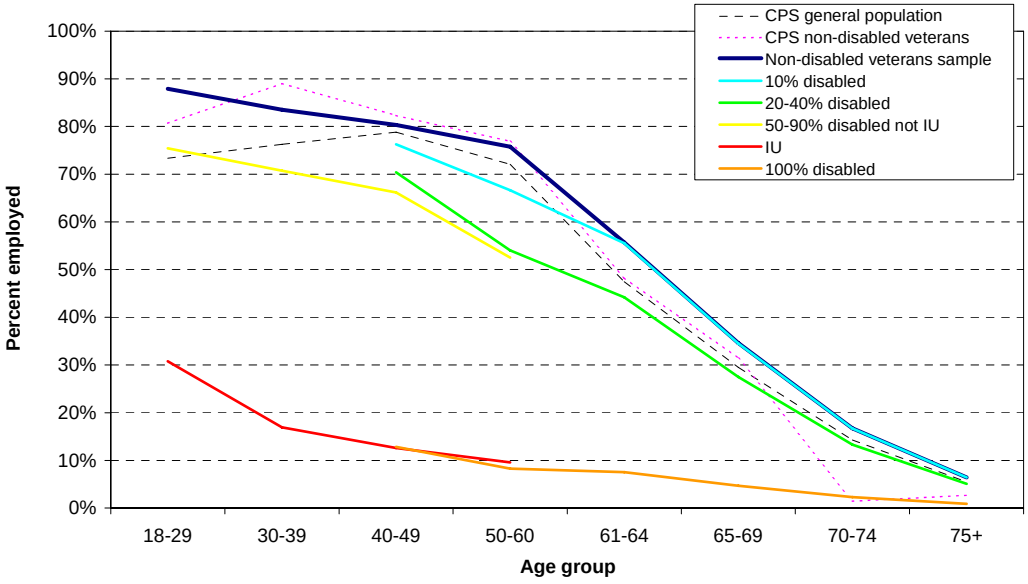


Figure 126. Average employment rate of service-disabled veterans with a mental primary disability (women)



Figures 127 -138 show the average earned income for female service-disabled veterans by rating group and body system.

Figure 127.Average earned income of service-disabled veterans with a musculoskeletal primary disability (women)

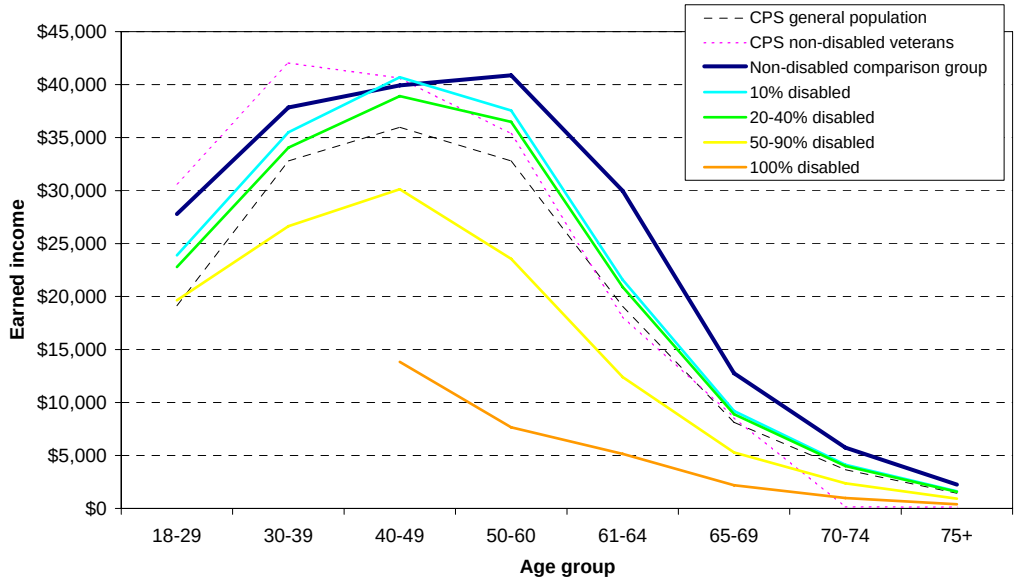


Figure 128. Average earned income of service-disabled veterans with a skin primary disability (women)

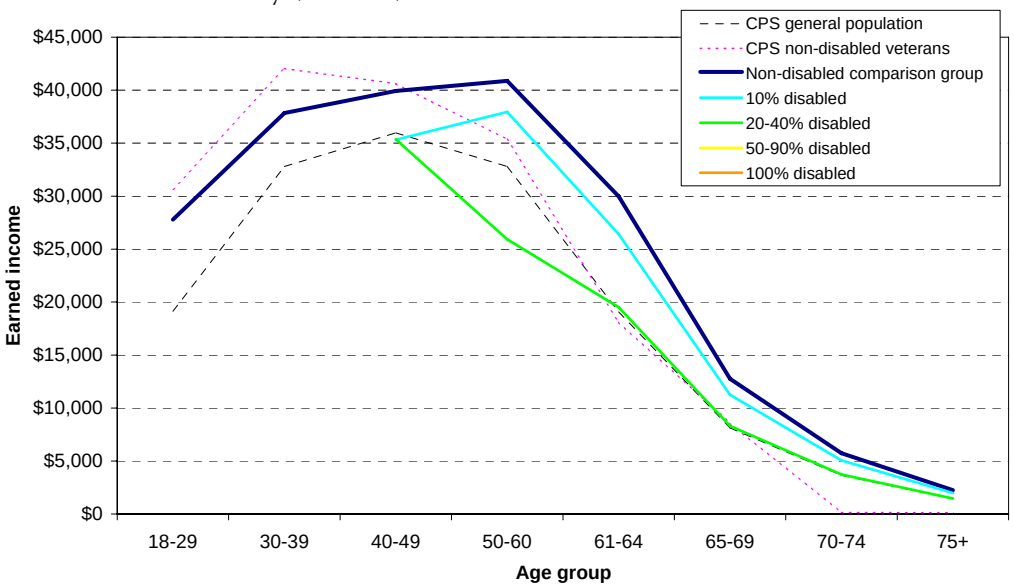


Figure 129. Average earned income of service-disabled veterans with an auditory primary disability (women)

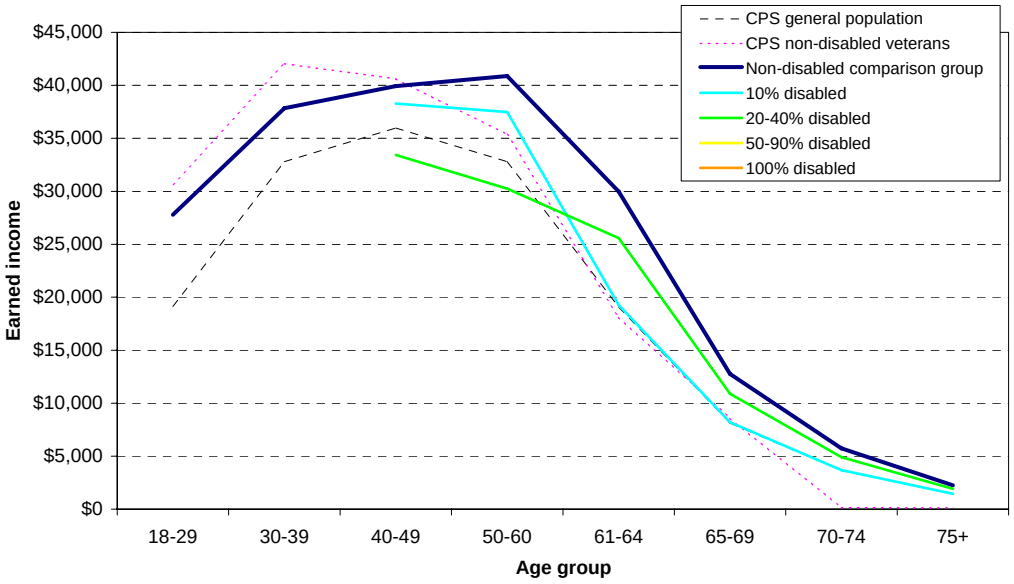


Figure 130. Average earned income of service-disabled veterans with a neurological primary disability (women)

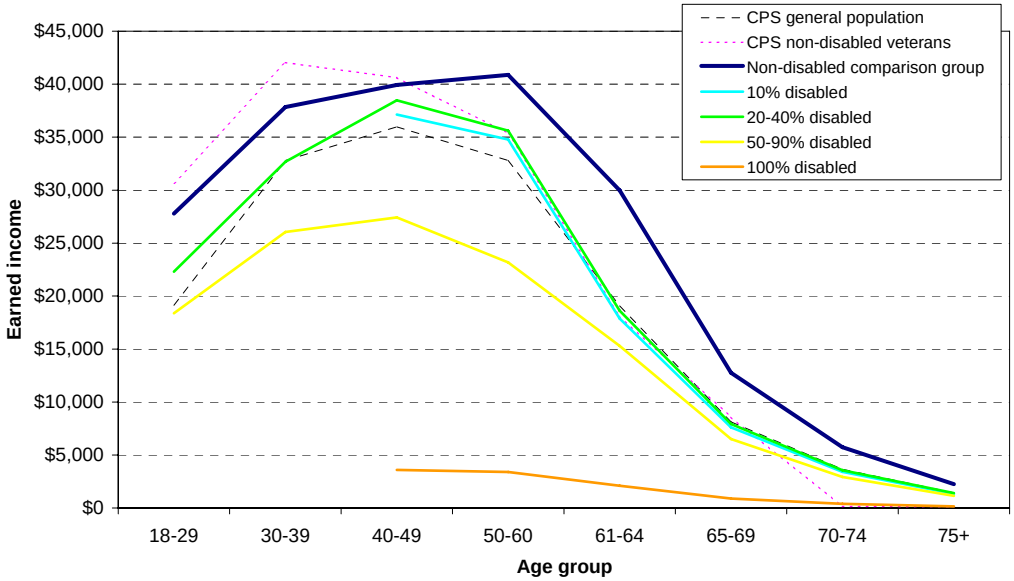


Figure 131. Average earned income of service-disabled veterans with a PTSD primary disability (women)

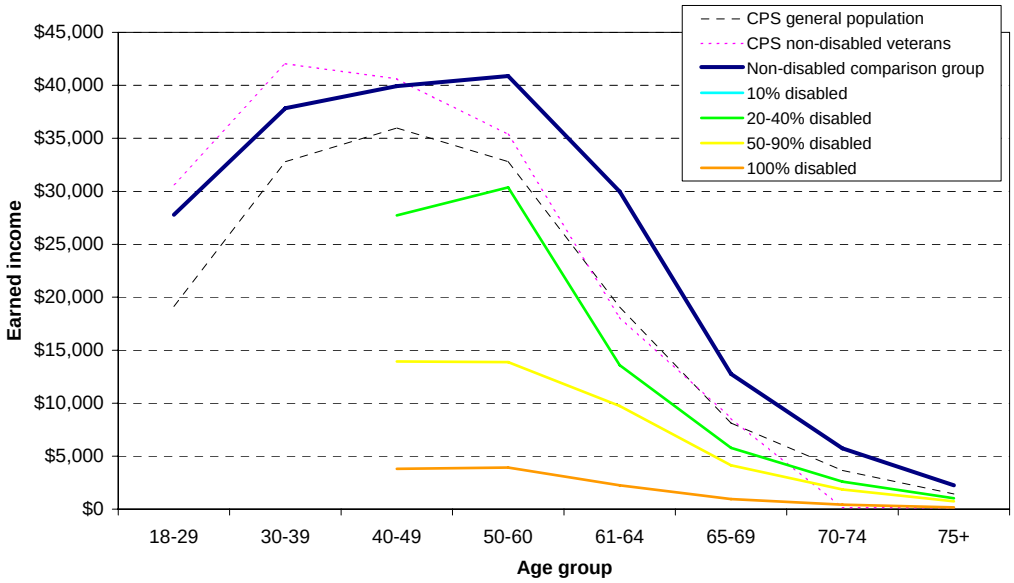


Figure 132. Average earned income of service-disabled veterans with a mental (not PTSD) primary disability (women)

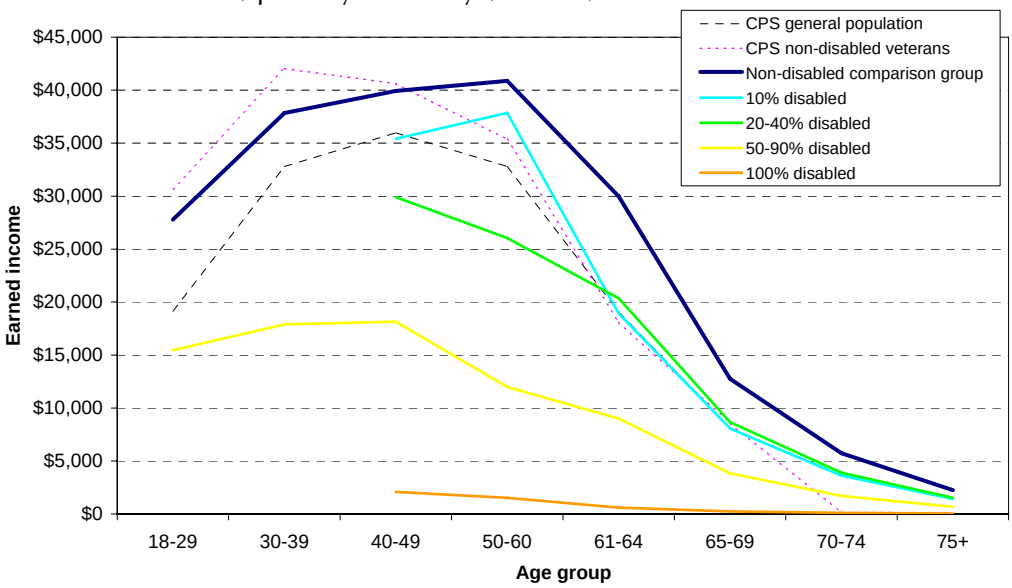


Figure 133. Average earned income of service-disabled veterans with a digestive primary disability (women)

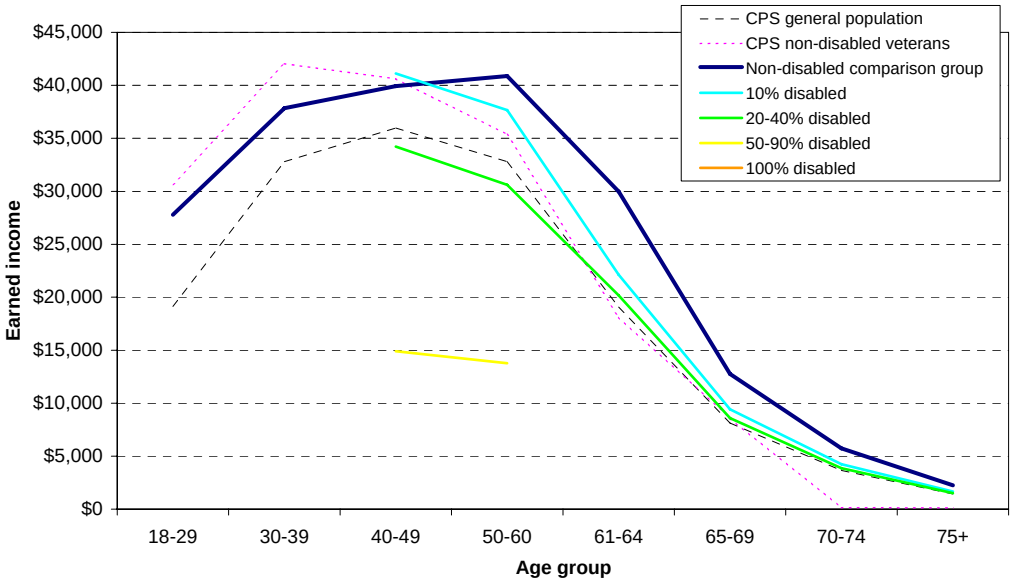


Figure 134.Average earned income of service-disabled veterans with a cardiovascular primary disability (women)

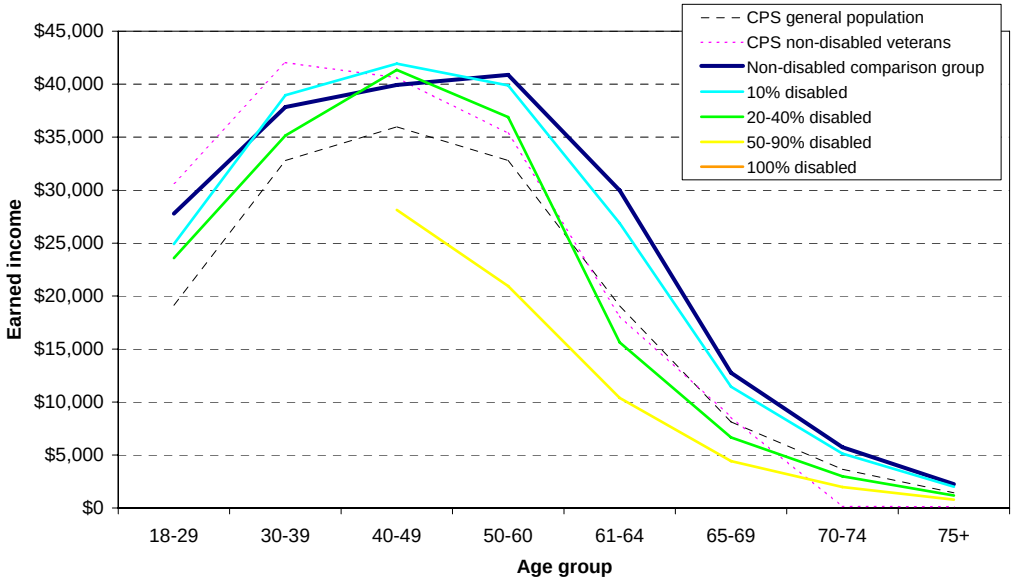


Figure 135. Average earned income of service-disabled veterans with a respiratory primary disability (women)

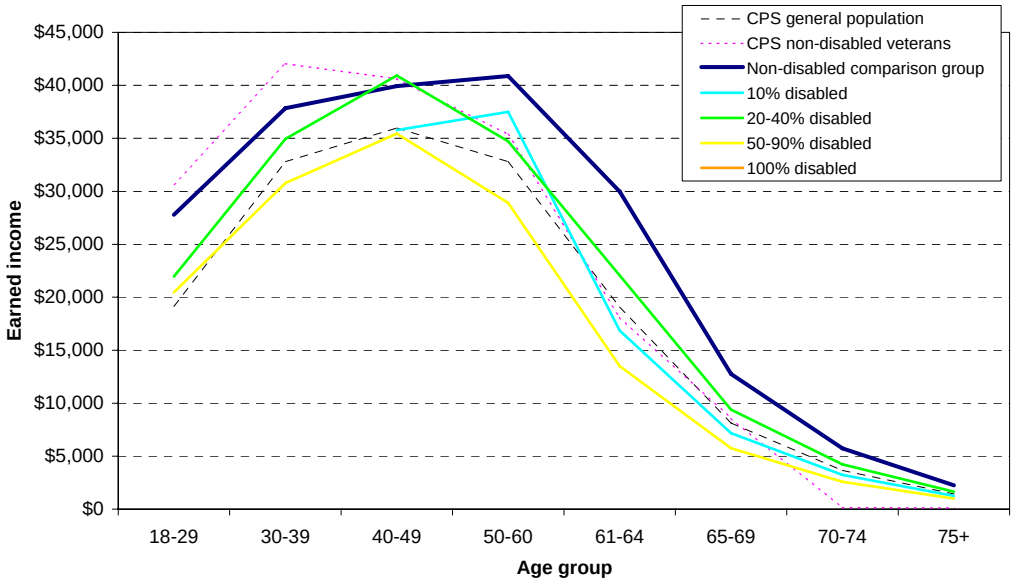


Figure 136. Average earned income of service-disabled veterans with an endocrine primary disability (women)

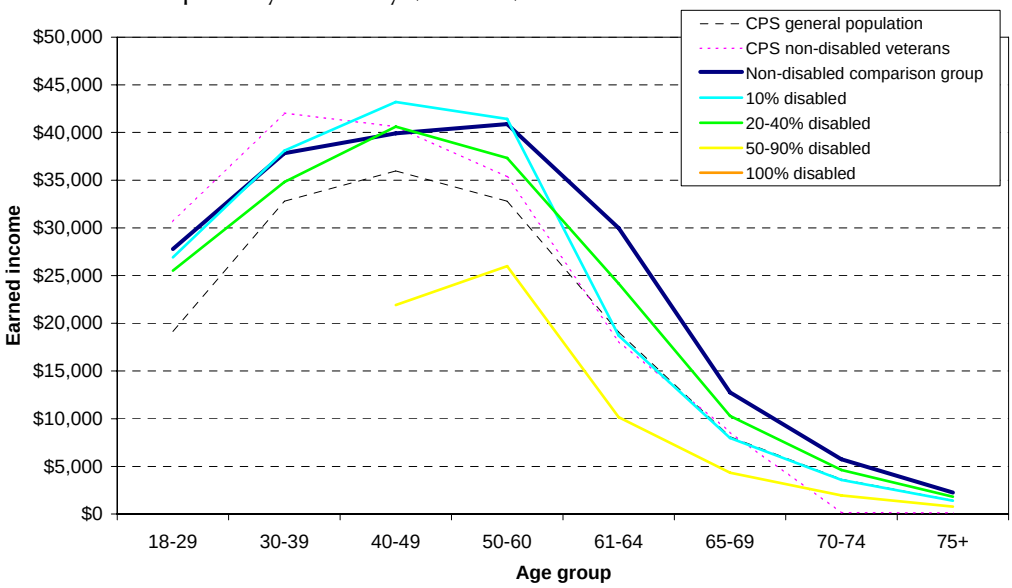


Figure 137. Average earned income of service-disabled veterans with a genitourinary primary disability (women)

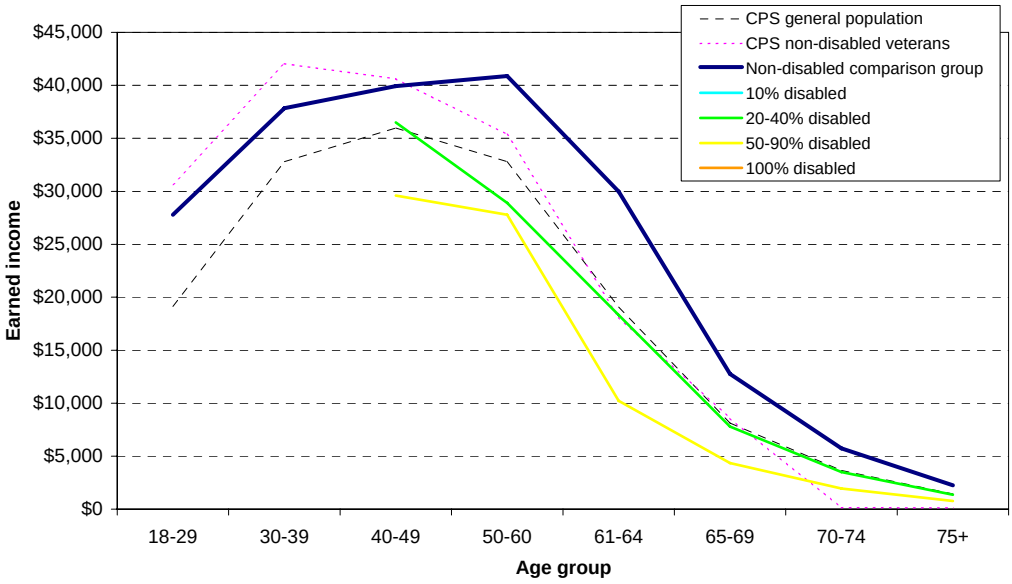
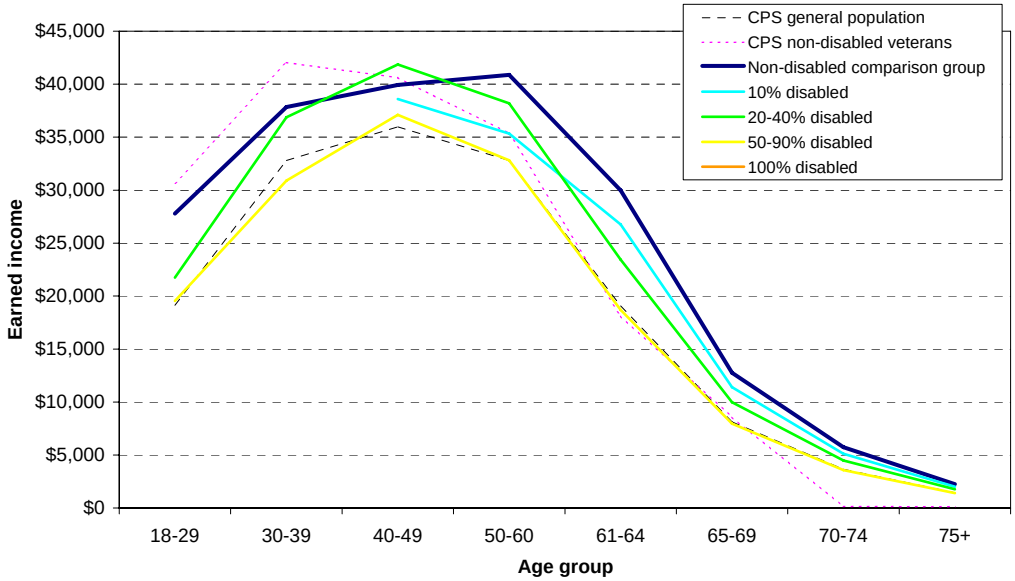


Figure 138. Average earned income of service-disabled veterans with a gynecological primary disability (women)



Figures 139 - 140 show the average earned income for female service-disabled veterans by rating group for physical and mental primary disabilities.

Figure 139. Average earned income of service-disabled veterans with a physical primary disability (women)

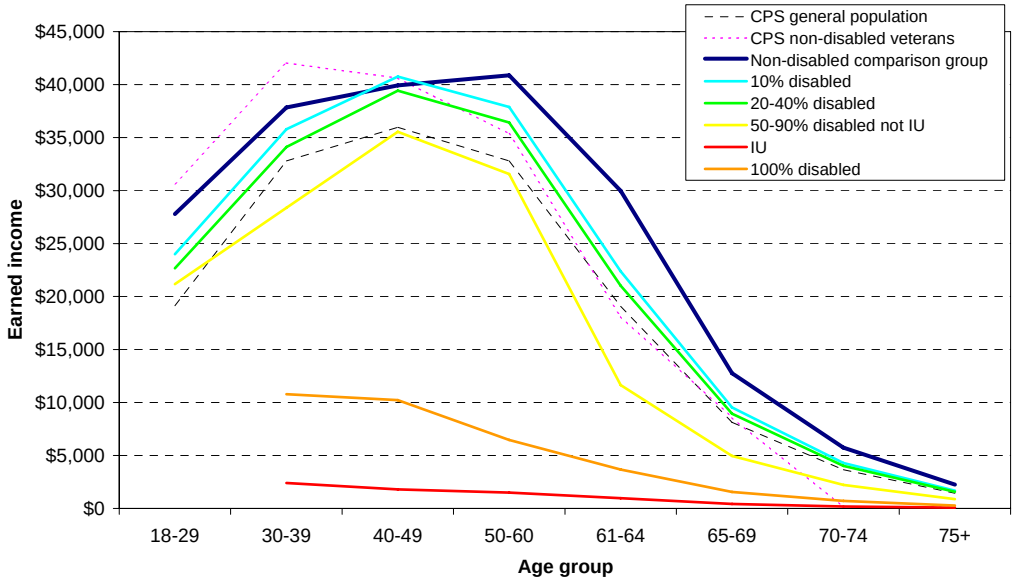
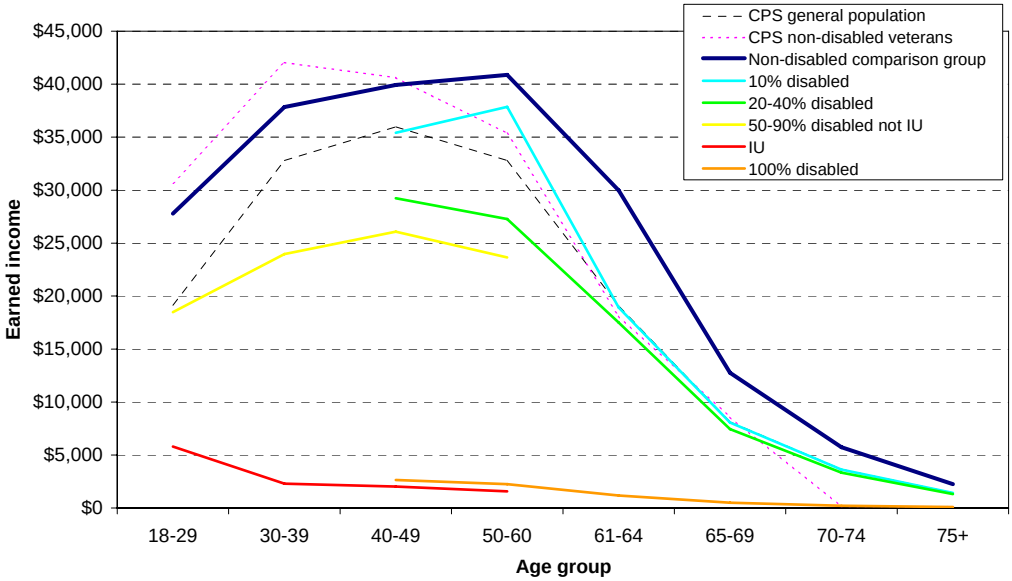


Figure 140. Average earned income of service-disabled veterans with a mental primary disability (women)



Appendix C: Annuity methodology

This appendix describes how we calculated the expected value of the annuity accruing to a disabled veteran. An annuity is a series of payments that accrue for the life of the beneficiary. The actuarial expected present value of an annuity stream is a sum of money that, when it is invested at a given interest rate, will suffice to finance a stream of payments for the average individual in the given population.

Briefly, valuing an annuity involves two types of calculations. The first type is the calculation of the value of the stream of payments accruing to an individual, conditional on the individual surviving to a given age. The present discounted value of an annuity for t periods is *V(t)*, where

$$V(t) = \sum_{t=0}^{t} \beta^t V$$

where β is the discount factor calculated from the appropriate interest rate. For an interest rate i, β is calculated at $1/(1+i)$.

The second calculation is to determine the probability that a member of a given group will survive to a given age. Using mortality rate information, we can calculate the probability that an individual of a known current age will survive exactly 1 year, 2 years, and so on. For the purposes of our calculations, we capped life expectancy at 120. (For every group we looked at, the probability of surviving to 120 was essentially nil, so that this cap had no impact on the value calculations.)

The expected value of the annuity is the product of the value of the annuity to a fixed life span, multiplied by the probability that the individual survives to that horizon, summed over all possible horizons:

$$EPV = \sum_{t} p(t)V(t)$$

where $p(t)$ is the probability that an annuitant will survive for exactly t periods, and Σ_t $p(t) = 1$.

A large source of variation in the value of benefits paid to individuals is the life expectancy. Mortality rates are calculated as population averages. Very few people will ex-

perience an exactly average life. Some individuals in the group will receive payments that are significantly less than average, and many people will receive payments significantly more than average. The calculations provide a benchmark estimate of the likely value of the benefit annuity to the given population.

The remainder of this appendix describes the details of how we implemented these calculations for our populations. We begin with a discussion of the appropriate interest rate. We follow that with a detailed description of the process for estimating mortality and life expectancy. We then describe how the pieces come together to generate an expected value for the annuity. We illustrate the calculations with examples drawn from the population of veterans with a 100-percent disability.

Interest rates

We discounted future payments at a net discount rate of 3.8 percent, which is based on the relationship between the yields on 10-year U.S. Treasury bonds and inflation as measured by the Consumer Price Index (CPI). To accurately reduce a stream of payments to present value, we need a net discount rate that simultaneously accounts for the expected growth in VA compensation and the expected return an individual could get from investments. A net discount rate that does this gives a present value or lump sum payment that is equivalent to the VA compensation annuity.

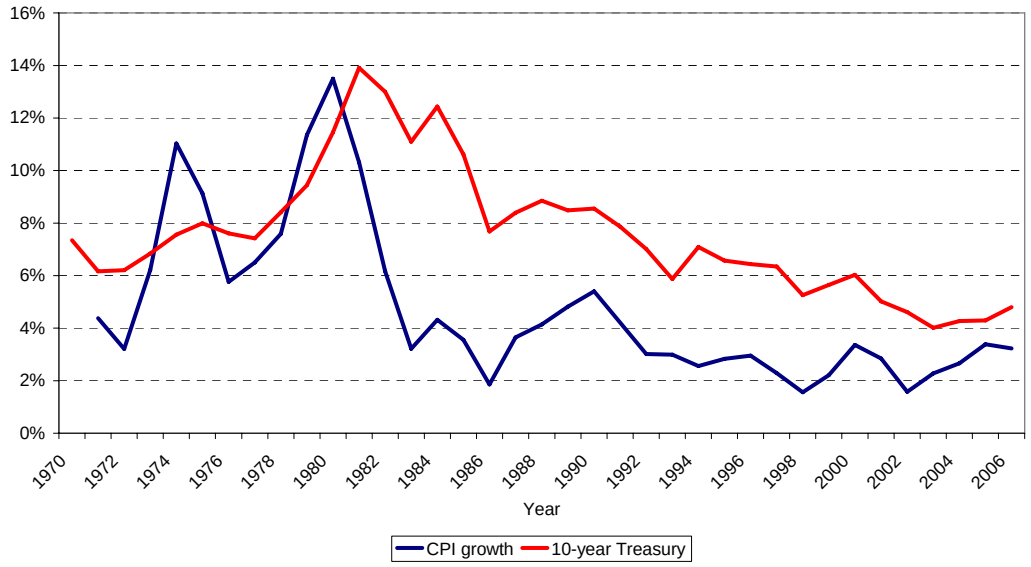
An advantage of a net discount rate is that one does not need to know what inflation or investment rates will be in the future to accurately estimate the present value of an annuity if the relationship between inflation and investment returns is stable [63]. Figure 141 shows that since 1981, there has been a stable relationship between 10-year U.S. Treasury bonds and inflation as measured by the CPI. Although inflation and bond yields vary over time, they generally move together.

Given this relationship, we can compute the average net discount rate between 1981 and 2006 in two ways. We get the same result in either case. First, we can compute the net discount rate for each year between 1981 and 2006 as

$$(1+b)/(1+i)-1$$

where b is the bond yield and i is the inflation rate. Taking the average of these over this period yields an average net discount rate of 3.8 percent. Second, we can compute the net discount rate by computing the per annum inflation rate between 1981 and 2006, which is 3.24 percent and comparing that to the per annum bond yield over the period. This figure is 7.18 percent. Putting these rates in the formula $(1+b)/(1+i)-1$ results in a net discount rate of 3.8 percent.

Figure 141. Relationship between 10-year U.S. T-bills yields and inflation (1970-2006)



This interest rate yields a discount factor $\beta = 1/(1+0.038) = 0.9634$, to four significant digits. One dollar delivered a year from now is worth just over 96 cents today.

Mortality rates

We estimate mortality rates using data provided by the VBA on the population of veterans receiving compensation for a service-related disability. We estimate mortality rates by following our VBA 2000 cohort over the period 2001-2005. From the extract, we know an individual's degree of disability and disability classification. From data provided by SSA in their Death Master File (DMF), we know whether these individuals deceased over the 5-year span. We are thus able to calculate mortality rates indexed by degree of disability, gender, and primary body system.

Table 56 is a sample of the population and mortality information we have for the VBA 2000 cohort. This is actual data for veterans with a disability rating of 100 percent. If this is an accurate accounting of deaths, then our estimated mortality rates will be accurate. We believe that this method captures the overwhelming majority of deaths in our veteran population. There are two possible sources of error: First, the SSA reports that not all deaths are necessarily reported to the SSA, so the absence of information from the DMF does not necessarily indicate that an individual is alive. SSA does not report on the magnitude of underreporting, so we do not know the impact that this has on our calculations. This source of error causes us to underestimate the true population mortality rate.

Table 56. Sample mortality data (100 – percent disability)

Age on January 1, 2000	Total Population	Number dying in year: 2001	2002	2003	2004	2005	Alive on January 1, 2006
30	453	4	4	6	1	5	433
31	446	6	4	2	4	5	425
32	547	8	5	3	3	5	523
33	599	7	4	8	6	6	568
34	623	10	3	11	7	2	590
35	734	14	7	9	8	4	692
36	760	12	6	6	9	4	723
37	887	19	9	8	15	9	827
38	1,068	20	12	15	15	14	992
39	1,239	19	22	19	27	19	1,133
40	1,387	25	17	21	18	17	1,289
41	1,701	23	23	26	23	17	1,589

A second source of error is that not all of the Social Security numbers in our VBA extract are accurate. For example, we see several different veterans in the VBA extract with the same SSN. More subtle errors in SSNs escape our checks. Our analysis indicates that the overall error rate is probably on the order of 0.1 percent.

If we do not have a valid SSN for an individual, then we are not able to match that SSN to the information in the DMF, and we therefore do not have records of deaths that did in fact occur. Again, we underestimate mortality rates.

We use this data to generate estimates of the mortality rate by age. We calculate mortality rates by age, based on up to 5 years of individual observations. For example, for veterans age 30, we observe four deaths out of a population of 453 individuals, for a mortality rate of 0.88 percent. To estimate the mortality rate for 31-year-olds, we use data from the 446 disabled veterans who were 31 on January 1, 2000, and information on the 449 survivors from the cohort who were 30 years old on January 1, 2000. Out of these populations, we observe 6+4=10 deaths, with a resulting estimated mortality rate of 10/895 = 1.12 percent.

We model the probability that any individual dies during the year as a Bernoulli random variable. Let h be the hazard of death. With probability h, we observe a death, and with probability *(1-h),* the individual survives until the following year. The standard deviation of an individual trial is $\sqrt{h(1-h)}$, and the standard deviation of the mean from multiple trials is $\sqrt{h(1-h)}/\sqrt{n}$, where n is the size of the observed population. This al-

lows us to calculate confidence intervals around the estimates: We estimate that the standard error of the mortality rate estimate for 30-year-olds is about 0.44 percent, and the standard error of the estimate for 31-year-olds is about 0.35 percent.

Note that we observe fairly few young veterans with a 100-percent disability rating. From table 56, we see more than four times as many 41-year-old 100-percent disabled veterans as 30-year-old disabled veterans. The standard error of the population mortality rate shrinks in proportion to the square root of the size of the population, so mortality rates are estimated much more precisely for these slightly older populations.

When we tabulate our data, we observe that we have very large numbers of observations for veterans in their mid-40s to about age 80. We have relatively few observations on veterans younger than 40 or older than 80. This is a problem, as annuity calculations require estimates of mortality rates for ages up over 100 years. In order to bridge this gap, we use the *Gompertz-Markham law of mortality,* which states that the mortality rate increases exponentially with age [64].

The Gompertz-Markham law implies that $h(t)$, the mortality rate at age t, has a specific functional form:

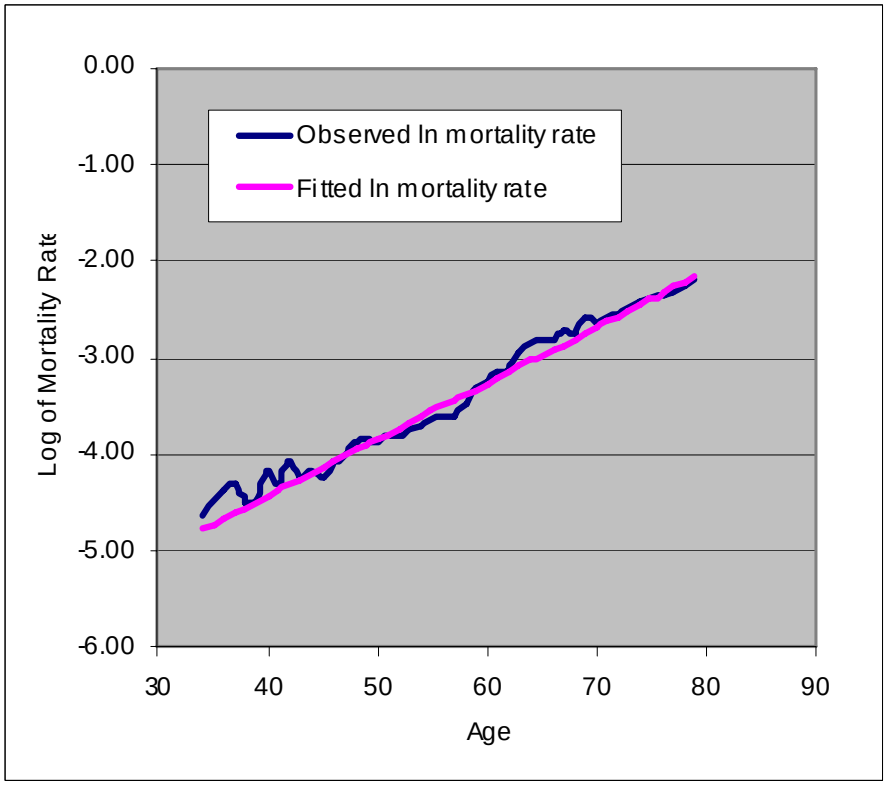
$$h(t) = \exp(a + bt) \quad \text{or} \quad \ln(h(t)) = a + bt$$

That is, the log of the mortality hazard rate is linear in age. Our strategy is to estimate the parameters of this relationship from our observed data and use the functional relationship to extrapolate mortality rates for older veterans. We then use the extrapolated mortality rates in the annuity calculations.

We estimate this relationship using the technique of *weighted least squares*. We know the standard error of the individual age-dependent mortality rates, and we use the *delta method* to calculate the standard errors of the natural log of these mortality rates. These standard deviations are used as weighting factors for the weighted least squares step.

To illustrate, figure 142 is the plot of the observed and fitted values of the natural log of the mortality rate for the population of veterans with a 100-percent disability rating. The main effect of the weighted least squares methodology is to place greater weight on those mortality rates calculated from large numbers of observations.

Figure 142. Observed and fitted values of the natural log of the mortality rate



Survival probabilities

We use the fitted mortality rates to calculate the probability that an individual survives to a given age. For example, consider a 58-year-old male veteran with a 100-percent disability rating. Using the fitted mortality rate, that individual has a 3.4 percent probability of dying in the next year, and a 96.6 percent probability of surviving. If he survives, we estimate a 3.6 percent chance of death in the subsequent year.

From this information, we can start to calculate the life expectancy profile. The probability that the veteran dies in his 58^{th} year is 0.034. The probability that the veteran dies in his 59^{th} year is

$$(1\text{-}0.034)\ 0.036 = 0.035.$$

The probability that the veteran survives to his 60^{th} year is

$$(1\text{-}0.034)\,(1\text{-}0.036) = 0.931$$

and the probability that the veteran dies in his 60th year is 0.931 times the mortality rate for 60-year-olds.

In general, the probability that a veteran dies in exactly t years is

$$p(t) = h(t)\prod_{i=1}^{t-1}(1-h(i)).$$

The resulting life span probabilities $p(t)$ give us the probability distribution for the individual's life span and satisfy the relationship

$$\sum_{t} p(t) = 1.$$

To illustrate, figure 143 plots the calculated life span probabilities for a 58-year-old male with a 100-percent disability rating. For a population of similar 58-year-olds, this figure plots the fraction that we expect to survive to various ages. The vertical line is drawn for veterans age 78: For a population of 58-year-old veterans, we expect that almost exactly 3 percent will die sometime during their 78th year. These probabilities form the basis of the annuity value calculations.

Figure 143. Life span probabilities for a 58-year-old male veteran with a 100-percent disability rating

Valuing uncertain horizon annuities

Disabled veterans receive payments monthly. We assume that the average veteran receives six monthly payments in the year of his/her death. We then calculate that a veteran who receives payments of V dollars per year and who dies t years from now as earning

$$V(t) = \sum_{t=0,t-1} \beta^t V + 0.5\beta^t V \ .$$

The remaining issue is that the time to death is a random variable and hence annuity value is a random variable. In general, the expected value of a random variable is the sum of values that the random variable may take times the probability that each value occurs. We use the annuity value calculator with the life span probabilities to calculate the terms of the expectation.

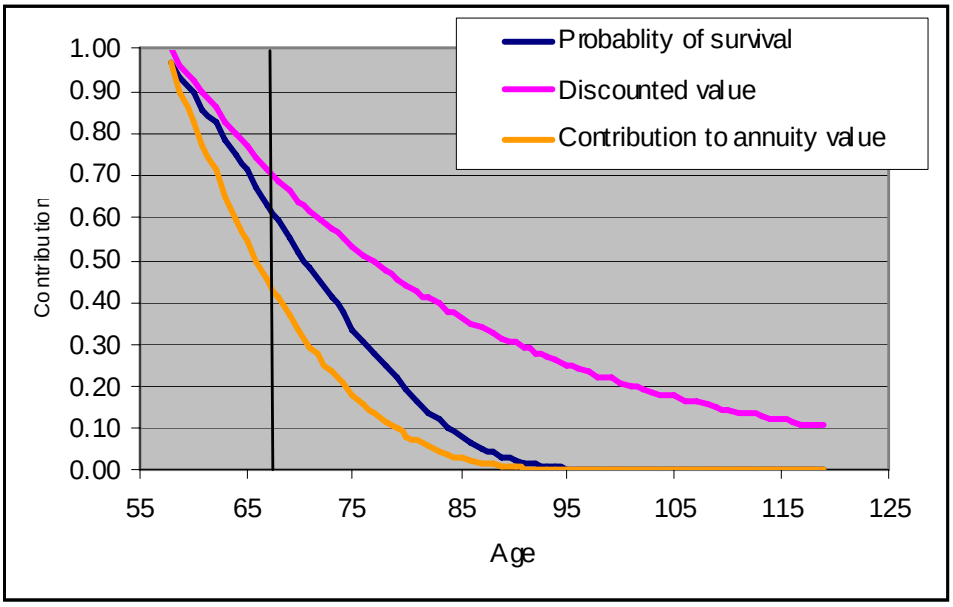
For example, the 58-year-old veteran with a 100-percent disability has a 0.036 probability of dying at age 59. In that event, the veteran receives a total annuity of

$$V(t) = (1 + 0.5\beta)V \ ,$$

where V is the value of his/her monthly payment. Thus, this term contributes a total of $0.036(1 + 0.5*\beta)V$ to the expected value of the annuity. For our interest rate of 3.8 percent, the total contribution is equal to 5.3 percent of the value of the annuity payment. The total expected value of the annuity is the sum of these terms over all possible expected life spans. For the case of our 58-year-old veteran, possible life spans range from 59 to about 104.

Figure 144 portrays how mortality and discounting come together. This figure illustrates how potential income accruing at some future date contributes to the overall value of the annuity.

Figure 144. Contribution to the total value of the annuity



To illustrate, the vertical line is drawn for age 68. The pink line represents the effect of discounting. For a 58-year-old, the promise of a payment of $1 due 10 years from now is worth only 69 cents today. The blue line represents the effect of uncertain mortality. The probability that a male with a 100-percent disability rating survives through his 69th year is about 0.59. Taking these two factors together, the value of the promise to make a payment of $1 in 10 years if you live that long is worth, in an actuarial sense, about 41 cents.

Appendix D: Earnings ratios

Table 57 shows the earnings ratios for female service-disabled veterans by rating group and age at first entry.

Table 57. Earnings ratio by rating group and age at first entry (women)[a]

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
25	0.98	1.02	1.08	0.92	1.04	1.05
35	0.99	1.04	1.08	0.86	0.94	1.03
45	**0.97**	**1.02**	**1.08**	0.91	0.95	1.00
55	**0.90**	**0.99**	**1.09**	**1.18**	**1.17**	**1.00**
65	0.90	1.25	1.96	3.64	3.41	1.63
75	1.13	2.21	4.84	10.55	9.61	3.59

a. Values for average age at first entry are in bold type.

Table 58 compares the earnings ratios for female service-disabled veterans with physical v. mental primary disabilities by rating group and age at first entry.

Table 58. Earnings ratio by rating group and age at first entry for physical v. mental primary disabilities (women)[a]

Age at first entry	Physical primary disabilities					Mental primary disabilities				
	10%	20-40%	50-90% not IU	IU	100%	10%	20-40%	50-90% not IU	IU	100%
25	0.98	1.03	1.13	0.90	0.94			0.96	0.93	
35	0.99	1.04	1.12	0.85	0.88			0.92	0.87	
45	**0.97**	**1.03**	**1.12**	0.90	0.87	**0.88**	**0.78**	**0.92**	0.94	0.87
55	**0.91**	**1.00**	**1.12**	**1.17**	**1.05**	**0.81**	**0.77**	**0.98**	**1.24**	**1.11**
65	0.90	1.26	1.97	3.59	2.99	0.49	0.88	1.76	3.86	3.30
75	1.14	2.22	4.86	10.44	8.59	0.79	1.96	4.55	11.54	9.42

a. Values for average age at first entry are in bold type.

Tables 59 - 68 show the earnings ratios for male service-disabled veterans for various body systems by rating group and age at first entry.

Table 59. Earnings ratio for those with a skin disability by rating group and age at first entry (men)[a]

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
25	0.96	1.02				1.00
35	0.94	1.00	0.98			0.97
45	**0.90**	**0.96**	**0.90**	0.69	0.77	0.93
55	**0.88**	**0.94**	**0.92**	**0.89**	**0.91**	**0.91**
65	0.92	1.12	1.58	2.29	1.96	1.10
75	0.98	1.51	2.84	5.47	3.91	1.46

a. Values for average age at first entry are in bold type.

Table 60. Earnings ratio for those with an auditory disability by rating group and age at first entry (men)[a]

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
25	0.99	1.04				1.06
35	0.98	1.03				1.05
45	**0.92**	**0.96**	**0.86**		0.91	0.98
55	**0.86**	**0.89**	**0.84**	**1.02**	**1.14**	**0.94**
65	0.87	1.03	1.55	2.73	2.71	1.17
75	0.97	1.43	3.12	6.93	6.22	1.74

a. Values for average age at first entry are in bold type.

Table 61. Earnings ratio for those with a neurological disability by rating group and age at first entry (men)[a]

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
25	0.97	1.00	1.11	0.74	0.90	1.03
35	0.96	1.00	1.08	0.71	0.83	1.00
45	**0.93**	**0.98**	**1.05**	0.76	0.87	0.97
55	**0.91**	**0.97**	**1.07**	**0.99**	**1.08**	**1.00**
65	0.95	1.19	1.66	2.59	2.64	1.55
75	0.99	1.66	3.13	6.28	6.42	2.76

a. Values for average age at first entry are in bold type.

Table 62. Earnings ratio for those with a mental (not PTSD) disability by rating group and age at first entry (men)[a]

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
25	0.87	0.82	0.84	0.74	0.72	0.79
35	0.87	0.82	0.79	0.71	0.67	0.72
45	**0.84**	**0.78**	**0.75**	0.77	0.70	0.70
55	**0.83**	**0.76**	**0.77**	**1.00**	**0.91**	**0.81**
65	0.88	0.97	1.32	2.58	2.31	1.68
75	0.94	1.44	2.54	6.12	5.39	3.63

a. Values for average age at first entry are in bold type.

Table 63. Earnings ratio for those with a digestive disability by rating group and age at first entry (men)[a]

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
25	1.00	1.03			1.08	1.03
35	0.98	1.02	1.01	0.65	1.03	1.01
45	**0.94**	**0.96**	**0.94**	0.68	1.03	0.96
55	**0.91**	**0.92**	**0.99**	**0.90**	**1.21**	**0.96**
65	0.95	1.06	1.72	2.36	2.60	1.27
75	1.01	1.41	3.19	5.81	5.79	1.94

a. Values for average at first entry are in bold type.

Table 64. Earnings ratio for those with a cardiovascular disability by rating group and age at first entry (men)[a]

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
25	1.02	1.03			0.87	1.11
35	1.02	1.03			0.79	1.08
45	**1.01**	**1.02**	**1.00**	0.70	0.77	1.04
55	**1.00**	**1.03**	**1.05**	**0.92**	**0.92**	**1.06**
65	1.08	1.25	1.73	2.36	2.13	1.61
75	1.16	1.69	3.19	5.81	5.05	2.78

a. Values for average age at first entry are in bold type.

Table 65. Earnings ratio for those with a respiratory disability by rating group and age at first entry (men)[a]

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
25	1.02	1.03	1.19		0.78	1.10
35	1.01	1.04	1.18	0.68	0.74	1.09
45	**0.97**	**1.00**	**1.15**	0.70	0.69	1.04
55	**0.93**	**0.97**	**1.18**	**0.87**	**0.78**	**1.03**
65	0.97	1.17	1.84	2.22	1.76	1.49
75	1.03	1.64	3.26	5.37	4.07	2.57

a. Values for average age at first entry are in bold type.

Table 66. Earnings ratio for those with an endocrine disability by rating group and age at first entry (men)[a]

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
25	1.01	1.03			0.87	1.02
35	1.02	1.00			0.78	0.99
45	**0.94**	**0.91**	**0.87**	0.59	0.71	0.90
55	**0.84**	**0.85**	**0.83**	**0.78**	**0.81**	**0.86**
65	0.89	1.10	1.41	2.02	1.96	1.23
75	0.93	1.60	2.64	5.11	4.60	2.01

a. Values for average age at first entry are in bold type.

Table 67. Earnings ratio for those with a genitourinary disability by rating group and age at first entry (men)[a]

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
25	1.03	1.08			0.95	1.14
35	1.03	1.09			0.95	1.13
45	**0.97**	**1.07**	**1.11**	0.76	1.06	1.10
55	**0.96**	**1.07**	**1.13**	**1.07**	**1.34**	**1.16**
65	1.05	1.39	1.89	3.06	2.89	1.98
75	1.14	2.00	3.44	8.54	6.68	3.75

a. Values for average age at first entry are in bold type.

Table 68. Earnings ratio for those with an eye disability by rating group and age at first entry (men)[a]

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
25	1.02	1.05				1.08
35	1.03	1.05				1.07
45	**1.01**	**1.02**	**1.07**	0.76	0.82	1.03
55	**0.99**	**1.01**	**1.10**	**1.00**	**1.01**	**1.04**
65	1.03	1.27	1.84	2.64	2.35	1.49
75	1.12	1.80	3.49	6.61	5.29	2.43

a. Values for average age at first entry are in bold type.

Appendix E: Veterans Survey results

All results are adjusted to be representative of the entire U.S. population of veterans receiving VA disability compensation.

Veterans Survey Part A: Introduction

Survey item: A8 Description: Are you currently retired and not working for pay? Population: All disabled veterans	
Categories	**Percentages**
Yes	54.49
No	45.16
Missing	0.35
Total	100.00

Veterans Survey Part B: Health-related quality of life

Survey item: B1 Description: In general, would you say your health is excellent, very good, good, fair, or poor? Population: All disabled veterans	
Categories	**Percentages**
Excellent	3.89
Very good	14.19
Good	32.32
Fair	31.86
Poor	17.53
Missing	0.20
Total	100.00

Survey item: B2
Description: Does your health now limit you in moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf? Does your health now limit you a lot, limit you a little, or not limit you at all?
Population: All disabled veterans

Categories	Percentages
Yes, limited a lot	36.25
Yes, limited a little	40.95
No, not limited at all	21.96
Missing	0.84
Total	100.00

Survey item: B3
Description: Does your health now limit you in climbing several flights of stairs? Does your health now limit you a lot, limit you a little, or not limit you at all?
Population: All disabled veterans

Categories	Percentages
Yes, limited a lot	37.32
Yes, limited a little	35.23
No, not limited at all	26.72
Missing	0.73
Total	100.00

Survey item: B4
Description: During the past 4 weeks, how much of the time have you accomplished less than you would like as a result of your physical health?
Population: All disabled veterans

Categories	Percentages
None of the time	16.37
A little of the time	21.69
Some of the time	30.35
Most of the time	21.87
All of the time	8.95
Missing	0.76
Total	100.00

Survey item: B5
Description: During the past 4 weeks, how much of the time have you cut down the amount of time you spent on work or other activities as a result of your physical health?
Population: All disabled veterans

Categories	Percentages
None of the time	21.42
A little of the time	20.25
Some of the time	27.83
Most of the time	20.63
All of the time	9.26
Missing	0.60
Total	100.00

Survey item: B6
Description: During the past 4 weeks, how much of the time were you limited in the kind of work or other activities you do as a result of your physical health?
Population: All disabled veterans

Categories	Percentages
None of the time	17.23
A little of the time	20.26
Some of the time	28.73
Most of the time	21.65
All of the time	11.66
Missing	0.47
Total	100.00

Survey item: B7
Description: During the past 4 weeks, how much of the time have you had difficulty performing work or other activities as a result of your physical health?
Population: All disabled veterans

Categories	Percentages
None of the time	15.40
A little of the time	19.70
Some of the time	26.01
Most of the time	24.99
All of the time	13.43
Missing	0.46
Total	100.00

Survey item: B8
Description: During the past 4 weeks, how much of the time have you cut down the amount of time you spent on work or other activities as a result of any emotional problems?
Population: All disabled veterans

Categories	Percentages
None of the time	47.50
A little of the time	14.57
Some of the time	17.16
Most of the time	13.68
All of the time	6.43
Missing	0.67
Total	100.00

Survey item: B9
Description: During the past 4 weeks, how much of the time have you accomplished less than you would like as a result of any emotional problems?
Population: All disabled veterans

Categories	Percentages
None of the time	46.94
A little of the time	14.68
Some of the time	17.41
Most of the time	14.54
All of the time	5.97
Missing	0.47
Total	100.00

Survey item: B10
Description: During the past 4 weeks, how much of the time did you not do work or other activities as carefully as usual as a result of any emotional problems?
Population: All disabled veterans

Categories	Percentages
None of the time	49.58
A little of the time	15.59
Some of the time	16.71
Most of the time	11.62
All of the time	5.56
Missing	0.94
Total	100.00

Survey item: B11
Description: During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups?
Population: All disabled veterans

Categories	Percentages
Not at all	27.52
Slightly	21.37
Moderately	21.26
Quite a bit	18.75
Extremely	10.52
Missing	0.57
Total	100.00

Survey item: B12
Description: How much bodily pain have you had during the past 4 weeks?
Population: All disabled veterans

Categories	Percentages
None	7.41
Very mild	9.73
Mild	20.81
Moderate	35.83
Severe	21.18
Very severe	4.91
Missing	0.13
Total	100.00

Survey item: B13
Description: During the past 4 weeks, how much did pain interfere with your normal work, including both work outside the home and housework?
Population: All disabled veterans

Categories	Percentages
Not at all	14.42
A little bit	22.98
Moderately	26.03
Quite a bit	25.00
Extremely	11.10
Missing	0.46
Total	100.00

Survey item: B14
Description: How much of the time during the past 4 weeks have you been a very nervous person?
Population: All disabled veterans

Categories	Percentages
All of the time	5.63
Most of the time	10.28
A good bit of the time	8.98
Some of the time	17.34
A little of the time	23.11
None of the time	34.45
Missing	0.20
Total	100.00

Survey item: B15
Description: How much of the time during the past 4 weeks have you felt so down in the dumps that nothing could cheer you up?
Population: All disabled veterans

Categories	Percentages
All of the time	3.41
Most of the time	8.67
A good bit of the time	8.62
Some of the time	14.70
A little of the time	20.70
None of the time	43.65
Missing	0.24
Total	100.00

Survey item: B16
Description: How much of the time during the past 4 weeks have you felt down-hearted and blue?
Population: All disabled veterans

Categories	Percentages
All of the time	3.57
Most of the time	9.61
A good bit of the time	8.37
Some of the time	16.50
A little of the time	27.02
None of the time	34.72
Missing	0.21
Total	100.00

Survey item: B17
Description: How much of the time during the past 4 weeks have you felt calm and peaceful?
Population: All disabled veterans

Categories	Percentages
All of the time	7.44
Most of the time	32.52
A good bit of the time	13.47
Some of the time	19.94
A little of the time	18.65
None of the time	7.73
Missing	0.25
Total	100.00

Survey item: B18
Description: How much of the time during the past 4 weeks did you have a lot of energy?
Population: All disabled veterans

Categories	Percentages
All of the time	2.93
Most of the time	17.07
A good bit of the time	12.69
Some of the time	25.62
A little of the time	25.10
None of the time	16.36
Missing	0.23
Total	100.00

Survey item: B19
Description: How much of the time during the past 4 weeks have you been a happy person?
Population: All disabled veterans

Categories	Percentages
All of the time	8.74
Most of the time	34.30
A good bit of the time	14.54
Some of the time	21.10
A little of the time	15.41
None of the time	5.71
Missing	0.19
Total	100.00

Survey item: B20
Description: During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc.)?
Population: All disabled veterans

Categories	Percentages
All of the time	8.74
Most of the time	16.83
Some of the time	23.95
A little of the time	21.68
None of the time	28.29
Missing	0.52
Total	100.00

Survey item: B21
Description: During the past 4 weeks, how much of the time has your physical health or an emotional problem kept you from bonding or being emotionally close with someone in your family?
Population: All disabled veterans

Categories	Percentages
All of the time	5.89
Most of the time	13.25
Some of the time	20.68
A little of the time	20.18
None of the time	39.38
Missing	0.62
Total	100.00

Survey item: B22
Description: During the past 4 weeks, how much of the time has your physical health or an emotional problem kept you from enjoying nature, art, or music?
Population: All disabled veterans

Categories	Percentages
All of the time	5.43
Most of the time	14.26
Some of the time	21.84
A little of the time	19.56
None of the time	38.38
Missing	0.53
Total	100.00

Survey item: B23
Description: Do you have serious difficulty seeing, even when wearing glasses or contact lenses?
Population: All disabled veterans

Categories	Percentages
Yes	26.65
No	72.78
Missing	0.58
Total	100.00

Survey item: B24
Description: Do you now use a hearing aid?
Population: All disabled veterans

Categories	Percentages
Yes	18.45
No	81.45
Missing	0.10
Total	100.00

Survey item: B25
Description: Do you now use any of these aids to get around? *Multiple responses allowed.*
Population: All disabled veterans

Categories	Percentages
Cane	20.90
Crutches	2.42
Walker	5.32
Medically prescribed shoes	11.40
Manual wheelchair	3.12
Electric wheelchair	1.88
Scooter	2.38
No, none of the above	67.74
Missing	0.03

Survey item: B26
Description: Do you now use an artificial leg, foot, arm, or hand?
Population: All disabled veterans

Categories	Percentages
Yes	1.27
No	98.67
Missing	0.06
Total	100.00

Survey item: B26A
Description: Are you experiencing problems with breathing or other respiratory functions due to a service connected disability?
Population: All disabled veterans

Categories	Percentages
Yes	20.53
No	76.11
Missing	3.36
Total	100.00

Survey item: B26C
Description: Do you take pain medication daily to regulate the effects of your service connected disability?
Population: All disabled veterans

Categories	Percentages
Yes	46.56
No	52.67
Missing	0.77
Total	100.00

Survey item: B27
Description: Because of a physical, mental, or emotional problem, do you get help from another person with any routine activities such as bathing, dressing, preparing meals, getting around, shopping, or paying bills?
Population: All disabled veterans

Categories	Percentages
Yes	24.07
No	75.70
Missing	0.23
Total	100.00

Survey item: B28
Description: Do you have any physical, mental, or emotional symptoms that are intermittent, in other words, that come and go?
Population: All disabled veterans

Categories	Percentages
Yes	52.80
No	45.94
Missing	1.27
Total	100.00

Survey item: B29
Description: Have any of these intermittent symptoms been gone or absent during the past 4 weeks?
Population: Disabled veterans with intermittent physical, mental, or emotional symptoms

Categories	Percentages
Yes	36.13
No	62.29
Missing	1.58
Total	100.00

Survey item: B30
Description: If these absent symptoms had been present during the past 4 weeks, how would they have affected your health? Would your health have been much worse, worse, a little bit worse, or about the same?
Population: Disabled veterans with intermittent physical, mental, or emotional symptoms that have been gone or absent during the past 4 weeks.

Categories	Percentages
Much worse	7.83
Worse	21.19
A little bit worse	31.10
About the same	38.83
Missing	1.06
Total	100.00

Veterans Survey Part C: Overall quality of life

Survey item: C1
Description: How much satisfaction do you get from your life overall?
Population: All disabled veterans

Categories	Percentages
A lot	34.92
A fair amount	35.03
Some	17.14
A little	10.06
None	2.58
Missing	0.27
Total	100.00

Survey item: C2
Description: How much satisfaction do you get from the city or place you live in?
Population: All disabled veterans

Categories	Percentages
A lot	29.85
A fair amount	32.39
Some	18.63
A little	12.61
None	6.19
Missing	0.33
Total	100.00

Survey item: C3
Description: How much satisfaction do you get from your non-working activities – hobbies or other interests?
Population: All disabled veterans

Categories	Percentages
A lot	30.03
A fair amount	26.66
Some	18.05
A little	14.96
None	8.41
NA	1.67
Missing	0.22
Total	100.00

Survey item: C4
Description: How much satisfaction do you get from your family life?
Population: All disabled veterans

Categories	Percentages
A lot	48.95
A fair amount	24.95
Some	11.82
A little	9.22
None	3.64
NA	1.05
Missing	0.37
Total	100.00

Survey item: C5
Description: How much satisfaction do you get from your friendships?
Population: All disabled veterans

Categories	Percentages
A lot	36.64
A fair amount	28.15
Some	16.16
A little	11.95
None	5.44
NA	1.43
Missing	0.24
Total	100.00

Survey item: C6
Description: How much satisfaction do you get from your health and physical condition?
Population: All disabled veterans

Categories	Percentages
A lot	10.82
A fair amount	29.40
Some	22.82
A little	23.54
None	12.70
Missing	0.72
Total	100.00

Survey item: C7
Description: So far as you and your family are concerned, would you say that you are pretty well satisfied with your present financial situation, more or less satisfied, or not satisfied at all?
Population: All disabled veterans

Categories	Percentages
Pretty well satisfied	28.50
More or less satisfied	45.31
Not satisfied at all	25.40
Missing	0.78
Total	100.00

Survey item: C8
Description: Do you think the disability payment you receive from the VA compensates you fairly for potential lost earnings?
Population: All disabled veterans

Categories	Percentages
Yes	48.07
No	48.25
Missing	3.69
Total	100.00

Survey item: C9
Description: Initial effect of service connected disability on life
Population: All disabled veterans

Categories	Percentages
A great effect	52.95
Some effect	36.91
Little or no effect	9.60
Missing	0.54
Total	100.00

Survey item: C10
Description: Change in effect of service connected disability
Population: All disabled veterans

Categories	Percentages
Effect is more than before	56.96
Effect is same as before	28.46
Effect is less than before	13.41
Missing	1.17
Total	100.00

Survey item: C11A
Description: Agreement with statement, "I pretty much adjusted to living with my service-connected disability"
Population: All disabled veterans

Categories	Percentages
Strongly agree	15.68
Agree	64.26
Disagree	13.41
Strongly disagree	5.92
Missing	0.73
Total	100.00

Survey item: C11B
Description: Agreement with statement, "Living with my service-connected disability bothers me every day"
Population: All disabled veterans

Categories	Percentages
Strongly agree	30.94
Agree	42.47
Disagree	20.37
Strongly disagree	5.54
Missing	0.69
Total	100.00

Survey item: C11C
Description: Agreement with statement, "I had to change my career plans due to my service-connected disability"
Population: All disabled veterans

Categories	Percentages
Strongly agree	28.89
Agree	29.24
Disagree	31.26
Strongly disagree	8.98
Missing	1.63
Total	100.00

Survey item: C11D
Description: Agreement with statement, "I had to change my family plans due to my service-connected disability"
Population: All disabled veterans

Categories	Percentages
Strongly agree	18.25
Agree	27.27
Disagree	42.50
Strongly disagree	10.72
Missing	1.26
Total	100.00

Survey item: C11E
Description: Agreement with statement, "I worry about the future due to my service-connected disability"
Population: All disabled veterans

Categories	Percentages
Strongly agree	28.57
Agree	35.41
Disagree	27.54
Strongly disagree	7.54
Missing	0.93
Total	100.00

Survey item: C11F
Description: Agreement with statement, "I don't like thinking about my service-connected disability"
Population: All disabled veterans

Categories	Percentages
Strongly agree	23.39
Agree	44.13
Disagree	23.30
Strongly disagree	6.74
Missing	2.44
Total	100.00

Survey item: C11G
Description: Agreement with statement, "My service-connected disability is hard on my family"
Population: All disabled veterans

Categories	Percentages
Strongly agree	20.22
Agree	33.37
Disagree	36.34
Strongly disagree	8.53
Missing	1.54
Total	100.00

Survey item: C11H
Description: Agreement with statement, "My service connected disability is visible to other people"
Population: All disabled veterans

Categories	Percentages
Strongly agree	15.59
Agree	33.89
Disagree	37.55
Strongly disagree	11.89
Missing	1.09
Total	100.00

Survey item: C11I
Description: Agreement with statement, "I hardly notice my service connected disability"
Population: All disabled veterans

Categories	Percentages
Strongly agree	3.55
Agree	15.62
Disagree	44.45
Strongly disagree	35.46
Missing	0.92
Total	100.00

Survey item: C11J
Description: Agreement with statement, "I receive the right amount of compensation for my service-connected disability"
Population: All disabled veterans

Categories	Percentages
Strongly agree	4.39
Agree	36.38
Disagree	32.61
Strongly disagree	23.19
Missing	3.43
Total	100.00

Survey item: C11K
Description: Agreement with statement, "I receive too little compensation for my service-connected disability"
Population: Disabled veterans who do not think that they receive the "right amount of compensation" for their disability

Categories	Percentages
Strongly agree	38.49
Agree	44.89
Disagree	7.95
Strongly disagree	4.49
Missing	4.18
Total	100.00

Survey item: C11L
Description: Agreement with statement, "I receive too much compensation for my service-connected disability"
Population: Disabled veterans who do not think that they receive the "right amount of compensation" and who do not think that they receive "too little compensation"

Categories	Percentages
Strongly agree	1.14
Agree	1.86
Disagree	41.80
Strongly disagree	40.20
Missing	14.99
Total	100.00

Veterans Survey Section D: Compliance with recommended medical treatments

Survey item: D1
Description: During the past 12 months, have you made at least one visit to a doctor or other health care professional, such as a nurse practitioner or psychologist?
Population: All disabled veterans

Categories	Percentages
Yes	93.80
No	6.16
Missing	0.04
Total	100.00

Survey item: D2
Description: Were any of these visits [to a doctor or other health care professional in the past 12 months] related to your service-connected disability?
Population: Disabled veterans who had at least one visit to a doctor or other health care professional in the past 12 months

Categories	Percentages
Yes	72.89
No	26.06
Missing	1.05
Total	100.00

Survey item: D3
Description: During the past 12 months, did a doctor or other health care professional prescribe or recommend a treatment or procedure related to your service-connected disability that you decided not to accept or take at the time it was first offered?
Population: Disabled veterans with any visits in the past 12 months to a doctor or other health care professional for treatment of a service-connected disability

Categories	Percentages
Yes	8.24
No	91.40
Missing	0.35
Total	100.00

Survey item: D4
Description: During the past 12 months, on how many occasions did you turn down a prescription or treatment recommendation related to your service-connected disability?
Population: Disabled veterans who had a doctor or other health care professional prescribe/recommend a treatment/procedure in the past 12 months for a service-connected disability that veteran decided not to accept

Categories	Percentages
One time	67.52
More than one time	30.83
Missing	1.65
Total	100.00

Survey item: D5
Description: What kind of prescription or treatment was it that you turned down? *Multiple responses allowed.*
Population: Disabled veterans who had a doctor or other health care professional prescribe/recommend a treatment/procedure in the past 12 months for a service-connected disability that veteran decided not to accept

Categories	Percentages
Medication	39.18
Surgery	37.87
Diagnostic test	7.25
Physical therapy	10.45
Counseling	6.11
Psychotherapy	3.86
Nursing care	1.02
Medical device	5.84
Occupational therapy	1.39
Other	1.87
Missing	0.98

Survey item: D6
Description: Reasons for turning down treatment that was recommended for the service-connected disability. *Multiple responses allowed.*
Population: Disabled veterans who had a doctor or other health care professional prescribe/recommend a treatment/procedure in the past 12 months for a service-connected disability that veteran decided not to accept

Categories	Percentages
Treatment would have cost too much	16.72
Treatment would have been painful, unpleasant, or embarrassing	31.59
Difficult to get to the place where the treatment was available	17.13
Waiting time was too long	15.03
Don't like seeing doctors, nurses, or therapists	18.34
Getting the treatment might have ended up changing disability benefits	4.65
Expected to get better without the treatment	20.39
Didn't think the treatment would do any good	43.25
Didn't care whether got better or not	8.75
Concerned about the side effects of medication	46.56
Different doctors were giving different advice	37.44
Too depressed to go for treatment	12.97
Forgot about the appointment	7.05
Other	29.37
Missing	0.61

Survey item: D8
Description: During the past 12 months, was there ever a time when you had started any type of treatment or therapy prescribed by a doctor or other health care professional but did not complete it or follow it exactly?
Population: Disabled veterans with any visits in the past 12 months to a doctor or other health care professional for treatment of a service-connected disability

Categories	Percentages
Yes	9.78
No	89.70
Missing	0.53
Total	100.00

Survey item: D9
Description: Were any of these treatments [i.e., recommended treatments that were not followed or completed] related to your service-connected disability?
Population: Disabled veterans who started a treatment/therapy in the past 12 months but did not complete it or follow it exactly

Categories	Percentages
Yes	70.49
No	26.28
Missing	3.23
Total	100.00

Survey item: D10
Description: During the past 12 months, on how many separate occasions did you start but not complete or not follow exactly a treatment or therapy related to your service-connected disability?
Population: Disabled veterans who started but did not complete or follow exactly a treatment/therapy for a service-connected disability

Categories	Percentages
One time	64.44
More than one time	34.30
Missing	1.25
Total	100.00

Survey item: D11
Description: Type of treatment that veteran started but did not follow or complete for the service-connected disability. *Multiple responses allowed.*
Population: Disabled veterans who started but did not complete or follow exactly a treatment/therapy for a service-connected disability

Categories	Percentages
Medication	50.08
Surgery	5.23
Diagnostic test	6.41
Physical therapy	23.70
Counseling	11.04
Psychotherapy	10.13
Nursing care	0.85
Medical device	7.53
Occupational therapy	2.16
Other	2.29
Missing	1.21

Survey item: D12 Description: Reasons for not completing or not following exactly the treatment started for the service connected disability. *Multiple responses allowed.* Population: Disabled veterans who started but did not complete or follow exactly a treatment/therapy for a service-connected disability	
Categories	**Percentages**
Treatment would have cost too much	12.70
Treatment was painful or unpleasant	34.29
Difficult to get to the place where the treatment was available	26.87
Waiting time was too long	20.51
Don't like seeing doctors, nurses, or therapists	19.45
Completing the treatment might have ended up changing disability benefits	5.46
Expected to get better without completing the treatment	21.66
Didn't think the treatment was doing any good	43.24
Didn't care whether got better or not	10.21
Didn't like the side effects of the medication	53.59
Different doctors were giving different advice	33.77
Too depressed to go for treatment	21.02
Forgot about the appointment	16.78
Other	19.75
Missing	1.62

Veterans Survey Part E: Labor force participation

Survey item: E1 Description: Last week, did you do any work for either pay or profit? Population: Disabled veterans who are not retired	
Categories	**Percentages**
Yes	78.76
No	20.79
Missing	0.45
Total	100.00

Survey item: E2
Description: Last week, did you have a job, either full or part time?
Population: Disabled veterans who are not retired but did not do any work last week

Categories	Percentages
Yes	31.13
No	65.87
Missing	3.00
Total	100.00

Survey item: E3
Description: Did you retire early or stop working because of a health problem?
Population: Disabled veterans who are retired and under age 65

Categories	Percentages
Yes	74.74
No	24.84
Missing	0.42
Total	100.00

Survey item: E4
Description: Was that health problem [i.e., the health problem for which the veteran retired early or stopped working] your service-related disability?
Population: Disabled veterans under age 65 who retired early or stopped working because of a health problem

Categories	Percentages
Yes	84.34
No	12.95
Can't say, because health problem's service-related status has not yet been determined	0.85
Missing	1.87
Total	100.00

Survey item: E5
Description: If you were not receiving any disability payments from the VA, would you be working now?
Population: Disabled veterans who are retired and under age 65

Categories	Percentages
Yes	22.91
No	72.21
Missing	4.88
Total	100.00

Survey item: E6 Description: Altogether, how many jobs or businesses do you have? Population: Disabled veterans who either did work for pay or profit last week or had a job last week	
Categories	**Percentages**
One	87.47
More than one	11.68
Missing	0.85
Total	100.00

Survey item: E7 Description: How many hours per week do you usually work at your job? Population: Disabled veterans with one job or business	
Categories	**Percentages**
Less than 35 hours	15.85
35 hours or more	83.73
Missing	0.42
Total	100.00

Survey item: E8 Description: How many hours per week do you usually work at your main job? Population: Disabled veterans with more than one job or business	
Categories	**Percentages**
Less than 35 hours	25.87
35 hours or more	73.77
Missing	0.36
Total	100.00

Survey item: E9 Description: How many hours per week do you usually work at your other job(s)? Population: Disabled veterans with more than one job or business	
Categories	**Percentages**
Less than 35 hours	92.45
35 hours or more	3.42
Missing	4.13
Total	100.00

Survey item: E10
Description: Do you want to work a full-time workweek of 35 hours or more per week?
Population: Disabled veterans who either did work for pay or profit last week or had a job last week and usually work less than 35 hours per week

Categories	Percentages
Yes	51.69
No	44.47
Regular hours are full-time	2.87
Missing	0.97
Total	100.00

Survey item: E11
Description: What is your main reason for working part-time (instead of full-time)?
Population: Disabled veterans who either did work for pay or profit last week or had a job last week and usually work less than 35 hours per week and want to work full-time

Categories	Percentages
Slack work/business conditions	8.81
Could only find part-time work	13.94
Seasonal work	1.62
Child care problems	0.24
Other family/personal obligations	15.14
Health/medical limitations	34.82
School/training	6.95
Retired/Social Security limit on earnings	0.47
Full-time workweek is less than 35 hours	5.47
Other	10.89
Missing	1.65
Total	100.00

Survey item: E12
Description: Does your service-connected disability prevent you from working full-time?
Population: Disabled veterans who either did work for pay or profit last week or had a job last week and usually work less than 35 hours per week and want to work full-time

Categories	Percentages
Yes	57.86
No	38.46
Missing	3.68
Total	100.00

Survey item: E13
Description: If you were not receiving any disability payments from the VA, would you be working full-time now?
Population: Disabled veterans who either did work for pay or profit last week or had a job last week and usually work less than 35 hours per week and do not say that they do not want to work full-time

Categories	Percentages
Yes	26.92
No	69.38
Missing	3.70
Total	100.00

Survey item: E14
Description: What is the main reason you do not want to work full time?
Population: Disabled veterans who either did work for pay or profit last week or had a job last week and usually work less than 35 hours per week and do not want to work full-time

Categories	Percentages
Child care problems	0.62
Other family/personal obligations	8.37
Health/medical limitations	37.67
School/training	6.08
Retired/Social Security limit on earnings	19.96
Full-time workweek less than 35 hours	1.77
Other	23.70
Missing	1.82
Total	100.00

Survey item: E15
Description: Does your service-connected disability keep you from wanting to work full-time?
Population: Disabled veterans who either did work for pay or profit last week or had a job last week and usually work less than 35 hours per week and do not want to work full-time

Categories	Percentages
Yes	36.21
No	63.14
Missing	0.65
Total	100.00

Survey item: E16
Description: If you were not receiving any disability payments from the VA, would you want to be working full-time?
Population: Disabled veterans who either did work for pay or profit last week or had a job last week and usually work less than 35 hours per week and do not want to work full-time

Categories	Percentages
Yes	26.81
No	70.11
Missing	3.08
Total	100.00

Survey item: E17
Description: Have you been doing anything to find work during the last 4 weeks?
Population: Disabled veterans who are not retired, did not do work for pay or profit last week, and did not have a job last week

Categories	Percentages
Yes	28.76
No	67.49
Missing	3.75
Total	100.00

Survey item: E18
Description: What is the main reason you were not looking for work during the last 4 weeks?
Population: Disabled veterans who are not retired, did not do work for pay or profit last week, did not have a job last week, and have not been doing anything to find work during the last 4 weeks

Categories	Percentages
No work available in line of work or area	2.07
Can't find any work	0.83
Lacks necessary schooling, training, skills, or experience	0.09
Employers think too young or too old	4.08
Other types of discrimination	0.28
Can't arrange child care	0.13
Family responsibilities	2.26
In school or other training	15.89
Ill health, physical disability, or mental disability	50.06
Transportation problems	0.84
Other	17.28
Missing	6.21
Total	100.00

Survey item: E19
Description: Has your service-connected disability kept you from looking for work?
Population: Disabled veterans who are not retired, did not do work for pay or profit last week, did not have a job last week, and have not been doing anything to find work during the last 4 weeks

Categories	Percentages
Yes	48.08
No	50.19
Missing	1.73
Total	100.00

Survey item: E20
Description: If you were not receiving any disability payments from the VA, would you have been looking for work?
Population: Disabled veterans who are not retired, did not do work for pay or profit last week, did not have a job last week, and have not been doing anything to find work during the last 4 weeks

Categories	Percentages
Yes	29.15
No	64.57
Missing	6.28
Total	100.00

Veterans Survey Part F: Closing

Survey item: F1
Description: Is there anything else you would like to tell the Commission about your VA Disability Compensation benefit? *Multiple responses allowed.*
Population: All disabled veterans

Categories	Percentages
Benefit covers basics expenses	2.84
Grateful to receive it	10.76
Disability benefit is needed	3.88
Benefit makes up for the suffering due to disability	0.83
Other	46.52
No comment	36.56

Appendix F: Veterans Survey instrument

PART A: Informed Consent and Introduction

Hello, my name is _____. I would like to speak with [veteran] about a letter he/she received from the Veterans Disability Benefits Commission.

A1 **Is this [veteran's name]?**

1. Yes
2. No SKIP TO A2

GENDER **IF A1=YES: Interviewer: Please record gender. [If absolutely necessary: I'm required to ask your gender. Are you male or female?]**

1. Male SKIP TO A3
2. Female SKIP TO A3
3. Refused SKIP TO A3

A2 **IF A1=NO: Can you tell me a good time to call back to reach [veteran]?** SET CALLBACK SCHEDULE.

A3 **IF A1=YES: A few weeks ago, General Scott, the Chairman of the Veterans' Disability Benefits Commission, sent you a letter about a survey on service-connected disabilities and quality of life. Did you receive and read this letter?**

1. Yes CONTINUE and SKIP the Privacy Act Notice shown *in italics.*
2. No CONTINUE and READ the Privacy Act Notice shown in *italics.*
3. Don't know CONTINUE and READ the Privacy Act Notice shown in *italics.*

The reason I am calling you is because you are a part of a randomly selected interview sample of veterans who receive disability benefits from the VA. The purpose of our study is to provide information to Congress and the President about veterans' disability payments – specifically, how fair and effective they are in compensating disabled vets for the loss of potential earnings and other issues. Your response is very important because it represents not only your own circumstances, but also those of many others. The answers that you give will be kept confidential and will be used for research purposes only. *PRIVACY ACT NOTICE: Your information is protected by the Federal Privacy Act Law.* The Commission hired ORC Macro, a private, independent research firm, to conduct this survey.

The survey, which typically lasts 15-25 minutes, asks you questions about your life satisfaction, health care, health status and employment. Participation in the survey will not affect your VA disability benefits. There are no risks to you if you participate in this survey, but if you feel uncomfortable with any of the questions, you may choose to skip them, or to stop the interview at any time. Although there are no direct benefits to you for participating in this survey, your participation will help better assess the program.

A4 **Do you have any [other] questions about the survey?**

1. Yes
2. No

IF "YES", ELICIT SPECIFIC QUESTIONS AND RESPOND PER TRAINING, THEN REPEAT A4 UNTIL ANSWER IS "NO."

A5 **Is now a convenient time for the interview?**

1. Yes GO TO A5A
2. No
88. DK
99. REF

IF YES, CONTINUE.

IF NO, SET CALLBACK SCHEDULE. IF ASSISTANCE NEEDED, RECORD NAME OF ASSISTANT FOR CALLBACK AND SET CALLBACK SCHEDULE.

A5A **IF A5=YES: Interviewer indicates who (if anyone) is assisting veteran in responding.**

A6 **According to our records, you receive a monthly disability benefit payment from the VA. Is this correct? This could be a check or direct deposit into a bank account.**

1. Yes GO TO A7
2. No
88. DK
99. REF

IF YES, CONTINUE.

IF NO OR DK OR REF, PROBE FOR EXPLANATION, CONFIRM THE ANSWER, ENTER COMMENTS, THEN END CALL AND REFER CASE TO SUPERVISOR.

A7 **How old are you?** _____

Ages 18-89: Interviewer codes actual age and goes to A8.
Ages 90-100: Interviewer codes actual age and goes to A7VER.
Ages 101 and older: Interviewer enters a single code and goes to A7VER.
Ages 17 and younger: Interviewer enters a single code and goes to A7VER.
Don't know or refuse: Interviewer goes to A7A.

A7VER **Just to confirm, you said you are [age from A7] years of age. Is that correct?**

1. Yes GO TO A8
2. No GO BACK TO A7
88. DK GO TO A8
99. REF GO TO A8

A7A **ASK ONLY IF A7=DK OR REF: Are you 65 or older?**

1. Yes
2. No
88. DK
99. REF

A8 **Are you currently retired and not working for pay at all?**

1. Yes
2. No
88. DK
99. REF

FOR SECTION E:
IF A8 =YES AND [(A7 = 64 OR YOUNGER) OR A7=REF], RESPONDENT WILL GO TO E3, SKIPPING E1 AND E2.
IF A8=YES AND A7 =65 OR OLDER, RESPONDENT WILL SKIP TO SECTION F, SKIPPING SECTION E ENTIRELY.

PART B: Health-Related Quality of Life[80]

NOTE TO INTERVIEWERS: If a respondent uses an assistive device (such as a cane, wheelchair, or hearing aid) and asks whether to answer these questions "as if" they had no device or assistance, respond that he/she should "answer as if using any assistance that you would normally use."

First, I'm going to ask some general questions about your health currently and other activities that you might do during a typical day. When the question mentions work, please consider any activity that you do around the home or activity like volunteer work if you are retired.

B1 **In general, would you say your health is...** [Source: VR-12]

1. Excellent
2. Very good
3. Good
4. Fair (or)
5. Poor
88. DK
99. REF

B2 **Does your health now limit you in moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf. Does your health now limit you a lot, limit you a little, or not limit you at all**? [Source: VR-12]

1. Yes, limited a lot
2. Yes, limited a little
3. No, not limited at all
88. DK
99. REF

B3 **Does your health now limit you in climbing several flights of stairs. Does your health now limit you a lot, limit you a little, or not limit you at all?** [Source: VR-12]

1. Yes, limited a lot
2. Yes, limited a little
3. No, not limited at all
88. DK
99. REF

80. Questions B1 to B20 come from the Veterans RAND 36-Item Health Survey (VR-36), a subset of which is the Veterans RAND 12-Item Health Survey (VR-12). The VR-12 and VR-36 were developed and modified from the original RAND version of the 36-Item Health Survey version 1.0, which was developed at RAND as part of the Medical Outcomes Study.

B4 ***During the past 4 weeks*, how much of the time have you accomplished less than you would like *as a result of your physical health*? Would you say…?** [Source: VR-12]

1. None of the time
2. A little of the time
3. Some of the time
4. Most of the time
5. All of the time
88. DK
99. REF

B5 ***During the past 4 weeks*, how much of the time have you cut down the amount of time you spent on work or other activities *as a result of your physical health*? Would you say…?** [Source: VR-36]

1. None of the time
2. A little of the time
3. Some of the time
4. Most of the time
5. All of the time
88. DK
99. REF

B6 ***During the past 4 weeks*, how much of the time were you limited in the kind of work or other activities you do *as a result of your physical health*? Would you say…?** [Source: VR-12]

1. None of the time
2. A little of the time
3. Some of the time
4. Most of the time
5. All of the time
88. DK
99. REF

B7 ***During the past 4 weeks*, how much of the time have you had difficulty performing work or other activities *as a result of your physical health*? For example, it took extra effort. Would you say…?** [Source: VR-36]

1. None of the time
2. A little of the time
3. Some of the time
4. Most of the time
5. All of the time
88. DK
99. REF

B8 ***During the past 4 weeks*, how much of the time have you cut down the amount of time you spent on work or other activities *as a result of any emotional problems*? Would you say…?** [Source: VR-36]

1. None of the time
2. A little of the time
3. Some of the time
4. Most of the time
5. All of the time
88. DK
99. REF

B9 ***During the past 4 weeks*, how much of the time have you accomplished less than you would like *as a result of any emotional problems*? Would you say…?** [Source: VR-12]

1. None of the time
2. A little of the time
3. Some of the time
4. Most of the time
5. All of the time
88. DK
99. REF

B10 ***During the past 4 weeks*, how much of the time did you not do work or other activities as carefully as usual *as a result of any emotional problems*? Would you say…?** [Source: VR-12]

1. None of the time
2. A little of the time
3. Some of the time
4. Most of the time
5. All of the time
88. DK
99. REF

B11 ***During the past 4 weeks*, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups? Would you say…?** [Source: VR-36]

1. Not at all
2. Slightly
3. Moderately
4. Quite a bit
5. Extremely
8. DK
9. REF

B12 **How much bodily pain have you had *during the past 4 weeks*? Would you say…?** [Source: VR-36]

1. None
2. Very mild
3. Mild
4. Moderate
5. Severe
6. Very severe
88. DK
99. REF

B13 ***During the past 4 weeks*, how much did pain interfere with your normal work, including both work outside the home and housework? Did it interfere…?** [Source: VR-12]

1. Not at all
2. A little bit
3. Moderately
4. Quite a bit
5. Extremely
88. DK
99. REF

These next questions are about how you feel and how things have been with you *during the past 4 weeks*. For each question, please give the one answer that comes closest to the way you have been feeling.

B14 **How much of the time *during the past 4 weeks* have you been a very nervous person? Would you say…?** [Source: VR-36]

1. All of the time
2. Most of the time
3. A good bit of the time
4. Some of the time
5. A little of the time
6. None of the time
88. DK
99. REF

B15 **How much of the time *during the past 4 weeks* have you felt so down in the dumps that nothing could cheer you up? Would you say…?** [Source: VR-36]

1. All of the time
2. Most of the time
3. A good bit of the time
4. Some of the time
5. A little of the time
6. None of the time
88. DK
99. REF

B16 **How much of the time *during the past 4 weeks* have you felt downhearted and blue? Would you say…?** [Source: VR-12]

1. All of the time
2. Most of the time
3. A good bit of the time
4. Some of the time
5. A little of the time
6. None of the time
88. DK
99. REF

B17 **How much of the time *during the past 4 weeks* have you felt calm and peaceful? Would you say…?** [Source: VR-12]

1. All of the time
2. Most of the time
3. A good bit of the time
4. Some of the time
5. A little of the time
6. None of the time
88. DK
99. REF

B18 **How much of the time *during the past 4 weeks* did you have a lot of energy? Would you say...?** [Source: VR-12]

1. All of the time
2. Most of the time
3. A good bit of the time
4. Some of the time
5. A little of the time
6. None of the time
88. DK
99. REF

B19 **How much of the time *during the past 4 weeks* have you been a happy person? Would you say...?** [Source: VR-36]

1. All of the time
2. Most of the time
3. A good bit of the time
4. Some of the time
5. A little of the time
6. None of the time
88. DK
99. REF

B20 ***During the past 4 weeks*, how much of the time has your *physical health or emotional problems* interfered with your social activities (like visiting with friends, relatives, etc.)? Would you say...?** [Source: VR-12]

1. All of the time
2. Most of the time
3. Some of the time
4. A little of the time
5. None of the time
88. DK
99. REF

B21 **During the *past 4 weeks*, how much of the time has your physical health or an emotional problem kept you from bonding or being emotionally close with someone in your family?** [Source: New question]

1. All of the time
2. Most of the time
3. Some of the time
4. A little of the time
5. None of the time
88. DK
99. REF

B22 **During the *past 4 weeks*, How much of the time has your physical health or an emotional problem kept you from enjoying nature, art, or music?** [Source: New question]

1. All of the time
2. Most of the time
3. Some of the time
4. A little of the time
5. None of the time
88. DK
99. REF

B23 **Do you have *serious* difficulty seeing, even when wearing glasses or contact lenses?** [Source: NHIS Disability Supplement]

1. Yes
2. No
88. DK
99. REF

B24 **Do you now use a hearing aid?** [Source: NHIS Disability Supplement]

1. Yes
2. No
88. DK
99. REF

B25 **Do you now use any of these aids to get around?** CHECK ALL THAT APPLY. [Source: NHIS Disability Supplement]

1. Cane
2. Crutches
3. Walker
4. Medically prescribed shoes
5. Manual wheelchair
6. Electric wheelchair
7. Scooter
8. NA
88. DK
99. REF

B26 **Do you now use an artificial leg, foot, arm, or hand?** [Source: NHIS Disability Supplement]

1. Yes
2. No
88. DK
99. REF

B26A **Are you experiencing problems with breathing or other respiratory functions due to a service connected disability?** [Source: New question]

1. Yes
2. No
88. DK
99. REF

B26C **Do you take pain medication daily to regulate the effects of your service connected disability?** [Source: New question] INTERVIEWER NOTE: "Effect" is any, both side and direct.

1. Yes
2. No
88. DK
99. REF

B27 **Because of a physical, mental, or emotional problem, do you get help from another person with any routine activities such as bathing, dressing, preparing meals, getting around, shopping, or paying bills?** [Source: New question]

1. Yes
2. No
88. DK
99. REF

B28 **Do you have any physical, mental, or emotional symptoms that are intermittent, in other words, that come and go?** [Source: New question]

1. Yes
2. No SKIP TO PART C.
88. DK SKIP TO PART C.
99. REF SKIP TO PART C.

B29 **ASK ONLY IF B28=YES: Have any of these *intermittent* symptoms been gone or absent during the *past 4 weeks*?** [Source: New question]

1. Yes
2. No SKIP TO PART C.
88. DK SKIP TO PART C.
99. REF SKIP TO PART C.

B30 **ASK ONLY IF B29=YES: If these absent symptoms had been present during the *past 4 weeks*, how would they have affected your health—would your health have been much worse, worse, a little bit worse, or about the same?** [Source: New question]

1. Much worse
2. Worse
3. A little bit worse
4. About the same
88. DK
99. REF

PART C: Overall Quality of Life

I am now going to ask you about your satisfaction with various aspects of your life currently. For each area of life I am going to name, please tell me how much satisfaction you get from that area currently.

C1 **How much satisfaction do you get from your life overall? Would you say...?** [Source: New question]

1. A lot
2. A fair amount
3. Some
4. A little
5. None
88. DK
99. REF

C2 **How much satisfaction do you get from the city or place you live in? Would you say...?** [Source: GSS]

1. A lot
2. A fair amount
3. Some
4. A little
5. None
88. DK
99. REF

C3 **How much satisfaction do you get from your non-working activities – hobbies or, other interests? Would you say…?** [Source: GSS]

1. A lot
2. A fair amount
3. Some
4. A little
5. None
6. NA
88. DK
99. REF

C4 **How much satisfaction do you get from your family life? Would you say…?** [Source: GSS]

1. A lot
2. A fair amount
3. Some
4. A little
5. None
6. NA
88. DK
99. REF

C5 **How much satisfaction do you get from your friendships? Would you say…?** [Source: GSS]

1. A lot
2. A fair amount
3. Some
4. A little
5. None
6. NA
88. DK
99. REF

C6 **How much satisfaction do you get from your health and physical condition? Would you say…?** [Source: GSS]

1. A lot
2. A fair amount
3. Some
4. A little
5. None
88. DK
99. REF

C7 **We are interested in how people are getting along financially these days. So far as you and your family are concerned, would you say that you are…:** [Source: GSS]

1. Pretty well satisfied with your present financial situation
2. More or less satisfied
3. Not satisfied at all
88. DK
99. REF

C8 **Do you think the disability payment you receive from the VA compensates you fairly for potential lost earnings?** [Source: New question] INTERVIEWER NOTE: "Potential lost earnings" refers to money you could have earned if you did not have your service connected disability.

1. Yes
2. No
88. DK
99. REF

C9 **What was the initial effect of your service connected disability on your life? Did it have:** [Source: New question]

1. A great effect on your life
2. Some effect on your life
3. Little or no effect on your life
88. DK
99. REF

C10 **Over time, has this changed? Would you say that …?** [Source: New question]

1. The service connected disability affects your life more now than it did before
2. The service connected disability affects your life the same as it did in the beginning
3. The service connected disability affects your life less now than it did before
88. DK
99. REF

C11 **I am going to read you some statements about your service-connected disability. For each statement, please tell me if you strongly agree, agree, disagree, or strongly disagree.** [Source: New question] (INTERVIEWER READS EACH STATEMENT, RECORDS STRONGLY AGREE / AGREE / DISAGREE / STRONGLY DISAGREE / DK OR REF FOR EACH).

C11A **I pretty much adjusted to living with my service-connected disability**
C11B **Living with my service-connected disability bothers me every day**
C11C **I had to change my career plans due to my service-connected disability**
C11D **I had to change my family plans due to my service-connected disability**
C11E **I worry about the future due to my service-connected disability**
C11F **I don't like thinking about my service-connected disability**
C11G **My service-connected disability is hard on my family**
C11H **My service connected disability is visible to other people**
C11I **I hardly notice my service connected disability**
C11J **I receive the right amount of compensation for my service-connected disability** (SKIP TO PART D IF AGREE OR STRONGLY AGREE)
C11K **I receive too little compensation for my service-connected disability** (SKIP TO PART D IF AGREE OR STRONGLY AGREE)
C11L **I receive too much compensation for my service-connected disability**

PART D: Compliance with Recommended Medical Treatments

Next I would like to ask you about visits you may have made to receive health care services during the past 12 months.

Determine Whether Any Medical Visits for Service Connected Disability

D1 **During the *past 12 months*, have you made at least one visit to a doctor or other health care professional, such as a nurse practitioner or psychologist?** [Source: New question]

1. Yes
2. No SKIP TO PART E.
88. DK SKIP TO PART E.
99. REF SKIP TO PART E.

D2 **ASK ONLY IF D1=YES: Were any of these visits related to your *service-connected disability?* By service-connected disability, I mean the condition or conditions for which you have a disability rating from the VA**? [Source: New question]

1. Yes
2. No SKIP TO PART E.
88. DK SKIP TO PART E.
99. REF SKIP TO PART E.

Not Following Recommended Medical Treatments

D3 **ASK ONLY IF D2=YES: During the *past 12 months*, did a doctor or other health care professional prescribe or recommend a treatment or procedure related to *your service-connected disability* that you decided not to accept or take at the time it was first offered? For example, have you turned down any medications, surgical procedures, tests, special equipment, physical therapy, counseling, nursing, or things like that?** [Source: New question]

1. Yes
2. No SKIP TO D8.
88. DK SKIP TO D8.
99. REF SKIP TO D8.

D4 **ASK ONLY IF D3=YES: During the *past 12 months*, on how many occasions did you turn down a prescription or treatment recommendation related to your *service-connected disability*? Was it one time or more than one time?** [Source: New question]

1. One time
2. More than one time
88. DK
99. REF

D5 **ASK ONLY IF D3=YES: [READ THIS PHRASE ONLY IF D4=2: Thinking about the *most recent time* that happened,] What kind of prescription or treatment was it that you turned down? Was it…?** [INTERVIEWER CHECK ALL THAT APPLY] [Source: New question]

1. Medication
2. Surgery
3. Diagnostic Test
4. Physical therapy
5. Counseling
6. Psychotherapy
7. Nursing Care
8. Medical Device
9. Occupational Therapy
10. Something else I have not mentioned? [SPECIFY]

88. DK
99. REF

D6 **ASK ONLY IF D3=YES: I am going to read you a list of common reasons why people might turn down treatment. Please tell me which of them are reasons for your turning down the treatment that was recommended for your service-connected disability.** CHECK ALL THAT APPLY. [Source: New question]

1. The treatment would have cost too much.
2. The treatment would have been painful, unpleasant, or embarrassing.
3. It was difficult to get to the place where the treatment was available.
4. The waiting time was too long.
5. You don't like seeing doctors, nurses, or therapists.
6. Getting the treatment might have ended up changing your disability benefits.
7. You expected to get better yourself without the treatment.
8. You didn't think the treatment would do any good.
9. You didn't care whether you got better or not.
10. You were concerned about the side effects of medication.
11. Different doctors were giving you different advice.
12. You were too depressed to go for treatment.
13. You forgot about the appointment.
14. Some other reason I have not mentioned? [SPECIFY]

88. DK
99. REF

SKIP TO D8 UNLESS D6=6.

D7 **ASK ONLY IF D6=6: You mentioned that you were concerned that the treatment might have changed your disability benefits. How did you think the treatment might have done this?** [OPEN-ENDED RESPONSE—CODE VERBATIM] [Source: New question]

Not Completing Recommended Medical Treatments

D8 **ASK ONLY IF D2=YES: People sometimes <u>start</u> a course of treatment or therapy but end up not following it exactly or not completing it. During the *past 12 months*, was there ever a time when you had started any type of treatment or therapy prescribed by a doctor or other health care professional but did not complete it or follow it exactly? This would include medication, surgical procedures, tests, special equipment, physical therapy, counseling, nursing, or things like that.** [Source: New question]

1. Yes
2. No SKIP TO PART E.
88. DK SKIP TO PART E.
99. REF SKIP TO PART E.

D9 **ASK ONLY IF D8=YES: Thinking about the treatment or therapy that you started but did not complete or follow exactly, were any of these treatments related to your service-connected disability?** [Source: New question]

1. Yes
2. No SKIP TO PART E.
88. DK SKIP TO PART E.
99. REF SKIP TO PART E.

D10 **ASK ONLY IF D9=YES: During the past 12 months, on how many separate occasions did you start but not complete <u>or</u> not follow exactly a treatment or therapy related to your service-connected disability? Was it one time or more than one time?** [Source: New question]

1. One time
2. More than one time
88. DK
99. REF

D11 **ASK ONLY IF D9=YES: [READ THIS PHRASE ONLY IF D10=2: Thinking about the most recent treatment that you started but did not complete or follow exactly,] What kind of treatment was it? Was it...?** [INTERVIEWER CHECK ALL THAT APPLY] [Source: New question]

1. Medication
2. Surgery
3. Diagnostic Test
4. Physical therapy
5. Counseling
6. Psychotherapy
7. Nursing Care
8. Medical Device
9. Occupational Therapy
10. Something else I have not mentioned? [SPECIFY]
88. DK
99. REF

D12 **ASK ONLY IF D9=YES: Now I am going to read you a list of common reasons why people might not complete or follow exactly a treatment or therapy that they start. Please tell me which of them are reasons for your not completing or not following exactly the treatment that you started for your service-connected disability.** CHECK ALL THAT APPLY. [Source: New question]

1. The treatment cost too much.
2. The treatment was painful or unpleasant.
3. It was difficult to get to the place where the treatment was available.
4. The waiting time was too long.
5. You don't like seeing doctors, nurses, or therapists.
6. Completing the treatment might have ended up changing your disability benefits.
7. You expected to get better yourself without completing the treatment.
8. You didn't think the treatment was doing any good.
9. You didn't care whether you got better or not.
10. You didn't like the side effects of the medication.
11. Different doctors were giving you different advice.
12. You were too depressed to go for treatment.
13. You forgot about the appointment.
14. Some other reason I have not mentioned? [SPECIFY]

88. DK
99. REF

SKIP TO PART F UNLESS D12=6.

D13 **ASK ONLY IF D12=6: You mentioned that you were concerned that completing the treatment or following the treatment exactly might have changed your disability benefits. How did you think that might have happened?** [OPEN-ENDED RESPONSE—CODE VERBATIM] [Source: New question]

PART E: Labor Force Participation

IF RESPONDENT IS RETIRED (A8=YES):
SKIP TO PART F IF AGE(A7) IS 65 OR OLDER.
SKIP TO E3 IF AGE(A7)<65.
SKIP TO E5 IF AGE(A7) IS DK OR REF.

Now I would like to change topics. I am going to ask a couple questions about work-related activities last week. By "last week," I mean the week beginning on Sunday, [date], and ending on Saturday, [date].

E1 **ASK ONLY IF NOT RETIRED (A8=NO OR DK OR REF): Last week, did you do any work for either pay or profit? Please include work in a family business or farm.** [Source: CPS]

1. Yes SKIP TO E6.
2. No

88. DK
99. REF

E2 **ASK ONLY IF E1=[NO OR DK OR REF]. Last week, did you have a job, either full or part time? Include any job from which you were temporarily absent.** [Source: CPS]

1. Yes SKIP TO E6.
2. No SKIP TO E17
88. DK SKIP TO E17
99. REF SKIP TO E17

Retirement before age 65

E3 **ASK ONLY IF LESS THAN 65 YEARS OLD (A7=64 or younger) AND RETIRED (A8=YES)**: **Did you retire early or stop working because of a health problem?** [Source: New question]

1. Yes
2. No SKIP TO E.5
88. DK SKIP TO E.5
99. REF SKIP TO E.5

E4 **ASK ONLY IF E3=YES: Was that health problem your service-related disability?** [Source: New question]

1. Yes
2. No
3. Can't say, because health problem's service-related status has not yet been determined.
88. DK
99. REF

E5 **ASK ONLY IF RETIRED (A8=YES) AND AGE(A7) IS LESS THAN 65 OR DK OR REF**: **If you were not receiving any disability payments from the VA, would you be working now**? [Source: New question]

1. Yes
2. No
88. DK
99. REF

SKIP TO PART F.

For people who are working, determine whether full-time or part-time

E6 **ASK ONLY IF E1=YES OR E2=YES: Altogether, how many jobs or businesses do you have?** RECORD EXACT NUMBER IF PROVIDED. [Source: CPS]

1. One
2. More than one SKIP TO E.8.
88. DK SKIP TO E.8.
99. REF SKIP TO E.8.

E7 **ASK ONLY IF E6=1. How many hours per week do you usually work at your job?** RECORD EXACT NUMBER IF PROVIDED. [Source: CPS]

1. Less than 35 SKIP TO E.10.
2. 35 or more SKIP TO PART F.
88. DK SKIP TO PART F.
99. REF SKIP TO PART F.

E8 **ASK ONLY IF E6=["MORE THAN ONE JOB" OR DK OR REF]. How many hours per week do you usually work at your main job? By "main job," we mean the one at which you usually work the most hours.** [Source: CPS] IF HOURS ARE EQUAL, WHICHEVER JOB WAS HELD THE LONGEST.

_____ HOURS PER WEEK

E9 **ASK ONLY IF E6=["MORE THAN ONE JOB" OR DK OR REF]. How many hours per week do you usually work at your other job(s)?** [Source: CPS]

_____HOURS PER WEEK

SKIP TO PART F IF SUM OF HOURS FROM E8 AND E9 IS 35 OR MORE.

For people working part-time, reasons for working part-time instead of full-time

E10 **ASK ONLY IF E7=1 OR THE SUM OF HOURS FROM E8 AND E9 IS LESS THAN 35. Do you want to work a full-time workweek of 35 hours or more per week?** [Source: CPS]

1. Yes	
2. No	SKIP TO E14.
3. Regular hours are full-time	SKIP TO PART F.
88. DK	SKIP TO E13
99. REF	SKIP TO E13

E11 **ASK ONLY IF E10=YES. Some people work part-time because they cannot find full-time work or because business is poor. Others work part-time because of family obligations or other personal reasons. What is your <u>main</u> reason for working part-time?** (PROBE IF NECESSARY: What is your main reason for working <u>part-time</u> instead of <u>full-time</u>?) DO NOT READ LIST. [Source: CPS]

1. Slack work/business conditions
2. Could only find part-time work
3. Seasonal work
4. Child care problems
5. Other family/personal obligations
6. Health/medical limitations
7. School/training
8. Retired/Social Security limit on earnings
9. Full-time workweek is less than 35 hours
10. Other (specify) _____

88. DK
99. REF

E12 **ASK ONLY IF E10=YES: Does your service connected disability prevent you from working full-time?** [Source: New question]

1. Yes
2. No

88. DK
99. REF

E13 **ASK ONLY IF E10=[YES OR DK OR REF]. If you were not receiving any disability payments from the VA, would you be working full-time now**? [Source: New question]

1. Yes
2. No
88. DK
99. REF

SKIP TO PART F.

E14 **ASK ONLY IF RESPONDENT DOESN'T WANT TO WORK FULL-TIME (E10=NO). What is the main reason you do not want to work full time?** DO NOT READ LIST. [Source: CPS]

1. Child care problems
2. Other family/personal obligations
3. Health/medical limitations
4. School/training
5. Retired/Social Security limit on earnings
6. Full-time workweek less than 35 hours
7. Other (specify) _____
88. DK
99. REF

E15 **ASK ONLY IF E10 = NO. Does your service-connected disability keep you from wanting to work full-time?** [Source: New question]

1. Yes
2. No
88. DK
99. REF

E16 **ASK ONLY IF E10=NO: If you were not receiving any disability payments from the VA, would you want to be working full-time**? [Source: New question]

1. Yes
2. No
88. DK
99. REF

SKIP TO PART F.

For people who are not working and not retired, determine whether looking for a job

E17 **ASK ONLY IF NOT WORKING BUT NOT RETIRED (E2 = NO OR DK OR REF). Have you been doing anything to find work during the last 4 weeks?** [Source: CPS]

1. Yes SKIP TO PART F.
2. No
88 DK SKIP TO PART F.
99. REF SKIP TO PART F.

E18 **ASK ONLY IF E17=NO. What is the main reason you were not looking for work during the last 4 weeks?** DO NOT READ LIST. [Source: CPS]

1. Believes no work available in line of work or area
2. Couldn't find any work
3. Lacks necessary schooling, training, skills, or experience
4. Employer thinks too young or too old
5. Other types of discrimination
6. Can't arrange child care
7. Family responsibilities
8. In school or other training
9. Ill health, physical disability, or mental disability
10. Transportation problems
11. Other, specify_____
88. DK
99. REF

E19 **ASK ONLY IF E17= NO. Has your service connected disability kept you from looking for work?** [Source: New question]

1. Yes
2. No
88. DK
99. REF

E20 **ASK ONLY IF E17=NO: If you were not receiving any disability payments from the VA, would you have been looking for work**? [Source: New question]

1. Yes
2. No
88. DK
99. REF

PART F: Closing

F1 **Before we end this interview, is there anything else you would like to tell the Commission about your VA Disability Compensation benefit?** (SELECT AS MANY AS APPLY)

1. Benefit covers basics expenses
2. Grateful to receive it
3. Disability benefit is needed
4. Benefit makes up for the suffering due to disability
5. Other (specify)
96. No other comment
98. DK
99. REF

That is all the questions I have for you. If you have any questions about the survey or the Veterans' Disability Benefits Commission, please visit the Commission's website at www.vetscommission.org or call the following toll-free number: 1- XXX-XXX-XXXX. Thank you very much for being a part of this study.

END

Appendix G: Survey sampling plan and achieved sample

The population that we surveyed is the 2,660,654 service-disabled veterans receiving VA compensation on 1 December 2005. This is the sample population that we analyzed for earnings losses. How to sample this population appropriately is a function of what the analytical goals are:

- The desired level of statistical precision.
- Distinct subpopulations that we wish to analyze separately.

The Commission determined that the desired level of statistical precision was 95/5. This means that it wants to be 95-percent certain that the *true* value was within a 5-percent interval. In other words, if an *estimated* population mean were 50 percent, for example, this level of precision means that we'd be 95-percent certain that the *actual* population mean was between 47.5 and 52.5 percent. To say it another way, if we generated 20 random samples and surveyed each sample, we'd expect for 19 of these 20 samples, the true population mean to be in a 5-percent interval around the sample mean.

So what sample size would be necessary for this level of precision? If we were sampling from an infinite population (or effectively very large populations), a sample of 384 would be necessary to achieve the 95/5 precision level. So if we simply wanted a random sample of the 2,669,654 service-disabled veterans that would be precise at the 95/5 level, we'd need a sample of 384. However, this sample size is not sufficient because the Commission needs to analyze the quality of life of various subpopulations of service-disabled veterans. And for each subpopulation we analyze, we need a sample large enough to provide 95/5 precision. Note that it is not necessary to have a sample of 384 for each subpopulation. With finite populations, a sample slightly smaller than 384 will achieve the same precision.

The Commission and CNAC chose to focus on subpopulations defined by the following:

- **Rating group**—10-percent, 20-40-percent, 50-90-percent, and 100-percent
- **Body system of primary disability**—musculoskeletal; skin; auditory; neurological; PTSD; mental (not PTSD); digestive; cardiovascular; respiratory; endocrine; genitourinary; eye; gynecological; infectious, immune, nutritional; dental; and hemic lymphatic.
- **Special monthly compensation (SMC) group**—0-percent rating with SMC K; 100-percent rating with SMC S, L, M, N, or O; and 100-percent rating with SMC R1 or R2.

These subpopulations mirror those that we used for the earned income analysis. In total the four disability rating groups and the 16 body systems result in 64 subpopulations.[81] But some of these are quite small, too small to successfully sample them. So for these sample cells, we combined them with another rating group in the sample body system. For example, we combined 100 percent with 50-90 percent for skin because there were very few rated 100 percent. After combining these small groups with other groups, there were 54 subpopulations. These plus the three SMC groups gave us a total of 57 subpopulations. The total target sample across these groups was 21,221, which would achieve the 95/5 precision level.

CNAC fielded the Veterans Survey through a subcontract with ORC Macro. Fielding of the survey ran from 20 November 2006 through 17 April 2007—a period of 5 months. ORC Macro administered the survey via telephone using Computer-Assisted Telephone Interviewing (CATI).

The total sample achieved was 21,857. Additionally, we met our target sample in 53 of the 57 subpopulations. For the four that were short (10-40 percent gynecological; 10-40 percent infectious, immune, nutrition; 100-percent auditory; and 100-percent mental (not PTSD)), the achieved sample was large enough to provide at least 94/5 statistical precision.

81. There are 15 body systems, but because the Commission wanted to separate out PTSD, we split the mental body system into "PTSD" and "all other mental." This resulted in the "16" body systems.

Table 69 shows the sizes of the subpopulations as defined by rating, body system, and SMC groups.

Table 69. Population of service-disabled veterans by subpopulation

	Population by combined degree of disability					
Body system of primary disability	**0**	**10**	**20-40**	**50-90**	**100**	**Total**
Musculoskeletal		366,900	513,498	209,306	14,344	1,104,048
Skin		69,033	33,332	13,744[a]		116,109
Auditory		106,480	69,845	30,800	7,278	214,403
Neurological		28,287	46,264	45,583	7,451	127,585
PTSD		5,278	29,646	121,760	50,630	207,314
All other mental		36,337	38,955	65,854	58,783	199,929
Digestive		37,866	40,268	15,118	4,714	97,966
Cardiovascular		52,415	51,646	51,089	12,685	167,835
Respiratory		33,694	38,248	35,459	8,625	116,026
Endocrine		11,259	74,284	24,445	2,821	112,809
Genitourinary		11,780	18,361	18,479	11,992	60,612
Eye		9,705	20,839	12,414[a]		42,958
Gynecological			7,675[b]	13,748[a]		21,423
Infectious, immune, nutritional			2,820[b]	3,170[a]		5,990
Dental			5,217[c]			5,217
Hemic/ lymphatic			5,329[b]	2,699	3,709	11,737
Cat 1: 0% w/ SMC K	4,101					4,101
Cat 2: 100% w/ SMC S,L,M,N, or O					45,765	45,765
Cat 3: 100% w/ SMC R1 or R2					7,827	7,827
Total	**4,101**	**769,034**	**996,227**	**663,668**	**236,624**	**2,669,654**

a. Cell represents population with a combined degree of disability from 50 to 100 percent.
b. Cell represents population with a combined degree of disability from 10 to 40 percent.
c. Cell represents population with a combined degree of disability from 10 to 100 percent.

Table 70 shows the target sample for each of the subpopulations in table 64.[82] For example, for the population of 9,705 service-disabled veterans with a 10 percent rating for an eye condition, a sample of 370 achieves the 95/5 precision level. In total, the target sample across all subpopulations is 21,221.

Table 70. Target sample sizes of service-disabled veterans

	Population by combined degree of disability					
Body system of primary disability	**0**	**10**	**20-40**	**50-90**	**100**	**Total**
Musculoskeletal		384	384	383	374	1,525
Skin		382	380	374[a]		1,136
Auditory		383	382	379	365	1,509
Neurological		379	381	381	365	1,506
PTSD		358	379	383	381	1,501
All other mental		380	380	382	382	1,524
Digestive		380	381	375	355	1,491
Cardiovascular		381	381	381	373	1,516
Respiratory		380	380	380	368	1,508
Endocrine		372	382	378	338	1,470
Genitourinary		372	376	376	372	1,496
Eye		370	377	373[a]		1,120
Gynecological			366[b]	374[a]		740
Infectious, immune, nutritional			338[b]	343[a]		681
Dental			358[c]			358
Hemic/ lymphatic			358[b]	336	348	1,042
Cat 1: 0% w/ SMC K	351					351
Cat 2: 100% w/ SMC S,L,M,N, or O					381	381
Cat 3: 100% w/ SMC R1 or R2					366	366
Total	351	4,521	5,983	5,598	4,768	21,221

a. Cell represents population with a combined degree of disability from 50 to 100 percent.
b. Cell represents population with a combined degree of disability from 10 to 40 percent.
c. Cell represents population with a combined degree of disability from 10 to 100 percent.

Table 71 shows the achieved sample after fielding the survey. In total, 21,859 service-disabled veterans are in the sample. We achieved the target sample in all but four of the subpopulations:

- 10-40 percent gynecological—achieved 365 of the target of 366

82. For a finite population, the sample size necessary for 95/5 statistical precision level is computed as: *Sample* = 384/(1+384/*Population*).

- 10-40 percent infectious, immune, nutritional–achieved 333 of a target of 338
- 100-percent auditory—achieved 340 of a target of 365
- 100-percent mental (not PTSD)—achieved 350 of a target of 382

Despite being slightly under the target, we can still achieve a high level of statistical precision for these groups. The "100-percent mental (not PTSD)" group missed the target by the most. But, even for this group, the achieved population is large enough to reach 94/5 statistical precision.

Table 71. Achieved sample of service-disabled veterans

	Population by combined degree of disability					
Body system of primary disability	**0**	**10**	**20-40**	**50-90**	**100**	**Total**
Musculoskeletal		405	394	398	379	1,576
Skin		397	413	379[a]		1,189
Auditory		391	390	386	340	1,507
Neurological		381	386	394	365	1,526
PTSD		365	396	392	398	1,551
All other mental		382	381	386	350	1,499
Digestive		394	383	398	365	1,540
Cardiovascular		383	403	405	383	1,574
Respiratory		392	396	390	379	1,557
Endocrine		384	393	398	353	1,528
Genitourinary		394	393	413	396	1,596
Eye		376	393	393[a]		1,162
Gynecological			365[b]	399[a]		764
Infectious, immune, nutritional			333[b]	348[a]		681
Dental			361[c]			361
Hemic/ lymphatic			371[b]	355	383	1,109
Cat 1: 0% w/ SMC K	362					362
Cat 2: 100% w/ SMC S,L,M,N, or O					399	399
Cat 3: 100% w/ SMC R1 or R2					376	376
Total	362	4,644	6,151	5,834	4,866	21,857

a. Cell represents population with a combined degree of disability from 50 to 100 percent.
b. Cell represents population with a combined degree of disability from 10 to 40 percent.
c. Cell represents population with a combined degree of disability from 10 to 100 percent.

We used the same process for surviving spouses of stratifying the population and generating a target sample for a certain level of statistical precision. In consultation with the Commission, we stratified the surviving spouses based on years since the veteran's death, whether or not the veteran's pension was offset for SBP, and survivor age. This

resulted in four principal survivor groups plus an overlapping fifth group for "young" survivors. Table 72 shows the populations of these groups plus the target and achieved samples.

Table 72. Population, target sample, and achieved sample for surviving spouses

Group	Population	Target sample	Achieved sample
DIC with SBP offset and veteran died 5+ years ago	36,623	380	432
DIC without SBP offset and veteran died 5+ years ago	193,975	383	556
DIC with SBP offset and veteran died <5 years ago	13,897	374	423
DIC without SBP offset and veteran died <5 years ago	57,142	381	583
Total	301,637	1,518	1,994
Young survivors (<40 years old)	5,427	359	365
Total sample with young survivors[a]	301,637	1,842	1,994

a. The four main groups defined by SBP and years since veteran's death include young survivors. For this reason, the line for "total sample with younger survivors" is not greater than the other "total" line.

Appendix H: PCS and MCS by body system

Figures 145 - 159 show the physical and mental component summaries by body system by rating and age groups.

Figure 145. PCS and MCS for veterans with a musculoskeletal primary diagnosis

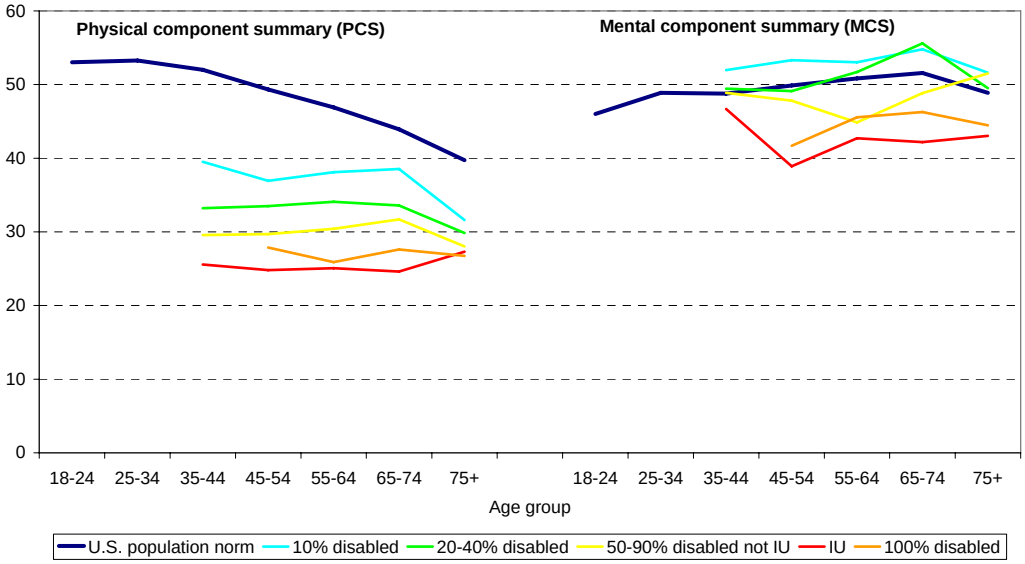


Figure 146. PCS and MCS for veterans with a skin primary diagnosis

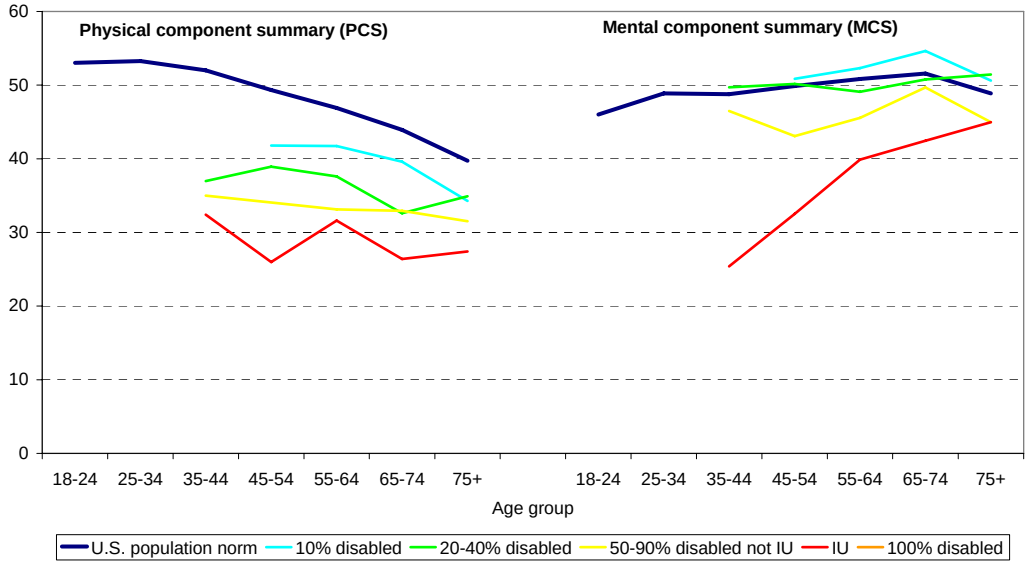


Figure 147. PCS and MCS for veterans with an auditory primary diagnosis

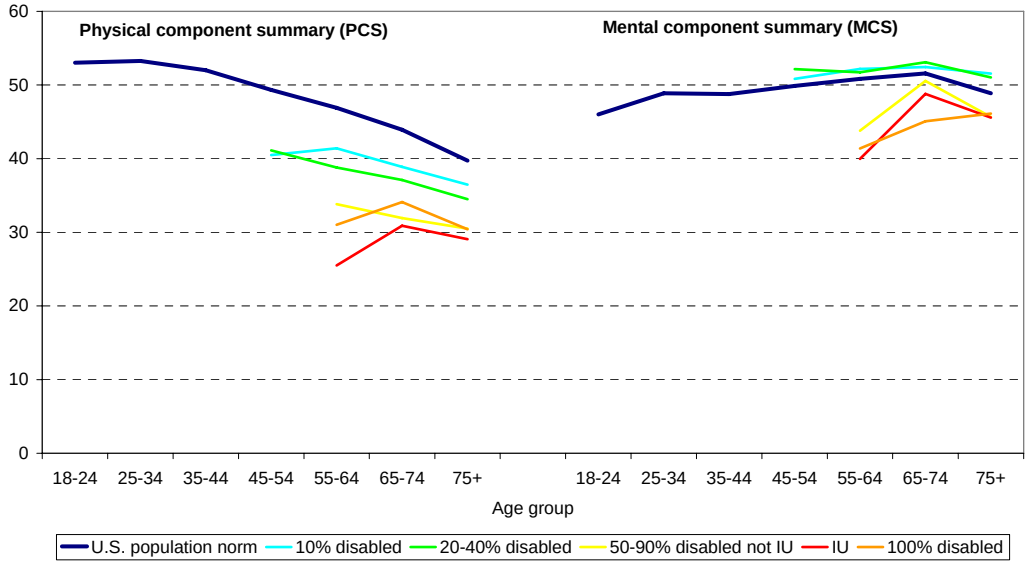


Figure 148. PCS and MCS for veterans with a neurological primary diagnosis

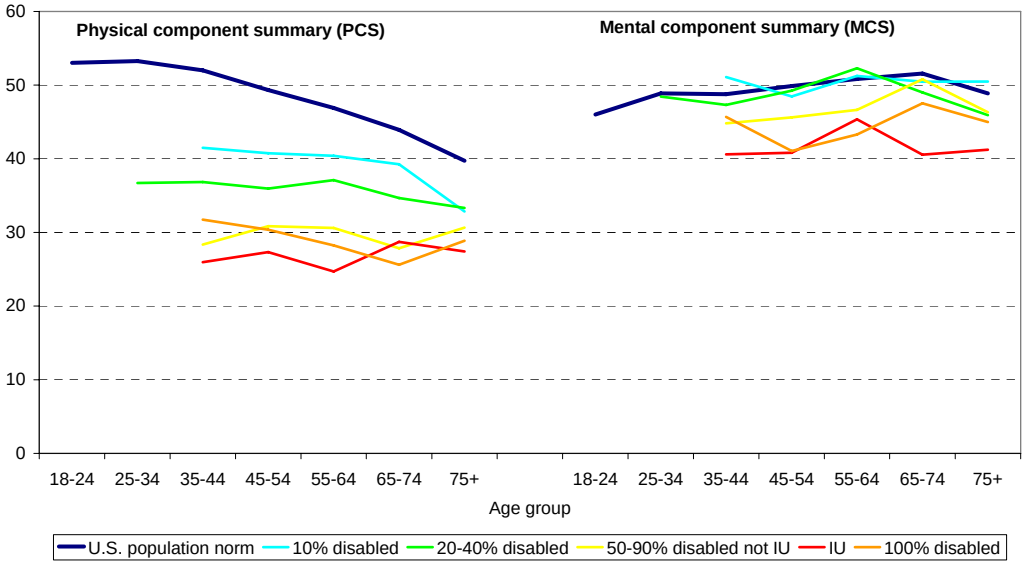


Figure 149. PCS and MCS for veterans with a mental (not PTSD) primary diagnosis

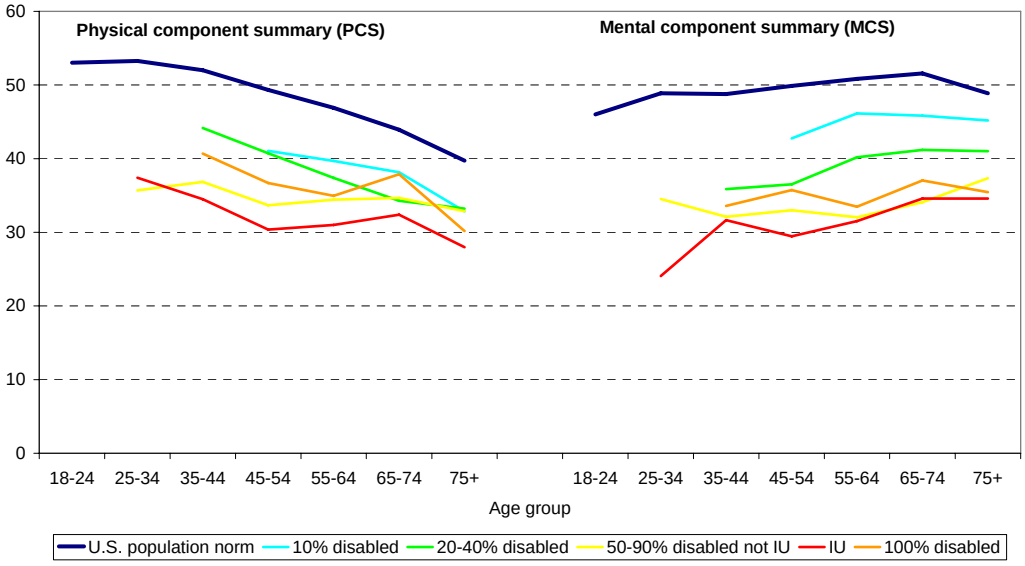


Figure 150. PCS and MCS for veterans with a digestive primary diagnosis

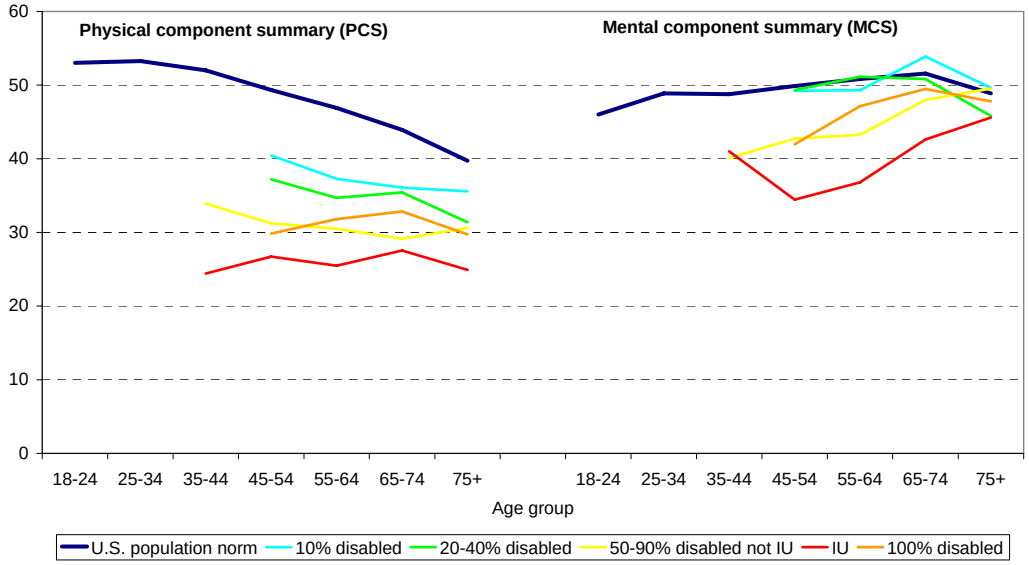


Figure 151. PCS and MCS for veterans with a cardiovascular primary diagnosis

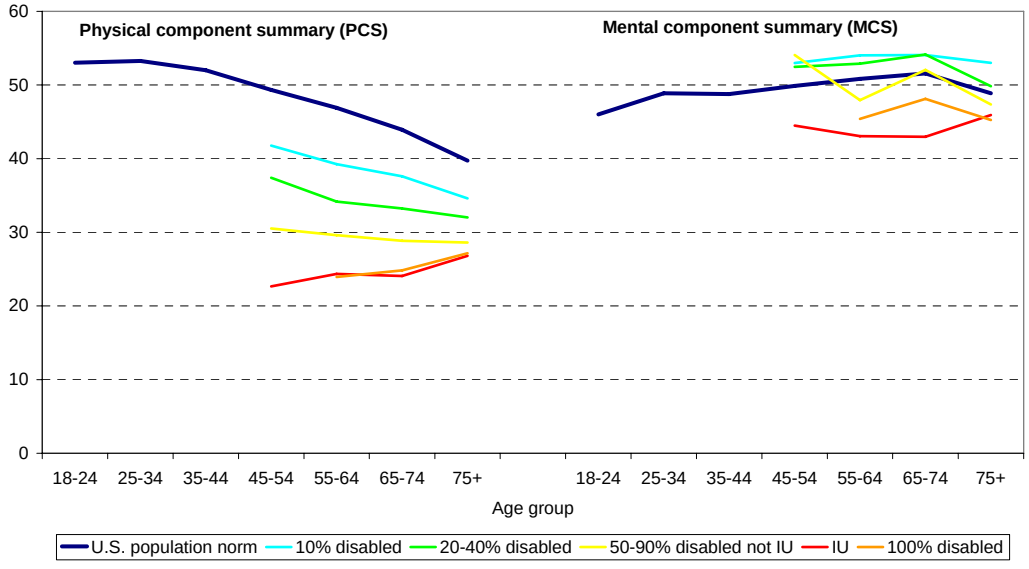


Figure 152.PCS and MCS for veterans with a respiratory primary diagnosis

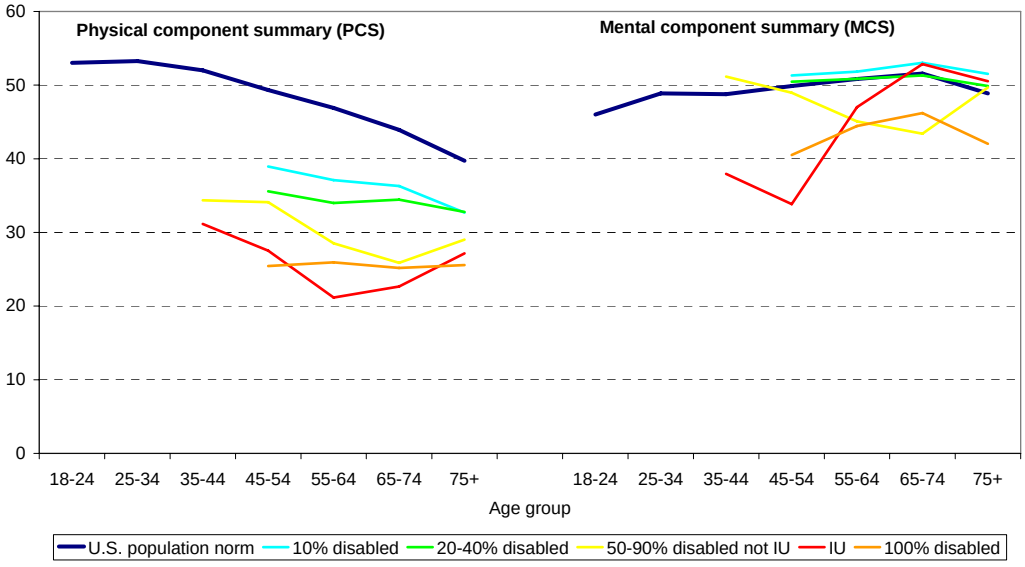


Figure 153. PCS and MCS for veterans with an endocrine primary diagnosis

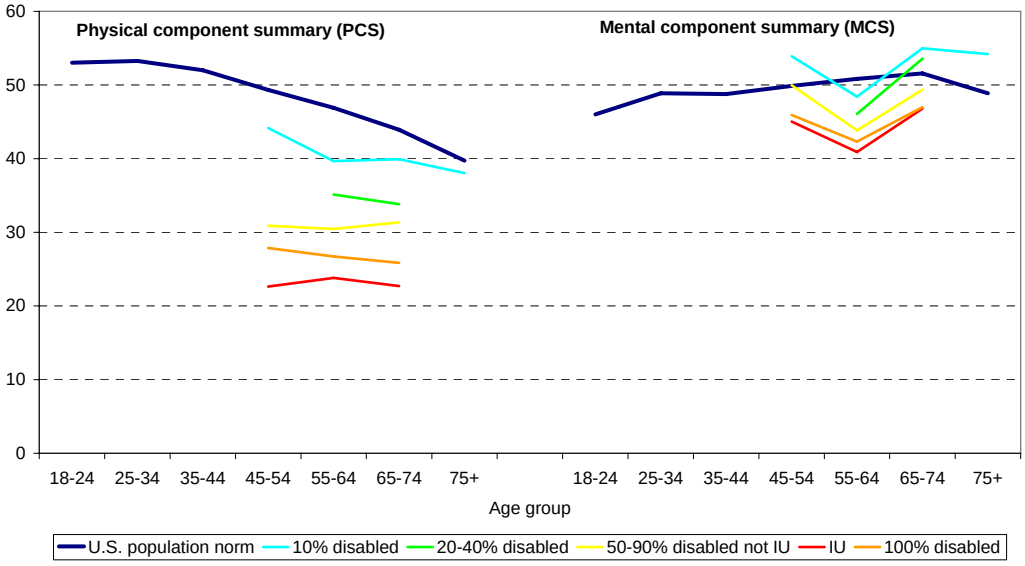


Figure 154. PCS and MCS for veterans with a genitourinary primary diagnosis

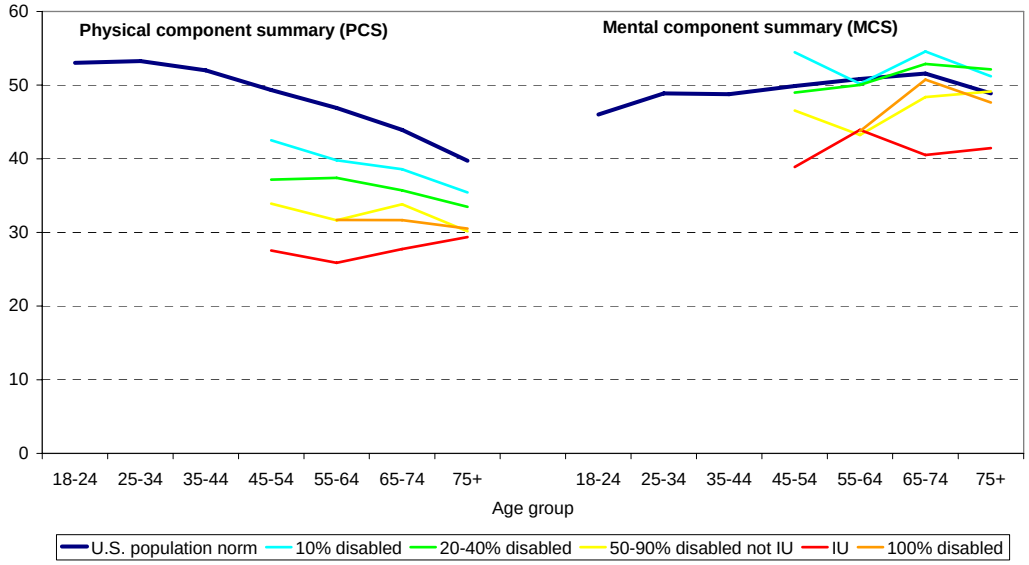


Figure 155. PCS and MCS for veterans with an eye primary diagnosis

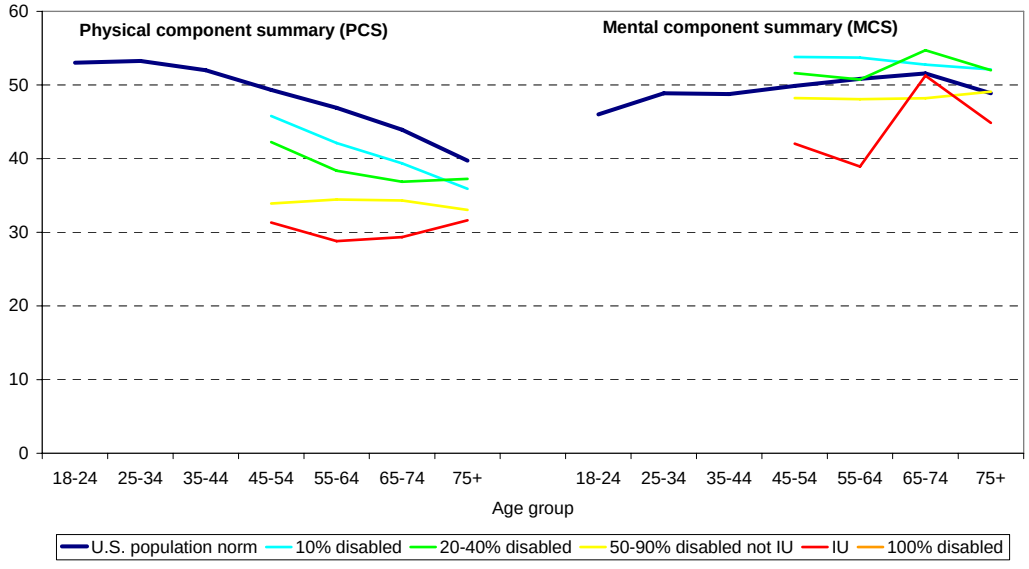


Figure 156. PCS and MCS for veterans with a gynecological primary diagnosis

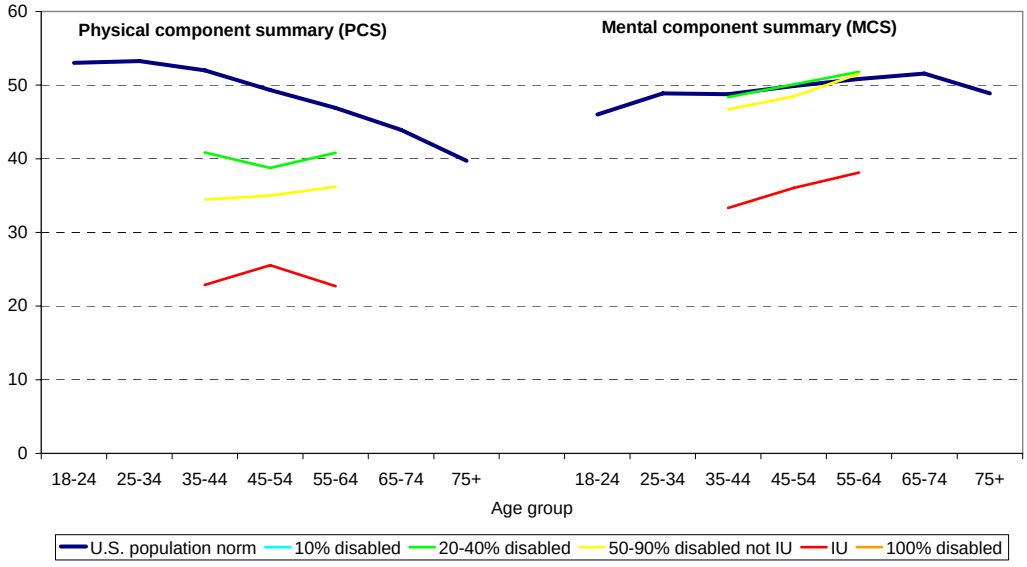


Figure 157. PCS and MCS for veterans with an infectious, immune, nutritional primary diagnosis

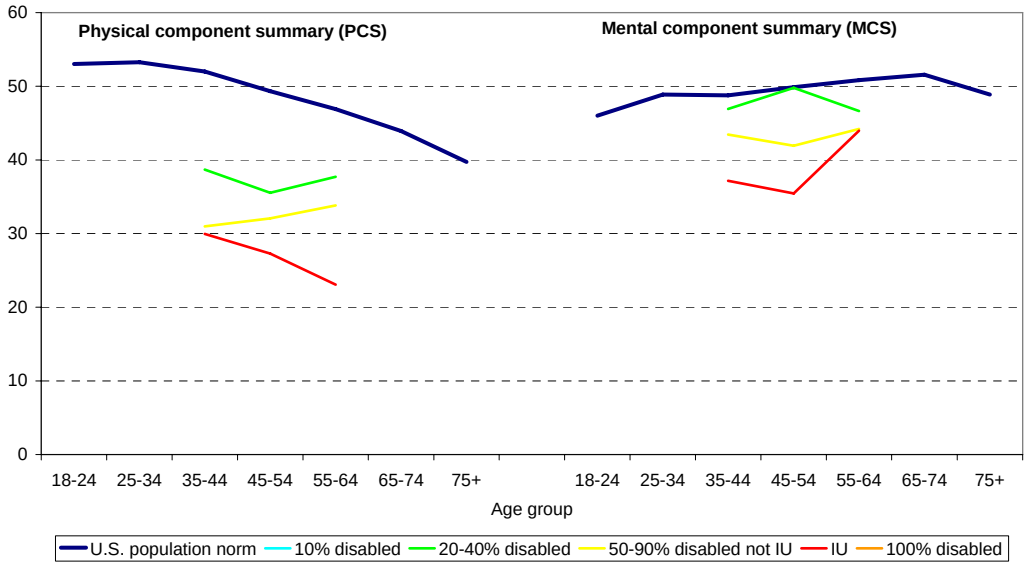


Figure 158. PCS and MCS for veterans with a dental primary diagnosis

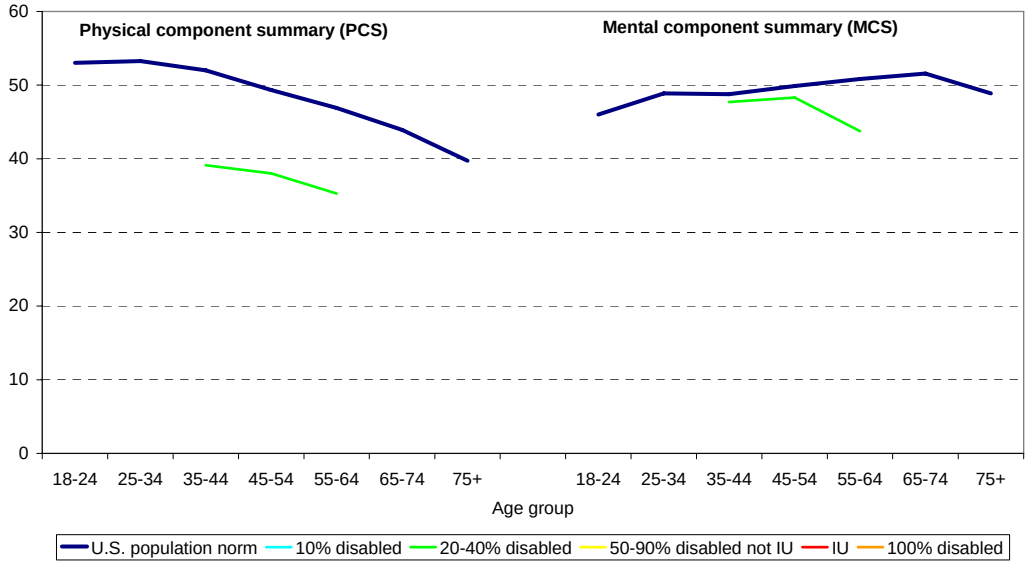
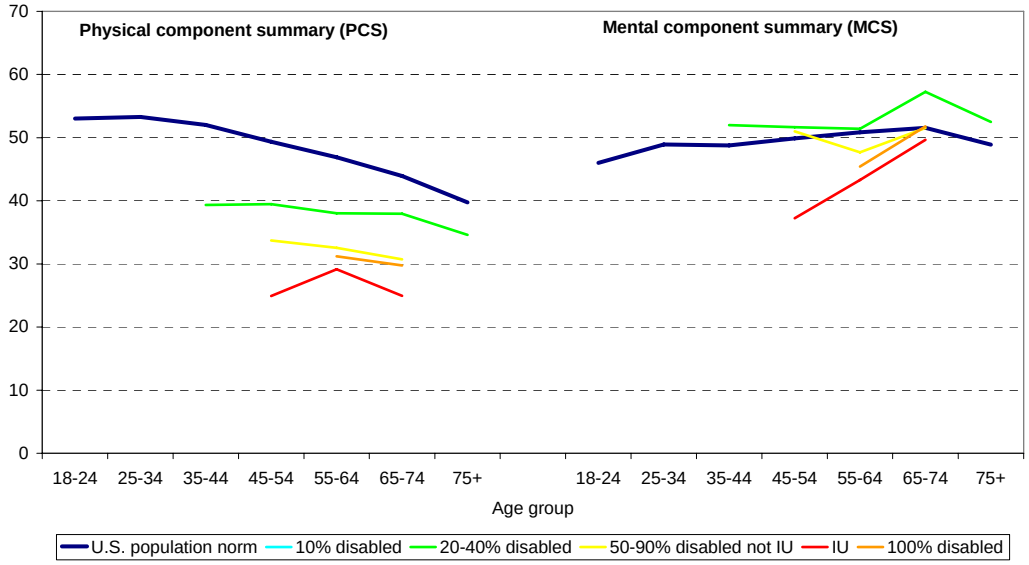


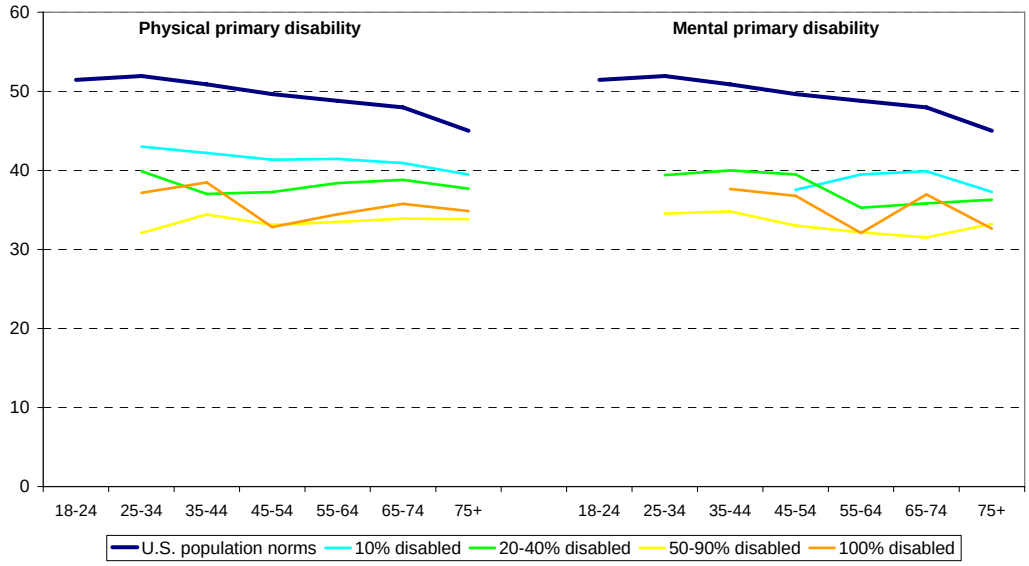
Figure 159. PCS and MCS for veterans with a hemic/lymphatic primary diagnosis



Appendix I: Health subscales

Figure 160 shows the bodily pain subscale of physical quality of life (based on the physical component summary) for physical compared to mental primary disabilities.

Figure 160. Bodily pain subscale by rating and age groups for physical and mental primary conditions



Figures 161 and 162 show the social functioning and mental health subscales of mental quality of life (based on the mental component summary) for physical compared to mental primary disabilities.

Figure 161. Social functioning subscale by rating and age groups for physical and mental primary conditions

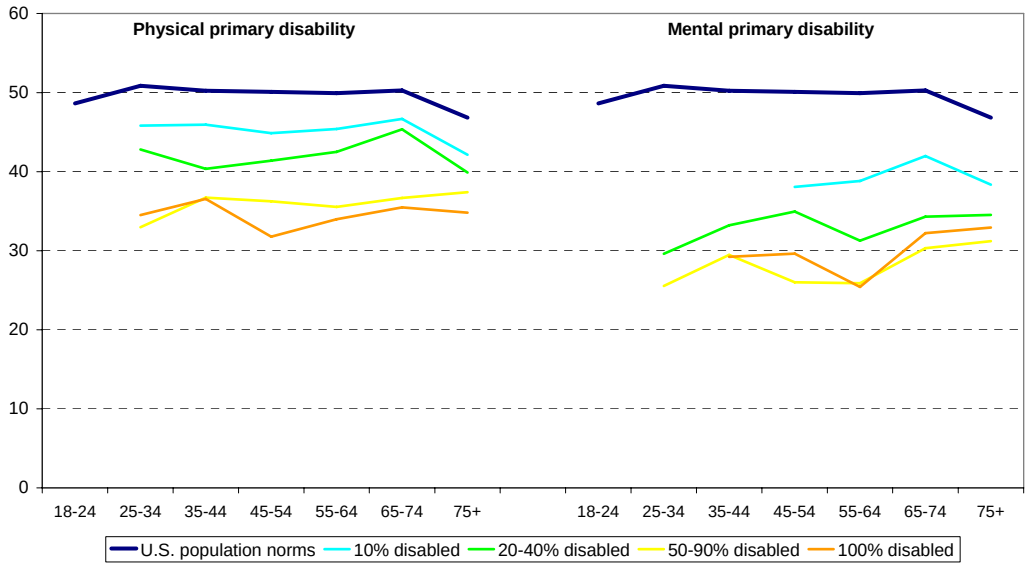
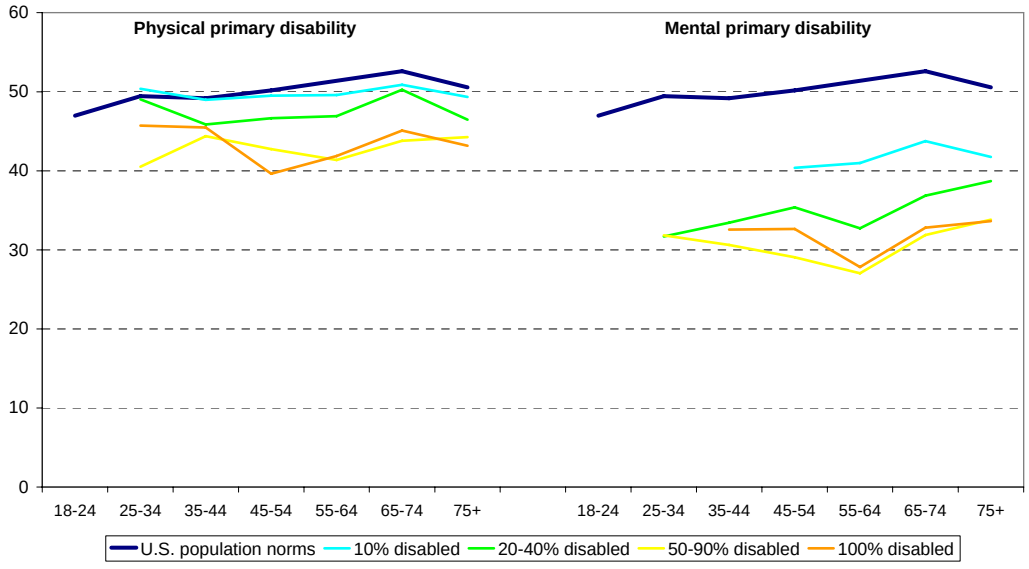


Figure 162.Mental health subscale by rating and age groups for physical and mental primary conditions



Figures 163 - 176 show the health subscales by body system and rating group.

Figure 163. Health subscales for those with a skin primary diagnosis by rating group

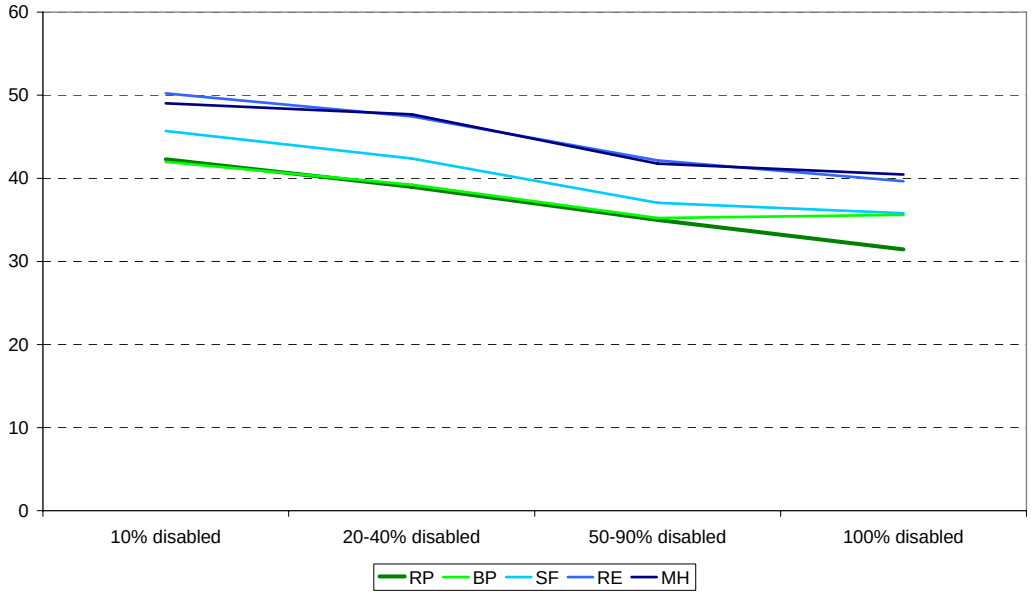


Figure 164. Health subscales for those with an auditory primary diagnosis by rating group

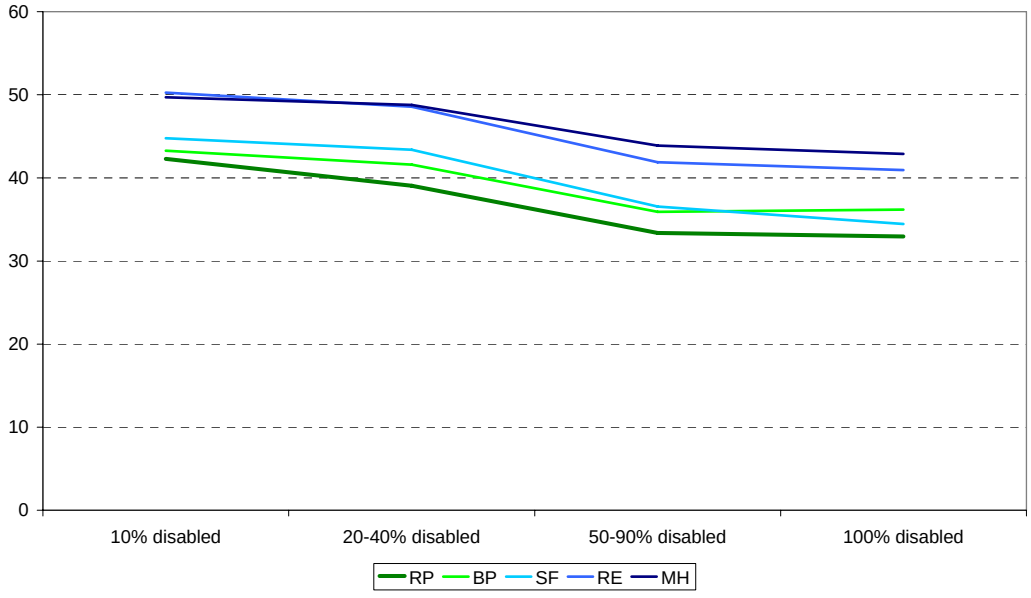


Figure 165. Health subscales for those with a neurological primary diagnosis by rating group

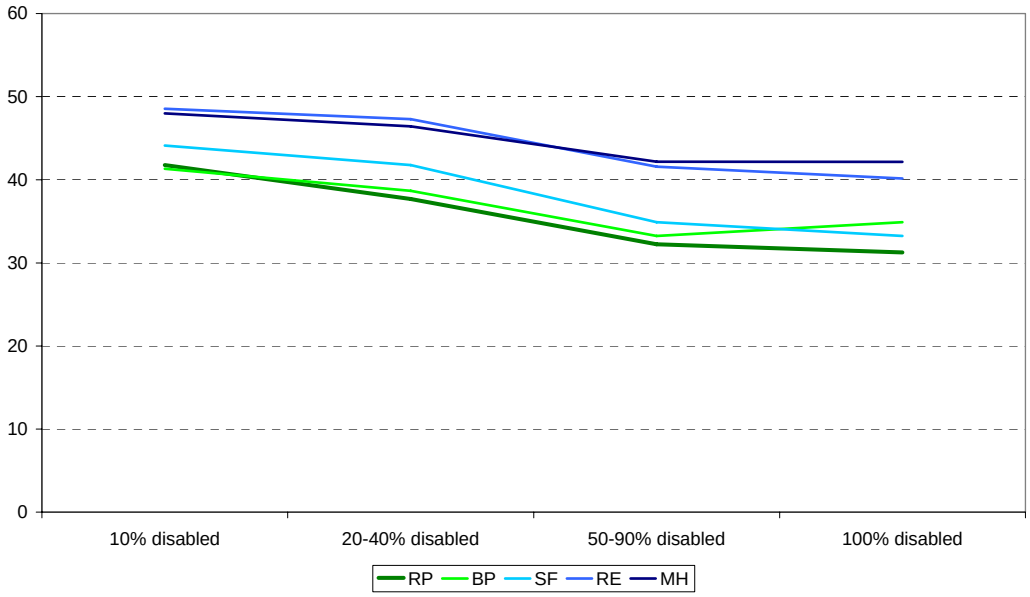


Figure 166. Health subscales for those with a mental (not PTSD) primary diagnosis by rating group

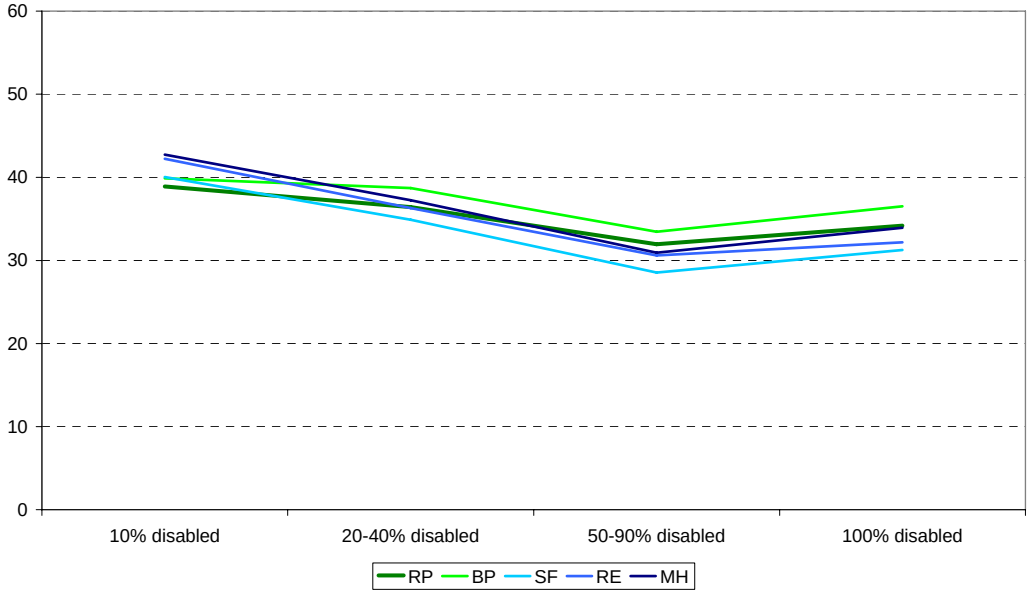


Figure 167. Health subscales for those with a digestive primary diagnosis by rating group

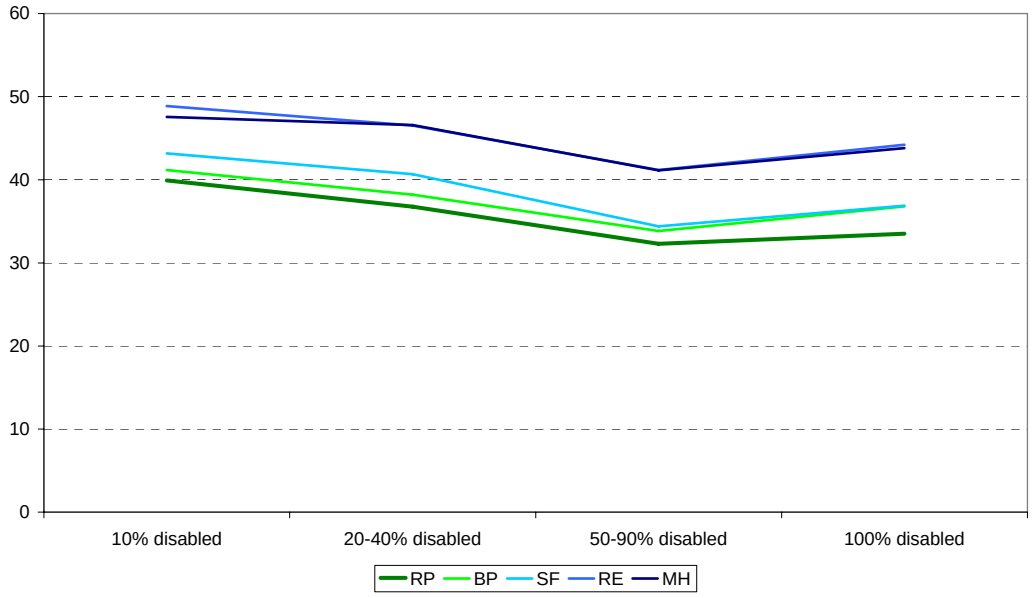


Figure 168. Health subscales for those with a cardiovascular primary diagnosis by rating group

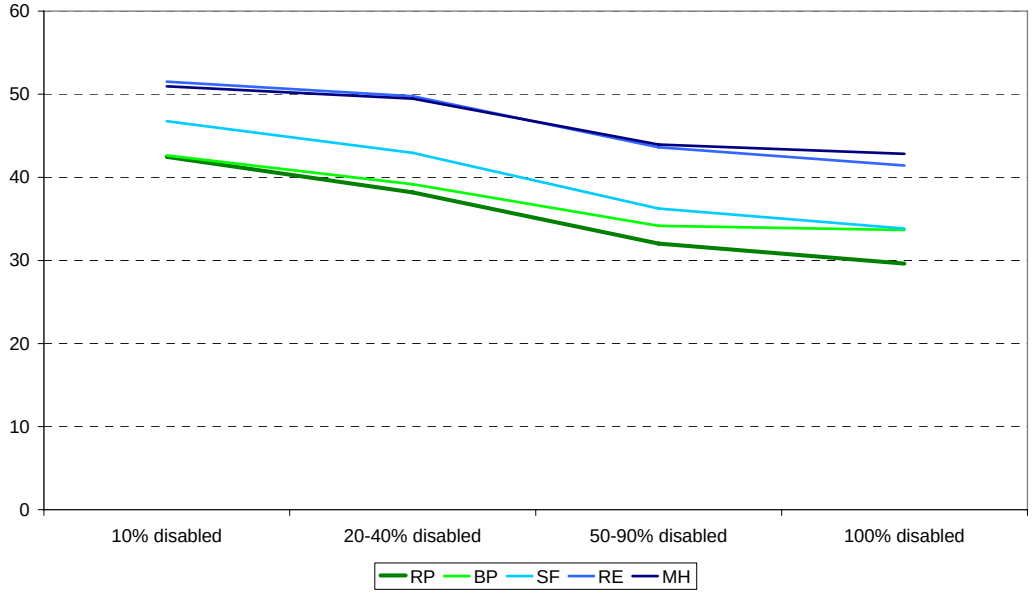


Figure 169. Health subscales for those with a respiratory primary diagnosis by rating group

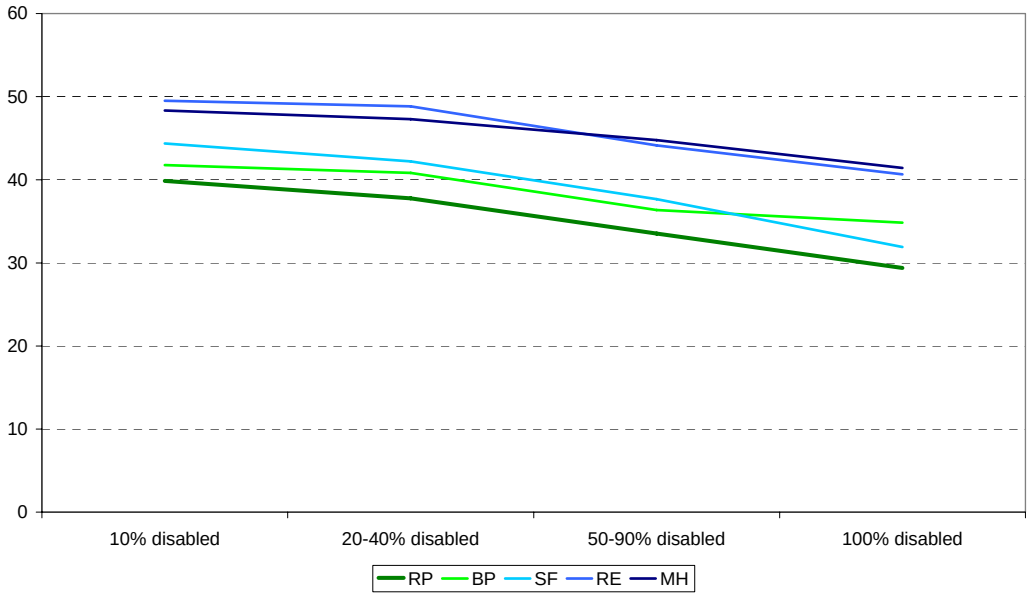


Figure 170. Health subscales for those with an endocrine primary diagnosis by rating group

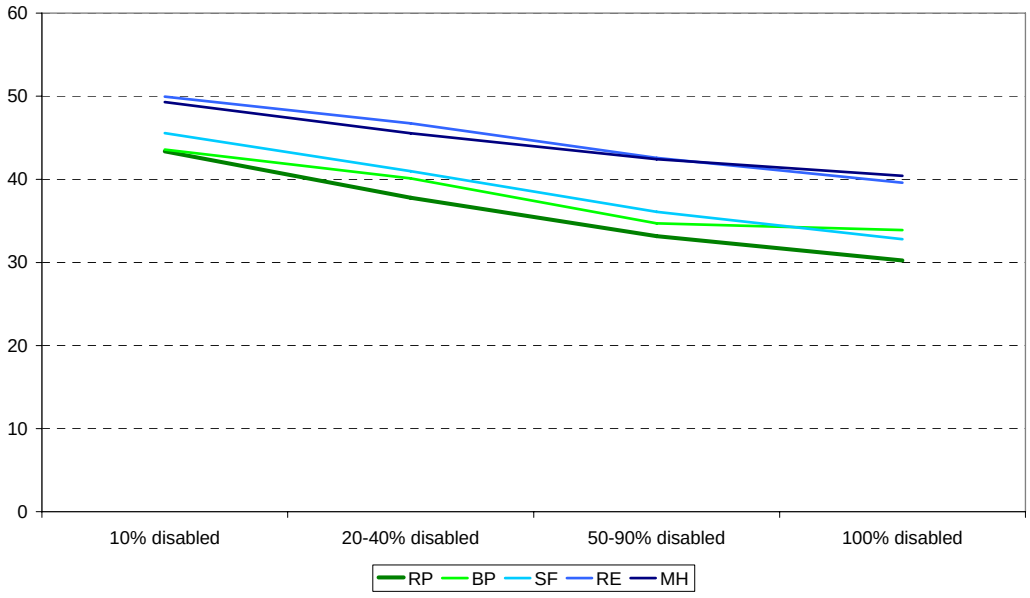


Figure 171. Health subscales for those with a genitourinary primary diagnosis by rating group

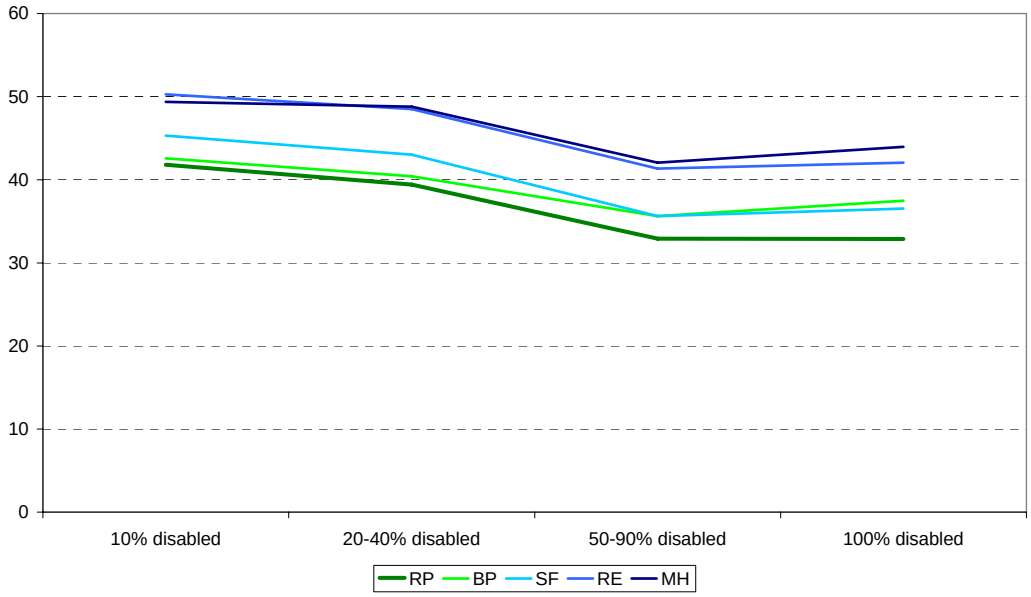


Figure 172. Health subscales for those with an eye primary diagnosis by rating group

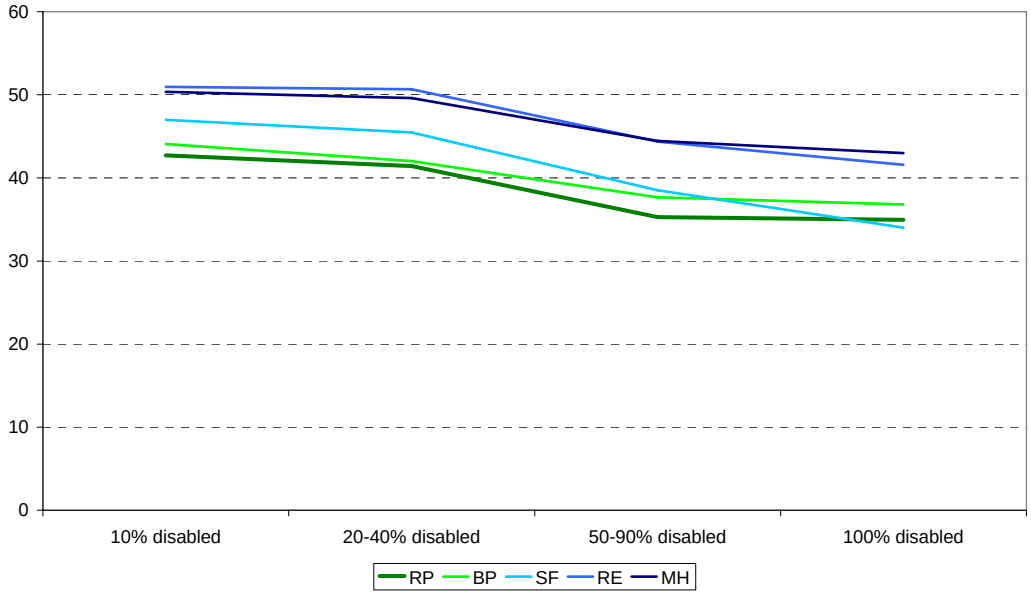


Figure 173. Health subscales for those with a gynecological primary diagnosis by rating group

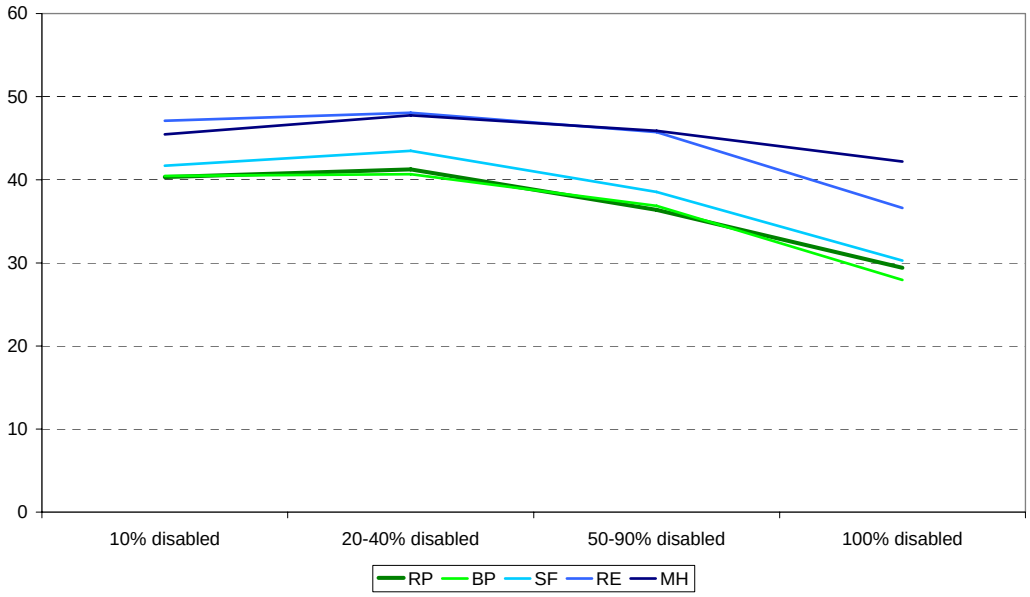


Figure 174. Health subscales for those with an infectious, immune, nutritional primary diagnosis by rating group

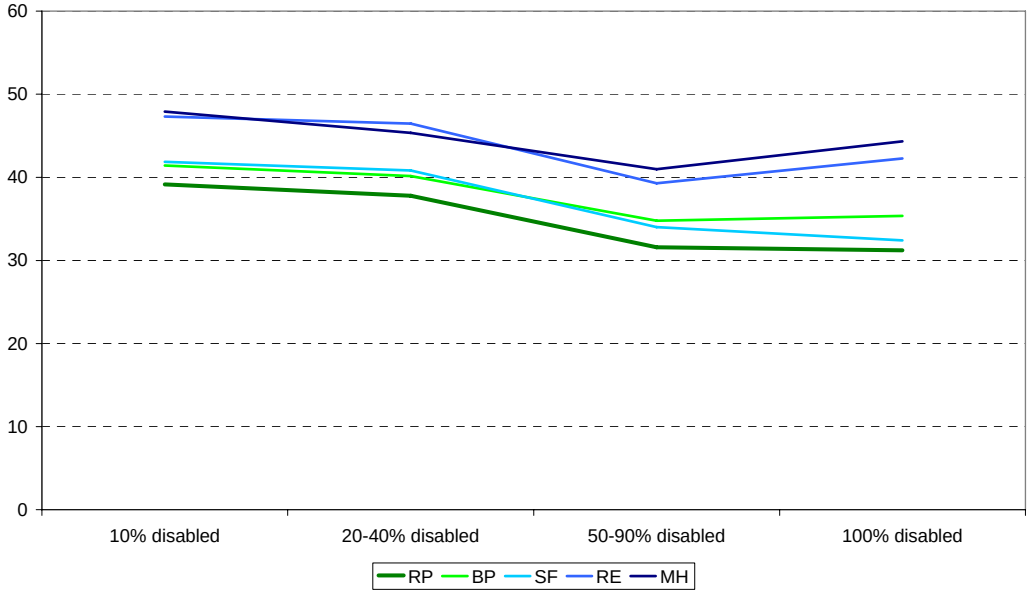


Figure 175. Health subscales for those with a dental primary diagnosis by rating group

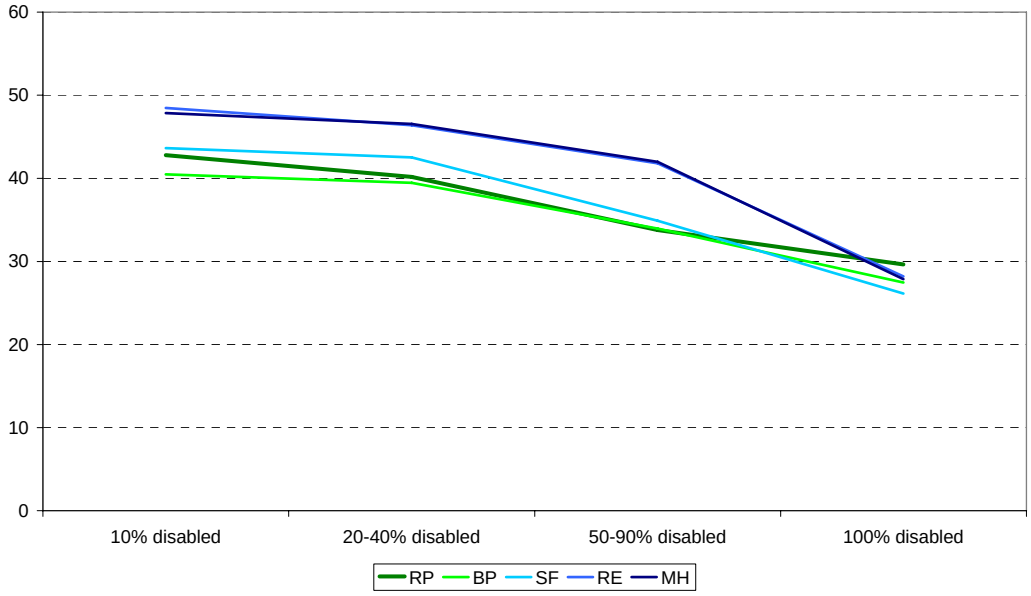
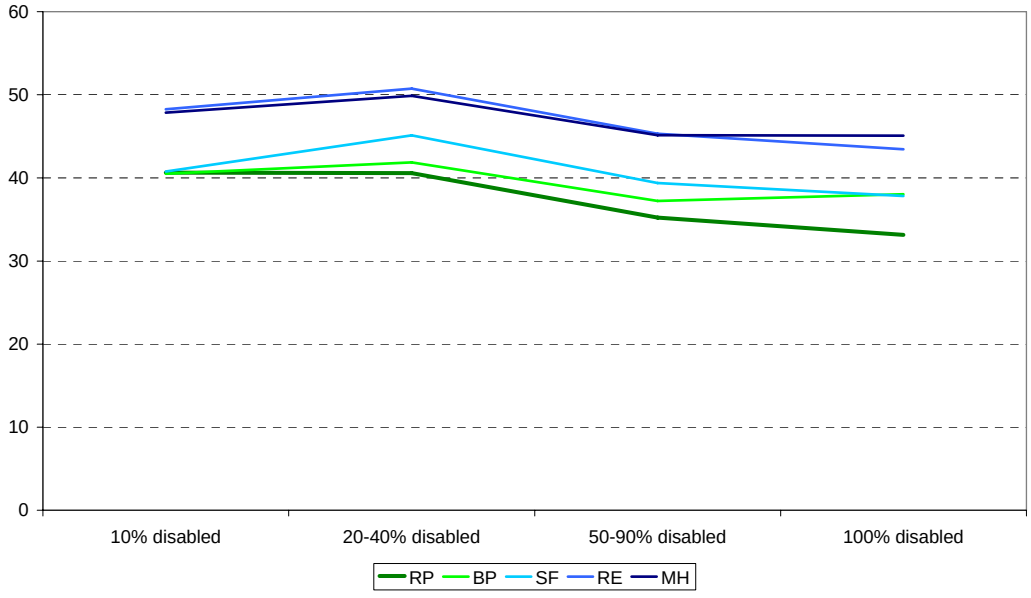


Figure 176. Health subscales for those with a hemic/lymphatic primary diagnosis by rating group



Appendix J: Life satisfaction measures

This appendix shows the findings for veterans' life satisfaction for the city/place they live in, hobbies, family, friendships, and their health/physical condition. Figures 177 - 181 show these results for all body systems combined. Figures 182 - 186 show the results broken out by physical compared to mental primary disability.

Figure 177. Satisfaction with city/place veterans by rating and age groups

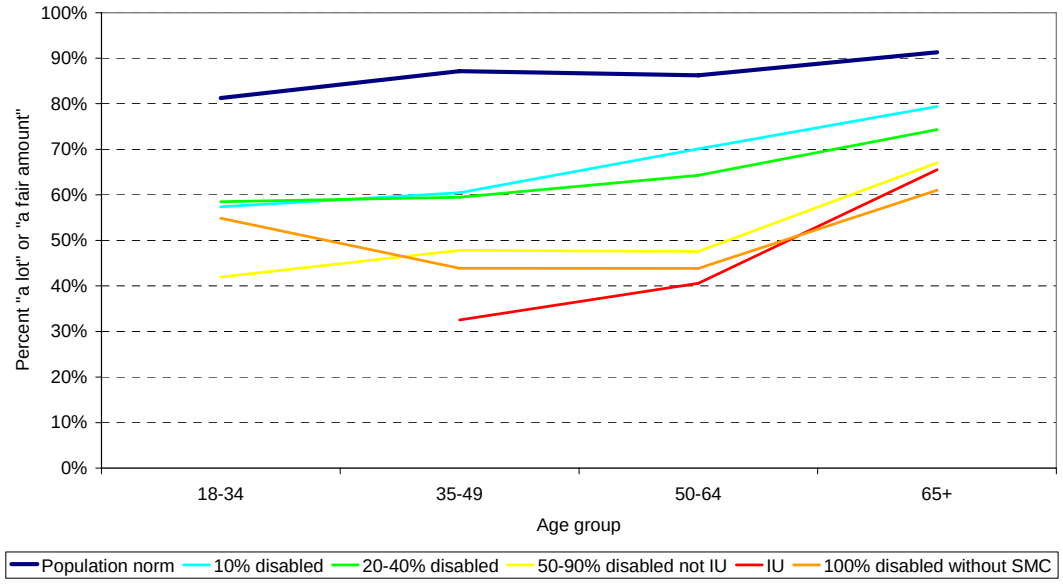


Figure 178. Satisfaction with hobbies or non-working activities by rating and age groups

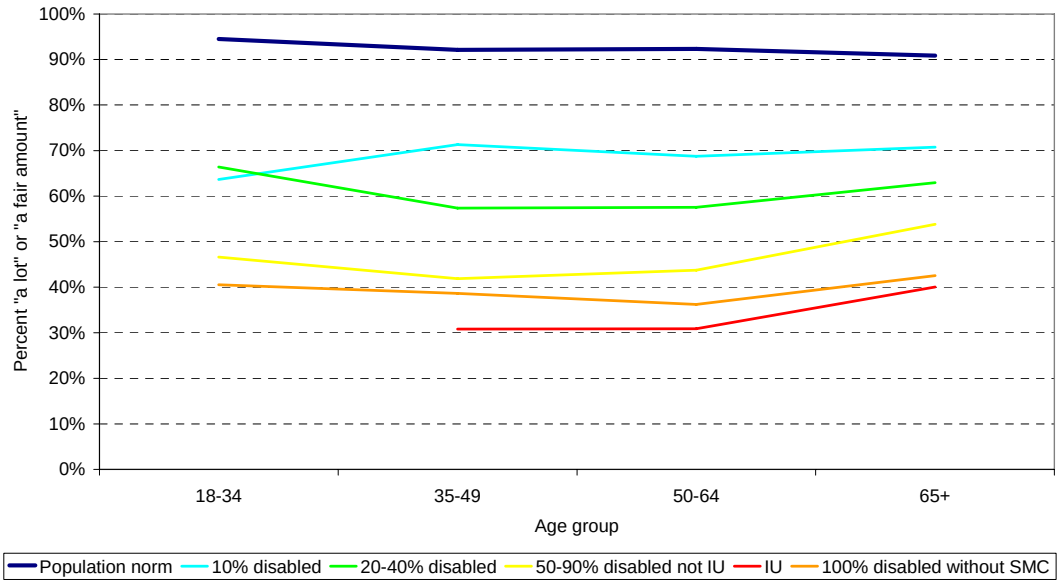


Figure 179. Satisfaction with family life by rating and age groups

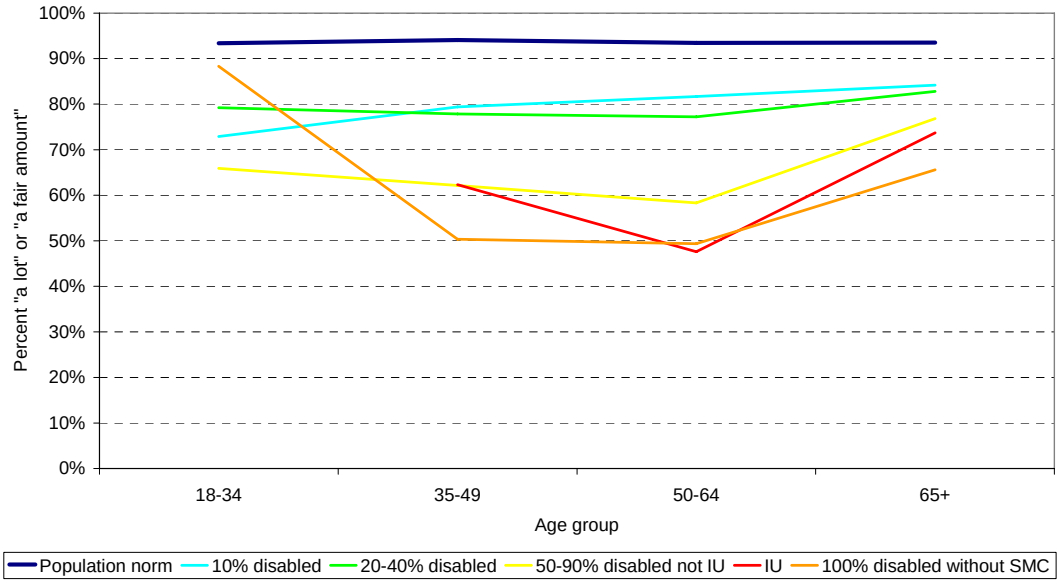


Figure 180. Satisfaction from friendships live in by rating and age groups

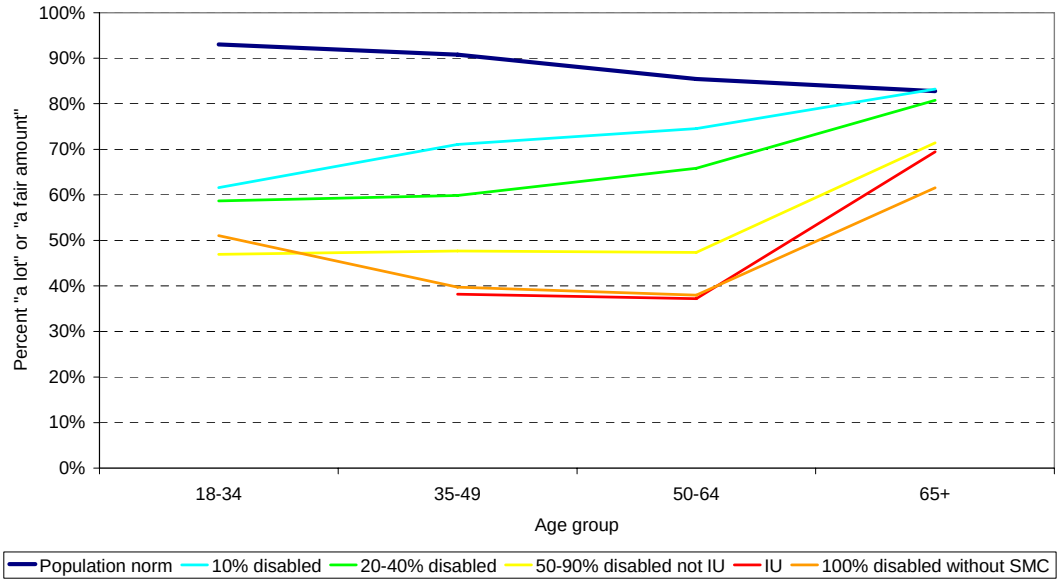


Figure 181. Satisfaction with health and physical condition by rating and age groups

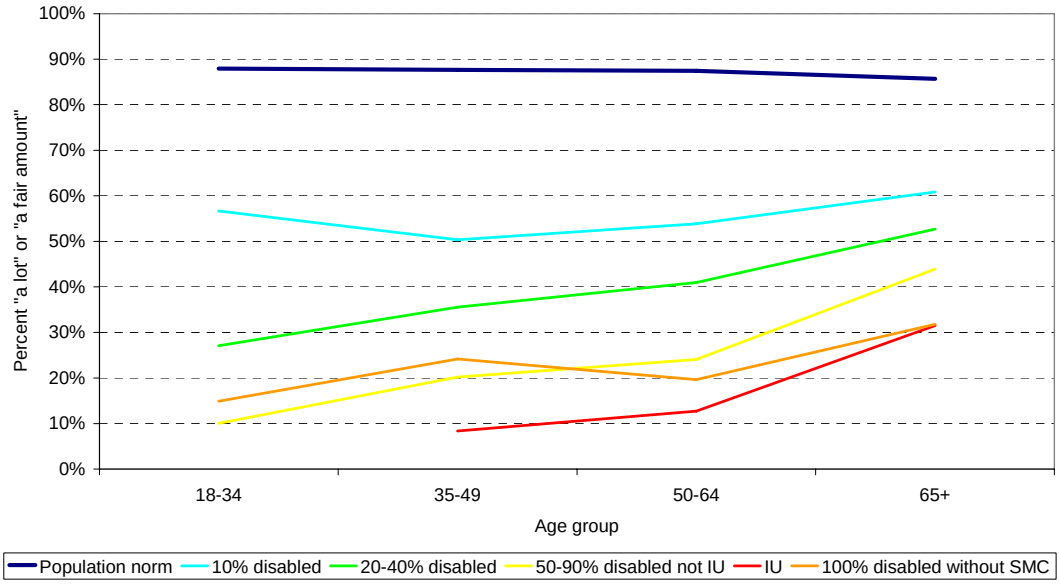


Figure 182. Satisfaction with city/place veterans live in by rating and age groups and physical compared to mental primary disability

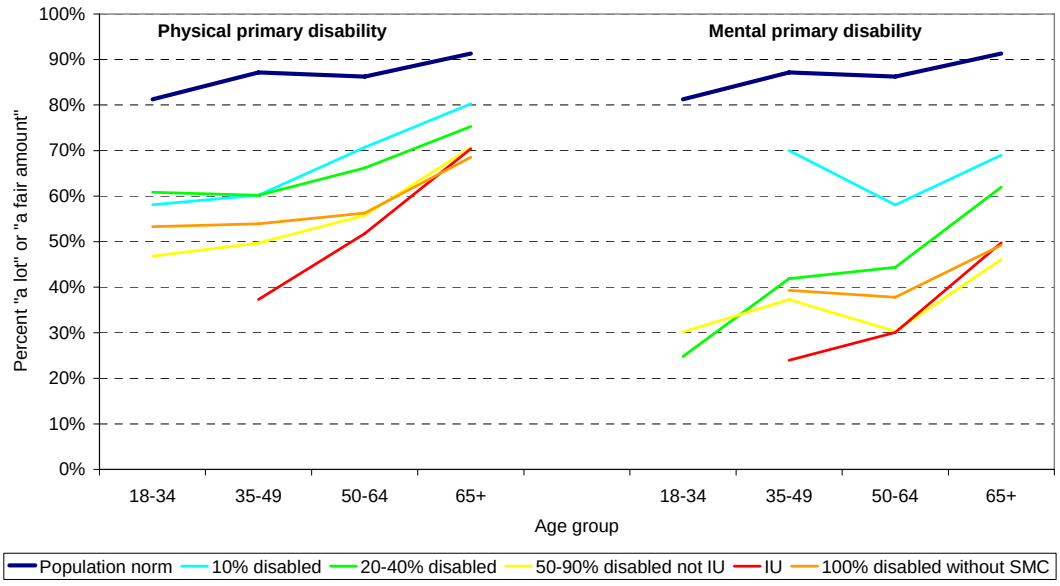


Figure 183. Satisfaction with hobbies or non-working activities by rating and age groups and physical compared to mental primary disability

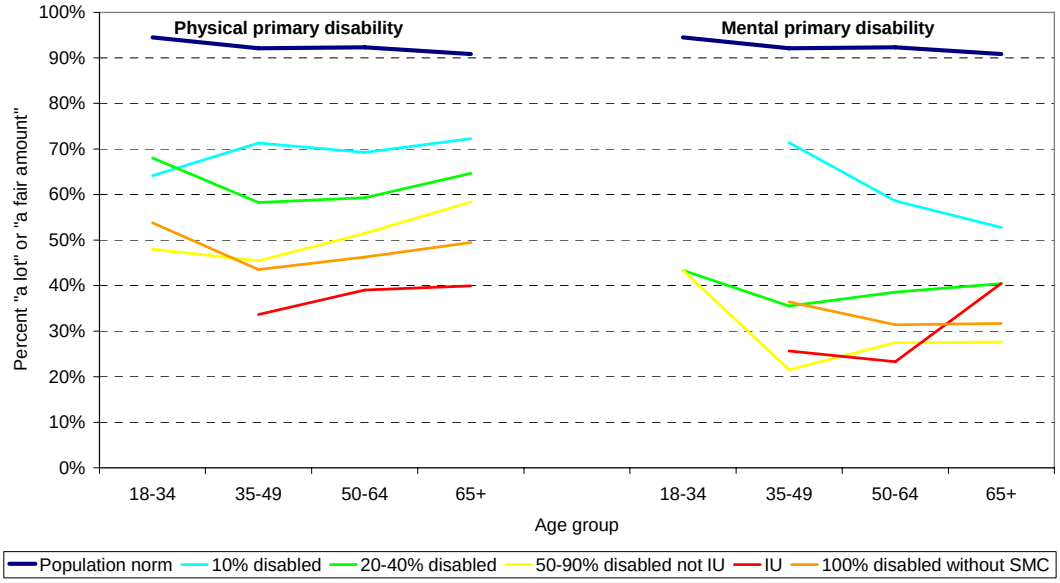


Figure 184. Satisfaction with family life by rating and age groups and physical compared to mental primary disability

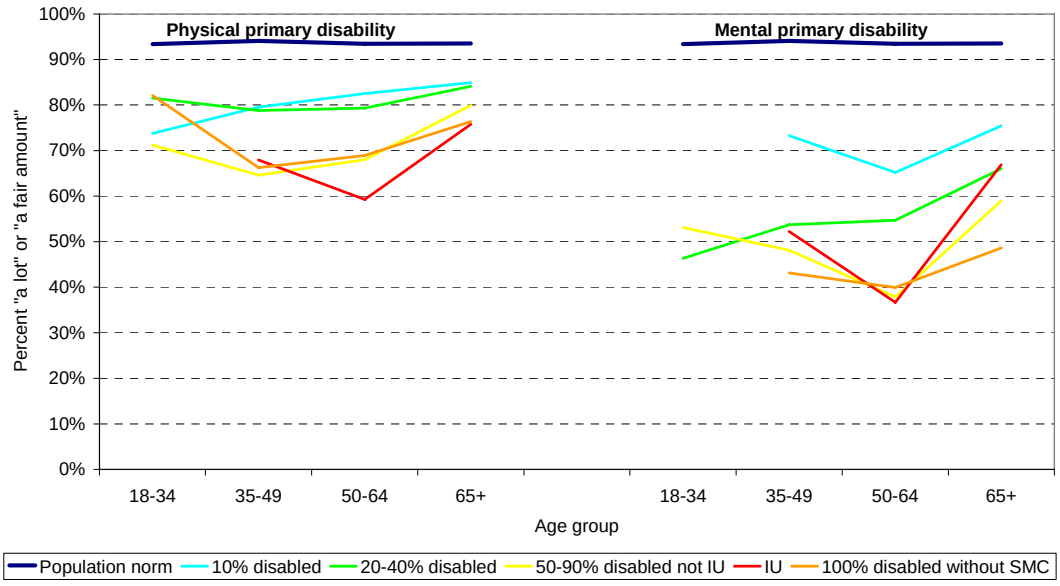


Figure 185. Satisfaction from friendships by rating and age groups and physical compared to mental primary disability

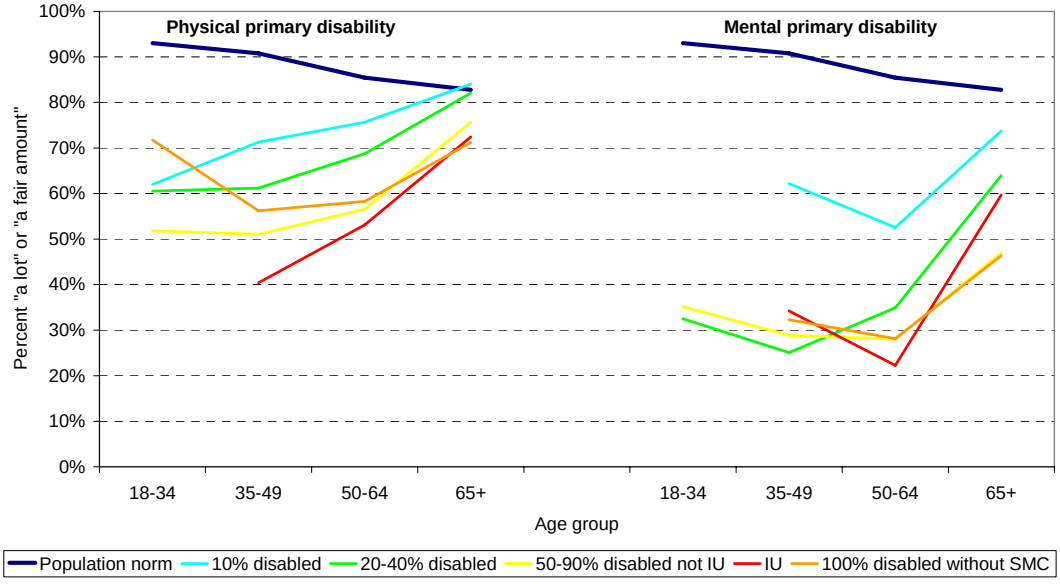
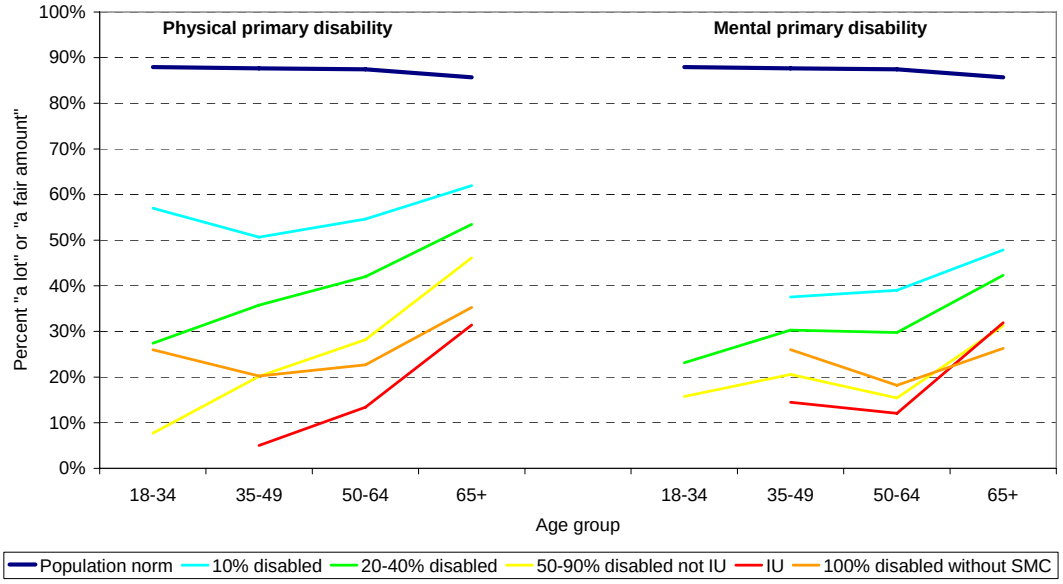


Figure 186. Satisfaction with health and physical condition by rating and age groups and physical compared to mental primary disability



Appendix K: Implicit quality-of-life payments

Figure 187 shows the implicit quality-of-life payment for women by rating group and age at first entry.

Figure 187. Implicit quality-of-life payment by rating group and age at first entry (women)

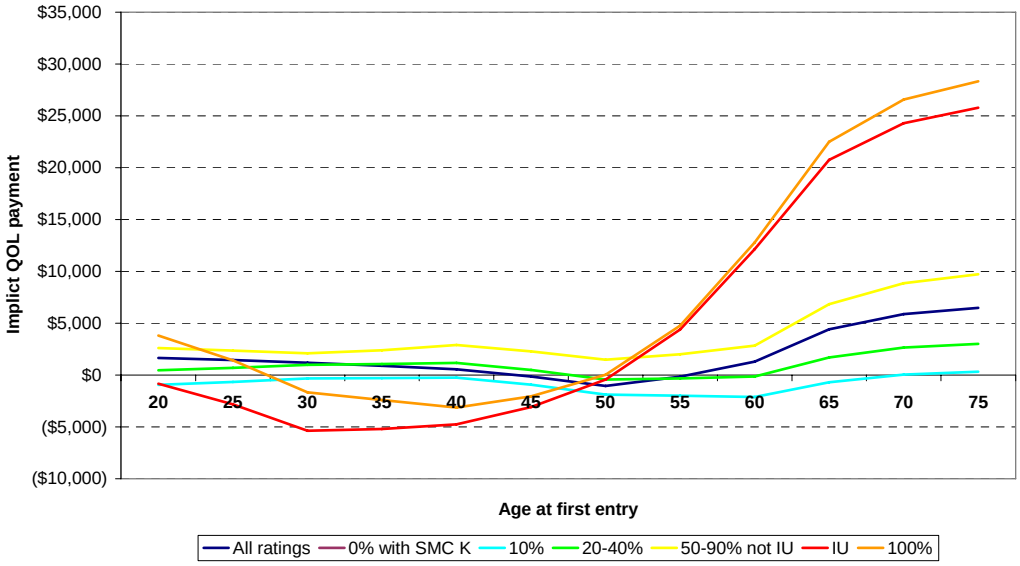


Table 73 compares the annuities that would replace average earned income losses for women to VA compensation by age at first entry and rating group. These data are the basis of the estimates for the implicit quality-of-life payments.

Table 73. Actual VA compensation compared to that which would provide parity with earned income losses by rating group and age at first entry (women)

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
Average actual VA compensation (annual)						
All ages	1,290	4,140	11,499	28,442	31,560	7,910
Annual compensation (annuity) that would provide parity with earned income losses						
25	1,959	3,444	9,127	31,262	30,146	6,462
35	1,583	3,080	9,093	33,630	33,958	7,004
45	2,215	3,646	9,211	31,528	33,604	8,033
55	3,271	4,467	9,480	24,042	26,784	8,049
65	1,987	2,425	4,668	7,690	9,061	3,496
75	973	1,129	1,780	2,648	3,223	1,433

Table 74 compares the annuities that would replace average earned income losses for women to VA compensation for those with a physical primary disability compared to a mental one.

Table 74. Actual VA compensation compared to that which would provide parity with earned income losses for physical v. mental primary disability (women)

Age at first entry	Physical primary disabilities					Mental primary disabilities				
	10%	20-40%	50-90% not IU	IU	100%	10%	20-40%	50-90% not IU	IU	100%
Average actual VA compensation (annual)										
All ages	1,289	4,136	11,489	28,659	28,303	1,315	4,403	11,533	28,235	27,611
Annual compensation (annuity) that would provide parity with earned income losses										
25	1,929	3,314	7,658	32,273	30,804			13,028	30,567	
35	1,539	2,892	7,739	34,172	33,611			14,166	32,780	
45	2,164	3,398	8,072	32,138	33,454	4,776	10,831	14,117	30,379	32,259
55	3,218	4,242	8,843	24,548	26,906	5,398	9,645	12,078	22,840	25,026
65	1,946	2,353	4,602	7,865	8,904	4,856	5,274	5,837	7,252	8,323
75	954	1,108	1,769	2,704	3,098	1,854	1,974	2,150	2,424	2,914

Figures 188 and 189 show the implicit quality-of-life payments for women by rating group and age at first entry for those with a physical v. mental primary disability.

Figure 188. Implicit quality-of-life payment for those with a physical primary disability (women)

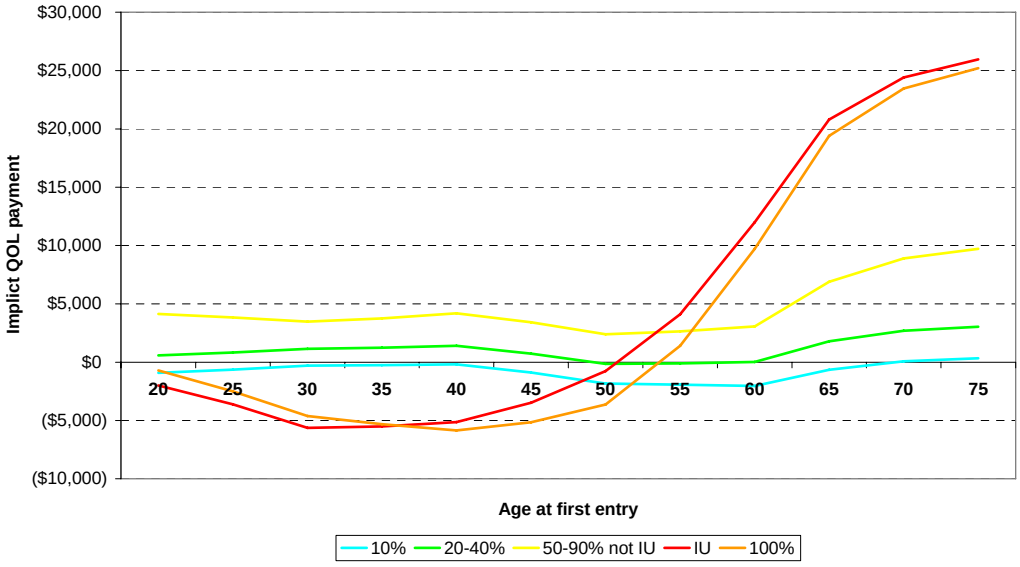


Figure 189. Implicit quality-of-life payment for those with a mental primary disability (women)

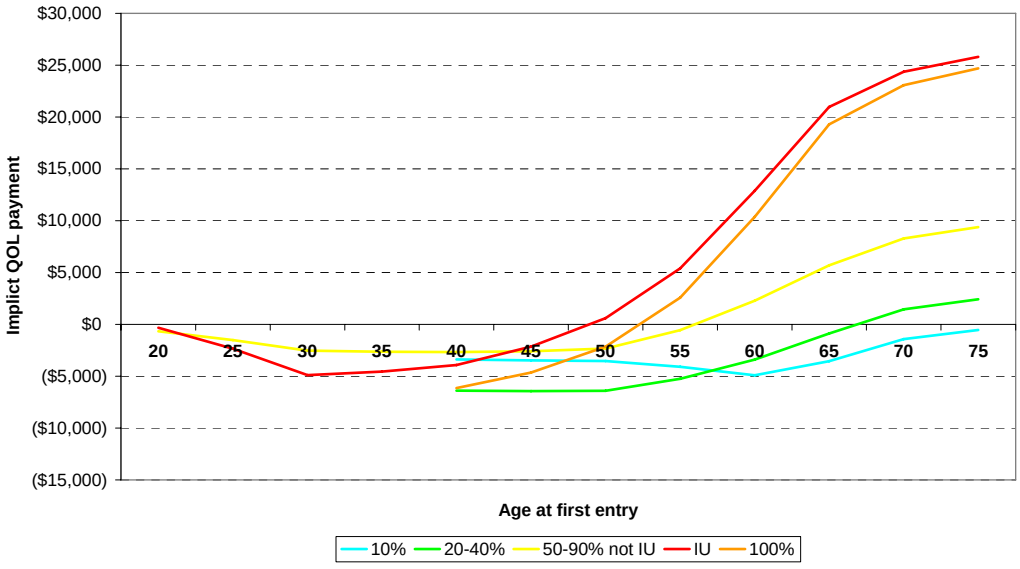


Figure 190 shows the implicit quality-of-life payments for men by age at first entry and rating group for those with physical primary disabilities.

Figure 190. Implicit quality-of-life payment for those with a physical primary disability (men)

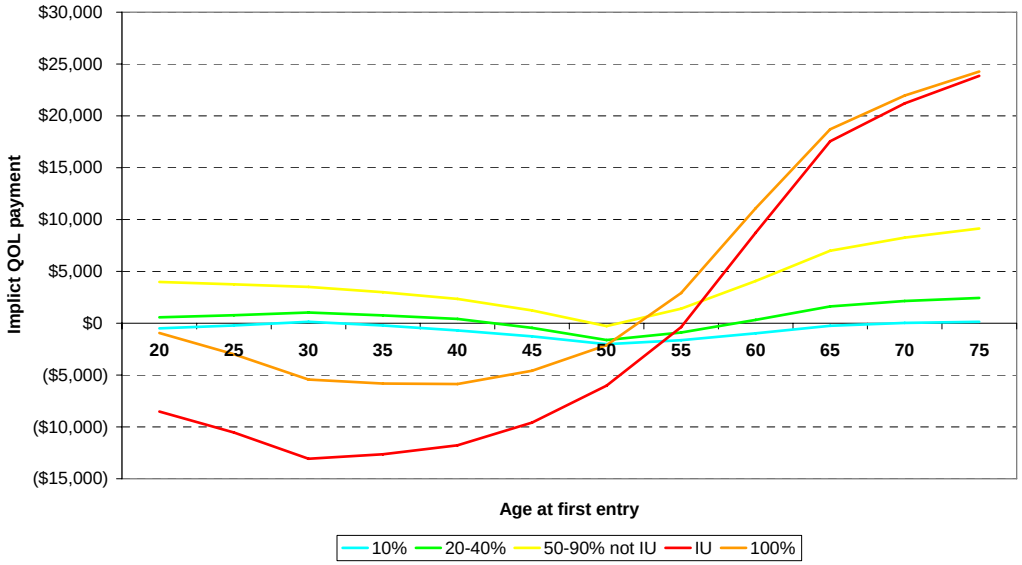


Figure 191 shows the implicit quality-of-life payments for men by age at first entry and rating group for those with mental primary disabilities.

Figure 191. Implicit quality-of-life payment for those with a mental primary disability (men)

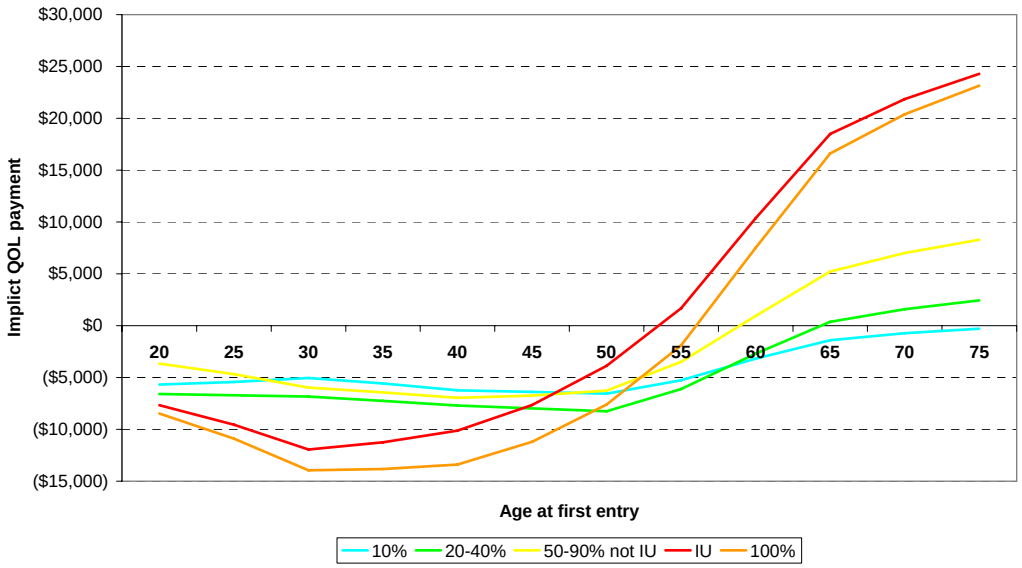


Table 75 compares the annuities that would replace average earned income losses for men to VA compensation for a musculoskeletal primary disability.

Table 75. Actual VA compensation compared to that which would provide parity with earned income losses for those with a musculoskeletal disability (men)

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
Average actual VA compensation (annual)						
All ages	1,282	3,870	11,062	28,433	28,942	5,753
Annual compensation (annuity) that would provide parity with earned income losses						
25	1,226	2,814	7,088	37,171	26,290	3,804
35	1,004	2,567	7,552	39,081	28,990	4,116
45	1,694	3,334	8,770	36,032	28,856	5,316
55	1,955	3,711	8,650	27,299	23,628	5,423
65	1,056	1,910	4,109	10,374	9,610	2,571
75	966	1,341	2,140	4,417	4,714	1,600

Figure 192 shows the implicit quality-of-life payment for men for those with a musculoskeletal primary disability by rating group and age at first entry.

Figure 192. Implicit quality-of-life payment for those with a musculoskeletal disability (men)

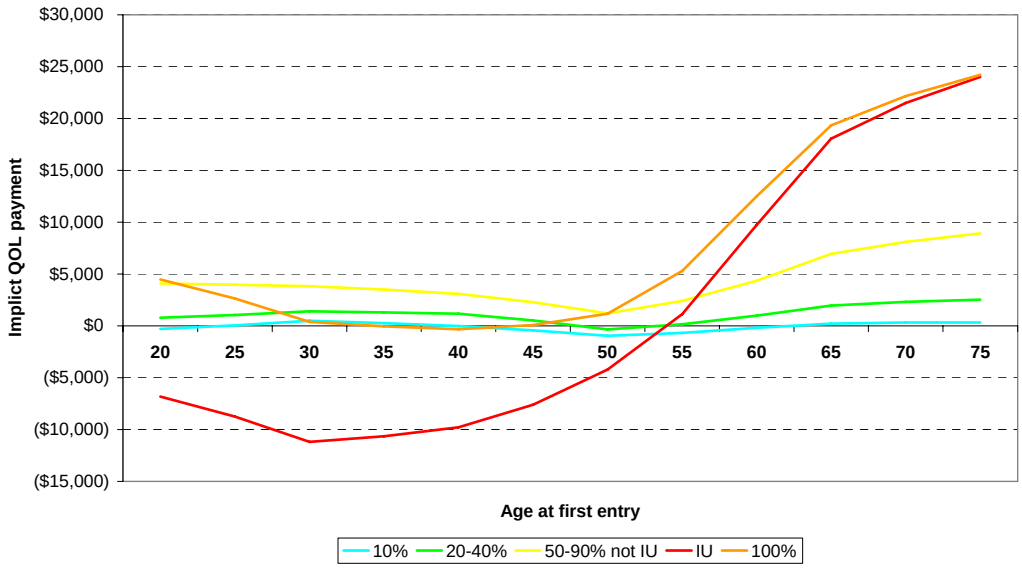


Table 76 compares the annuities that would replace average earned income losses for men to VA compensation for a skin primary disability.

Table 76. Actual VA compensation compared to that which would provide parity with earned income losses for those with a skin disability (men)

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
Average actual VA compensation (annual)						
All ages	1,286	3,836	11,257	27,409	27,736	3,598
Annual compensation (annuity) that would provide parity with earned income losses						
25	2,609	3,178				3,784
35	3,417	3,730	12,249			4,658
45	4,700	5,225	14,791	40,850	38,523	6,136
55	4,290	5,402	13,564	31,121	31,248	5,798
65	2,055	2,731	5,169	11,832	12,870	2,690
75	1,380	1,669	2,711	4,926	6,479	1,651

Figure 193 shows the implicit quality-of-life payment for men for those with a skin primary disability by rating group and age at first entry.

Figure 193. Implicit quality-of-life payment for those with a skin disability (men)

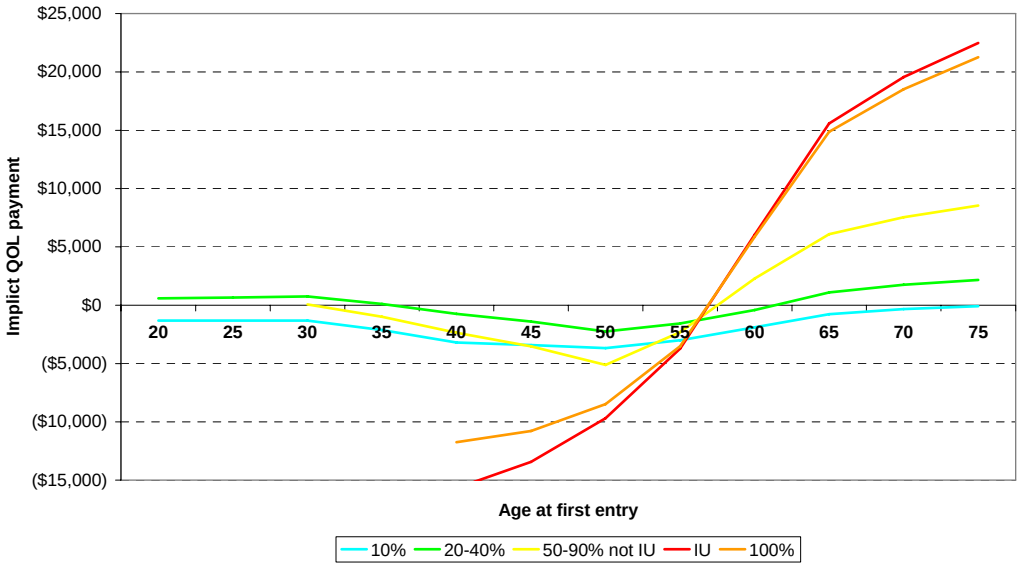


Table 77 compares the annuities that would replace average earned income losses for men to VA compensation for an auditory primary disability.

Table 77. Actual VA compensation compared to that which would provide parity with earned income losses for those with an auditory disability (men)

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
Average actual VA compensation (annual)						
All ages	1,281	3,667	10,956	28,093	28,627	4,872
Annual compensation (annuity) that would provide parity with earned income losses						
25	1,761	2,268				2,579
35	2,048	2,759				3,211
45	3,851	4,981	16,031		32,270	5,472
55	4,698	6,336	15,403	27,721	24,606	6,465
65	2,472	3,450	5,581	9,992	9,564	3,300
75	1,423	1,908	2,426	3,898	4,125	1,828

Figure 194 shows the implicit quality-of-life payment for men for those with an auditory primary disability by rating group and age at first entry.

Figure 194. Implicit quality-of-life payment for those with an auditory disability (men)

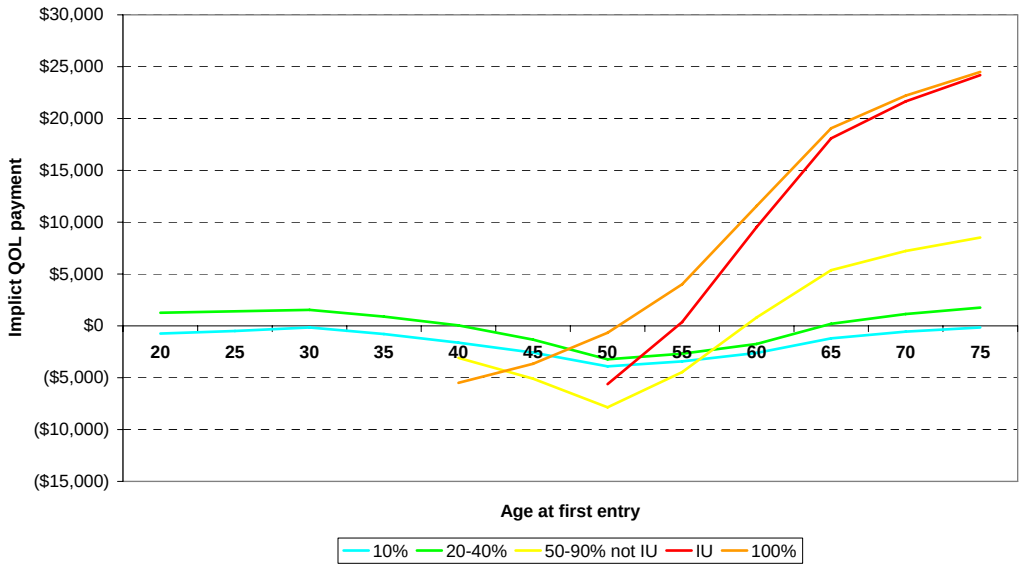


Table 78 compares the annuities that would replace average earned income losses for men to VA compensation for a neurological primary disability.

Table 78. Actual VA compensation compared to that which would provide parity with earned income losses for those with a neurological disability (men)

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
Average actual VA compensation (annual)						
All ages	1,282	4,292	11,783	28,596	29,126	9,813
Annual compensation (annuity) that would provide parity with earned income losses						
25	2,541	4,250	7,693	39,693	33,777	8,747
35	2,635	4,334	8,791	41,468	36,844	9,770
45	3,581	5,137	10,169	38,305	34,895	10,985
55	3,477	5,018	10,055	29,035	26,837	9,936
65	1,764	2,455	5,282	10,888	10,382	4,387
75	1,334	1,518	2,598	4,468	4,220	2,254

Figure 195 shows the implicit quality-of-life payment for men for those with a neurological primary disability by rating group and age at first entry.

Figure 195. Implicit quality-of-life payment for those with a neurological disability (men)

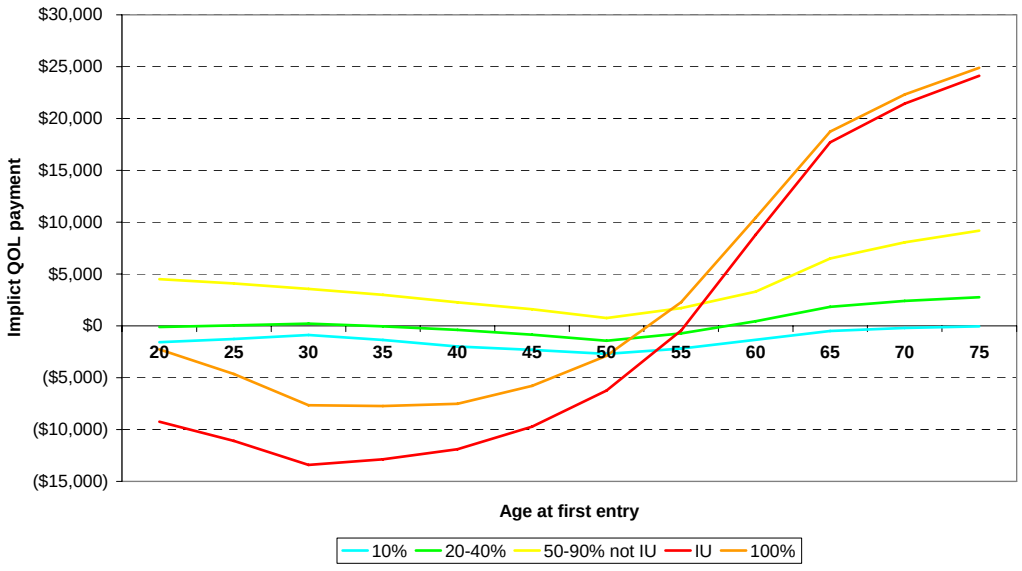


Table 79 compares the annuities that would replace average earned income losses for men to VA compensation for PTSD.

Table 79. Actual VA compensation compared to that which would provide parity with earned income losses for those with PTSD (men)

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
Average actual VA compensation (annual)						
All ages	1,286	4,941	11,280	28,261	28,205	19,649
Annual compensation (annuity) that would provide parity with earned income losses						
25		10,911	13,729	34,640	35,340	21,543
35		11,944	15,616	38,646	39,357	25,009
45	10,514	12,910	16,298	34,906	36,788	25,232
55	9,247	10,711	13,296	25,425	27,478	19,809
65	3,668	3,830	4,833	9,005	9,782	7,003
75	1,960	1,823	2,079	3,501	3,853	2,843

Figure 196 shows the implicit quality-of-life payment for men for those with PTSD by rating group and age at first entry.

Figure 196. Implicit quality-of-life payment for those with PTSD (men)

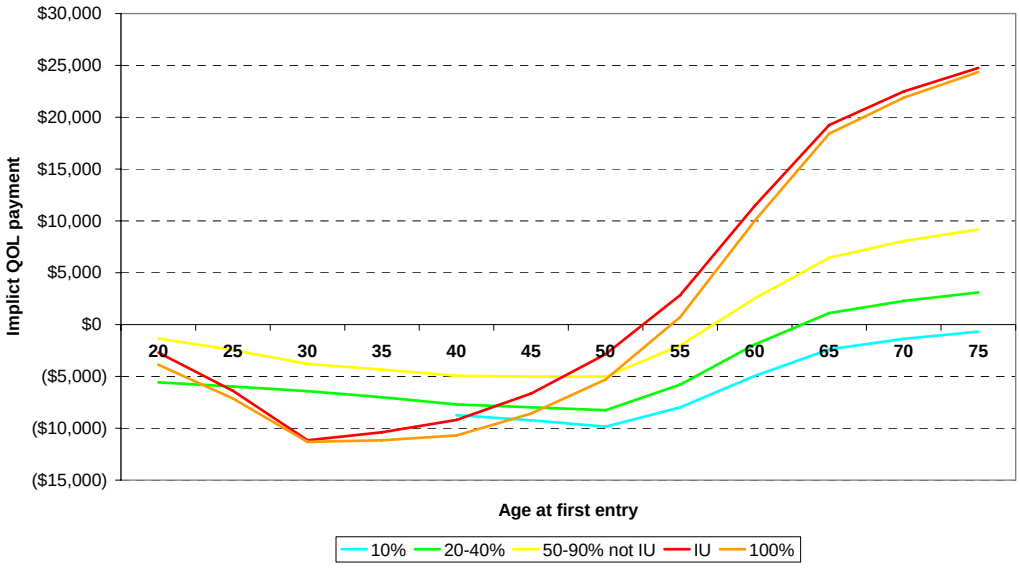


Table 80 compares the annuities that would replace average earned income losses for men to VA compensation for a mental (not PTSD) primary disability.

Table 80. Actual VA compensation compared to that which would provide parity with earned income losses for those with a mental (not PTSD) disability (men)

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
Average actual VA compensation (annual)						
All ages	1,295	4,372	10,747	28,232	27,881	15,199
Annual compensation (annuity) that would provide parity with earned income losses						
25	6,209	11,284	17,086	38,968	40,132	23,679
35	6,159	11,531	19,096	40,723	42,829	26,619
45	6,687	12,082	19,913	37,576	40,291	26,366
55	5,648	10,607	17,168	28,519	31,059	20,577
65	2,498	4,704	7,302	10,823	11,991	8,019
75	1,574	2,434	3,480	4,545	5,138	3,523

Figure 197 shows the implicit quality-of-life payment for men for those with a mental (not PTSD) primary disability by rating group and age at first entry.

Figure 197. Implicit quality-of-life payment for those with a mental (not PTSD) disability (men)

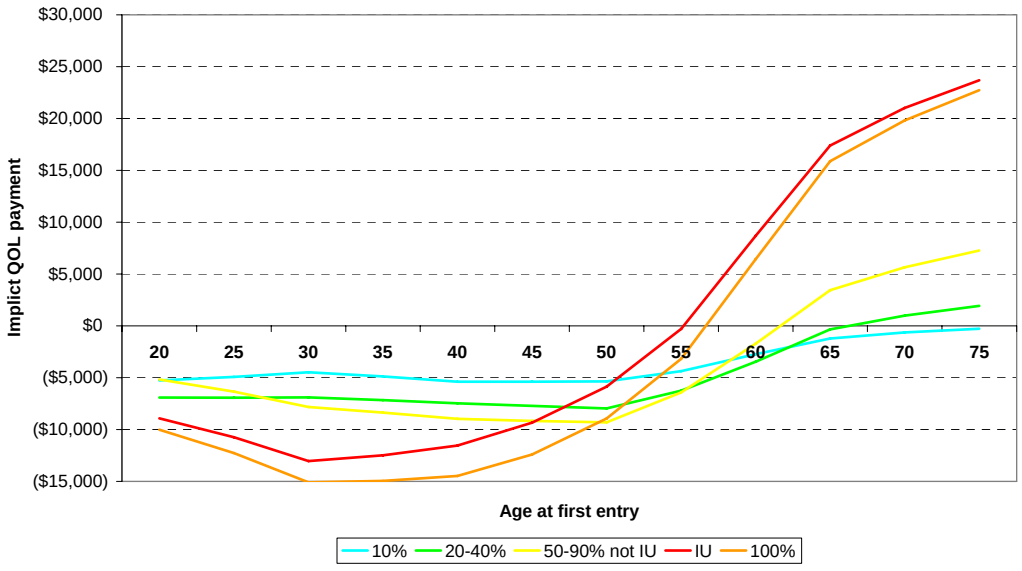


Table 81 compares the annuities that would replace average earned income losses for men to VA compensation for a digestive primary disability.

Table 81. Actual VA compensation compared to that which would provide parity with earned income losses for those with a digestive disability (men)

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
Average actual VA compensation (annual)						
All ages	1,285	3,758	11,083	28,071	28,373	5,817
Annual compensation (annuity) that would provide parity with earned income losses						
25	1,404	2,639			24,942	4,575
35	2,090	3,135	10,580	44,979	26,975	5,524
45	3,372	5,104	13,214	42,140	27,202	7,150
55	3,584	5,957	11,516	31,677	21,615	7,003
65	1,779	3,142	3,789	11,576	8,351	3,167
75	1,231	1,929	1,832	4,669	3,713	1,791

Figure 198 shows the implicit quality-of-life payment for men for those with a digestive primary disability by rating group and age at first entry.

Figure 198. Implicit quality-of-life payment for those with a digestive disability (men)

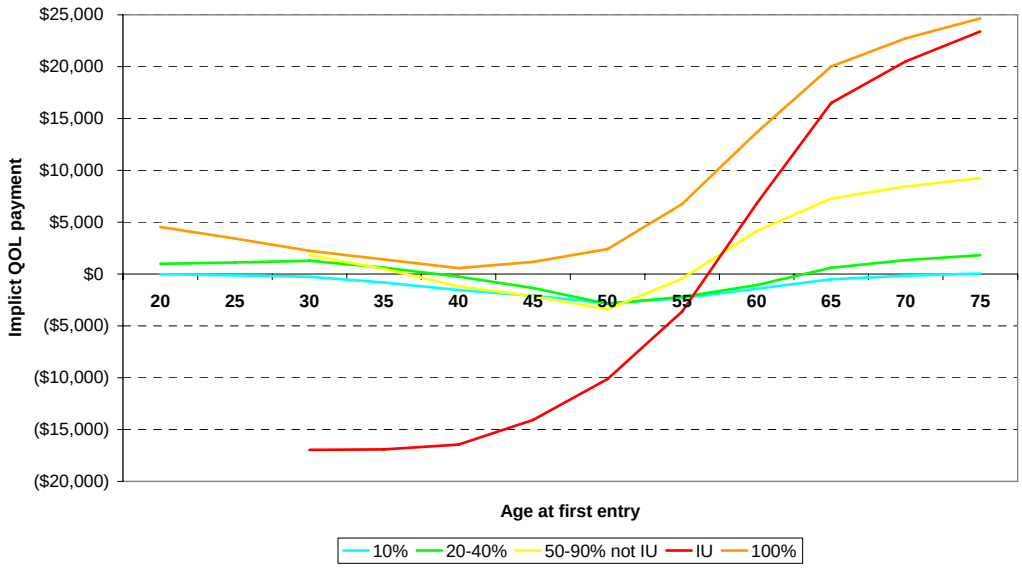


Table 82 compares the annuities that would replace average earned income losses for men to VA compensation for a cardiovascular primary disability.

Table 82. Actual VA compensation compared to that which would provide parity with earned income losses for those with a cardiovascular disability (men)

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
Average actual VA compensation (annual)						
All ages	1,284	4,079	11,941	28,347	28,572	9,720
Annual compensation (annuity) that would provide parity with earned income losses						
25	708	3,130			35,514	5,728
35	585	3,062			40,175	6,676
45	956	3,460	11,883	41,964	40,624	8,263
55	1,221	3,378	10,547	31,308	31,854	8,099
65	559	1,632	4,252	11,645	12,161	3,512
75	644	1,167	2,166	4,699	5,036	1,934

Figure 199 shows the implicit quality-of-life payment for men for those with a cardiovascular primary disability by rating group and age at first entry.

Figure 199. Implicit quality-of-life payment for those with a cardiovascular disability (men)

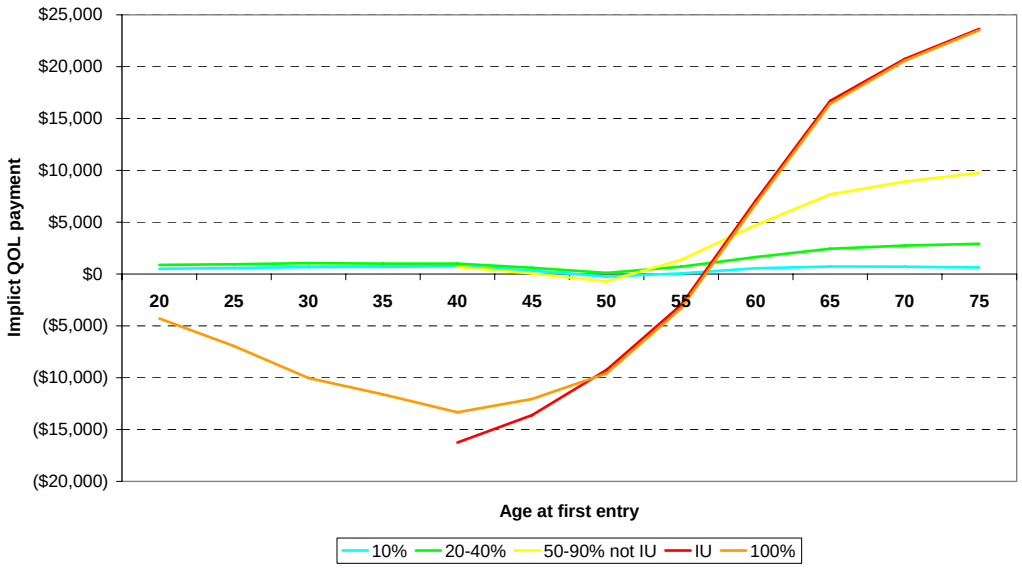


Table 83 compares the annuities that would replace average earned income losses for men to VA compensation for a respiratory primary disability.

Table 83. Actual VA compensation compared to that which would provide parity with earned income losses for those with a respiratory disability (men)

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
Average actual VA compensation (annual)						
All ages	1,282	4,329	12,209	28,289	28,313	8,777
Annual compensation (annuity) that would provide parity with earned income losses						
25	660	3,056	4,900		41,645	4,831
35	807	2,831	5,072	43,637	45,511	5,311
45	2,323	4,270	6,767	41,706	47,606	7,271
55	3,005	5,156	7,431	32,982	38,886	7,981
65	1,568	2,672	3,435	12,690	14,831	3,892
75	1,150	1,597	1,974	5,243	6,271	2,019

Figure 200 shows the implicit quality-of-life payment for men for those with a respiratory primary disability by rating group and age at first entry.

Figure 200. Implicit quality-of-life payment for those with a respiratory disability (men)

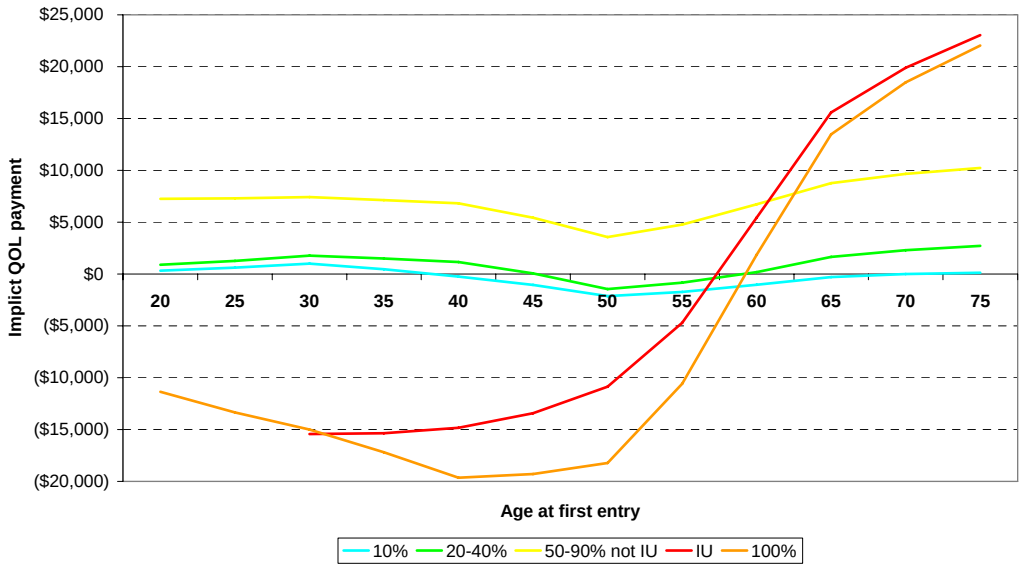


Table 84 compares the annuities that would replace average earned income losses for men to VA compensation for an endocrine primary disability.

Table 84. Actual VA compensation compared to that which would provide parity with earned income losses for those with an endocrine disability (men)

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
Average actual VA compensation (annual)						
All ages	1,308	3,902	11,198	28,700	28,452	6,696
Annual compensation (annuity) that would provide parity with earned income losses						
25	843	2,866			35,312	5,806
35	610	3,895			41,382	7,285
45	3,291	6,988	16,314	50,492	44,421	10,389
55	5,214	7,915	16,305	37,648	36,386	10,714
65	2,375	2,993	6,459	13,938	13,510	4,259
75	1,629	1,511	3,126	5,484	5,678	2,195

Figure 201 shows the implicit quality-of-life payment for men for those with an endocrine primary disability by rating group and age at first entry.

Figure 201. Implicit quality-of-life payment for those with an endocrine disability (men)

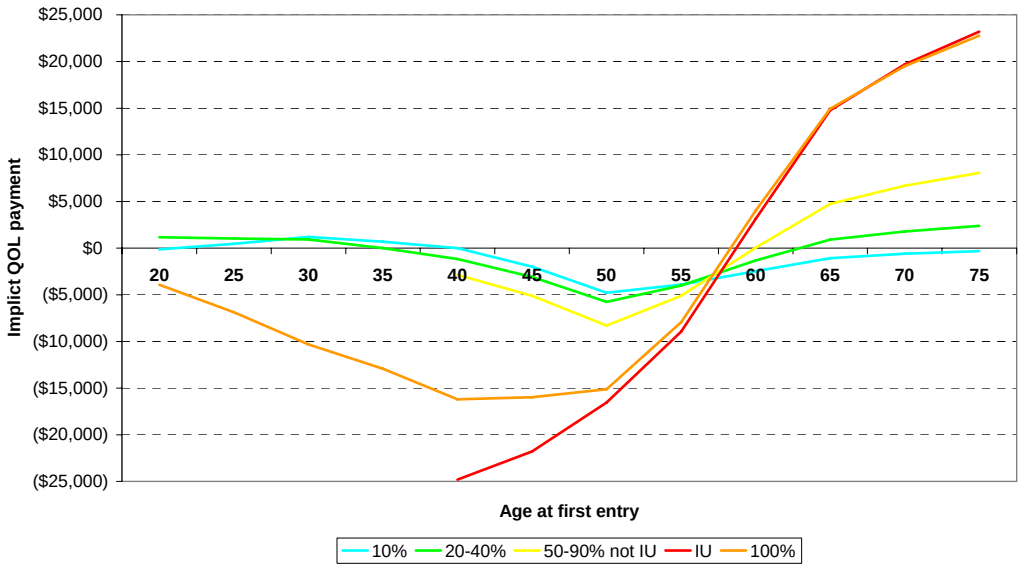


Table 85 compares the annuities that would replace average earned income losses for men to VA compensation for an genitourinary primary disability.

Table 85. Actual VA compensation compared to that which would provide parity with earned income losses for those with a genitourinary disability (men)

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
Average actual VA compensation (annual)						
All ages	1,582	4,642	12,325	28,828	28,768	12,649
Annual compensation (annuity) that would provide parity with earned income losses						
25	572	1,641			31,202	7,295
35	636	1,384			31,538	7,717
45	2,515	2,363	8,392	39,059	26,445	9,064
55	2,515	2,998	8,968	26,924	17,609	8,462
65	1,148	1,042	3,382	8,851	6,309	3,122
75	1,023	745	1,818	3,069	2,638	1,531

Figure 202 shows the implicit quality-of-life payment for men for those with an genitourinary primary disability by rating group and age at first entry.

Figure 202. Implicit quality-of-life payment for those with a genitourinary disability (men)

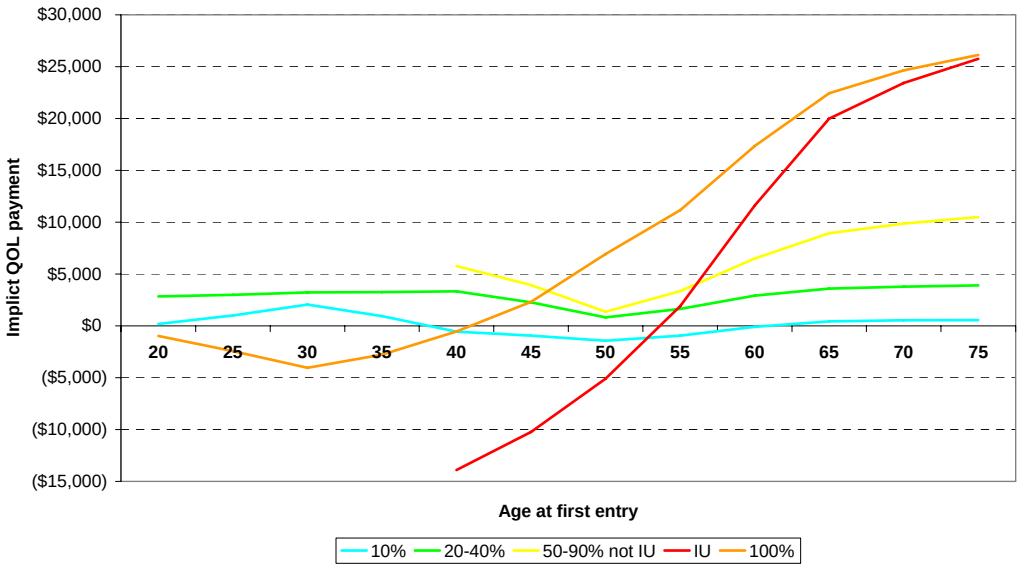


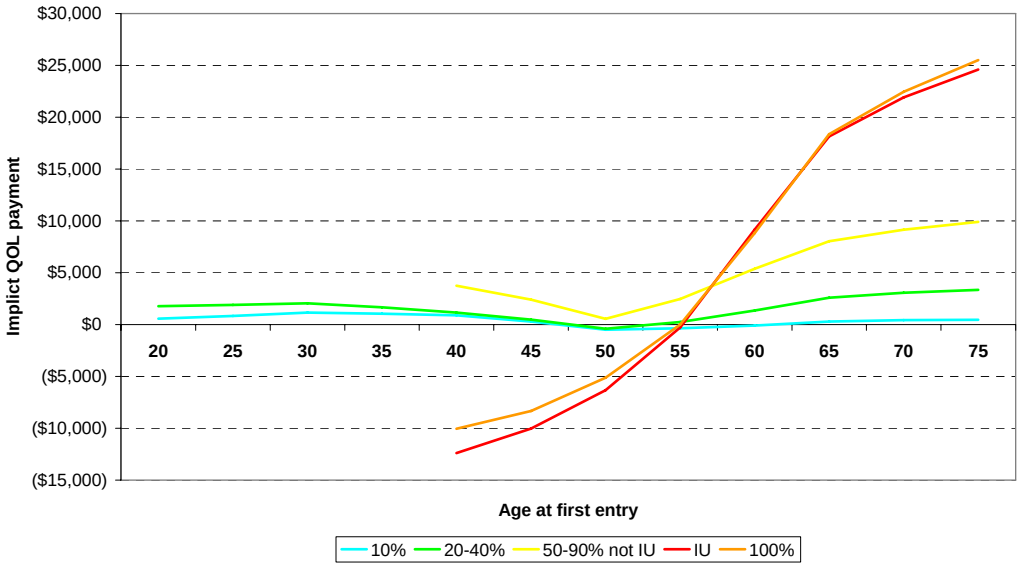
Table 86 compares the annuities that would replace average earned income losses for men to VA compensation for musculoskeletal primary disability.

Table 86. Actual VA compensation compared to that which would provide parity with earned income losses for those with an eye disability (men)

Age at first entry	10%	20-40%	50-90% not IU	IU	100%	All ratings
Average actual VA compensation (annual)						
All ages	1,292	4,823	11,635	28,863	31,243	7,570
Annual compensation (annuity) that would provide parity with earned income losses						
25	453	2,923				4,695
35	244	3,150				5,098
45	978	4,331	9,217	38,902	39,570	6,620
55	1,640	4,563	9,171	29,135	31,246	6,707
65	990	2,229	3,585	10,705	12,877	2,947
75	820	1,465	1,712	4,257	5,722	1,655

Figure 203 shows the implicit quality-of-life payment for men for those with an eye primary disability by rating group and age at first entry.

Figure 203. Implicit quality-of-life payment for those with an eye disability (men)



Appendix L: Summary of earnings and quality-of-life analyses by rating group

Table 87 presents the summary of the earnings and quality-of-life analyses for men by rating group. These figures are for all disabilities combined. Tables 88 though 90 compare the earnings and quality-of-life results for physical compared to mental primary disabilities. These tables do this separately for different rating groups, which are 20-40 percent, 50-90 percent, and IU. The table for the 10-percent group is in the body of the report.

Table 87. Summary of earnings and quality-of-life analyses by rating group (men)

	Age at first entry					
	25	35	45	55	65	75
10% disabled						
Annual VA compensation	$1,288	$1,288	$1,288	$1,288	$1,288	$1,288
Annual earned income loss	$1,644	$1,670	$2,740	$3,079	$1,575	$1,170
Earnings ratio	0.99	0.99	0.96	0.93	0.97	1.03
Implicit QOL payment	($355)	($382)	($1,452)	($1,790)	($286)	$119
Overall health percentile[a]	33%	28%	27%	32%	40%	38%
Overall life satisfaction[b]	77%	80%	78%	82%	87%	82%
20-40% disabled						
Annual VA compensation	$3,991	$3,991	$3,991	$3,991	$3,991	$3,991
Annual earned income loss	$3,618	$3,665	$4,940	$5,295	$2,427	$1,528
Earnings ratio	1.01	1.01	0.97	0.95	1.16	1.58
Implicit QOL payment	$373	$326	($949)	($1,303)	$1,564	$2,463
Overall health percentile[a]	17%	12%	14%	17%	29%	80%
Overall life satisfaction[b]	77%	63%	72%	74%	84%	77%
50-90% disabled (not IU)						
Annual VA compensation	$11,280	$11,280	$11,280	$11,280	$11,280	$11,280
Annual earned income loss	$9,429	$10,302	$11,918	$11,291	$4,691	$2,322
Earnings ratio	1.05	1.03	0.98	1.00	1.66	3.08
Implicit QOL payment	$1,851	$978	($638)	($11)	$6,589	$8,958
Overall health percentile[a]	2%	5%	6%	3%	12%	21%
Overall life satisfaction[b]	58%	57%	62%	51%	67%	73%
IU						
Annual VA compensation	$28,352	$28,352	$28,352	$28,352	$28,352	$28,352
Annual earned income loss	$38,436	$40,449	$37,272	$28,127	$10,600	$4,440
Earnings ratio	0.76	0.72	0.78	1.01	2.61	6.19
Implicit QOL payment	($10,084)	($12,097)	($8,920)	$225	$17,752	$23,912
Overall health percentile[a]	0%	1%	1%	1%	3%	10%
Overall life satisfaction[b]	---	51%	39%	41%	60%	71%
100% disabled						
Annual VA compensation	$30,723	$30,723	$30,723	$30,723	$30,723	$30,723
Annual earned income loss	$36,880	$40,212	$38,392	$29,539	$11,150	$4,956
Earnings ratio	0.87	0.80	0.83	1.04	2.50	5.60
Implicit QOL payment	($6,157)	($9,488)	($7,669)	$1,185	$19,573	$25,767
Overall health percentile[a]	6%	3%	2%	1%	7%	9%
Overall life satisfaction[b]	56%	48%	42%	39%	59%	61%

a. The comparison group value is 50%.
b. There is no population norm for this measure.

Table 88. Summary of earnings and quality-of-life analyses for 20-40 percent disabled for physical compared to mental primary disabilities (men)

	Age at first entry					
	25	35	45	55	65	75
20-40% physical primary disabled						
Annual VA compensation	$3,944	$3,944	$3,944	$3,944	$3,944	$3,944
Annual earned income loss	$3,170	$3,185	$4,385	$4,826	$2,313	$1,487
Earnings ratio	1.02	1.02	0.99	0.97	1.17	1.58
Implicit QOL payment	$774	$759	($441)	($882)	$1,631	$2,457
Overall health percentile[a]	19%	12%	15%	19%	31%	31%
Overall life satisfaction[b]	80%	63%	73%	77%	85%	79%
20-40% mental primary disabled						
Annual VA compensation	$4,629	$4,629	$4,629	$4,629	$4,629	$4,629
Annual earned income loss	$11,339	$11,864	$12,603	$10,744	$4,264	$2,181
Earnings ratio	0.83	0.82	0.78	0.77	1.04	1.57
Implicit QOL payment	($6,711)	($7,236)	($7,974)	($6,116)	$365	$2,447
Overall health percentile[a]	2%	4%	6%	3%	5%	14%
Overall life satisfaction[b]	35%	51%	48%	46%	49%	61%

a. The comparison group value is 50%.
b. There is no population norm for this measure.

Table 89. Summary of earnings and quality-of-life analyses for 50-90 percent disabled for physical compared to mental primary disabilities (men)

	Age at first entry					
	25	35	45	55	65	75
50-90% physical primary disabled						
Annual VA compensation	$11,343	$11,343	$11,343	$11,343	$11,343	$11,343
Annual earned income loss	$7,581	$8,351	$10,100	$9,934	$4,341	$2,205
Earnings ratio	1.10	1.08	1.04	1.06	1.71	3.13
Implicit QOL payment	$3,762	$2,993	$1,244	$1,409	$7,002	$9,138
Overall health percentile[a]	2%	6%	8%	6%	14%	23%
Overall life satisfaction[b]	69%	62%	67%	64%	74%	78%
50-90% mental primary disabled						
Annual VA compensation	$11,084	$11,084	$11,084	$11,084	$11,084	$11,084
Annual earned income loss	$15,766	$17,521	$17,825	$14,571	$5,861	$2,793
Earnings ratio	0.88	0.84	0.82	0.88	1.50	2.84
Implicit QOL payment	($4,682)	($6,438)	($6,741)	($3,487)	$5,223	$8,291
Overall health percentile[a]	1%	1%	1%	1%	3%	11%
Overall life satisfaction[b]	32%	36%	35%	32%	32%	52%

a. The comparison group value is 50%.
b. There is no population norm for this measure.

Table 90. Summary of earnings and quality-of-life analyses for those with IU for physical compared to mental primary disabilities (men)

	Age at first entry					
	25	35	45	55	65	75
IU physical primary disabled						
Annual VA compensation	$28,421	$28,421	$28,421	$28,421	$28,421	$28,421
Annual earned income loss	$38,954	$41,051	$37,995	$28,798	$10,878	$4,547
Earnings ratio	0.75	0.71	0.76	0.99	2.56	6.08
Implicit QOL payment	($10,533)	($12,631)	($9,575)	($377)	$17,543	$23,873
Overall health percentile[a]	0%	1%	1%	2%	3%	12%
Overall life satisfaction[b]		65%	48%	59%	63%	72%
IU mental primary disabled						
Annual VA compensation	$28,253	$28,253	$28,253	$28,253	$28,253	$28,253
Annual earned income loss	$37,801	$39,494	$35,902	$26,567	$9,753	$3,970
Earnings ratio	0.77	0.74	0.80	1.07	2.80	6.81
Implicit QOL payment	($9,548)	($11,241)	($7,648)	$1,686	$18,500	$24,283
Overall health percentile[a]	1%	1%	0%	0%	2%	5%
Overall life satisfaction[b]			22%	28%	52%	66%

a. The comparison group value is 50%.
b. There is no population norm for this measure.

Appendix M: Employment rates and earned income for male surviving spouses

Figure 204 shows the percentage of male surviving spouses who are receiving DIC that are employed.

Figure 204. Average employment rate for surviving spouses (men)

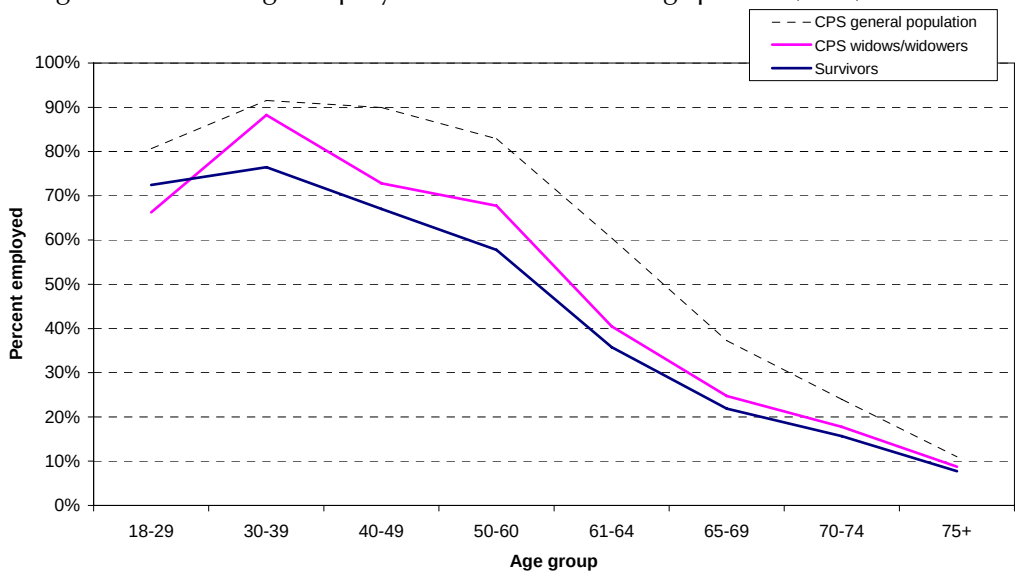


Figure 205 shows the average earned income of male surviving spouses who are receiving DIC.

Figure 205. Average earned income for surviving spouses (men)

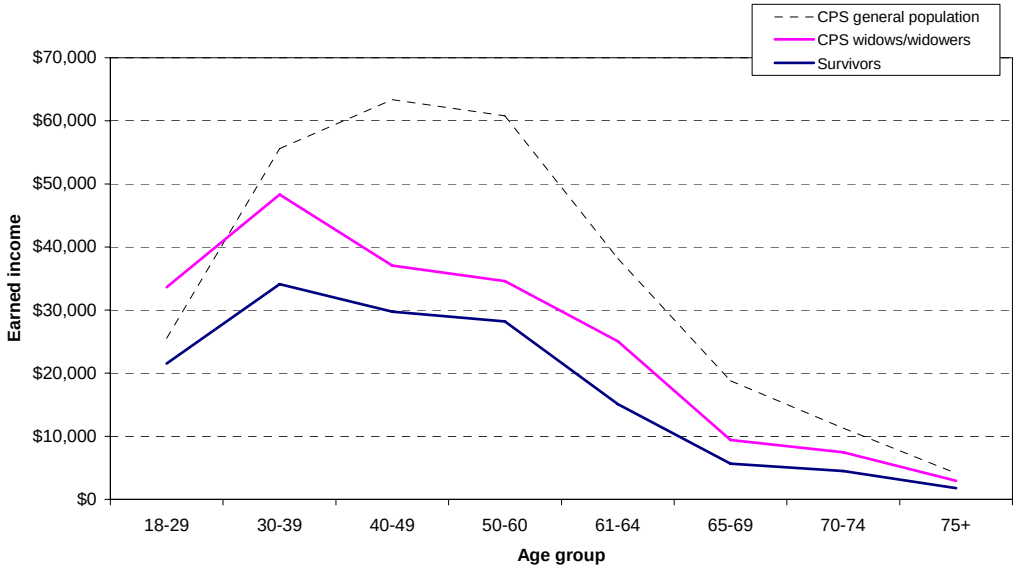
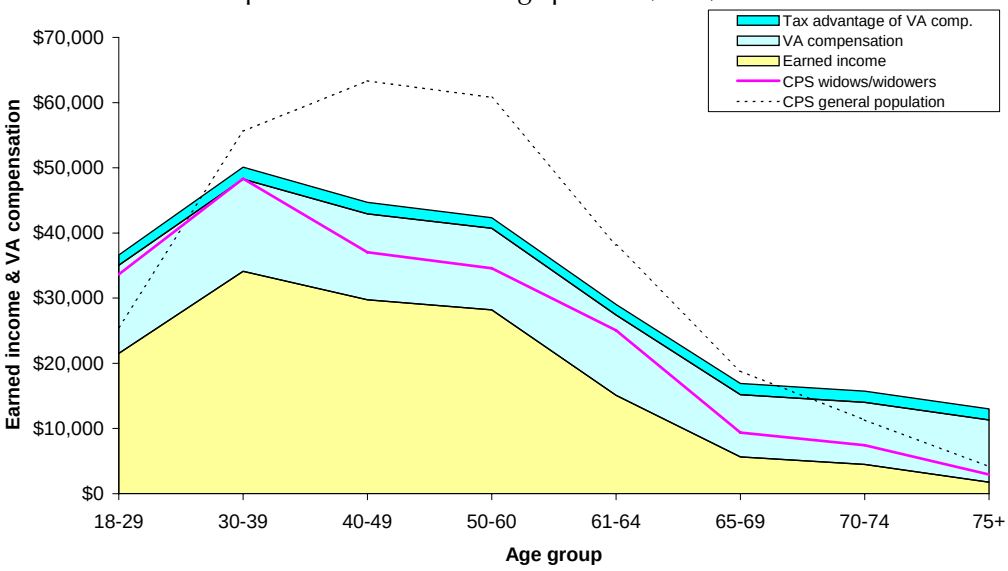


Figure 206 shows the average earned income of male surviving spouses who are receiving DIC plus the taxable equivalent of VA compensation relative to the average earned income of their peers.

Figure 206. Average earned income and the taxable equivalent of VA compensation for surviving spouses (men)



Figures 207 and 208 show the average employment rates and earned income of male surviving spouses by years since the veterans' death.

Figure 207. Average employment rates for surviving spouses by years since the veterans' death (men)

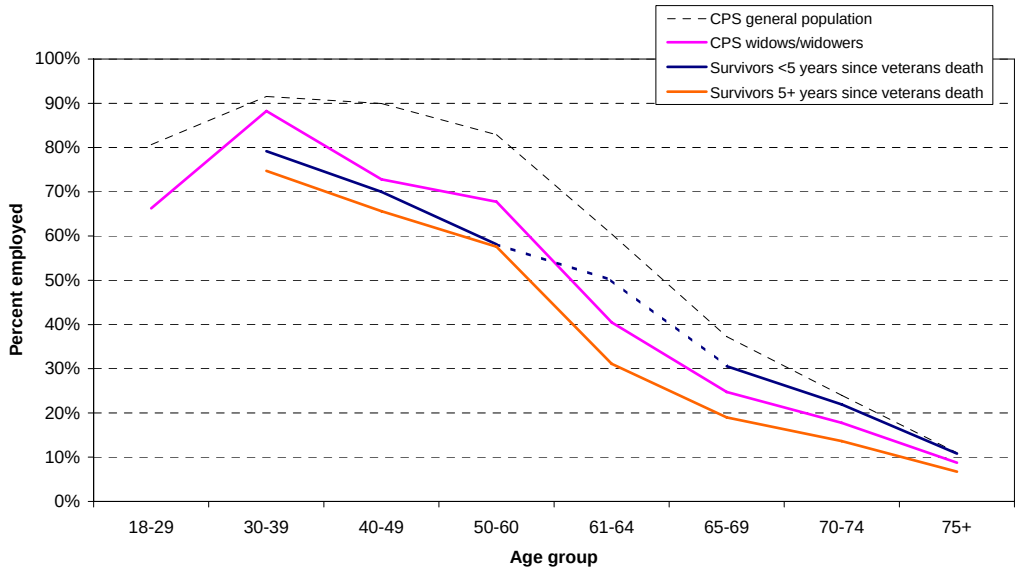
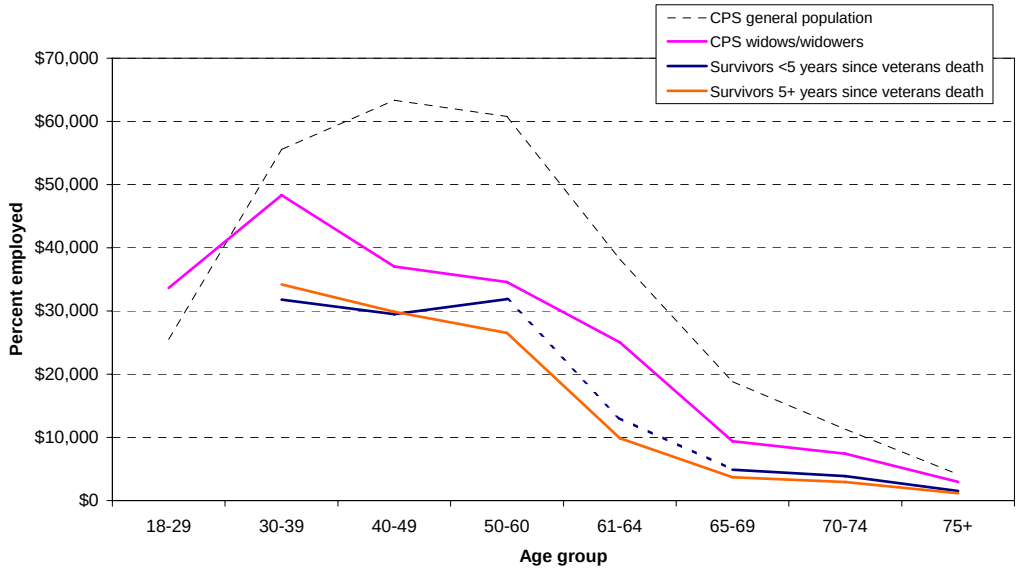


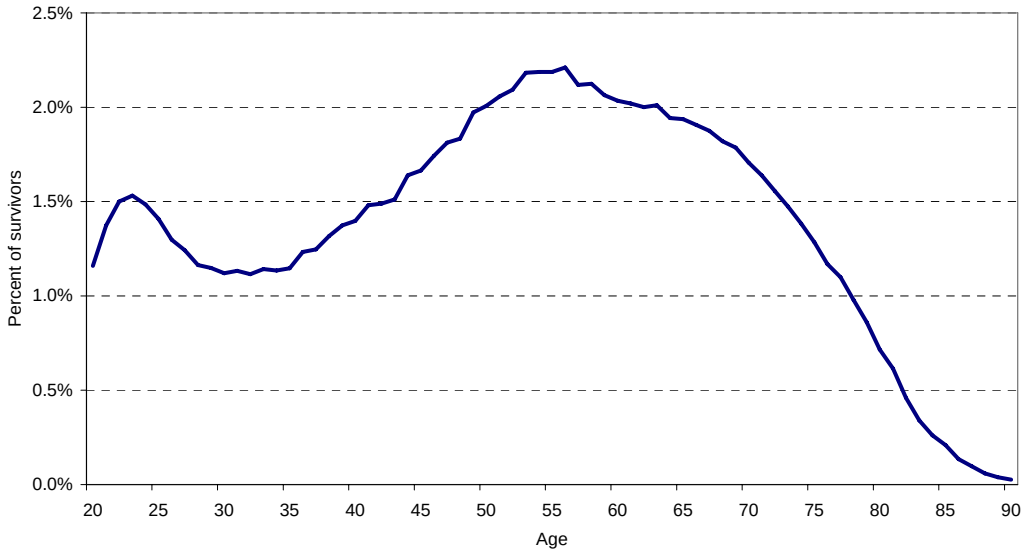
Figure 208. Average earned income for surviving spouses by years since the veterans' death (men)



Appendix N: Survivors' age at veterans' death

Figure 209 shows the distribution of surviving spouses' ages at the time of veterans' death for all survivors receiving DIC as of 1 December 2005.

Figure 209. Survivors' age at veterans' death (2005)



Figures 210 and 211 show the distribution of surviving spouses' ages at the time of veterans' death separately for those survivors whose veteran spouse died (1) in the last 5 years and (2) at least 5 years ago.

Figure 210. Survivors' age at veterans' death if less than 5 years since veterans' death (2005)

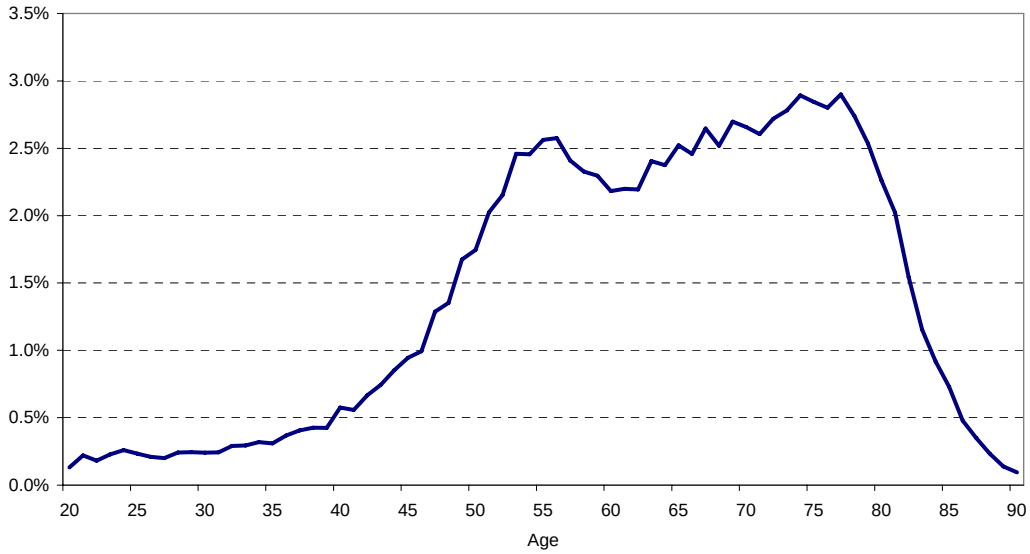
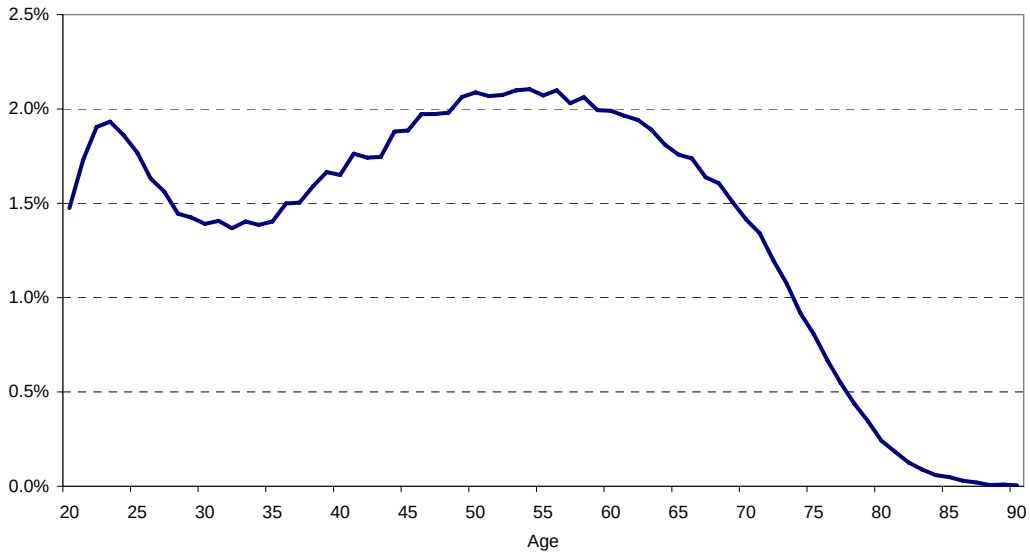


Figure 211. Survivors' age at veterans' death if at least 5 years since veterans' death (2005)



Figures 212 and 213 show the distribution of surviving spouses' age at the time of veterans' death separately for those survivors with and without an SBP offset.

Figure 212. Survivors' age at veterans' death for those without an SBP offset (2005)

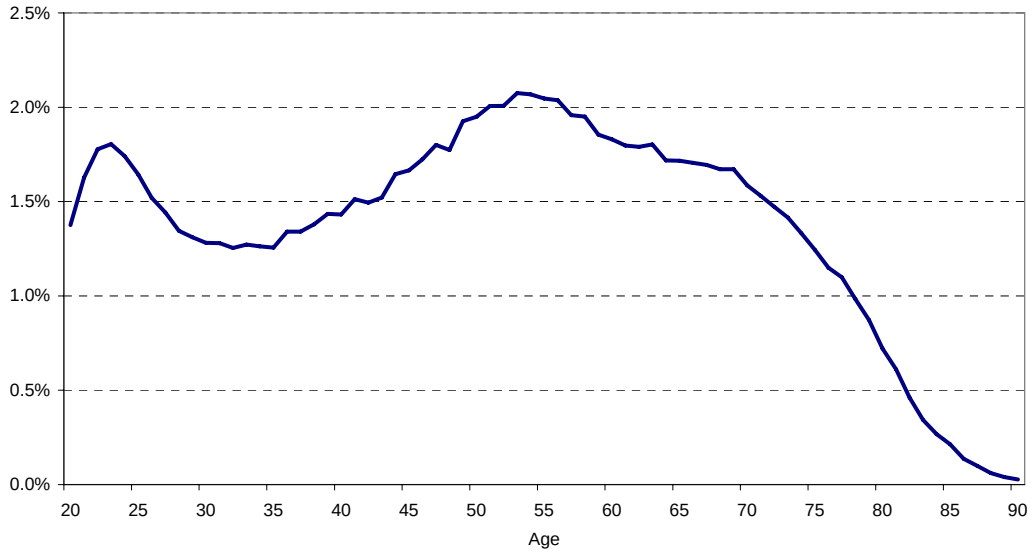
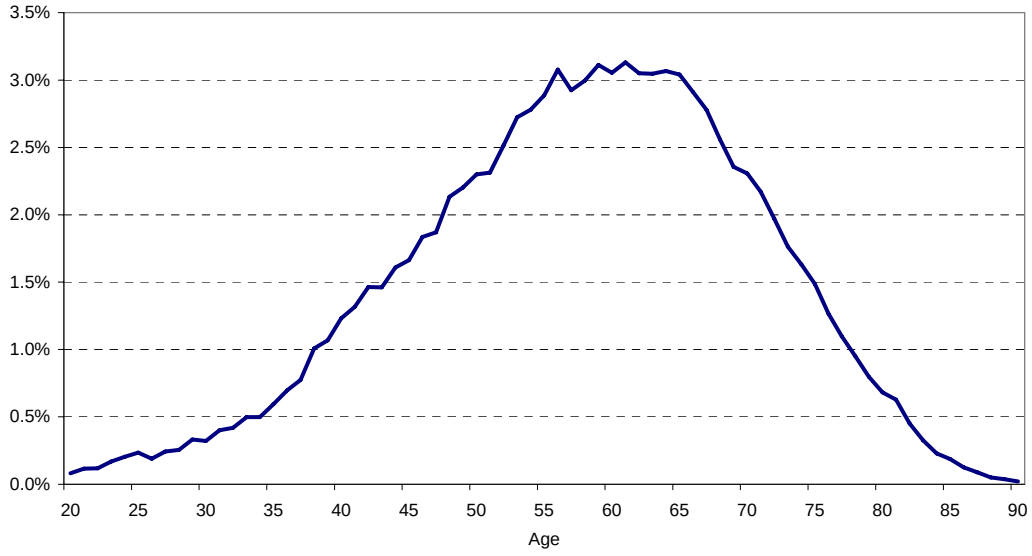


Figure 213. Survivors' age at veterans' death for those with an SBP offset (2005)



Appendix O: Survivors Survey results

All results are adjusted to be representative of the entire U.S. population of Dependency and Indemnity Compensation (DIC) recipients.

Survivors Survey Part I: Introduction

Survey item: [not applicable] Description: Gender Population: All survivors	
Categories	**Percentages**
Female	99.5
Male	0.5
Missing	0.0
Total	100.0

Survey item: I7 Description: Age Population: All survivors	
Categories	**Percentages**
29 and younger	0.3
30-39	1.2
40-49	2.8
50-59	10.6
60-69	22.3
70-79	31.7
80 and older	31.0
Missing	0.1
Total	100.0

Survey item: I8 Description: Retirement (Are you currently retired and not working for pay at all?) Population: All survivors	
Categories	**Percentages**
Yes	79.9
No	20.0
Missing	0.1
Total	100.0

Survey item: I9 Description: Active-duty death (Did your spouse pass away while on active duty?) Population: All survivors	
Categories	**Percentages**
Yes	23.6
No	76.3
Missing	0.1
Total	100.0

Survivors Survey Part A: Effect of veteran's disability on spouse before veteran's death

Survey item: A1A Description: Years veteran lived with disability Population: I9=no (Survivors whose spouse did not die on active duty)	
Categories	**Percentages**
Less than 5 years	11.8
5-9 years	9.1
10-19 years	16.8
20-29 years	13.8
30-39 years	12.3
40-49 years	7.6
50 years or more	9.0
Missing	19.6
Total	100.0

Survey item: A1B
Description: Years since veteran died
Population: All survivors

Categories	Percentages
Less than 5 years	14.9
5-9 years	17.0
10-19 years	21.4
20-29 years	16.6
30 years or more	28.8
Missing	1.3
Total	100.0

Survey item: A1
Description: Veteran required care (During the period before your spouse's death, did he/she have service-connected disabilities that were so severe that he/she needed someone to care for some of his/her needs?)
Population: I9=no (Survivors whose spouse did not die on active duty)

Categories	Percentages
Yes	57.0
No	42.5
Missing	0.5
Total	100.0

Survey item: A2
Description: Spouse provided a significant amount of care (As a result of your spouse's service-connected disability, did you yourself ever provide care to him/her for 4 or more hours per day at least 5 days a week for 2 or more years?)
Population: I9=no (Survivors whose spouse did not die on active duty)

Categories	Percentages
Not applicable because veteran did not require care	43.0
Yes	44.1
No	12.1
Missing	0.8
Total	100.0

Survey item: A1, A3, A4, A5 Description: Effect of veteran's disability on survivor's education or training due to care-giving Population: I9=no (Survivors whose spouse did not die on active duty)	
Categories	**Percentages**
No effect on education/training	87.7
At least some effect on education/training, but not due to care-giving	3.3
Some effect on education/training due to care-giving: Did not get as much education/training	4.1
Some effect on education/training due to care-giving: Got more education/training	0.2
Some effect on education/training due to care-giving: Education/training took longer	2.3
Some effect on education/training due to care-giving: Education/training took less time	0.1
Some effect on education/training due to care-giving: Other	0.8
Missing	1.5
Total	100.0

Survey item: A3, A6, A7 Description: Effect of veteran's disability on survivor's education or training due to loss of veteran's earnings Population: I9=no (Survivors whose spouse did not die on active duty)	
Categories	**Percentages**
No effect on education/training	87.7
At least some effect on education/training, but not due to veteran's earnings loss	3.0
Some effect on education/training due to veteran's earnings loss: Less education/training because had to earn money	2.2
Some effect on education/training due to veteran's earnings loss: Less education/training because couldn't afford tuition	1.6
Some effect on education/training due to veteran's earnings loss: More education/training because needed a better-paying job	2.0
Some effect on education/training due to veteran's earnings loss: Other	1.8
Missing	1.7
Total	100.0

Survey item: A8, A9, A10 Description: Effect of veteran's disability on survivor's employment Population: I9=no (Survivors whose spouse did not die on active duty)	
Categories	**Percentages**
No effect on employment	66.2
At least some effect on employment, due to: Care-giving only	4.6
At least some effect on employment, due to: Veteran's earnings loss only	5.5
At least some effect on employment, due to: Care-giving and veteran's earnings loss	16.7
At least some effect on employment, due to: Neither care-giving nor veteran's earnings loss	4.1
Missing	3.0
Total	100.0

Survey item: A11 Description: Type of effect on survivor's employment (How did your spouse's disability affect your employment? *Multiple responses allowed.*) Population: I9=no (Survivors whose spouse did not die on active duty)	
Categories	**Percentages**
Not applicable because no effect on survivor's employment	66.2
Not applicable because effect on employment was not due to care-giving or veteran's earnings loss	7.1
Type of effect on survivor's employment *(multiple responses allowed)*	
Started working	4.1
Continued working but increased the number of hours	2.9
Switched to a more demanding job	1.3
Switched to a higher-paying job	1.7
Stopped working entirely	15.3
Continued working but decreased the number of hours	6.7
Switched to a less demanding job	1.8
Switched to a lower-paying job	1.8
Made some other change	2.3
Missing	0.2

Survey item: A12
Description: Effect of care-giving on survivor's physical health (How much did caring for your spouse affect your physical health status?)
Population: I9=no (Survivors whose spouse did not die on active duty)

Categories	Percentages
Not applicable because veteran did not require care	43.0
No effect	20.3
Health worse than it would have been	30.8
Health better than it would have been	1.0
Other	2.4
Not applicable because survivor did not provide care	0.1
Missing	2.4
Total	100.0

Survey item: A12A
Description: Effect of veteran's disability on survivor's mental/emotional health (How did your spouse's disability affect your mental or emotional health?)
Population: I9=no (Survivors whose spouse did not die on active duty)

Categories	Percentages
Not applicable because veteran did not require care	43.0
No effect	5.6
Worried more than would have otherwise	48.5
Worried less than would have otherwise	0.9
Other	1.1
Missing	0.9
Total	100.0

Survey item: A12A_2
Description: What survivor worried about (What did you worry more about? *Multiple responses allowed.*)
Population: I9=no (Survivors whose spouse did not die on active duty)

Categories	Percentages
Not applicable because veteran did not require care	43.0
Not applicable because survivor did not report worrying more	51.5
What survivor worried about *(multiple responses allowed)*	
The cost of veteran's care	14.1
Caring for other family members during veteran's illness	18.0
Other expenses not covered due to veteran's limited, or lack of, employment	20.0
Maintaining veteran's morale during his/her illness	30.5
Managing day-to-day affairs and decisions	31.2
Other	4.1
Missing	1.1

Survey item: A12B
Description: How often survivor worried about veteran's condition (While you were caring for your spouse, how often did you worry about him/her or his/her condition?)
Population: I9=no (Survivors whose spouse did not die on active duty)

Categories	Percentages
Not applicable because veteran did not require care	43.0
All of the time	37.6
Most of the time	13.2
Some of the time	4.9
A little of the time	1.0
None of the time	0.2
Not applicable because survivor did not provide care	0.0
Missing	0.1
Total	100.0

Survey item: A13 Description: Effect on survivor's social activities (How much did caring for your spouse affect your participation in social activities such as community programs, school activities, or going out with friends?) Population: I9=no (Survivors whose spouse did not die on active duty)	
Categories	**Percentages**
Not applicable because veteran did not require care	43.0
Participation increased	1.6
Participation stayed the same	8.1
Participation decreased	46.0
Not applicable because survivor did not provide care	0.7
Missing	0.6
Total	100.0

Survey item: A14 Description: Effect on survivor's quality of life (How was your quality of life impacted by your spouse's service connected disability?) Population: I9=no (Survivors whose spouse did not die on active duty)	
Categories	**Percentages**
Very negatively impacted	18.4
Negatively impacted	31.2
Not impacted	16.3
Positively impacted	15.0
Very positively impacted	8.9
Missing	10.2
Total	100.0

Survivors Survey Part B: Changes after veteran's death

Survey item: B1, B2, B2a Description: Employment before veteran's death Population: All survivors	
Categories	**Percentages**
Survivor did not work in the year before veteran's death	60.2
Survivor worked full-time in the year before veteran's death	27.5
Survivor worked part-time in the year before veteran's death	12.2
Missing	0.1
Total	100.0

Survey item: B3
Description: For those who did not work before veteran's death, whether started working after veteran's death (Did you start working in a job or business in the first 12 months after your spouse died?)
Population: All survivors

Categories	Percentages
Not applicable because survivor worked before veteran's death	39.8
Yes, started working	9.5
No, did not start working	50.7
Missing	0.0
Total	100.0

Survey item: B4
Description: For those who did work before veteran's death, ways in which employment changed after veteran's death (How did your employment change in the first 12 months after your spouse died? *Multiple responses allowed.*)
Population: All survivors

Categories	Percentages
Not applicable because survivor did not work before veteran's death	60.2
How employment changed after veteran's death *(multiple responses allowed)*	
Did not work	6.1
Made no changes	16.1
Increased hours	6.2
Switched to a more demanding job	3.0
Switched to a higher-paying job	2.1
Stopped working entirely	6.6
Decreased hours	3.6
Switched to a less demanding job	2.2
Switched to a lower-paying job	1.2
Made some other change	2.7
Missing	1.0

Survey item: B5
Description: Change in survivor's earnings for those survivors who worked before veteran's death and veteran died more than 1 year ago (How did your earnings from your own work change in the first 12 months after your spouse died compared with the year before?)
Population: All survivors

Categories	Percentages
Not applicable because survivor did not work before veteran's death or veteran died less than 1 year ago	60.2
Little or no change in earnings	17.3
Earnings increased	7.0
Earnings decreased	13.7
Missing	1.8
Total	100.0

Survey item: B6, B7
Description: Changes in child care arrangements due to veteran's death
Population: All survivors

Categories	Percentages
No dependent children at time of veteran's death	58.6
Survivor had dependent children and made changes in child care	8.9
Survivor had dependent children but made no changes in child care	31.9
Survivor had dependent children, but child care is not applicable	0.0
Missing	0.6
Total	100.0

Survey item: B8
Description: Educational attainment before spouse died (What was the highest level of schooling you completed before your spouse died?)
Population: All survivors

Categories	Percentages
Less than high school	17.7
High school diploma or GED	41.0
Some college	24.8
Bachelor's degree	7.1
Graduate training	2.5
Professional certificate	4.3
Technical license	1.8
Missing	0.8
Total	100.0

Survey item: B9
Description: Any changes in education/training in the year after veteran's death due to veteran's death (In the first 12 months after your spouse died, did you make any changes in your education or training due to his/her death?)
Population: All survivors

Categories	Percentages
Yes	10.7
No	89.0
Missing	0.3
Total	100.0

Survey item: B10
Description: Types of changes in education/training for those who made any education/training changes in the first 12 months after veteran died. *Multiple responses allowed.*
Population: All survivors

Categories	Percentages
Not applicable because no education/training changes	89.3
Types of changes in education/training *(multiple responses allowed)*	
Quit school	0.5
Changed schools, majors, or programs	0.6
Gave up plans to go to college	0.9
Enrolled in school or a job training program	9.0
Other changes	0.6
Missing	0.2

Survey item: B11, B12
Description: Reasons for any inability to take classes or courses after veteran died in order to improve chances of getting a good or better job.
Population: All survivors

Categories	Percentages
No inability to take classes	76.6
Inability to take classes: too expensive	3.0
Inability to take classes: didn't know where to find appropriate courses	0.5
Inability to take classes: too many other things to take care of	8.7
Inability to take classes: could not get child care	1.8
Inability to take classes: inconvenient locations or times	1.5
Inability to take classes: no transportation	1.8
Inability to take classes: other reasons	3.9
Missing	2.2
Total	100.0

Survey item: B13, B14
Description: Whether survivor had to move because of veteran's death and main reason for moving (In the first 12 months after your spouse died, did you have to move from where you lived due to his/her death? Which of the following best describes the main reason why you moved?)
Population: All survivors

Categories	Percentages
Did not have to move because of veteran's death	76.9
Had to move: no longer qualified for military housing	2.0
Had to move: needed a less expensive place to live	6.5
Had to move: physically unable to maintain residence	2.5
Had to move: wanted to be closer to school or job	0.8
Had to move: wanted to make a fresh start	2.7
Had to move: found a place more to your liking	1.4
Had to move: other reason	7.2
Missing	0.0
Total	100.0

Survey item: B13, B15
Description: Whether survivor had to move because of veteran's death and where survivor moved to (In the first 12 months after your spouse died, did you have to move from where you lived due to his/her death? What best describes the placed you moved to?)
Population: All survivors

Categories	Percentages
Did not have to move because of veteran's death	76.9
Had to move: moved in with family	6.5
Had to move: moved into better housing of your own	2.1
Had to move: moved into similar housing of your own	3.1
Had to move: moved into less expensive housing of your own	8.4
Had to move: moved into other type of place	2.9
Missing	0.1
Total	100.0

Survey item: B16, B17
Description: Change in financial situation after veteran's death (In the first 12 months after your spouse died, did your overall financial situation change due to his/her death? Which of the following describes your financial changes? *Multiple responses allowed.*)
Population: All survivors

Categories	Percentages
No financial change due to veteran's death	26.4
Types of changes in financial situation *(multiple responses allowed)*	
Dramatic decrease in financial resources	48.3
Started working for pay	14.5
Lost commissary privileges	4.6
Received financial help from family	11.9
Received help from churches or community organizations	3.1
Received public assistance	3.3
Received assistance from a veteran's service organization	17.8
Remarried and new spouse/partner helped with expenses	2.4
Other change	9.1
Missing	2.2

Survey item: B18A
Description: Change in role of family and friends since veteran's death: Survivor relies more on family or friends to keep him/her company
Population: All survivors

Categories	Percentages
Agree	73.9
Disagree	25.3
Missing	0.8
Total	100.0

Survey item: B18B
Description: Change in role of family and friends since veteran's death: Survivor relies more on family or friends for transportation
Population: All survivors

Categories	Percentages
Agree	24.8
Disagree	75.0
Missing	0.2
Total	100.0

Survey item: B18C
Description: Change in role of family and friends since veteran's death: Survivor relies more on family or friends for social activities
Population: All survivors

Categories	Percentages
Agree	69.3
Disagree	29.5
Missing	1.2
Total	100.0

Survey item: B18D
Description: Change in role of family and friends since veteran's death: Survivor relies more on family or friends for shopping
Population: All survivors

Categories	Percentages
Agree	29.4
Disagree	70.2
Missing	0.4
Total	100.0

Survey item: B18E
Description: Change in role of family and friends since veteran's death: Survivor goes on long-term visits to family or friends' homes
Population: All survivors

Categories	Percentages
Agree	27.2
Disagree	72.0
Missing	0.8
Total	100.0

Survey item: B18FA
Description: Change in role of family and friends since veteran's death: Family or friends help survivor save money by buying survivor's groceries
Population: All survivors

Categories	Percentages
Agree	6.9
Disagree	92.8
Missing	0.3
Total	100.0

Survey item: B18FB
Description: Change in role of family and friends since veteran's death: Family or friends help survivor save money by taking survivor out to dinner
Population: All survivors

Categories	Percentages
Agree	19.3
Disagree	80.2
Missing	0.5
Total	100.0

Survey item: B18FC
Description: Change in role of family and friends since veteran's death: Family or friends help survivor save money by providing transportation
Population: All survivors

Categories	Percentages
Agree	19.1
Disagree	80.8
Missing	0.1
Total	100.0

Survey item: B18FD Description: Change in role of family and friends since veteran's death: Family or friends help survivor save money by inviting survivor for long-term visits Population: All survivors	
Categories	**Percentages**
Agree	13.1
Disagree	85.9
Missing	1.0
Total	100.0

Survey item: B18FE Description: Change in role of family and friends since veteran's death: Family or friends help survivor save money by paying some of survivor's expenses Population: All survivors	
Categories	**Percentages**
Agree	7.2
Disagree	92.7
Missing	0.1
Total	100.0

Survivors Survey Part C: Use of and satisfaction with survivor benefits

Survey item: C1 Description: Overall satisfaction with DIC (How satisfied are you with your VA Dependency and Indemnity Compensation benefit overall?) Population: All survivors	
Categories	**Percentages**
Very satisfied	35.4
Satisfied	52.6
Neutral	2.3
Dissatisfied	6.7
Very dissatisfied	1.6
Missing	1.4
Total	100.0

Survey item: C2a Description: Reason why satisfied with DIC benefit. *Multiple responses allowed.* Population: Survivors who are satisfied or very satisfied with DIC	
Categories	**Percentages**
Not expecting DIC	28.8
Amount	51.8
Easy process	28.2
Service from VA staff	31.2
Other reason	10.6
Missing	5.4

Survey item: C2b Description: Reason why dissatisfied with DIC benefit. *Multiple responses allowed.* Population: Survivors who are dissatisfied or very dissatisfied with DIC	
Categories	**Percentages**
Expecting more DIC	50.0
Amount	60.6
Forms that need to be filled out	7.9
Service from VA staff	9.9
Other reason	8.8
Missing	0.1

Survey item: C3, C3a Description: SBP (Survivor Benefit Program) receipt Population: All survivors	
Categories	**Percentages**
Receive SBP	35.6
Do not receive SBP	61.3
Missing	3.1
Total	100.0

Survey item: C4
Description: SBP monthly amount (How much do you receive per month from the Survivor Benefit Program?)
Population: Survivors who report receiving SBP

Categories	Percentages
Less than $500	9.5
$500-$999	6.2
$1,000-$1,499	50.2
$1,500 or more	2.8
Missing	31.3
Total	100.0

Survey item: C5
Description: Overall satisfaction with SBP (How satisfied are you with the Survivor Benefit Program overall?)
Population: Survivors who report receiving SBP

Categories	Percentages
Very satisfied	31.6
Satisfied	48.5
Neutral	3.1
Dissatisfied	11.5
Very dissatisfied	4.2
Missing	1.1
Total	100.0

Survey item: C6a
Description: Reason why satisfied with SBP. *Multiple responses allowed.*
Population: Survivors who are satisfied or very satisfied with SBP

Categories	Percentages
Not expecting SBP	22.3
Amount	54.1
Easy process	29.5
Service from DOD staff	26.7
Other reason	9.7
Missing	7.6

Survey item: C6b
Description: Reason why dissatisfied with SBP. *Multiple responses allowed.*
Population: Survivors who are dissatisfied or very dissatisfied with SBP

Categories	Percentages
Expecting more SBP	53.0
Amount	48.3
Forms that need to be filled out	1.2
Service from DOD staff	3.7
Offsets DIC benefit	34.4
Other reason	8.7
Missing	0.0

Survey item: C7, C8
Description: Health plan (Are you currently enrolled in the VA's civilian health and medical program? This program is often referred to as CHAMP-VA. Are you currently enrolled in TRICARE?)
Population: All survivors

Categories	Percentages
Enrolled in CHAMP-VA	38.0
Enrolled in TRICARE	31.6
Enrolled in neither	27.4
Missing	3.0
Total	100.0

Survey item: C9
Description: Receipt of assistance from Educational Assistance Program (Have you or a child of yours ever received any financial aid from the VA's Survivors' and Dependents' Educational Assistance Program to help pay for college or education after high school?)
Population: All survivors

Categories	Percentages
Yes	33.8
No	64.9
Missing	1.3
Total	100.0

Survey item: C10
Description: Overall satisfaction with the Educational Assistance Program
Population: Survivors who report receiving assistance from the Educational Assistance Program

Categories	Percentages
Very satisfied	43.1
Satisfied	46.4
Neutral	2.2
Dissatisfied	5.5
Very dissatisfied	0.8
Missing	2.0
Total	100.0

Survey item: C11a
Description: Reason why satisfied with the Educational Assistance Program. *Multiple responses allowed.*
Population: Survivors who are satisfied or very satisfied with the Educational Assistance Program

Categories	Percentages
Amount	58.3
Forms easy to fill out	31.4
Service from VA staff	42.9
Other reason	14.1
Missing	5.3

Survey item: C11b
Description: Reason why dissatisfied with the Educational Assistance Program. *Multiple responses allowed.*
Population: Survivors who are dissatisfied or very dissatisfied with the Educational Assistance Program

Categories	Percentages
Amount	43.3
Forms that need to be filled out	13.3
Service from VA staff	10.5
Other reason	39.9
Missing	0.0

Survey item: C12
Description: Use of Home Loan Guaranty Program (Have you ever made use of the VA's Home Loan Guaranty Program?)
Population: All survivors

Categories	Percentages
Yes	16.4
No	81.5
Missing	2.1
Total	100.0

Survey item: C13
Description: Overall satisfaction with the Home Loan Guaranty Program
Population: Survivors who report using the Home Loan Guaranty Program

Categories	Percentages
Very satisfied	54.2
Satisfied	41.3
Neutral	1.1
Dissatisfied	0.9
Very dissatisfied	0.6
Missing	1.9
Total	100.0

Survey item: C14a
Description: Reason why satisfied with the Home Loan Guaranty Program. *Multiple responses allowed.*
Population: Survivors who are satisfied or very satisfied with the Home Loan Guaranty Program

Categories	Percentages
Amount	46.4
Forms easy to fill out	39.0
Service from VA staff	42.3
Other reason	16.1
Missing	6.4

Survey item: C14b Description: Reason why dissatisfied with the Home Loan Guaranty Program. *Multiple responses allowed.* Population: Survivors who are dissatisfied or very dissatisfied with the Home Loan Guaranty Program	
Categories	**Percentages**
Amount	37.1
Forms that need to be filled out	20.1
Service from VA staff	30.9
Other reason	36.4
Missing	0.0

Survivors Survey Part D: Demographics and employment

Survey item: D1 Description: Marital status Population: All survivors	
Categories	**Percentages**
Widowed	93.8
Remarried	2.3
Divorced	3.8
Separated	0.1
Missing	0.0
Total	100.0

Survey item: D2 Description: Educational attainment (What was the highest level of schooling that you have completed?) Population: All survivors	
Categories	**Percentages**
Less than high school	17.0
High school diploma or GED	35.3
Some college	26.3
Bachelor's degree	8.8
Graduate training	4.6
Professional certificate	4.7
Technical license	2.8
Missing	0.5
Total	100.0

Survey item: D3, D4, D5, D6 Description: Employment status Population: All survivors	
Categories	**Percentages**
Retired	79.9
Employed full-time	8.6
Employed part-time – want full-time	1.2
Employed part-time – do not want full-time	4.7
Not employed	5.5
Missing	0.1
Total	100.0

Survey item: D7 Description: Reason working part-time instead of full-time for survivors who are employed part-time but would like to be employed full-time (What is the main reason for working part-time?) Population: Survivors who are employed part-time but would like to be employed full-time	
Categories	**Percentages**
Slack work/business conditions	2.7
Could only find part-time work	21.4
Seasonal work	17.5
Child care problems	0.3
Other family/personal obligations	25.6
Health/medical limitations	26.8
School/training	1.0
Retired/Social Security limit on earnings	0.0
Full-time workweek is less than 35 hours	1.1
Other reason	2.6
Missing	1.0
Total	100.0

Survey item: D8
Description: Reason for not wanting to work full-time for survivors who are employed part-time and would not like to be employed full-time (What is the main reason you do not want to work full-time?)
Population: Survivors who are employed part-time and would not like to be employed full-time

Categories	Percentages
Child care problems	1.8
Other family/personal obligations	15.0
Health/medical limitations	21.6
School/training	0.3
Retired/Social Security limit on earnings	16.8
Full-time workweek is less than 35 hours	1.0
Other reason	42.9
Missing	0.6
Total	100.0

Survivors Survey Part E: Health status

Survey item: E1
Description: In general, would you say your health is excellent, very good, good, fair, or poor?
Population: All survivors

Categories	Percentages
Excellent	6.6
Very good	18.0
Good	30.0
Fair	25.3
Poor	20.0
Missing	0.1
Total	100.0

Survey item: E2
Description: Does your health now limit you in moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf? Does your health now limit you a lot, limit you a little, or not limit you at all?
Population: All survivors

Categories	Percentages
Yes, limited a lot	36.9
Yes, limited a little	31.7
No, not limited at all	30.2
Missing	1.2
Total	100.0

Survey item: E3
Description: Does your health now limit you in climbing several flights of stairs? Does your health now limit you a lot, limit you a little, or not limit you at all?
Population: All survivors

Categories	Percentages
Yes, limited a lot	42.9
Yes, limited a little	26.0
No, not limited at all	30.2
Missing	0.9
Total	100.0

Survey item: E4
Description: During the past 4 weeks, how much of the time have you accomplished less than you would like as a result of your physical health?
Population: All survivors

Categories	Percentages
All of the time	14.0
Most of the time	22.0
Some of the time	26.9
A little of the time	13.2
None of the time	22.7
Missing	1.2
Total	100.0

Survey item: E5
Description: During the past 4 weeks, how much of the time were you limited in the kind of work or other daily activities you do as a result of your physical health?
Population: All survivors

Categories	Percentages
All of the time	12.8
Most of the time	17.9
Some of the time	28.7
A little of the time	14.0
None of the time	25.1
Missing	1.5
Total	100.0

Survey item: E6
Description: During the past 4 weeks, how much of the time have you accomplished less than you would like as a result of any emotional problems such as feeling depressed or anxious?
Population: All survivors

Categories	Percentages
All of the time	5.2
Most of the time	10.5
Some of the time	21.0
A little of the time	20.7
None of the time	42.1
Missing	0.5
Total	100.0

Survey item: E7
Description: During the past 4 weeks, how much of the time did you do work or other regular daily activities less carefully than usual as a result of any emotional problems such as feeling depressed or anxious?
Population: All survivors

Categories	Percentages
All of the time	3.3
Most of the time	8.2
Some of the time	18.9
A little of the time	17.5
None of the time	51.1
Missing	1.0
Total	100.0

Survey item: E8
Description: During the past 4 weeks, how much did pain interfere with your normal work including both work outside the home and housework?
Population: All survivors

Categories	Percentages
Not at all	26.2
A little bit	21.4
Moderately	18.1
Quite a bit	21.0
Extremely	12.3
Missing	1.0
Total	100.0

Survey item: E9
Description: How much of the time during the past 4 weeks have you felt calm and peaceful?
Population: All survivors

Categories	Percentages
All of the time	11.8
Most of the time	44.5
Some of the time	26.9
A little of the time	11.8
None of the time	4.2
Missing	0.8
Total	100.0

Survey item: E10
Description: How much of the time during the past 4 weeks did you have a lot of energy?
Population: All survivors

Categories	Percentages
All of the time	5.4
Most of the time	22.1
Some of the time	32.8
A little of the time	25.1
None of the time	14.3
Missing	0.3
Total	100.0

Survey item: E11
Description: How much of the time during the past 4 weeks have you felt down-hearted and depressed?
Population: All survivors

Categories	Percentages
All of the time	2.8
Most of the time	8.7
Some of the time	24.4
A little of the time	30.1
None of the time	33.7
Missing	0.3
Total	100.0

Survey item: E12
Description: During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives, etc.)?
Population: All survivors

Categories	Percentages
All of the time	7.2
Most of the time	13.8
Some of the time	21.5
A little of the time	17.3
None of the time	39.4
Missing	0.8
Total	100.0

Survivors Survey Part F: Overall quality of life

Survey item: F1
Description: Currently, how much satisfaction do you get from your life overall?
Population: All survivors

Categories	Percentages
A lot	32.6
A fair amount	41.0
Some	17.1
A little	7.2
None	1.6
Missing	0.5
Total	100.0

Survey item: F2
Description: How much satisfaction do you get from the city or place you live in?
Population: All survivors

Categories	Percentages
A lot	39.2
A fair amount	34.2
Some	14.4
A little	6.3
None	4.9
Missing	1.0
Total	100.0

Survey item: F3
Description: How much satisfaction do you get from your non-working activities – hobbies, socializing, or other interests?
Population: All survivors

Categories	Percentages
A lot	33.0
A fair amount	33.2
Some	14.4
A little	10.5
None	7.3
Not applicable	0.9
Missing	0.7
Total	100.0

Survey item: F4
Description: How much satisfaction do you get from your family life?
Population: All survivors

Categories	Percentages
A lot	52.8
A fair amount	25.7
Some	9.0
A little	8.2
None	3.1
Not applicable	1.0
Missing	0.2
Total	100.0

Survey item: F5
Description: How much satisfaction do you get from your friendships?
Population: All survivors

Categories	Percentages
A lot	49.6
A fair amount	28.3
Some	10.9
A little	7.8
None	2.2
Not applicable	1.1
Missing	0.1
Total	100.0

Survey item: F6
Description: How much satisfaction do you get from your health and physical condition?
Population: All survivors

Categories	Percentages
A lot	20.0
A fair amount	35.4
Some	17.6
A little	18.2
None	8.0
Missing	0.8
Total	100.0

Survey item: F7
Description: On the whole, how satisfied are you with the work you do?
Population: All survivors

Categories	Percentages
Very satisfied	15.3
Satisfied	59.4
Neutral	16.0
Dissatisfied	5.3
Very dissatisfied	3.0
Missing	1.0
Total	100.0

Survey item: F8
Description: So far as you and your family are concerned, would you say that you are pretty well satisfied with your present financial situation, more or less satisfied, or not satisfied at all?
Population: All survivors

Categories	Percentages
Pretty well satisfied with your present financial situation	41.6
More or less satisfied	45.8
Not satisfied at all	11.6
Missing	1.0
Total	100.0

Appendix P: Survivors Survey instrument

PART I: Informed Consent and Introduction

Hello, my name is _____. I would like to speak with [name of respondent] about a letter he/she received from the Veterans' Disability Benefits Commission.

I1 **Is this [name of respondent]?**

1. Yes SKIP TO GENDER.
2. No

I2 **IF I1=NO: Can you tell me a good time to call back to reach [name of respondent]?**
SET CALLBACK SCHEDULE.

GENDER **IF I1=YES: Interviewer: Please record gender. [ASK ONLY IF ABSOLUTELY NECESSARY: I'm required to ask your gender. Are you male or female?]**

1. Male
2. Female
3. Refused

I3 **IF I1=YES: A few weeks ago General Scott, Chairman of the Veterans' Disability Benefits Commission sent you a letter about a survey on the quality of life, employment, education, and health status of survivors of disabled veterans. Did you receive and read this letter?**

1. Yes
2. No
3. Don't know/don't remember
4. Refused

IF I3=YES, CONTINUE and SKIP the Privacy Act Notice shown *in italics.*
IF I3=NO, CONTINUE and READ the Privacy Act Notice shown in *italics.*
IF I3=DON'T KNOW OR NOT SURE OR REFUSE, CONTINUE and READ the Privacy Act Notice shown in *italics.*

The Veterans' Disability Benefits Commission is currently conducting a survey on the quality of life, employment, education, and health status of survivors of disabled veterans to assess the effectiveness of the benefits payment in helping survi-

vors after the veteran's death. You are a part of a randomly selected interview sample of people who receive benefit payments from the VA's Dependency and Indemnity Compensation program. Your response is very important because it represents not only your own circumstances, but also those of many others. The answers that you give will be kept confidential and will be used for research purposes only. *PRIVACY ACT NOTICE: Your information is protected by the Federal Privacy Act Law.* The Commission hired ORC Macro, a private, independent research firm, to conduct this survey.

The survey, which typically lasts 20-30 minutes, asks you questions about your life satisfaction, health care, health status and employment. Participation in the survey will not affect your VA disability (or survivor) benefits. There are no risks to you if you participate in this survey, but if you feel uncomfortable with any of the questions, you may choose to skip them, or to stop the interview at any time. Although there are no direct benefits to you for participating in this survey, your participation will help better assess the program.

I4 Do you have any questions about the survey?

1. Yes
2. No

IF "YES", ELICIT SPECIFIC QUESTIONS AND RESPOND PER TRAINING, THEN REPEAT I4 UNTIL ANSWER IS "NO."

I5 Is now a convenient time for the interview?

1. Yes GO TO I5A
2. No
98 DK
99 REF

IF YES, CONTINUE.
IF NO, SET CALLBACK SCHEDULE. IF ASSISTANCE NEEDED, RECORD NAME OF ASSISTANT FOR CALLBACK AND SET CALLBACK SCHEDULE.

I5A IF I5 = YES: Interviewer indicates who (if anyone) is assisting survivor in responding.

I6 According to our records, VA provides you with a monthly benefit payment in recognition of your special status as a survivor of a veteran. Please accept our appreciation for your family's sacrifice. Do you receive a monthly benefit from VA? [INTERVIEWER: If respondent seems confused about the benefit, indicate that VA may send a monthly check or make an electronic deposit into an account.]

1. Yes
2. No
8. DK
9. REF

IF YES, CONTINUE.

IF NO OR DK OR REF, PROBE FOR EXPLANATION, CONFIRM THE ANSWER, ENTER COMMENTS, THEN END CALL AND REFER CASE TO SUPERVISOR

I7 How old are you?

Ages 18-89: Interviewer codes actual age and goes to I8.
Ages 90-100: Interviewer codes actual age and goes to I7VER.
Ages younger than 18: Interviewer enters a single code and goes to I7VER.
Ages older than 100: Interviewer enters a single code and goes to I7VER.
Don't know or refuse: Interviewer goes to I8.

I7VER Just to confirm, you said you are [age in I7] years of age. Is that correct?

1. Yes GO TO I8
2. No GO BACK TO I7
88. DK GO TO I8
99. REF GO TO I8

I8 Are you currently retired and not working for pay at all?

1. Yes
2. No
88. DK
99. REF

I9 Did your spouse pass away while on active duty?

1. Yes SKIP TO A1B
2. No
3. DK
4. REF

PART A: Effect of Veteran's Disability on Spouse Before Veteran's Death

[INTERVIEWER: Read this only if the veteran did NOT die while on active duty (I9 = NO OR DK OR REF)] I'd like to start by asking some general questions about how you think [veteran's] service-connected disability affected various aspects of your life during the time between when he/she became disabled and when he/she died.

A1A ASK ONLY IF VETERAN DID NOT DIE ON ACTIVE DUTY (I9=NO OR DK OR REF): Can you please tell me the number of years your spouse lived with his/her disability?

If 1 – 80 years, interviewer codes the actual number of years.
If less than 1 year, interviewer enters a single code.
If more than 80 years, interviewer enters a single code.
If don't know or refuse, interviewer goes to A1B.

A1B How many years has it been since your spouse died?

If 1 – 80 years, interviewer codes the actual number of years.
If less than 1 year, interviewer enters a single code.
If more than 80 years, interviewer enters a single code.
If don't know or refuse, interviewer goes to A1 (if spouse died on active duty) or Part B (if spouse did not die on active duty).

A1 ASK ONLY IF VETERAN DID NOT DIE ON ACTIVE DUTY (I9=NO OR DK OR REF): During the period before your spouse's death, did he/she have service-connected disabilities that were so severe that he/she needed someone to care for some of his/her needs? [Source: Based on 2001 Survivor Survey] INTERVIEWER NOTE: By "care", we mean being available when needed to provide assistance with activities of daily living. Activities of daily living include dressing, eating, bathing, toileting, preparing meals, paying bills, getting out of bed, walking, climbing stairs, etc.

1. Yes
2. No SKIP TO A3
88. DK SKIP TO A3
99. REF SKIP TO A3

A2 ASK ONLY IF A1=YES: As a result of your spouse's service-connected disability, did you yourself ever provide care to him/her for 4 or more hours per day at least 5 days a week for two or more years? [Source: New question] INTERVIEWER NOTE: By "care", we mean being available when needed to provide assistance with activities of daily living. Activities of daily living include dressing, eating, bathing, toileting, preparing meals, paying bills, getting out of bed, walking, climbing stairs, etc.

1. Yes
2. No
88. DK
99. REF

Effect on education or training

A3 Did your spouse's disability affect your education or training in the period before his/her death? [Source: New question]

1. Yes
2. No SKIP TO A8
88. DK SKIP TO A8
99. REF SKIP TO A8

A4 **ASK ONLY IF VETERAN REQUIRED CARE (A1=YES) AND DISABILITY AFFECTED EDUCATION (A3=YES): Was the effect of your spouse's disability on your education or training at least partly a result of care that you had to provide to him/her?** [Source: New question]

1. Yes
2. No SKIP TO A6
88. DK SKIP TO A6
99. REF SKIP TO A6

A5 **ASK ONLY IF CARE-GIVING AFFECTED EDUCATION (A4=YES): How did providing care to your spouse affect your education or training? INTERVIEWER READ LIST AND SELECT ALL THAT APPLY.** [Source: New question]

1. You did not get as much education or training as you otherwise would have
2. You got more education or training than you otherwise would have
3. It took you longer to complete your education or training program
4. It took you less time to complete your education or training program
5. Other effect (SPECIFY _____)
88. DK
99. REF

A6 **ASK ONLY IF DISABILITY AFFECTED EDUCATION (A3=YES): Was the effect of your spouse's disability on your education or training at least partly a result of a decline in his/her ability to earn income after he/she became disabled?** [Source: New question]

1. Yes
2. No SKIP TO A8
88. DK SKIP TO A8
99. REF SKIP TO A8

A7 **ASK ONLY IF VETERAN'S EARNINGS LOSS AFFECTED EDUCATION (A6=YES): How did your spouse's loss of earnings affect your education or training? Did you...?** CHECK ALL THAT APPLY. [Source: New question]

1. Get less education or training because you had to earn money
2. Get less education or training because you couldn't afford tuition
3. Get more education or training because you had to get a better-paying job
4. Or was there some other effect? (SPECIFY_____)
88. DK
99. REF

Effect on employment

A8 **Did your spouse's disability affect your employment in the period before his/her death?** [Source: New question]

1. Yes
2. No SKIP TO A12
88. DK SKIP TO A12
99. REF SKIP TO A12

A9 **ASK ONLY IF VETERAN REQUIRED CARE (A1=YES) AND DISABILITY AFFECTED EMPLOYMENT (A8=YES): Was the effect of your spouse's disability on your employment at least partly a result of care that you had to provide to him/her?** [Source: New question]

1. Yes
2. No
88. DK
99. REF

A10 **ASK ONLY IF VETERAN'S DISABILITY AFFECTED EMPLOYMENT (A8=YES): Was the effect of your spouse's disability on your employment at least partly a result of a decline in his/her ability to earn income after he/she became disabled?** [Source: New question]

1. Yes
2. No
88. DK
99. REF

A11 **ASK ONLY IF (A9=YES OR A10=YES): How did your spouse's disability affect your employment? Did you...?** CHECK ALL THAT APPLY. [Source: New question]

1. Start working
2. Continue working but increase the number of hours
3. Switch to a more demanding job
4. Switch to a higher-paying job
5. Stop working entirely
6. Continue working but decrease the number of hours
7. Switch to a less demanding job
8. Switch to a lower-paying job
9. Make some other change (SPECIFY_____)
88. DK
99. REF

Other effects of care-giving

A12 ASK ONLY IF VETERAN REQUIRED CARE (A1=YES): How much did caring for your spouse affect your physical health status? READ RESPONSES, EXCEPT #5. [Source: New question]

1. It had no effect
2. Your health was worse than it would have been
3. Your health was better than it would have been
4. Other (SPECIFY_____)
5. [DON'T READ] Not applicable (respondent didn't provide care)
88. DK
99. REF

A12A ASK ONLY IF VETERAN REQUIRED CARE (A1=YES): How did your spouse's disability affect your mental or emotional health? [Source: New question]

1. It had no effect SKIP TO A12B
2. You worried more about things than you would have
3. You worried less about things than you would have SKIP TO A12B
4. Other (SPECIFY_____) SKIP TO A12B
88. DK SKIP TO A12B
99. REF SKIP TO A12B

A12A_2 ASK ONLY IF A12A = 2: What things did you worry more about? READ LIST. SELECT ALL THAT APPLY. [Source: New question]

1. The cost of his/her care
2. Caring for other family members during his/her illness
3. Other expenses that were not covered due to his/her limited or lack of employment
4. Maintaining the morale of your spouse during his/her illness
5. Managing day to day affairs and decisions
6. Other (SPECIFY_____)
88. DK
99. REF

A12B ASK ONLY IF VETERAN REQUIRED CARE (A1=YES): While you were caring for your spouse, how often did you worry about him/her or his/her condition? [Source: New question]

1. All of the time
2. Most of the time
3. Some of the time
4. A little of the time
5. None of the time
6. DON'T READ: Not applicable (respondent didn't provide care)
88. DK
99. REF

A13 **ASK ONLY IF VETERAN REQUIRED CARE (A1=YES): How much did caring for your spouse affect your participation in social activities such as community programs, school activities, or going places with friends? Did your participation increase, stay the same, or decrease?** [Source: Based on 2001 Survivors Survey]

1. Increase
2. Stay the same
3. Decrease
4. DON'T READ: Not applicable (respondent didn't provide care)
88. DK
99. REF

A14 **How was your quality of life impacted by your spouse's service connected disability? Would you say it was...? [READ LIST]** [Source: New question]

1. Very negatively impacted
2. Negatively impacted
3. Not impacted
4. Positively impacted
5. Very positively impacted
88. DK
99. REF

PART B: Changes After Veteran's Death

The next questions are about changes you might have made due to the passing of your spouse such as changes in your employment, education, where you lived, or your financial resources.

B1 **Were you doing any work either for pay or profit when your spouse died or in the year before he/she died? Please include work in a family business or farm.** [Source: Based on CPS]

1. Yes
2. No SKIP TO B3
8. DK SKIP TO B3
9. REF SKIP TO B3

B2 **ASK ONLY IF B1 = YES: On average, how many hours per week were you working then?** [Source: New question]

IF RESPONDENT PROVIDES AN ANSWER OR REFUSES TO ANSWER, SKIP TO B4.

IF RESPONDENT DOESN'T KNOW, ASK B2a.

B2a **ASK ONLY IF B2 = DON'T KNOW: Do you think it was full-time or part-time?** [Source: New question]

1. Full-time
2. Part-time
88. DK
99. REF

SKIP TO B4.

B3 **ASK ONLY IF B1=NO OR DK OR REF: Did you start working in a job or business in the {IF MORE THAN ONE YEAR HAS ELAPSED: first 12 months after your spouse died} {IF LESS THAN ONE YEAR HAS ELAPSED: time since your spouse died}?** [Source: New question]

1. Yes
2. No
88. DK
99. REF

SKIP TO B6.

B4 **ASK ONLY IF B1=YES: How did your employment change in the {IF MORE THAN ONE YEAR HAS ELAPSED: first 12 months after your spouse died} {IF LESS THAN ONE YEAR HAS ELAPSED: time since your spouse died}? Did you...?:** READ RESPONSES. CHECK ALL THAT APPLY. [Source: New question]

1. Not work
2. Make no changes.
3. Increase the hours that you worked
4. Switch to a more demanding job
5. Switch to a higher-paying job
6. Stop work entirely
7. Decrease the hours that you worked
8. Switch to a less demanding job
9. Switch to a lower-paying job
10. Make some other change – SPECIFY
88. DK
99. REF

B5 **ASK ONLY IF B1=YES AND VETERAN DIED MORE THAN ONE YEAR AGO: How did your earnings from your own work change in the 12 months after your spouse died compared with the year before? Was there little or no change, did your personal earnings increase, or did your earnings decrease?** [Source: New question]

1. Little or no change
2. Earnings increased
3. Earnings decreased
88. DK

99. REF

B6 **Did you have any dependent child or children living with you at the time your spouse died?** [Source: New question]

1. Yes
2. No SKIP TO B8
88. DK SKIP TO B8
99. REF SKIP TO B8

B7 **ASK ONLY IF B6=YES: In the first 12 months after your spouse died {IF LESS THAN ONE YEAR HAS ELAPSED: Since your spouse died} did you make any changes in your child care arrangements due to his/her death?** [Source: New question]

1. Yes
2. No
3. NA
88. DK
99. REF

B8 **What was the highest level of schooling you completed before your spouse died? Was it...?** READ RESPONSES. [Source: New question]

1. Less than high school
2. High school diploma or GED
3. Some college
4. Bachelor's degree
5. Graduate training
6. Professional certificate
7. Technical license
88. DK
99. REF

B9 **In the [first 12 months after/time since] your spouse died, did you make any changes in your education or training due to [his/her] death?** [Source: Based on 2001 Survivors Survey]

1. Yes
2. No SKIP TO B11
8. DK SKIP TO B11
9. REF SKIP TO B11

B10 **ASK ONLY IF B9=YES: Please tell me which of the following best describes these changes.** CODE ALL THAT APPLY. [Source: Based on 2001 Survivors Survey]

1. You quit school
2. You changed schools, majors, or programs
3. You gave up plans to go to college
4. You enrolled in school or a job training program
5. Something else (SPECIFY)
88. DK
99. REF

B11 **In the [first 12 months after/time after] your spouse died, were you unable to take classes or courses that you wanted to improve your chances of getting a good or better job?** [Source: Based on 2001 Survivors Survey]

1. Yes
2. No SKIP TO B13
88. DK SKIP TO B13
99. REF SKIP TO B13

B12 **ASK ONLY IF B11=YES: Which of the following best describes the main reason why you weren't able to take the courses?** READ RESPONSES. [Source: Based on 2001 Survivors Survey]

1. The courses were too expensive
2. You didn't know where to find appropriate courses
3. You had too many other things to take care of
4. You could not get childcare
5. The locations or times were inconvenient
6. You had no transportation
7. Other (SPECIFY)
88. DK
99. REF

B13 **In the first 12 months after your spouse died {IF LESS THAN ONE YEAR HAS ELAPSED: Since your spouse died,} did you have to move from where you lived due to his/her death?** [Source: Based on 2001 Survivors Survey]

1. Yes
2. No SKIP TO B16
88. DK SKIP TO B16
99. REF SKIP TO B16

B14 **ASK ONLY IF B13=YES: Please tell me which of the following best describes the main reason why you moved:** READ RESPONSES. [Source: Based on 2001 Survivors Survey]

1. You moved because you no longer qualified for military housing
2. You needed a less expensive place to live
3. You were physically unable to maintain the place where you were

4. You wanted to be closer to school or job
5. You wanted to make a fresh start
6. You found a place more to your liking
7. Something else (SPECIFY)
88. DK
99. REF

B15 ASK ONLY IF B13=YES: What best describes the place you moved to? Was it: [Source: Based on 2001 Survivors Survey]

1. In with family
2. Into better housing of your own
3. Into similar housing of your own
4. Into less expensive housing of your own
5. Something else (SPECIFY)
88. DK
99. REF

B16 In the first 12 months after your spouse died {IF LESS THAN ONE YEAR HAS ELAPSED: Since your spouse died} did your overall financial situation change due to his/her death? [Source: Based on 2001 Survivors Survey]

1. Yes
2. No SKIP TO B18
88. DK SKIP TO B18
99. REF SKIP TO B18

B17 ASK ONLY IF B16=YES: Please tell me which of the following describes your financial changes; tell me all that apply: READ RESPONSES, CODE ALL THAT APPLY. [Source: Based on 2001 Survivors Survey]

1. You experienced a dramatic decrease in financial resources
2. You started working for pay
3. You lost commissary privileges
4. You received financial help from your family
5. You got help from churches or community organizations
6. You received public assistance, such as welfare, or other resources
7. You got assistance from a veteran's service organization
8. You remarried and a new spouse or partner helped with expenses
9. Something else (SPECIFY)
88. DK
99. REF

B18 Now I'm going to read you a list of how the role of family and friends in your life may have changed since your spouse's death. Tell me if you agree or disagree with these statements (AGREE, DISAGREE, DK or REF): [Source: New questions]

B18A I rely more on family or friends to keep me company

B18B I rely more on family or friends for transportation

B18C I rely more on family or friends for social activities

B18D I rely more on family or friends for shopping

B18E I go on long term visits to family or friends' homes

B18F Family or friends help me save money by…:

B18FA Buying my groceries

B18FB Taking me out to dinner

B18FC Providing transportation

B18FD Inviting me for long-term visits

B18FE Paying some of my expenses

PART C. Use of and Satisfaction with Survivor Benefits

Now I have some questions about your overall satisfaction with some survivor benefits that you might have received from the VA and the Department of Defense.

C1 How satisfied are you with your VA Dependency and Indemnity Compensation benefit overall? Are you…? [Source: New question]

1. Very satisfied
2. Satisfied
3. Neutral (DO NOT READ THIS OPTION. CODE ONLY IF RESPONDENT PROVIDES THIS RESPONSE. THEN SKIP TO C3.)
4. Dissatisfied SKIP to C2b
5. Very Dissatisfied SKIP to C2b

88. DK SKIP TO C3
99. REF SKIP TO C3

C2a **ASK ONLY IF C1 = SATISFIED OR VERY SATISFIED: Why are you satisfied? Is it because…?** CHECK ALL THAT APPLY. [Source: Based on 2001 Survivors Survey]

1. You were not expecting to receive any benefit at all
2. Of the amount of the benefit
3. It was an easy process to follow.
4. Of service from VA staff
5. Some other reason (Specify_____)

88. DK
99. REF

SKIP TO C3

C2b **ASK ONLY IF C1 = DISSATISFIED OR VERY DISSATISFIED: Why are you dissatisfied? Is it because…?** CHECK ALL THAT APPLY. [Source: Based on 2001 Survivors Survey]

1. You were expecting to receive more benefit.
2. Of the amount of the benefit.
3. Of the forms you have to fill out.
4. Of service from VA staff
5. Some other reason (Specify_____)

88. DK
99. REF

C3 **Do you also receive monthly Survivor Benefit Program payments from the Department of Defense as a beneficiary of your spouse?** [Source: New question]

1. Yes SKIP TO C4
2. No SKIP TO C7

88. DK
99. REF SKIP TO C7

C3a **ASK ONLY IF C3=DK AND VBA DATA INDICATE THAT THE RESPONDENT DOES RECEIVE SBP. I'd like to ask you a little more about this, since our records do show that you receive payments from the Survivor Benefit Program. The Survivor Benefit Program is sometimes just referred to as the SBP. People are eligible for this program in two types of situations. First, if their spouse was retirement-eligible but died before retiring from the military. And second, if their spouse was retired from the military and, during the period between retirement and death, chose to make premium payments for this program. After hearing this description of the Survivor Benefit Program, do you now think you are receiving payments from it?** [Source: New question]

1. Yes SKIP TO C4
2. No

88. DK
99. REF SKIP TO C7

C3b ASK ONLY IF C3a=[NO OR DK]. Did you maybe receive benefits from the Survivor Benefit Program for a while after [veteran] died but then become ineligible? [Source: New question]

1. Yes
2. No
88. DK
99. REF

SKIP TO C7.

C4 ASK ONLY IF [C3=YES OR C3a=YES]: How much do you receive per month from the Survivor Benefit Program? [Source: New question]

RECORD AMOUNT _____

C5 ASK ONLY IF C3=YES OR C3a=YES: How satisfied are you with the Survivor Benefit Program overall? Are you...? [Source: New question]

1. Very satisfied
2. Satisfied
3. Neutral (DO NOT READ THIS OPTION. CODE ONLY IF RESPONDENT PROVIDES THIS RESPONSE. THEN SKIP TO C7.)
4. Dissatisfied SKIP TO C6b
5. Very Dissatisfied SKIP TO C6b
88. DK SKIP TO C7
99. REF SKIP TO C7

C6a ASK ONLY IF C5 = SATISFIED OR VERY SATISFIED. Why are you satisfied? Is it because...? ENTER ALL THAT APPLY. [Source: New question]

1. You were not expecting to receive any benefit at all
2. Of the amount of the benefit
3. It was an easy process to follow.
4. Of service from Department of Defense staff
5. Some other reason (Specify_____)
88. DK
99. REF

SKIP TO C7

C6b ASK ONLY IF C5 = DISSATISFIED OR VERY DISSATISFIED: Why are you dissatisfied? Is it because...? ENTER ALL THAT APPLY.

1. You were expecting to receive more benefit.
2. Of the amount of the benefit.
3. Of the forms you have to fill out.
4. Of service from Department of Defense staff
5. Of the offset of your Survivor's Benefit
6. Some other reason (Specify_____)
88. DK
99. REF

C7 **Are you currently enrolled in the VA's civilian health and medical program? This program is often referred to as CHAMP-VA.** [Source: New question]

1. Yes SKIP to C9
2. No
88. DK
99. REF

C8 **Are you currently enrolled in TRICARE?** [Source: New question]

1. Yes
2. No
88. DK
99. REF

C9 **Have you or a child of yours ever received any financial aid from the VA's Survivors' and Dependents' Educational Assistance program to help pay for college or education after high school?** [Source: New question]

1. Yes
2. No SKIP TO C12
88. DK SKIP TO C12
99. REF SKIP TO C12

C10 **ASK ONLY IF C9 = YES. How satisfied were you with the educational assistance program overall? Were you...?** [Source: New question]

1. Very satisfied
2. Satisfied
3. Neutral (DO NOT READ THIS OPTION. CODE ONLY IF RESPONDENT PROVIDES THIS RESPONSE. THEN SKIP TO C12.)
4. Dissatisfied SKIP TO C11b
5. Very dissatisfied SKIP TO C11b
8. DK SKIP TO C12
9. REF SKIP TO C12

C11a **ASK ONLY IF C10 = SATISFIED OR VERY SATISFIED. Why were you satisfied? Is it because of...?** ENTER ALL THAT APPLY. [Source: New question]

1. The amount of the benefit
2. The forms you had to fill out were easy to understand
3. The service from VA staff
4. Some other reason (Specify_____)
88. DK
99. REF

SKIP TO C12.

C11b **ASK ONLY IF C10 = DISSATISFIED OR VERY DISSATISFIED. Why were you dissatisfied? Is it because of...?** ENTER ALL THAT APPLY. [Source: New question]

1. The amount of the benefit
2. The forms you had to fill out
3. Service from VA staff
4. Some other reason (Specify_____)

88. DK
99. REF

C12 **Have you ever made use of the VA's Home Loan Guaranty program?** [Source: New question]

1. Yes
2. No SKIP TO PART D

8. DK SKIP TO PART D
9. REF SKIP TO PART D

C13 **ASK ONLY IF C12 = YES. How satisfied were you with the Home Loan Guaranty program overall? Were you...?** [Source: New question]

1. Very satisfied
2. Satisfied
3. Neutral (DO NOT READ THIS OPTION. CODE ONLY IF RESPONDENT PROVIDES THIS RESPONSE. THEN GO TO PART D.)
4. Dissatisfied SKIP TO C14b
5. Very dissatisfied SKIP TO C14b

88. DK SKIP TO PART D
99. REF SKIP TO PART D

C14a **ASK ONLY IF C13 = SATISFIED OR VERY SATISFIED. Why were you satisfied? Is it because of...?** ENTER ALL THAT APPLY. [Source: New question]

1. The amount of the benefit
2. The forms you had to fill out were easy to understand
3. The service from VA staff
4. Some other reason (Specify_____)

88. DK
99. REF

SKIP TO PART D

C14b ASK ONLY IF C13 = DISSATISFIED OR VERY DISSATISFIED. Why were you dissatisfied? Is it because of...? ENTER ALL THAT APPLY. [Source: New question]

1. The amount of the benefit
2. The forms you had to fill out
3. The service from VA staff
4. Some other reason (Specify_____)
88. DK
99. REF

PART D: Demographics and Employment

Now I have some questions about your current circumstances.

D1 What is your current marital status? Are you...? [Source: New question]

1. Widowed
2. Remarried
3. Divorced
4. Separated
99. REF

D2 What is the highest level of schooling that you have completed? READ RESPONSES. [Source: New question]

1. Less than high school
2. High school diploma or GED
3. Some college
4. Bachelor's degree
5. Graduate training
6. Professional certification
7. Technical licensing
88. DK
99. REF

IF RESPONDENT IS RETIRED I8=YES, SKIP TO PART E.

D3 ASK ONLY IF NOT RETIRED (I8 = NO, DK, or REF): Last week, did you do any work for either pay or profit? Please include work in a family business or farm. [Source: CPS]

1. Yes SKIP TO D5
2. No
88. DK
99. REF

D4 **ASK ONLY IF D3 =[NO OR DK OR REF]: Last week, did you have a job, either full or part time? Include any job from which you were temporarily absent.** [Source: CPS]

1. Yes
2. No SKIP TO PART E
88. DK SKIP TO PART E
99. REF SKIP TO PART E

D5 **ASK ONLY IF (D3=YES OR D4=YES): Altogether, how many hours do you usually work per week?** [Source: Based on CPS]

RECORD RESPONSE _____

SKIP TO PART E IF [(D5 is 35 or more) OR (D5=DK OR REF)].

D6 **ASK ONLY IF D5<35: Do you want to work a full-time workweek of 35 hours or more per week?** [Source: CPS]

1. Yes
2. No SKIP TO D8
3. Current regular hours are full time SKIP TO PART E
88. DK
99. REF

D7 **ASK ONLY IF D6=[YES OR DK OR REF]: Some people work part-time because they cannot find full-time work or because business is poor. Others work part-time because of family obligations or other personal reasons. What is your <u>main</u> reason for working part-time?** (PROBE IF NECESSARY: What is your main reason for working <u>part-time</u> instead of <u>full-time</u>?) DO NOT READ LIST. [Source: CPS]

1. Slack work/business conditions
2. Could only find part-time work
3. Seasonal work
4. Child care problems
5. Other family/personal obligations
6. Health/medical limitations
7. School/training
8. Retired/Social Security limit on earnings
9. Full-time workweek is less than 35 hours
10. Other (specify) _____
88. DK
99. REF

SKIP TO PART E.

D8 **ASK ONLY IF D6=NO. What is the main reason you do not want to work full time?** DO NOT READ LIST. [Source: CPS]

1. Child care problems
2. Other family/personal obligations
3. Health/medical limitations
4. School/training

5. Retired/Social Security limit on earnings
6. Full-time workweek less than 35 hours
7. Other (specify) _____
88. DK
99. REF

PART E. Health Status[83]

Now I'm going to ask some general questions about your health currently and activities that you might do during a typical day. When the question mentions work, please consider any activity that you do around the home or activity like volunteer work if you are retired.

E1 **In general, would you say your health is...** [Source: SF-12]

1. Excellent
2. Very good
3. Good
4. Fair
5. Poor
88. DK
99. REF

E2 **Does your health now limit you in moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf. Does your health now limit you a lot, limit you a little, or not limit you at all?** [Source: SF-12]

1. Yes, limited a lot
2. Yes, limited a little
3. No, not limited at all
88. DK
99. REF

E3 **Does your health now limit you in climbing several flights of stairs. Does your health now limit you a lot, limit you a little, or not limit you at all?** [Source: SF-12]

1. Yes, limited a lot
2. Yes, limited a little
3. No, not limited at all
88. DK
99. REF

83. Questions E.1 to E.12 come from the SF-12v2™ Health Survey (Standard, U.S. Version 2.0), copyright 1994, 2002 by QualityMetric Incorporated and Medical Outcomes Trust. The SF-12v2™ was licensed from QualityMetric Incorporated, Lincoln, Rhode Island. Minor modifications have been made to the SF-12v2™ interview script.

E4 **During the *past 4 weeks*, how much of the time have you accomplished less than you would like as a result of your physical health?** [Source: SF-12]

1. All of the time
2. Most of the time
3. Some of the time
4. A little of the time
5. None of the time
88. DK
99. REF

E5 **During the *past 4 weeks*, how much of the time were you limited in the kind of work or other regular daily activities you do *as a result of your physical health*?** [Source: SF-12]

1. All of the time
2. Most of the time
3. Some of the time
4. A little of the time
5. None of the time
88. DK
99. REF

E6 **During the *past 4 weeks*, how much of the time have you accomplished less than you would like *as a result of any emotional problems* such as feeling depressed or anxious?** [Source: SF-12]

1. All of the time
2. Most of the time
3. Some of the time
4. A little of the time
5. None of the time
88. DK
99. REF

E7 **During the *past 4 weeks*, how much of the time did you do work or other regular daily activities less carefully than usual *as a result of any emotional problems* such as feeling depressed or anxious*?*** [Source: SF-12]

1. All of the time
2. Most of the time
3. Some of the time
4. A little of the time
5. None of the time
88. DK
99. REF

E8 **During the *past 4 weeks*, how much did pain interfere with your normal work including both work outside the home and housework?** [Source: SF-12]

1. Not at all
2. A little bit
3. Moderately
4. Quite a bit
5. Extremely
88. DK
99. REF

E9 **How much of the time during the *past 4 weeks* have you felt calm and peaceful?** [Source: SF-12]

1. All of the time
2. Most of the time
3. Some of the time
4. A little of the time
5. None of the time
88. DK
99. REF

E10 **How much of the time during the *past 4 weeks* did you have a lot of energy?** [Source: SF-12]

1. All of the time
2. Most of the time
3. Some of the time
4. A little of the time
5. None of the time
88. DK
99. REF

E11 **How much of the time during the *past 4 weeks* have you felt downhearted and depressed?** [Source: SF-12]

1. All of the time
2. Most of the time
3. Some of the time
4. A little of the time
5. None of the time
88. DK
99. REF

E12 **During the *past 4 weeks*, how much of the time has your *physical health or emotional problems* interfered with your social activities (like visiting friends, relatives, etc.)? Has it interfered...?** [Source: SF-12]

1. All of the time
2. Most of the time
3. Some of the time
4. A little of the time
5. None of the time
88. DK
99. REF

PART F. Overall Quality of Life

I am now going to ask you about your satisfaction with various aspects of your life currently. For each area of life I am going to name, please tell me how much satisfaction you get from that area.

F1 **Currently, how much satisfaction do you get from your life overall?** [Source: New question]

1. A lot
2. A fair amount
3. Some
4. A little
5. None
88. DK
99. REF

F2 **How much satisfaction do you get from the city or place you live in?** [Source: GSS]

1. A lot
2. A fair amount
3. Some
4. A little
5. None
88. DK
99. REF

F3 **How much satisfaction do you get from your non-working activities – hobbies, socializing or other interests?** [Source: GSS]

1. A lot
2. A fair amount
3. Some
4. A little

5. None
6. NA
88. DK
99. REF

F4 **How much satisfaction do you get from your family life?** [Source: GSS]

1. A lot
2. A fair amount
3. Some
4. A little
5. None
6. NA
88. DK
99. REF

F5 **How much satisfaction do you get from your friendships?** [Source: GSS]

1. A lot
2. A fair amount
3. Some
4. A little
5. None
6. NA
88. DK
99. REF

F6 **How much satisfaction do you get from your health and physical condition?** [Source: GSS]

1. A lot
2. A fair amount
3. Some
4. A little
5. None
88. DK
99. REF

F7 **On the whole, how satisfied are you with the work you do – would you say you are...:** NOTE TO INTERVIEWER: IF RESPONDENT SAYS HE/SHE DOES NOT WORK, TELL HIM/HER TO CONSIDER ALL TYPES OF WORK, INCLUDING THE WORK HE/SHE DOES AROUND THE HOUSE. [Source: GSS]

1. Very satisfied
2. Satisfied
3. Dissatisfied
4. Very dissatisfied
5. NA
88. DK
99. REF

F8 **We are interested in how people are getting along financially these days. So far as you and your family are concerned, would you say that you are…:** [Source: GSS]

1. Pretty well satisfied with your present financial situation
2. More or less satisfied
3. Not satisfied at all
88. DK
99. REF

F9 **Before we end this interview, is there anything else you would like to tell the Commission about your VA DIC benefits?** (SELECT AS MANY AS APPLY)

1. Benefit covers basics expenses
2. Grateful to receive it
3. Benefit is unexpected but needed
4. Benefit recognizes me for the time I spent caring for [veteran]
5. Benefit does not make up for the time I spent caring for [veteran]
6. Benefit doesn't make up for the suffering and service experienced by the deceased veteran
7. Other (specify)
88. DK
99. REF

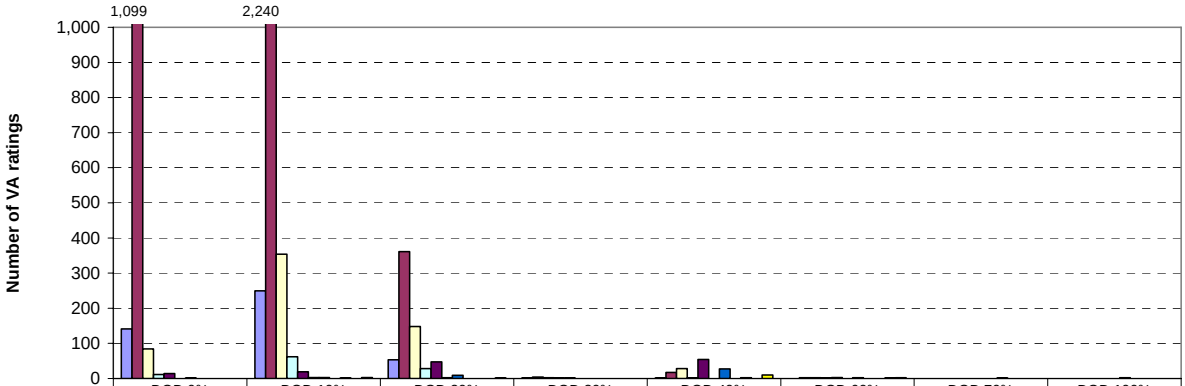
PART G: Closing

That's the end of my questions. If you have any questions about the survey or the Veterans' Disability Benefits Commission, please visit the Commission's website at www.vetscommission.org or call the following toll-free number: 1-XXX-XXX-XXXX. Thank you very much for being a part of this study!
END

Appendix Q: DOD/VA rating comparisons

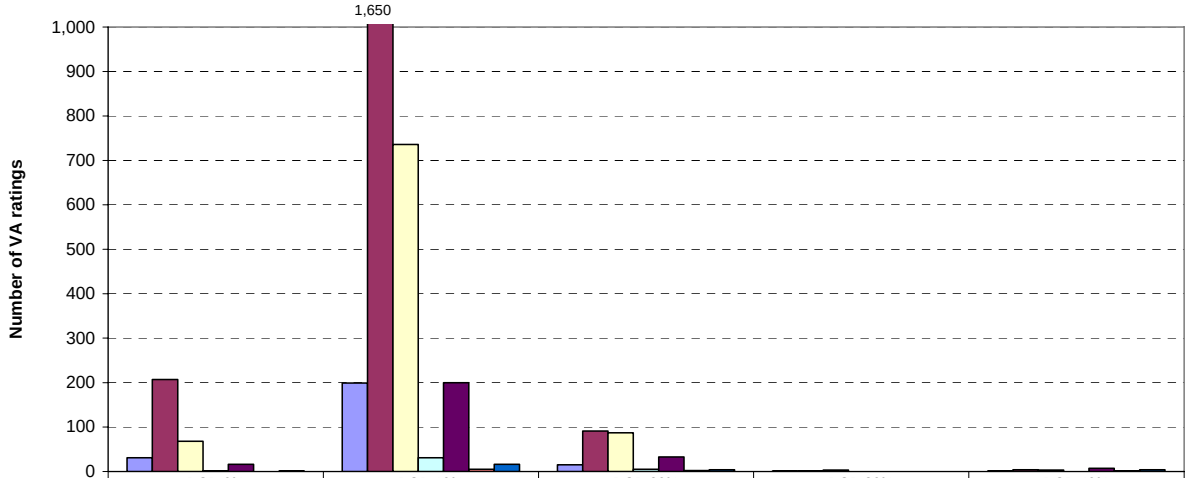
Figures 214 through 224 show the distribution of VA ratings by DOD rating by condition. These conditions are arthritis, lumbosacral or cervical strain, asthma, intervertebral disc syndrome, major depressive disorder, PTSD, diabetes mellitus, bipolar disorder, migraine headaches, traumatic brain injury, knee condition, seizure disorder, and sleep apnea.

Figure 214. Comparison of DOD and VA ratings for arthritis



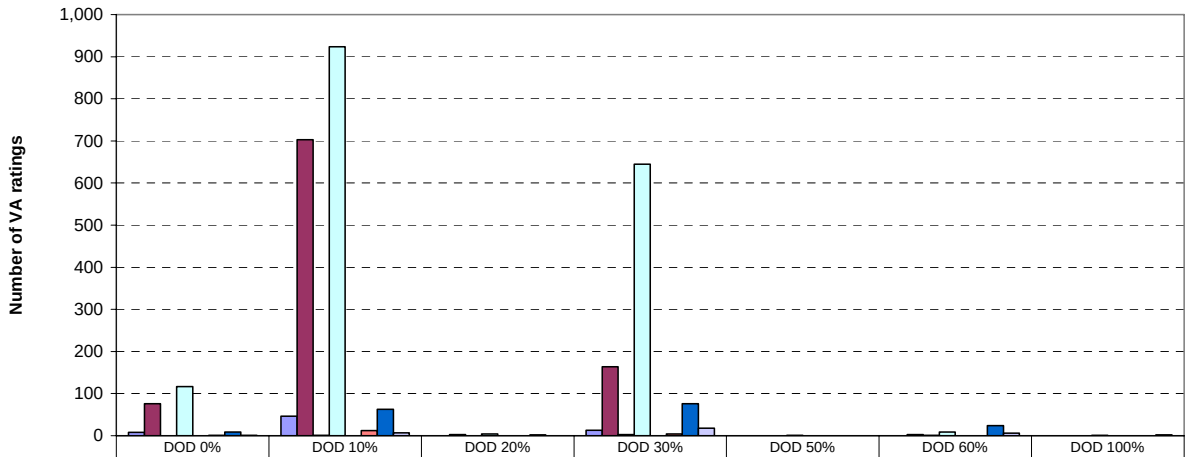
	DOD 0%	DOD 10%	DOD 20%	DOD 30%	DOD 40%	DOD 60%	DOD 70%	DOD 100%
VA 0%	141	250	53	1	1	0	0	0
VA 10%	1099	2240	361	4	17	2	0	0
VA 20%	84	354	148	2	28	2	0	0
VA 30%	11	62	28	1	1	1	0	0
VA 40%	14	19	47	1	54	3	0	0
VA 50%	0	3	2	0	0	0	0	0
VA 60%	1	3	9	0	27	2	0	2
VA 70%	0	0	0	0	0	0	1	0
VA 80%	0	1	0	0	2	0	0	0
VA 90%	0	0	0	0	0	1	0	0
VA 100%	0	3	1	0	10	2	0	0

Figure 215. Comparison of DOD and VA ratings for lumbosacral or cervical strain



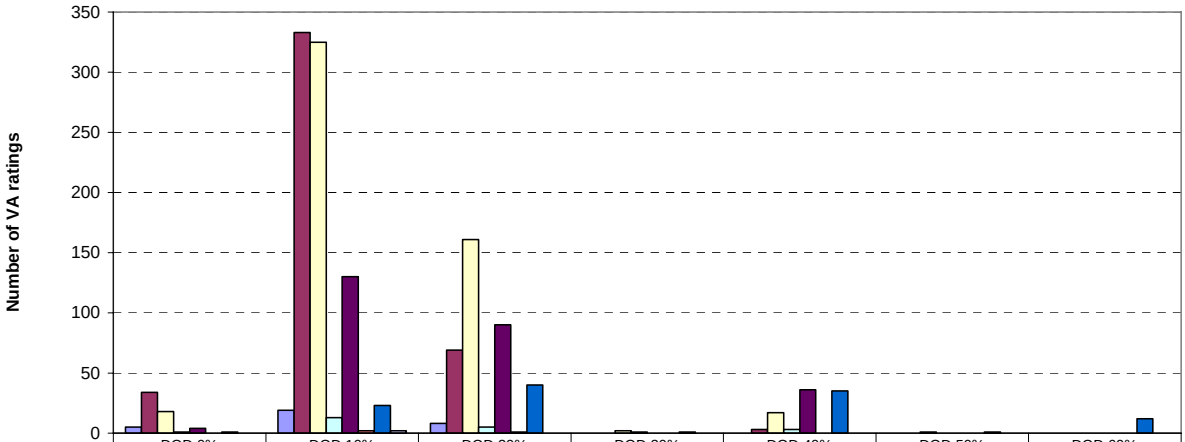
	DOD 0%	DOD 10%	DOD 20%	DOD 30%	DOD 40%
VA 0%	31	199	15	1	1
VA 10%	207	1650	91	1	4
VA 20%	68	736	87	3	3
VA 30%	1	31	5	0	0
VA 40%	16	200	33	0	7
VA 50%	0	5	2	0	1
VA 60%	1	16	4	0	4

Figure 216. Comparison of DOD and VA ratings for asthma



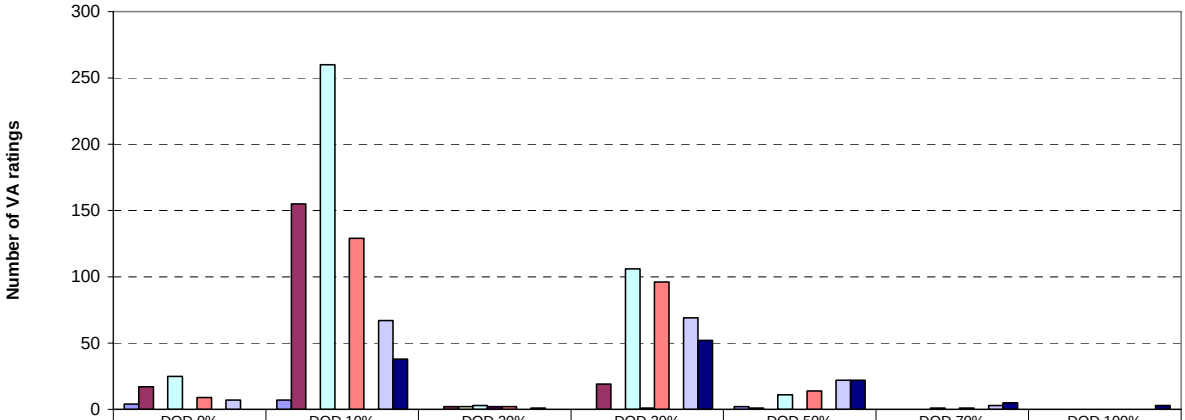
	DOD 0%	DOD 10%	DOD 20%	DOD 30%	DOD 50%	DOD 60%	DOD 100%
VA 0%	8	46	0	13	0	0	0
VA 10%	76	703	3	164	0	3	0
VA 20%	0	1	0	3	0	1	0
VA 30%	117	924	4	645	1	9	1
VA 40%	0	0	0	0	0	0	0
VA 50%	1	12	0	4	0	0	0
VA 60%	9	63	2	76	0	24	0
VA 100%	1	7	0	18	0	6	2

Figure 217. Comparison of DOD and VA ratings for intervertebral disc syndrome



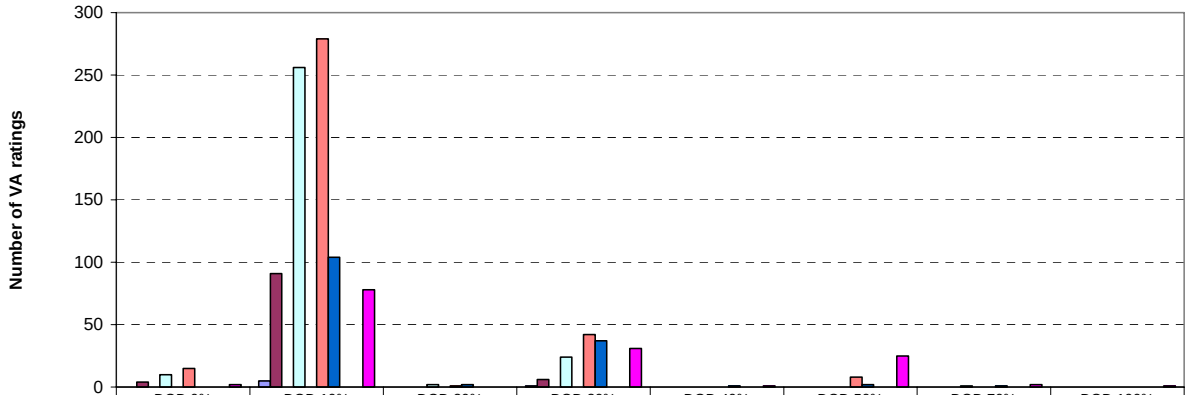
	DOD 0%	DOD 10%	DOD 20%	DOD 30%	DOD 40%	DOD 50%	DOD 60%
VA 0%	5	19	8	0	0	0	0
VA 10%	34	333	69	0	3	0	0
VA 20%	18	325	161	2	17	1	0
VA 30%	1	13	5	1	3	0	0
VA 40%	4	130	90	0	36	0	0
VA 50%	0	2	1	0	0	0	0
VA 60%	1	23	40	1	35	1	12
VA 100%	0	2	0	0	0	0	0

Figure 218. Comparison of DOD and VA ratings for major depressive disorder



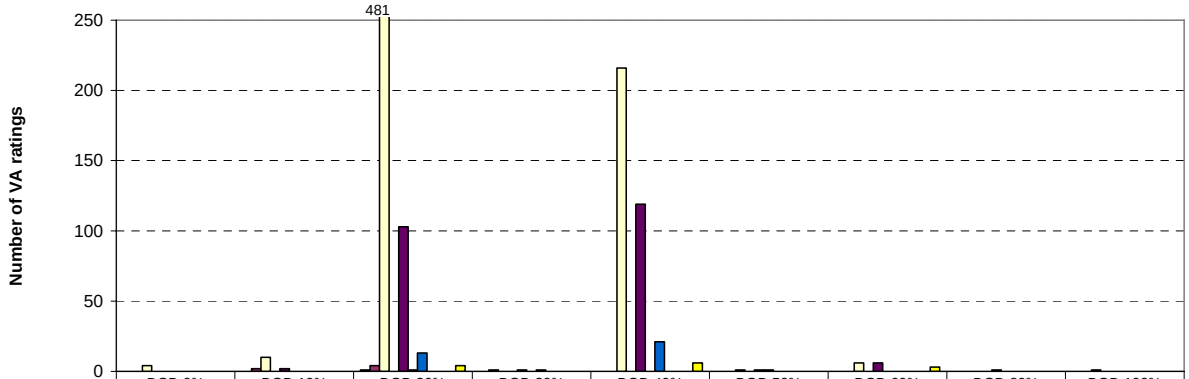
	DOD 0%	DOD 10%	DOD 20%	DOD 30%	DOD 50%	DOD 70%	DOD 100%
VA 0%	4	7	0	0	2	0	0
VA 10%	17	155	2	19	1	0	0
VA 20%	0	0	2	0	0	0	0
VA 30%	25	260	3	106	11	1	0
VA 40%	0	0	2	1	0	0	0
VA 50%	9	129	2	96	14	1	0
VA 60%	0	0	0	0	0	0	0
VA 70%	7	67	1	69	22	3	0
VA 100%	0	38	0	52	22	5	3

Figure 219. Comparison of DOD and VA ratings for PTSD



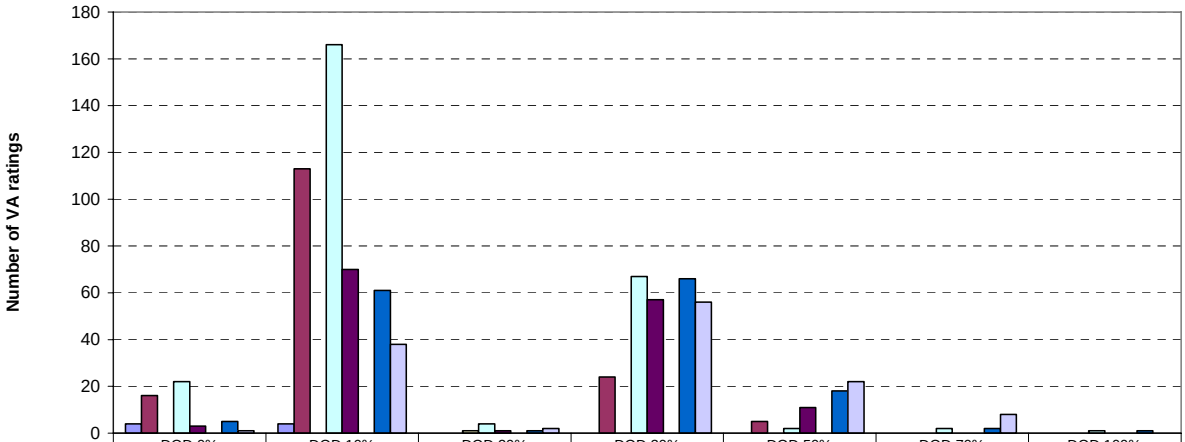
	DOD 0%	DOD 10%	DOD 20%	DOD 30%	DOD 40%	DOD 50%	DOD 70%	DOD 100%
VA 0%	0	5	0	1	0	0	0	0
VA 10%	4	91	0	6	0	0	0	0
VA 20%	0	0	0	0	0	0	0	0
VA 30%	10	256	2	24	0	0	1	0
VA 40%	0	0	0	0	0	0	0	0
VA 50%	15	279	1	42	0	8	0	0
VA 70%	0	104	2	37	1	2	1	0
VA 80%	0	0	0	0	0	0	0	0
VA 90%	0	0	0	0	0	0	0	0
VA 100%	2	78	0	31	1	25	2	1

Figure 220. Comparison of DOD and VA ratings for diabetes mellitus



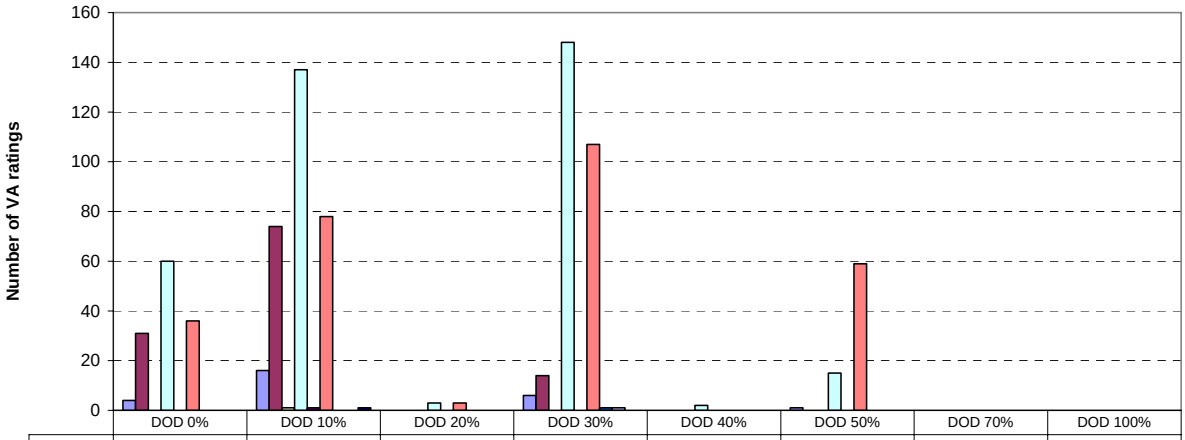
	DOD 0%	DOD 10%	DOD 20%	DOD 30%	DOD 40%	DOD 50%	DOD 60%	DOD 80%	DOD 100%
VA 0%	0	0	1	0	0	0	0	0	0
VA 10%	0	2	4	1	0	0	0	0	0
VA 20%	4	10	481	0	216	1	6	0	1
VA 30%	0	0	0	0	0	0	0	0	0
VA 40%	0	2	103	1	119	1	6	1	0
VA 50%	0	0	1	0	0	1	0	0	0
VA 60%	0	0	13	1	21	0	0	0	0
VA 70%	0	0	0	0	0	0	0	0	0
VA 80%	0	0	0	0	0	0	0	0	0
VA 90%	0	0	0	0	0	0	0	0	0
VA 100%	0	0	4	0	6	0	3	0	0

Figure 221. Comparison of DOD and VA ratings for bipolar disorder



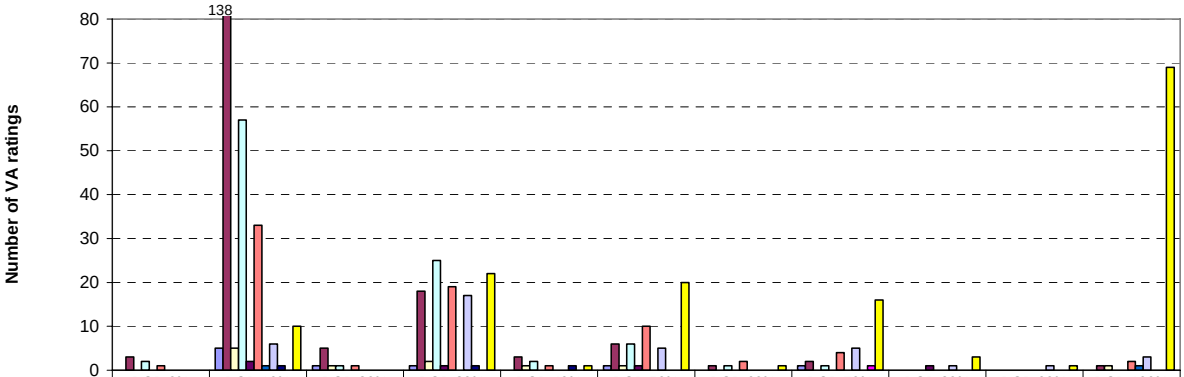
	DOD 0%	DOD 10%	DOD 20%	DOD 30%	DOD 50%	DOD 70%	DOD 100%
VA 0%	4	4	0	0	0	0	0
VA 10%	16	113	0	24	5	0	0
VA 20%	0	0	1	0	0	0	0
VA 30%	22	166	4	67	2	2	1
VA 50%	3	70	1	57	11	0	0
VA 60%	0	0	0	0	0	0	0
VA 70%	5	61	1	66	18	2	1
VA 100%	1	38	2	56	22	8	0

Figure 222. Comparison of DOD and VA ratings for migraine headaches



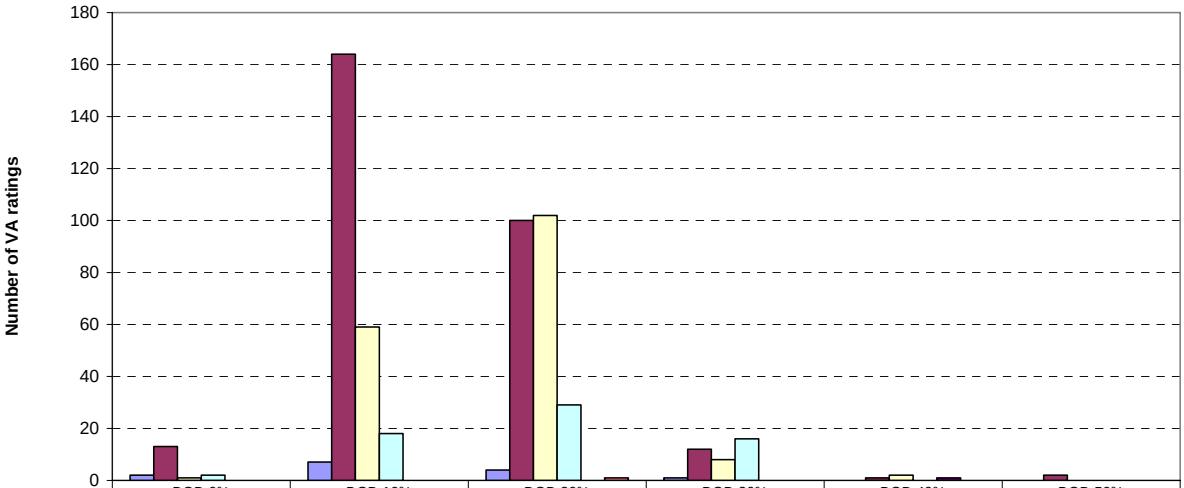
	DOD 0%	DOD 10%	DOD 20%	DOD 30%	DOD 40%	DOD 50%	DOD 70%	DOD 100%
VA 0%	4	16	0	6	0	1	0	0
VA 10%	31	74	0	14	0	0	0	0
VA 20%	0	1	0	0	0	0	0	0
VA 30%	60	137	3	148	2	15	0	0
VA 40%	0	1	0	0	0	0	0	0
VA 50%	36	78	3	107	0	59	0	0
VA 60%	0	0	0	1	0	0	0	0
VA 70%	0	0	0	1	0	0	0	0
VA 100%	0	1	0	0	0	0	0	0

Figure 223. Comparison of DOD and VA ratings for traumatic brain injury



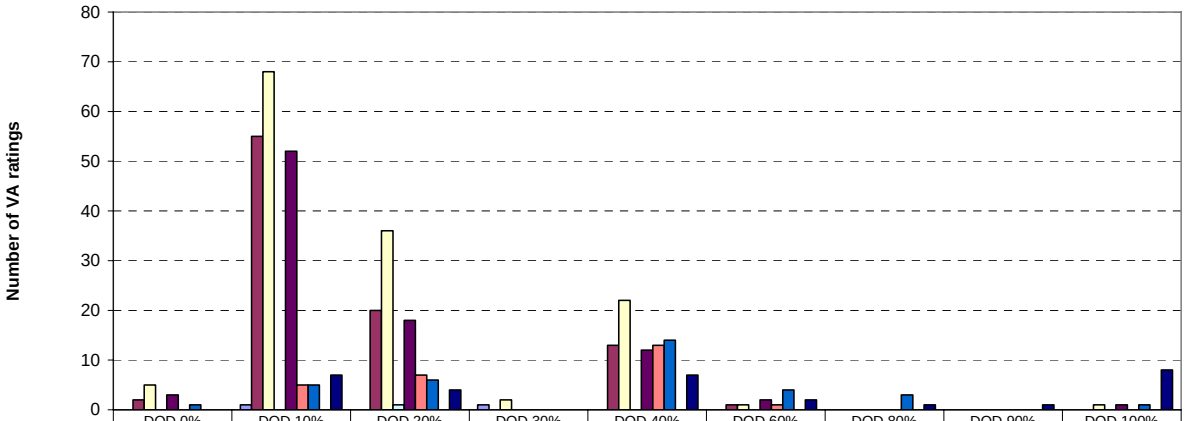
	DOD 0%	DOD 10%	DOD 20%	DOD 30%	DOD 40%	DOD 50%	DOD 60%	DOD 70%	DOD 80%	DOD 90%	DOD 100%
VA 0%	0	5	1	1	0	1	0	1	0	0	0
VA 10%	3	138	5	18	3	6	1	2	0	0	1
VA 20%	0	5	1	2	1	1	0	0	0	0	1
VA 30%	2	57	1	25	2	6	1	1	0	0	0
VA 40%	0	2	0	1	0	1	0	0	1	0	0
VA 50%	1	33	1	19	1	10	2	4	0	0	2
VA 60%	0	1	0	0	0	0	0	0	0	0	1
VA 70%	0	6	0	17	0	5	0	5	1	1	3
VA 80%	0	1	0	1	1	0	0	0	0	0	0
VA 90%	0	0	0	0	0	0	0	1	0	0	0
VA 100%	0	10	0	22	1	20	1	16	3	1	69

Figure 224. Comparison of DOD and VA ratings for knee condition



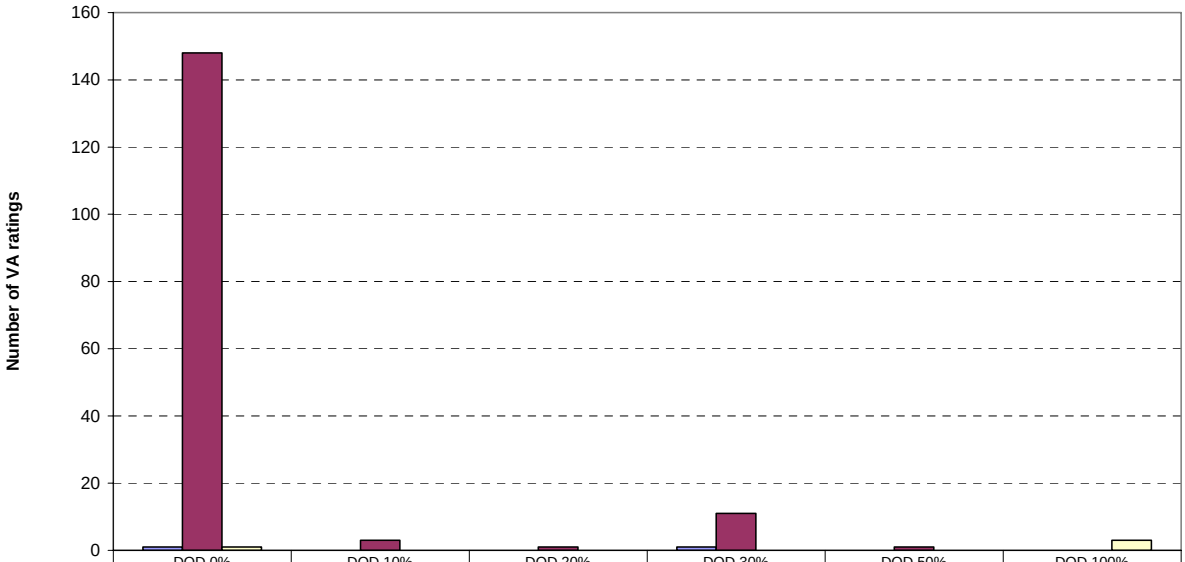
	DOD 0%	DOD 10%	DOD 20%	DOD 30%	DOD 40%	DOD 50%
VA 0%	2	7	4	1	0	0
VA 10%	13	164	100	12	1	2
VA 20%	1	59	102	8	2	0
VA 30%	2	18	29	16	0	0
VA 40%	0	0	0	0	1	0
VA 100%	0	0	1	0	0	0

Figure 225. Comparison of DOD and VA ratings for seizure disorder



	DOD 0%	DOD 10%	DOD 20%	DOD 30%	DOD 40%	DOD 60%	DOD 80%	DOD 90%	DOD 100%
VA 0%	0	1	0	1	0	0	0	0	0
VA 10%	2	55	20	0	13	1	0	0	0
VA 20%	5	68	36	2	22	1	0	0	1
VA 30%	0	0	1	0	0	0	0	0	0
VA 40%	3	52	18	0	12	2	0	0	1
VA 60%	0	5	7	0	13	1	0	0	0
VA 80%	1	5	6	0	14	4	3	0	1
VA 90%	0	0	0	0	0	0	0	0	0
VA 100%	0	7	4	0	7	2	1	1	8

Figure 226. Comparison of DOD and VA ratings for sleep apnea syndromes



	DOD 0%	DOD 10%	DOD 20%	DOD 30%	DOD 50%	DOD 100%
VA 30%	1	0	0	1	0	0
VA 50%	148	3	1	11	1	0
VA 100%	1	0	0	0	0	3

Appendix R: Non-response analysis for the Veterans and Survivors Surveys

CNA contracted with ORC Macro to field the veterans and survivors surveys. ORC Macro conducted a non-response analysis to determine if the responses to survey questions varied by demographic group. This appendix contains Macro's non-response analysis.

When response vary by demographic group, there is the potential for bias if the demographic mix of the respondents differs from the population from which the survey is drawn. When demographic differences exist, any potential bias is easily corrected for by weighting the survey so that it mirrors the demographics of the target population.

NON-RESPONSE ANALYSIS FOR THE VETERANS' DISABILITY BENEFITS COMMISSION'S

SURVEYS OF VETERANS WITH DISABILITIES AND SURVIVING SPOUSES SURVEYS

Submitted to:

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August 17, 2007

NON-RESPONSE ANALYSIS FOR VETERANS WITH DISABILITIES AND SURVIVING SPOUSES SURVEYS

This report presents the results of the non-response analysis and other response-related information associated with surveys conducted by Macro International Inc. for the Center for Naval Analysis Corporation in support of the Veterans Disability Benefits Commission. Two surveys were conducted between November 2006 and April of 2007—a Survey of Veterans with Disabilities who receive disability compensation benefits from the U.S. Department of Veterans Affairs (VA), and a survey of Surviving Spouses who receive Dependency and Indemnity Compensation (DIC) from VA. The report includes the following sections:

1) Introduction
2) Disposition Tables and Explanation
3) Response and Cooperation Rates
4) Analysis of 100 Percent Auditory Non-Response
5) First Wave Analysis of All Cells and Modification of Design
6) Final Non-Response Analysis, Propensity Scores, and Response Bias

The nonresponse analysis presents the final survey disposition for the released samples, as well as the response and cooperation rates calculated in accordance with Council of American Survey Research Organizations (CASRO) standards. A nonresponse bias assessment was conducted while the survey was in the field, and adjustments to the survey protocol for veterans were made to minimize the effects of nonresponse. Similar adjustments were not made for surviving spouses because there were fewer variables available for analysis. The veterans and surviving spouses who completed the surveys are very similar to those initially sampled. However, as a final precaution, weights were developed to compensate for detectable bias in the sample, assuring that the results based on the survey data are as robust as possible.

Introduction

The sample of disabled veterans required representation of degree of disability and affected body system among the 2,669,654 disabled veterans found on VA files, producing 57 cells. The cells for the veteran sample are defined in Table 1, which contains the population in each cell.

Table 1. Population of Disabled Veterans by Disability and Level

Body System of Primary Disability	10%	20-40%	50-90%	100%
Musculoskeletal	366,900	513,498	209,306	14,344
Skin	69,033	33,332	13,744*	
Auditory	106,480	69,845	30,800	7,278
Neurological	28,287	46,264	45,583	7,451
PTSD	5,278	29,646	121,760	50,630
Mental (Excludes PTSD)	36,337	38,955	65,854	58,783
Digestive	37,866	40,268	15,118	4,714
Cardiovascular	52,415	51,646	51,089	12,685
Respiratory	33,694	38,248	35,459	8,625
Endocrine	11,259	74,284	24,445	2,821
Genitourinary	11,780	18,361	18,479	11,992
Visual	9,705	20,839	12,414*	
Gynecological		7,675*	13,748*	
SYSTEMIC (Infectious, Immune…)		2,820*	3,170*	
Dental		5,217**		
Hemic/Lymphatic		5,329*	2,699	3,709
Cat 1: 0% with SMC K	4,101			
Cat 2: 100% with SMC S,L,M,N, Or O				45,765
Cat 3: 100% with R1 Or R2				7,827

*Combined with adjacent cell
**Combined with all dental cells

The sample of surviving spouses required representation of time since the veteran's death, and whether the deceased veteran's compensation was subject to an offset for the survivor benefit plan (SBP). There were originally four cells for the population of surviving spouses (both to be used for sampling and estimation) defined in Table 2:

Table 2. Population for the Survey of Surviving Spouses

Surviving Spouses	DIC w ith SBP Offset	DIC without SBP Offset
Veteran died >5 years	36,623	193,975
Veteran died < 5 years	13,897	57,142
Total	**50,520**	**251,117**

The sample was revised to target surviving spouses aged 40 and under. Table 3 shows the number of surviving spouses who are under 40.

Table 3. Universe for the Survey of Surviving Spouses under Age 40

Surviving Spouses	DIC w/ SBP Offset	DIC w/o SBP Offset
Veteran died > 5 years	267	2,063
Veteran died < 5 years	363	2,764
Total	**5,427**	

To obtain the population described in Table 3, the first four sampling cells were crossed with this population, creating a total of eight sampling cells for surviving spouses. The target sample for each cell was that required to obtain a 95 percent confidence interval of 5 percent for each estimation cell. In the veteran survey, the target sample was at most 384 respondents per cell, and in the spouse survey, the number was smaller because of the overlap and the size of the population.

A sample of five times the targeted sample size for each cell was obtained as an initial sample.

VA provided addresses from administrative records for all veterans and survivors in the sample. The address information on the population files was the address of record for benefit payment purposes. Because VA electronically transfers benefits to banks in most cases, this address sometimes was the address when the individual first began receiving disability or DIC benefits. VA assisted in improving addresses by matching the disability benefits samples with other VA benefit files that might have more recent addresses, such as Veterans Health Administration (VHA) files for veterans receiving health benefits. The Center for Naval Analysis Corporation also matched the sample records against the Social Security Death Index, and deleted individuals known to be deceased. VHA provided phone numbers for veterans if they were present in their files; no phone numbers were provided for surviving spouses because only veterans, not survivors, are eligible to receive VHA health benefits. Survivors who are also veterans may have appeared in the VHA match.

The names and addresses were sent to two vendors to obtain phone numbers for each member of the initial sample. At a later time, a supplementary sample was drawn, and the schedule permitted phone numbers to be obtained from only one vendor for those cases.

The survey protocol involved releasing cases using a modified Dillman approach. Respondents were mailed an initial contact letter under the signature of the Chairman of the Veterans Disability Benefits Commission, and were told of the study, asked to mail back a card with their phone number if they had one, or to call an 800 number to provide their phone number or complete the survey. The calling protocol required eight calls per number, with the protocol completed for one number before the next number was attempted. If the person who answered provided another number for the sampled veteran or surviving spouse, up to eight more calls were made. Because of efforts to minimize potential bias and a deadline for the completion of data collection, protocol was not completed for all cases.

The first wave release of the initial sample was approximately the size of the targeted sample for each cell. Initially, the waves were released in replicates, but some of the procedures

used to reduce non-response bias led to the modification of this procedure. The process used followed these steps:

1. An initial wave of size similar to the target sample was released.

2. Additional waves of different sizes from different cells were released as requested to meet call center productivity.

3. A non-response analysis was conducted when the vast majority of cases in the initial sample were resolved. The analysis predicted propensity to respond using variables available for all veterans in the initial sample. A high propensity respondent was defined as one whose characteristics indicate that he or she would be likely to be a respondent. A low propensity respondent was one whose characteristics are associated with a low response rate.

4. Cells were then divided into high propensity and low propensity halves, and greater effort was placed in calling low propensity members of the initial sample. Members of the initial sample were released accordingly.

5. An additional supplementary sample was obtained, with an abbreviated procedure for obtaining telephone numbers, because of schedule constraints.

Once the study was in progress, an updated list of deceased veterans and spouses was provided by VA to avoid calling recently deceased veterans. Those cases were eliminated from the survey. Those that were called before the list arrived are included in the detailed disposition tables. Every veteran who was initially sampled and who was in the list of deceased veterans, or was identified as deceased through the survey contact is counted as ineligible in the calculation of the response rate, with the exception of those who were interviewed before they died.

A supplementary sample was drawn only for those cells that appeared likely to produce insufficient numbers of completes. The results of the non-response analysis were used to adjust the weights of all respondents, including the supplementary sample.

Disposition Tables and Explanations

The status of the telephone interviews at the end of the study is shown in Table 4. Completed interviews represent a quarter of the released cases and refusals represent 16 percent of all released cases. Among reachable respondents, 61 percent completed the survey and 39 percent refused to complete the survey. There was negative publicity about this survey in the veteran community, including a website that urged veterans not to complete the survey.

The majority of respondents (56 percent) were not reached. Respondents were not reached primarily because they did not answer the last telephone call attempt (15 percent), the last attempt reached an answering machine (10 percent), and the last attempted telephone number was nonworking (9 percent) (see Table 4). Other phone number problems (cell phones, fax numbers, business numbers, no phone number, or wrong numbers) accounted for another 12 percent of the veterans who were not reached. A phone number was also not found for 15 percent of surviving spouses, and another 6 percent had phone numbers that did not result in contact (fax numbers, business numbers, and wrong numbers). These outcomes result from the quality of the initial contact information available from VA administrative records, the difficulty in locating current contact information from third-party sources, given current VA security requirements, lack of cooperation from respondents, and the decision to suspend calling on some cases (see first wave analysis).

Table 4. Final Disposition and Status of Telephone Interviews

Final Disposition of Telephone Interviews	Final Survey Status	Veterans		DIC Spouses		Total	
		#	%	#	%	#	%
Deceased, known from the list	Ineligible	1,986	2.4%	94	1.0%	2,080	2.2%
Deceased, known from calling	Ineligible	89	.1%	8	.1%	97	.1%
Respondent states he/she does not receive benefit	Ineligible	216	.3%	122	1.3%	338	.4%
TOTAL INELIGIBLE		**2,291**	**2.7%**	**224**	**2.5%**	**2,515**	**2.7%**
Answering machine or privacy manager	Unreachable	8,402	10.0%	854	9.4%	9,256	9.9%
Business telephone number	Unreachable	751	.9%	40	.4%	791	.8%
Busy telephone number	Unreachable	284	.3%	41	.5%	325	.3%
Cell phone	Unreachable	128	.2%	1	.0%	129	.1%
Fax/Modem	Unreachable	441	.5%	43	.5%	484	.5%
Callback requested, but not present at callback	Unreachable	5,128	6.1%	342	3.8%	5,470	5.9%
Disconnected, non-working telephone number	Unreachable	7,632	9.1%	646	7.1%	8,278	8.9%
No answer to telephone calls	Unreachable	12,303	14.6%	1,982	21.8%	14,285	15.3%
No valid address and phone number	Unreachable	662	.8%	134	1.5%	796	.9%
No phone number and did not respond to mailing (excludes cases with no valid address and phone)	Unreachable	3,841	4.6%	1,258	13.8%	5,099	5.5%
Wrong telephone number	Unreachable	4,253	5.1%	393	4.3%	4,646	5.0%
Respondent not available in study period	Unreachable	1,713	2.0%	99	1.1%	1,812	1.9%
Never attempted to contact, fresh cases (excludes cases without phone numbers or addresses)	Not Reached	651	.8%	0	.0%	651	.7%
TOTAL UNREACHABLE	Unreachable	**46,189**	**54.9%**	**5,833**	**64.1%**	**52,022**	**55.8%**
TOTAL INELIGIBLE OR UNREACHABLE	Ineligible Or Unreachable	**48,480**	**57.6%**	**6,057**	**66.6%**	**54,537**	**58.5%**

TOTAL REACHABLE	Reachable	**35,672**	**42.4%**	**3,037**	**33.4%**	**38,709**	**41.5%**

Table 4. Final Disposition and Status of Telephone Interviews (cont'd)

Final Disposition of Telephone Interviews	Telephone Interviews Status	Veterans		DIC Spouses		Total	
		#	%	#	%	#	%
Communication difficulties, language barrier, physical/mental disability with No assistant	Refusal	1,767	2.1%	204	2.2%	1971	2.1%
Breakoff (mid-term refusal)	Refusal	2,838	3.4%	152	1.7%	2,990	3.2%
High item nonresponse (<80% complete)	Refusal	18	.0%	2	.0%	20	.0%
Refusal, including gate-keeper refusal	Refusal	3,573	4.2%	527	5.8%	4,100	4.4%
Hang up	Refusal	5,617	6.7%	158	1.7%	5,775	6.2%
TOTAL REFUSAL	Refusal	**13,813**	**16.4%**	**1,043**	**11.5%**	**14,856**	**15.9%**
COMPLETED INTERVIEWS	**COMPLETE**	**21,859**	**26.0%**	**1,994**	**21.9%**	**23,853**	**25.6%**
TOTAL RELEASED CASES		**84,152**	**100%**	**9,094**	**100%**	**93,246**	**100%**

Notes: The unreachable cases include 28,965 veterans (62.7% of the unreachable veterans) and 1,267 surviving spouses (21.7% of the unreachable spouses) with incomplete calling protocols. Final disposition refers to final contact attempt.

Difficulties in reaching the respondents is partially the result of poor contact information. Table 5 illustrates the percentage of respondents with inaccurate addresses from VA's administrative files, identified primarily through return mail. Overall, more than 10 percent of the addresses were unusable. Accuracy of addresses varied in the sampling cells, ranging from 96.2 to 81.8 percent accurate for veterans (see Table 6) and from 91.6 to 78.7 percent accurate for surviving spouses (see Table 7).

Table 5. Percentage of Cases with Unusable Address Information

Cases with Unusable Contact Information	Veterans		DIC Spouses		Total	
	#	%	#	%	#	%
No valid address on administrative record	1,038	1.2%	155	1.7%	1,193	1.3%
Wrong address, no forwarding address	7,970	9.5%	894	9.8%	8,864	9.5%
Total—Unusable Contact Information	9,008	10.7%	1,049	11.5%	10,057	10.8%
TOTAL RELEASED CASES	**84,152**		**9,094**		**93,246**	

Table 6. Percentage of Veterans with Unusable Contact Information, by Sample Cell

SAMPLE CELL	QUALITY OF CONTACT INFORMATION		TOTAL
	Usable	Not Usable	
33 --10-40% Infectious, Immune	81.8%	18.2%	100.0%
32 --10-40% Gynecological	81.9%	18.1%	100.0%
8 -- 10% Musculoskeletal	82.6%	17.4%	100.0%
23 -- 20-40% Neurological	83.6%	16.4%	100.0%
34 -- 10-100% Dental	83.7%	16.3%	100.0%
11 -- 10% Neurological	84.4%	15.6%	100.0%
20 -- 20-40% Musculoskeletal	85.7%	14.3%	100.0%
16 -- 10% Respiratory	85.9%	14.1%	100.0%
1 -- 0% w/ SMC K	86.1%	13.9%	100.0%
55 – 100% All other mental (Excludes PTSD)	86.6%	13.4%	100.0%
28 -- 20-40% Respiratory	87.1%	12.9%	100.0%
15 -- 10% Cardiovascular	87.2%	12.8%	100.0%
19 -- 10% Eye	87.2%	12.8%	100.0%
21 -- 20-40% Skin	87.2%	12.8%	100.0%
25 -- 20-40% All other mental (Excludes PTSD)	87.3%	12.7%	100.0%
35 -- 10-40% Hemic and Lymphatic	87.3%	12.7%	100.0%
26 -- 20-40% Digestive System	87.4%	12.6%	100.0%
18 -- 10% Genitourinary	87.7%	12.3%	100.0%
14 -- 10% Digestive System	87.8%	12.2%	100.0%
31 -- 20-40% Eye	87.9%	12.1%	100.0%
12 -- 10% PTSD	88.0%	12.0%	100.0%
13 -- 10% All other mental (Excludes PTSD)	88.3%	11.7%	100.0%
48 -- 50-100% Gynecological	88.4%	11.6%	100.0%
9 -- 10% Skin	88.6%	11.4%	100.0%
27 -- 20-40% Cardiovascular	88.8%	11.2%	100.0%
17 -- 10% Endocrine	89.4%	10.6%	100.0%
49 -- 50-100% Infectious, Immune	89.4%	10.6%	100.0%
10 -- 10% Auditory	89.6%	10.4%	100.0%
37 -- 50-100% Skin	89.9%	10.1%	100.0%
41 -- 50-90% All other mental (Excludes PTSD)	89.9%	10.1%	100.0%
59 – 100% Endocrine	90.1%	9.9%	100.0%
36 -- 50-90% Musculoskeletal	90.4%	9.6%	100.0%
22 -- 20-40% Auditory	90.6%	9.4%	100.0%
30 -- 20-40% Genitourinary	90.6%	9.4%	100.0%
44 -- 50-90% Respiratory	90.6%	9.4%	100.0%
50 -- 50-90% Hemic and Lymphatic	90.8%	9.2%	100.0%
39 -- 50-90% Neurological	91.4%	8.6%	100.0%
51 – 100% Musculoskeletal	91.8%	8.2%	100.0%
42 -- 50-90% Digestive System	92.0%	8.0%	100.0%
53 – 100% Neurological	92.0%	8.0%	100.0%
24 -- 20-40% PTSD	92.6%	7.4%	100.0%
47 -- 50-100% Eye	92.6%	7.4%	100.0%
56 – 100% Digestive System	92.8%	7.2%	100.0%
54 – 100% PTSD	93.8%	6.2%	100.0%
29 -- 20-40% Endocrine	94.0%	6.0%	100.0%
46 -- 50-90% Genitourinary	94.2%	5.8%	100.0%
61 – 100% Hemic and Lymphatic	94.3%	5.7%	100.0%
45 -- 50-90% Endocrine	94.4%	5.6%	100.0%
43 -- 50-90% Cardiovascular	94.5%	5.5%	100.0%
58 – 100% Respiratory	94.6%	5.4%	100.0%
57 – 100% Cardiovascular	94.8%	5.2%	100.0%

2 -- 100% w/ SMC S,L,M,N, or O[1]	94.9%	5.1%	100.0%
40 -- 50-90% PTSD	95.3%	4.7%	100.0%

Table 6. Percentage of Veterans with Unusable Contact Information, by Sample Cell. (cont'd)

SAMPLE CELL	QUALITY OF CONTACT INFORMATION		TOTAL
	Usable	Not Usable	
60 – 100% Genitourinary	95.4%	4.6%	100.0%
52 – 100% Auditory	95.7%	4.3%	100.0%
3 -- 100% w/ R1 or R2	96.1%	3.9%	100.0%
38 -- 50-90% Auditory	96.2%	3.8%	100.0%
TOTAL	**89.3%**	**10.7%**	**100.0%**

Table 7. Percentage of DIC Surviving Spouses with Usable Contact Information, by Sample Cell

SAMPLE CELL	QUALITY OF CONTACT INFORMATION		TOTAL
	Usable	Unusable	
94 -- DIC w/ SBP offset (vet died > 5yrs) spouse<40	78.7%	21.3%	100.0%
96 -- DIC w/ SBP offset (vet died < 5yrs) spouse <40	83.3%	16.7%	100.0%
97 -- DIC w/o SBP offset (vet died < 5yrs) spouse <40	84.1%	15.9%	100.0%
95 -- DIC w/o SBP offset (vet died > 5yrs) spouse <40	84.5%	15.5%	100.0%
85 -- DIC w/o SBP offset (vet died > 5yrs) spouse >40	90.2%	9.8%	100.0%
84 -- DIC w/ SBP offset (vet died > 5yrs) spouse >40	90.4%	9.6%	100.0%
86 -- DIC w/ SBP offset (vet died < 5yrs) spouse >40	91.6%	8.4%	100.0%
87 -- DIC w/o SBP offset (vet died < 5yrs) spouse >40	91.6%	8.4%	100.0%
TOTAL	**88.5%**	**11.5%**	**100.0%**

Table 8 highlights the number of telephone calls attempted by final survey disposition. Unreachable cases were attempted, on the average, about seven times, followed by refusals (six attempts), and completed interviews (five attempts). Overall, it took slightly fewer attempts to resolve surviving spouse contacts than veteran contacts (five and six, respectively). Because fewer phone numbers were available for surviving spouses, fewer attempts on average were needed to determine that a surviving spouse was unreachable (six) than a veterans (eight).

Table 8. Average Number of Attempts to Contact Survey Respondents

SURVEY DISPOSITIONS	Veterans	DIC Spouses	Total
Ineligible	1.8	1.7	1.8
Unreachable	7.6	5.9	7.4
Refusal	6.1	4.5	5.9
Complete	4.9	4.4	4.9
TOTAL	**6.5**	**5.3**	**6.4**

*Includes attempts on all phone numbers available for each respondent.

Response and Cooperation Rates

The calculation of response rates, cooperation rates, and location rates was complicated by the fact that protocol was suspended for a large number of cases. This occurred because of the decision to adjust protocol to prevent potential bias in the context of a deadline for the completion of data collection, and multiple phone numbers for which eight calls had to be made for the completion of protocol. As the survey progressed, resources were shifted to prevent potential bias in cells or half-cells (the half of the original cells with high propensity or low propensity) where the number of completes appeared likely to be below the target sample, and released cases in progress from other cells were suspended to avoid over-completes in the remaining cells. The protocol was not completed for 34.4 percent of the released veterans and 13.9 percent of the released surviving spouses.

The cases for which protocol was not completed varied from cases where no attempts to call were made (but the sampled veteran was mailed a letter) to cases where one more call would have completed the protocol. Because the response rate is computed differently, depending on whether the sampled cases for which protocol was not completed are included or not, we have calculated the response rates and the contact rates both ways.

The following terms define resolution groups:

I=Complete interview
R=Contact but no interview (including refusals, break-offs, hang-ups, and so forth)
D=Veterans in the list as deceased
N=Ineligible, including veterans whose death was identified through the call
UF=Unreachable, protocol finished
UU=Unreachable, protocol unfinished

Five formulas are calculated:

Response Rate 1= I/(I+R+UF(I+R)/(I+R+N)). This is essentially CASRO RR3 where only cases where protocol is completed and the proportion of the unreachable that are eligible is estimated as the same as the proportion of the contacted cases. Response Rate 1 is 41.4 percent for veterans and 26.9 percent for surviving spouses.

Response Rate 2= I/(I+R+(UF+UU)(I+R)/(I+R+N)). This is the same formula, but all released cases are counted in the denominator. Response Rate 2 is 26.8 percent for veterans and 23.1 percent for surviving spouses.

Cooperation Rate= I/(I+R), which is equivalent to CASRO COOP1. This includes as non-cooperators persons unable to cooperate, such as those unable to answer for medical reasons. The cooperation rate is 61.3 percent for veterans and 65.7 percent for spouses.

Contact Rate 1= (I+R)/(I+R+UF(I+R)/(I+R+N)). This is the equivalent to the CASRO Contact Rate 2, estimating the error as in the first response rate. Contact Rate 1 is 67.6 percent for veterans and 41.0 percent for surviving spouses.

Contact Rate 2= (I+R)/(I+R+(UF+UU)(I+R)/(I+R+N)). This is the same as the previous contact rate, but including the unfinished protocol in the denominator. Contact Rate 2 is 43.8 percent for veterans and 35.2 percent for surviving spouses.

Several observations are relevant to the above rates. The first is that the contact information included some addresses dating back to the veteran's discharge. In many cases, different phone numbers were obtained from the three sources, and this required going through each number eight times. Negative publicity, including a disgruntled veteran who set up a Web site advising veterans not to complete the survey, is likely to have depressed the cooperation rate. Partial completes were not included in the response rate. Partial completes would have increased the response rate by three percentage points, and the cooperation rate even more. Partial completes (i.e. veterans who answered fewer than 80 percent of the survey items) were not counted in these rates because they were not included in the final database or in the analysis, and hence the use of CASRO RR4 was not deemed appropriate. Tables 9 and 10 present cell level results for the rates defined above.

Table 9. Response, Cooperation, and Contact Rates for Veterans by Cell

Cell	Response Rate 1	Response Rate 2	Cooperation Rate	Contact Rate 1	Contact Rate 2	Percent Not Finished
1 -- 0% w/ SMC K	35.1%	26.4%	62.4%	56.3%	42.3%	24.5%
2 -- 100% w/ SMC S,L,M,N, or O[1]	60.1%	34.5%	63.2%	95.1%	54.5%	39.5%
3 -- 100% w/ R1 or R2	55.4%	31.5%	58.2%	95.2%	54.1%	40.9%
8 -- 10% Musculoskeletal	42.4%	19.3%	53.6%	79.1%	35.9%	53.7%
9 -- 10% Skin	51.4%	24.9%	58.3%	88.1%	42.7%	50.4%
10 -- 10% Auditory	40.4%	30.3%	65.0%	62.2%	46.6%	24.7%
11 -- 10% Neurological	27.0%	20.5%	61.0%	44.3%	33.6%	23.6%
12 -- 10% PTSD	34.1%	25.5%	63.8%	53.5%	40.0%	24.8%
13 -- 10% All other mental (Excludes PTSD)	26.6%	21.5%	47.6%	55.8%	45.2%	18.4%
14 -- 10% Digestive System	30.1%	23.8%	55.4%	54.3%	43.0%	20.4%
15 -- 10% Cardiovascular	32.3%	24.4%	62.0%	52.1%	39.4%	23.9%
16 -- 10% Respiratory	26.1%	20.5%	54.6%	47.7%	37.5%	21.1%
17 -- 10% Endocrine	38.6%	30.2%	65.2%	59.2%	46.3%	21.6%
18 -- 10% Genitourinary	51.1%	24.6%	61.0%	83.8%	40.3%	51.0%
19 -- 10% Eye	32.3%	24.6%	58.9%	54.8%	41.8%	23.5%
20 -- 20-40% Musculoskeletal	28.7%	22.0%	58.0%	49.5%	37.8%	23.3%
21 -- 20-40% Skin	53.0%	22.3%	59.8%	88.7%	37.4%	56.7%
22 -- 20-40% Auditory	56.0%	28.3%	58.4%	96.0%	48.4%	48.2%
23 -- 20-40% Neurological	30.8%	23.1%	62.8%	49.1%	36.9%	24.6%
24 -- 20-40% PTSD	64.7%	31.2%	68.0%	95.1%	45.9%	51.2%
25 -- 20-40% All other mental (Excludes PTSD)	31.7%	24.4%	59.7%	53.1%	40.8%	22.4%
26 -- 20-40% Digestive System	32.0%	25.0%	58.1%	55.1%	43.0%	21.4%
27 -- 20-40% Cardiovascular	57.1%	27.0%	63.0%	90.6%	42.9%	51.7%
28 -- 20-40% Respiratory	48.7%	22.7%	56.7%	85.9%	40.1%	52.7%
29 -- 20-40% Endocrine	66.9%	35.1%	71.3%	93.7%	49.2%	46.9%
30 -- 20-40% Genitourinary	59.7%	33.2%	64.9%	92.0%	51.2%	43.3%
31 -- 20-40% Eye	34.1%	26.8%	60.9%	56.0%	44.0%	21.0%
32 -- 10-40% Gynecological	26.9%	19.6%	60.9%	44.1%	32.2%	26.8%
33 -- 10-40% Infectious, Immune	19.9%	15.4%	57.4%	34.7%	26.9%	22.3%
34 -- 10-100% Dental	29.5%	21.6%	61.6%	47.9%	35.1%	26.4%

35 -- 10-40% Hemic and Lymphatic	54.1%	24.9%	62.0%	87.2%	40.2%	53.2%
36 -- 50-90% Musculoskeletal	60.2%	30.3%	64.8%	92.9%	46.8%	48.4%

Table 9. Response, Cooperation, and Contact Rates for Veterans by Cell (cont'd)

Cell	Response Rate 1	Response Rate 2	Cooperation Rate	Contact Rate 1	Contact Rate 2	Percent Not Finished
37 -- 50-100% Skin	37.8%	28.7%	65.1%	58.1%	44.0%	23.6%
38 -- 50-90% Auditory	44.5%	32.4%	58.0%	76.8%	55.9%	26.0%
39 -- 50-90% Neurological	56.3%	27.4%	61.3%	91.9%	44.7%	50.4%
40 -- 50-90% PTSD	59.1%	31.9%	61.7%	95.8%	51.6%	45.4%
41 -- 50-90% All other mental (Excludes PTSD)	36.4%	27.4%	66.2%	55.0%	41.4%	23.9%
42 -- 50-90% Digestive system	62.2%	31.9%	66.4%	93.6%	48.0%	47.4%
43 -- 50-90% Cardiovascular	60.6%	32.5%	63.5%	95.5%	51.2%	44.9%
44 -- 50-90% Respiratory	39.3%	30.1%	65.0%	60.5%	46.3%	22.9%
45 -- 50-90% Endocrine	69.2%	36.0%	74.3%	93.3%	48.5%	47.3%
46 -- 50-90% Genitourinary	67.2%	36.7%	71.8%	93.5%	51.1%	44.6%
47 -- 50-100% Eye	59.8%	34.5%	65.1%	91.9%	53.0%	41.3%
48 -- 50-100% Gynecological	61.8%	26.8%	67.6%	91.4%	39.6%	56.3%
49 -- 50-100% Infectious, Immune	34.4%	25.1%	64.9%	53.0%	38.6%	26.6%
50 -- 50-90% Hemic and Lymphatic	58.5%	28.0%	64.3%	91.0%	43.6%	51.2%
51 -- 100% Musculoskeletal	42.2%	32.9%	64.6%	65.3%	51.0%	21.3%
52 -- 100% Auditory	20.8%	19.6%	34.9%	59.7%	56.3%	5.4%
53 -- 100% Neurological	37.4%	28.3%	61.4%	60.8%	46.1%	23.7%
54 -- 100% PTSD	58.6%	27.6%	62.6%	93.7%	44.1%	52.2%
55 -- 100% All other mental (Excludes PTSD)	20.8%	20.5%	50.7%	41.0%	40.4%	1.2%
56 -- 100% Digestive system	60.4%	30.8%	64.8%	93.1%	47.5%	47.3%
57 -- 100% Cardiovascular	62.4%	35.5%	64.4%	96.9%	55.2%	40.7%
58 -- 100% Respiratory	59.5%	34.9%	63.7%	93.4%	54.7%	37.7%
59 -- 100% Endocrine	58.6%	30.7%	63.9%	91.7%	48.1%	45.9%
60 -- 100% Genitourinary	71.2%	42.8%	74.6%	95.5%	57.4%	38.2%
61 -- 100% Hemic and Lymphatic	66.6%	41.1%	70.0%	95.2%	58.6%	36.6%
Total	41.4%	26.8%	61.3%	67.6%	43.8%	34.4%

Table 10. Response, Cooperation, and Contact Rates for Surviving Spouses by Cell

Cell	Response Rate 1	Response Rate 2	Cooperation Rate	Contact Rate 1	Contact Rate 2	Percent Not Finished
84 -- DIC w/ SBP offset (vet died > 5yrs) spouse >40	29.0%	26.9%	67.5%	42.9%	39.8%	7.2%
85 -- DIC w/o SBP offset (vet died > 5yrs) spouse >40	28.7%	26.4%	61.0%	47.1%	43.2%	8.1%
86 -- DIC w/ SBP offset (vet died < 5yrs) spouse >40	33.5%	30.3%	71.0%	47.2%	42.7%	9.4%
87 -- DIC w/o SBP offset (vet died < 5yrs) spouse >40	35.4%	32.9%	72.4%	48.9%	45.4%	7.1%
94 -- DIC w/ SBP offset (vet died > 5yrs) spouse <40	16.0%	11.6%	54.5%	29.4%	21.3%	27.4%
95 -- DIC w/o SBP offset (vet died > 5yrs) spouse <40	16.3%	11.8%	56.0%	29.1%	21.1%	27.4%
96 -- DIC w/ SBP offset (vet died < 5yrs) spouse <40	14.2%	10.8%	55.3%	25.6%	19.5%	24.0%
97 -- DIC w/o SBP offset (vet died < 5yrs) spouse <40	17.4%	13.3%	60.9%	28.6%	21.8%	23.6%
Total	26.9%	23.1%	65.7%	41.0%	35.2%	13.9%

Analysis of 100 Percent Auditory Non-Response

One of the advantages of the sampling design is that the first wave of the sample, consisting of 20 percent of the initial sample, is representative of the entire initial sample. This allowed a response bias analysis to be conducted before the survey was completed, and permitted a modification to the design to counter suspected bias. One phenomenon revealed by early analysis of first wave responses was that the response rate was higher for older (over 65) veterans (although it dropped off later on). This was hypothesized to be because the retirees were more likely to be home, so contact was more likely to be established. The discovery of potential bias associated with age led to the decision to conduct a more detailed and formal investigation of potential response bias while the survey was still in the field.

There are several steps in assessing response bias. The initial step is to compare the characteristics of respondents with those of the initial sample. This alone is not sufficient for the establishment of bias. For bias to be detected, the characteristics that correlate with actual response must also correlate with the variables being estimated.

Non-response bias can occur when there is a low response rate and respondents would have answered questions differently than non-respondents. If members of an initial sample have different probabilities of responding, the bias of a sample for a particular variable will depend both on the response rate and the correlation between the propensity of responding to the variable for which a mean is being estimated.

All that can be observed is whether a person was a respondent or not. But with auxiliary variables from administrative records available for the initial sample, a model was developed that predicts the propensity to respond for each member of the initial sample. In particular, this model can be used to obtain a propensity score for each respondent, and the propensity score can be correlated with key variables to determine if bias can be detected. The inverse of the propensity scores can also be used as weights, and estimates can be made multiplying these weights by any original weights (in this case constant) and comparing the resulting estimates with estimates without weights. Even if it is found that one can predict response, no bias will exist if there is no correlation between the propensity to respond and the estimated variables.

One sample cell had a very low response rate—the 100 percent auditory cell. As hearing impaired individuals would be less able to communicate with an interviewer over the phone, a response bias was possible. To examine the presence or absence of a bias, a file was created that included all members of the initial sample in the 100 percent auditory cell for which a final disposition had been established (i.e., all members of the initial sample in that cell for which it was established that they were respondents or non-respondents, excluding the deceased). A dichotomous dependent variable was used, coded with a 1 for respondents and a 0 for non-respondents. A total of 499 veterans, 124 of which were respondents, were in the sample. A classification and regression tree (C&RT) methodology was used to predict response rate. This was found to be a useful initial step, as it provided cutoff points for otherwise continuous variables.

The following variables entered the equation as predictors:

- Branch of the service
- Age
- Net award
- VA region
- Number of diagnostic codes
- Number of service-connected disabilities
- Length of military service in years
- Number of additional disabilities above six

The first four variables entered the equation as categorical variables. Exhibit 1 shows the C&RT analysis. The analysis combined categories for Branch and Region, and found a cut-off point to form a dichotomous variable from age and award.[1]

At this point the four dichotomous variables were coded and several stepwise logistic regressions were conducted. These verified the results of the C&RT analysis. A logit-linear analysis was then conducted, resulting in a confirmation of the C&RT model, as shown in Table 11. From this analysis, a propensity score was obtained for each combination of the four dichotomous variables. Several additional analyses were conducted using these propensity scores. Each of these analyses used seven key variables from the following survey items:

A8 Are you currently retired and not working for pay at all?

B1 In general, would you say your health is ... ?

B2 Does your health now limit you in moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf? Does your health now limit you a lot, limit you a little, or not limit you at all?

B6 During the past 4 weeks, how much of the time were you limited in the kind of work or other activities you do as a result of your physical health? Would you say ... ?

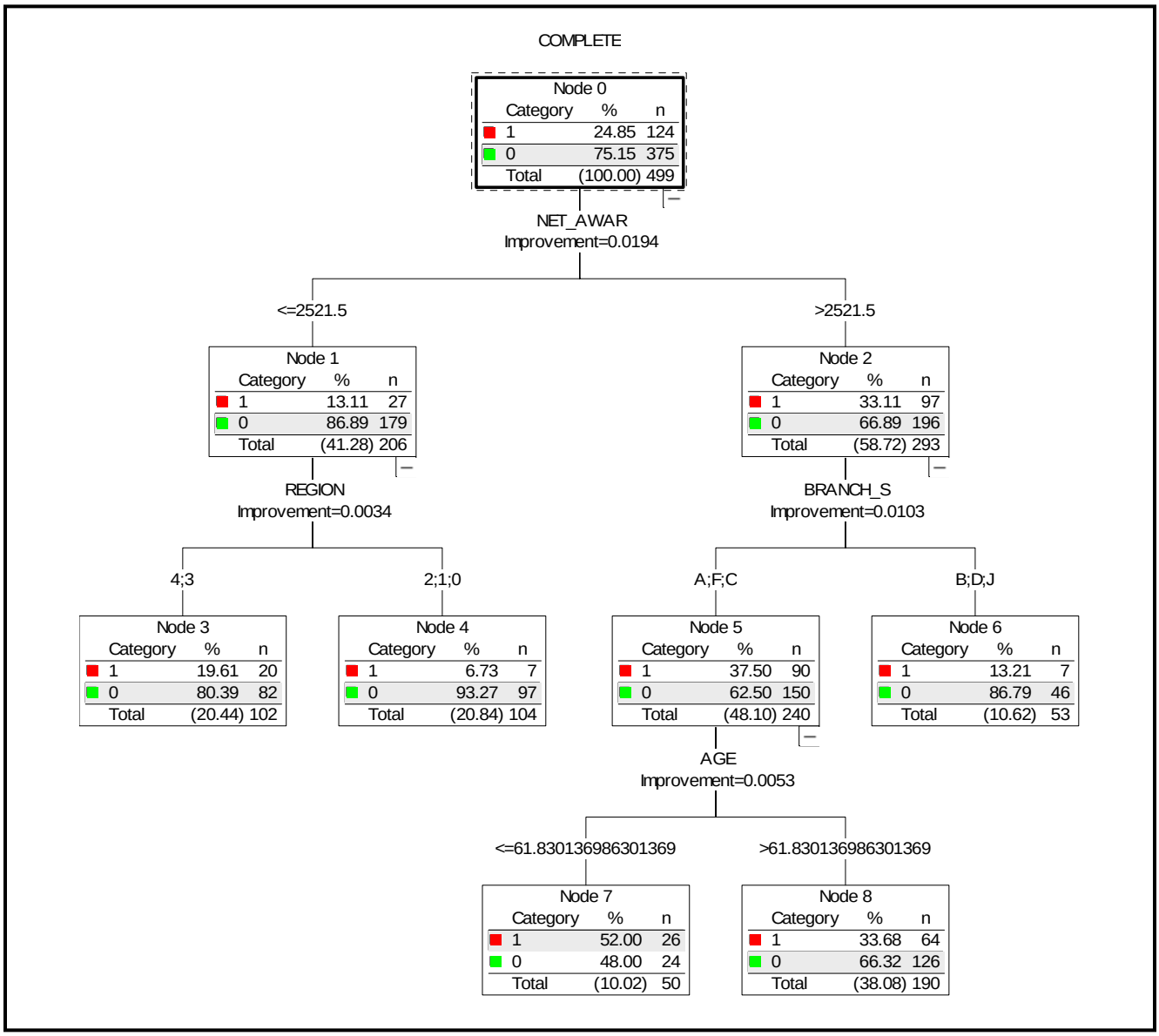
B8 During the past 4 weeks, how much of the time have you cut down the amount of time you spent on work or other activities as a result of any emotional problems? Would you say ... ?

[1] Where Branch of service combines Army, Marines, and Air Forces vs. the other services; Region divides Regions 3 and 4 from 1, 2, and foreign; and Age uses 61.8 years as the cut-off and the award is over or under 2,521.

B11 During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups? Would you say ... ?

C1 How much satisfaction do you get from your life overall? Would you say ... ?

Exhibit 1. Classification and Regression Tree (C&RT) Analysis for 100 Percent Auditory Cell



The first analysis treated these variables as continuous variables and correlated the variables with the propensity scores. None of the correlations was statistically significant. Spearman correlations were also calculated, but are not presented.

Table 11. Logit Analysis for 100 Percent Auditory Cell
Maximum Likelihood Analysis of Variance

Source	DF	Chi-square	Pr > Chi-square
Intercept	1	57.91	<.0001
Branch of the Service	1	1.77	0.1834
Award Amount	1	7.19	0.0073
Geographical Region	1	1.97	0.1603
Age of the Veteran	1	0.26	0.6129
Branch X Award Interaction	1	8.97	0.0027
Region X Award Interaction	1	12.23	0.0005
Age X Award Interaction	1	4.66	0.0309

The second analysis treated the variables as categorical, and two of the variables were significant at the .05 level (see Table 12). This suggests that while it is possible that there is some bias in the specific categories, as long as the variables are seen as ordinal or interval variables, there is no detectable relationship.

Table 12. Analysis of Variance

VARIABLE	F Ratio	Probability
Currently retired	1.79	.184
State of health	0.33	.802
Health now limits moderate activities	.05	.949
Limited by physical health in past 4 weeks	2.50*	.046
Cut down activities past 4 weeks due to emotional problems	0.62	.650
Health problems interfered with social activities in past 4 weeks	2.60*	.040
Satisfaction from life overall	1.85	.125

* Statistically significant at the $p < .05$ level.

Finally, the frequency distributions using and not using inverse propensity scores as weights are presented in Table 13.

The quality of this analysis depends on the model and the variables available. With only 124 respondents and only a few variables available to conduct the analysis, it is possible that a different model could predict response and correlate with the actual responses. The sample was too small to lend itself to cross-validation of the model. However, the tentative conclusion has to be that non-response is systematically related to several variables, but that for this cell, there is no correlation with key response variables. In the absence of a clear-cut bias, the recommendation for this cell was to continue to try to augment the respondent sample, but not to target specific sub-groups for a more intense contact.

It is clear that this model would not work for other cells because net-award is very closely associated with level of disability, and in some cells is, with some exceptions, constant.

Table 13. Frequency Distributions With and Without Propensity Weights

Variable	Response	% Without Weights	% With Propensity Weights
A8 Currently retired	1 Yes	90.32	90.87
	2 No	9.68	9.13
B1 State of health	2 Very good	8.06	9.42
	3 Good	29.03	26.61
	4 Fair	34.68	31.68
	5 Poor	28.23	32.29
B2 Health now limits moderate activities	1 Yes, limited a lot	46.61	47.44
	2 Yes, limited a little	37.29	36.39
	3 No, not limited at all	16.10	16.17
B6 Limited by physical health in past 4 weeks	1 None of the time	9.68	9.22
	2 A little of the time	12.90	9.76
	3 Some of the time	31.45	34.68
	4 Most of the time	28.23	28.69
	5 All of the time	17.74	17.65
B8 In past 4 weeks cut down activities due to emotional problems	1 None of the time	34.96	35.96
	2 A little of the time	14.63	15.02
	3 Some of the time	25.20	22.73
	4 Most of the time	14.63	18.64
	5 All of the time	10.57	7.65
B11 Health problems interfered with social activities in past 4 weeks	1 Not at all	14.52	19.04
	2 Slightly	13.71	10.10
	3 Moderately	27.42	27.86
	4 Quite a bit	27.42	31.00
	5 All of the time	16.94	12.00
C1 Satisfaction from life overall	1 A lot	34.43	32.50
	2 A fair amount	29.51	25.87
	3 Some	27.05	32.49
	4 Little	7.38	8.43
	5 None	1.64	0.71

First Wave Analysis of all Cells and Modification of Design

The concern that bias existed for the 100 percent auditory cells led to an extension of the analysis to the other veteran cells. The same variables and an equivalent methodology were used. Consideration was given to whether there should be a separate model for each cell or one model for all cells combined. An alternative was to include not only cell membership (to control for the differences in response rate between cells) but to include interactions with cell in the model. It was decided that the Wave 1 sample was not sufficiently large to include interactions with cell, so only the cell was used.

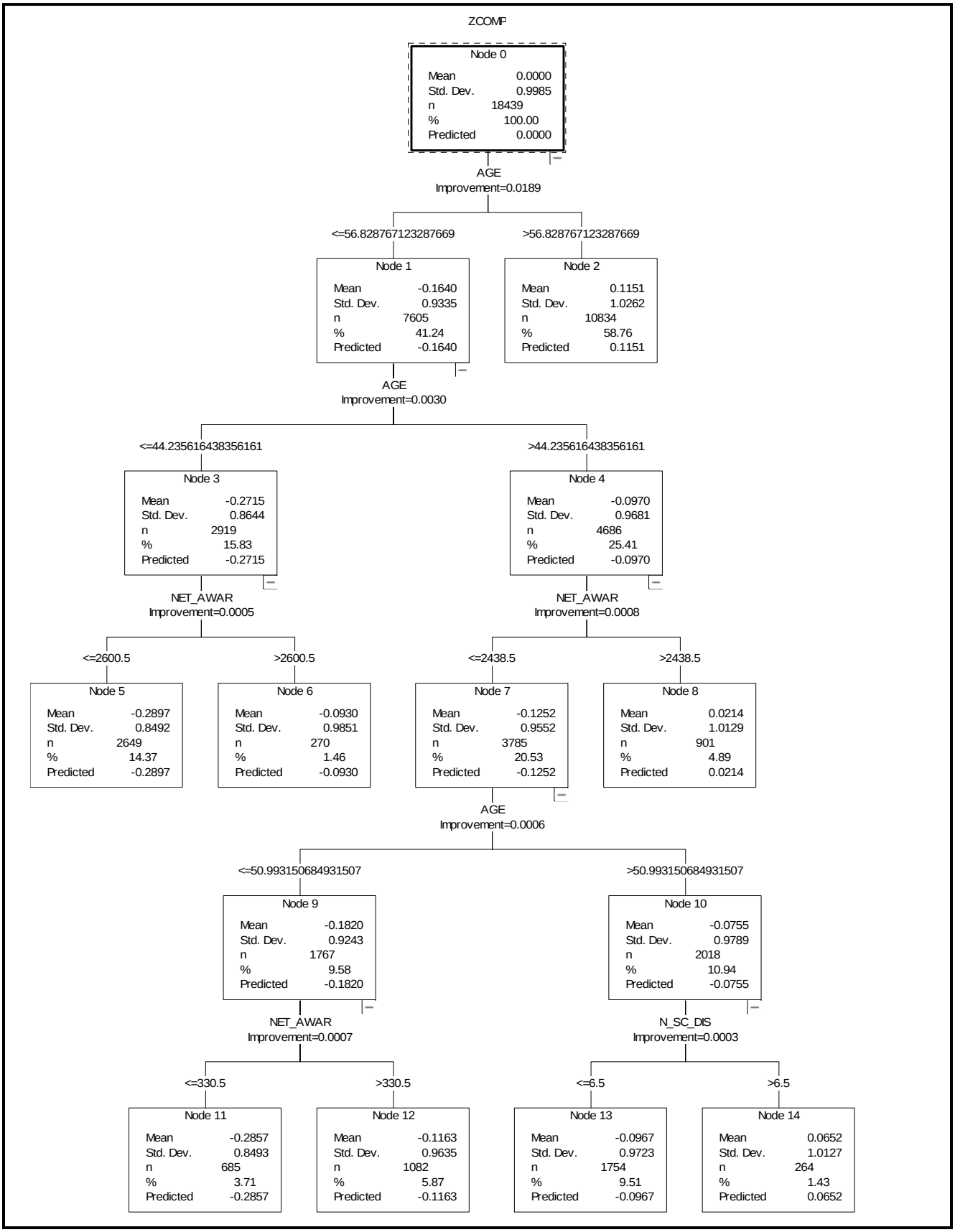
To better determine what variables to use in the model and how to group categories if necessary, the response variable was converted to a z score within each cell. Therefore, if in a cell p was the percentage of respondents and x=1 for respondents and x=0 for non-respondents, then $z=(x-p)/(p(1-p))^{½}$. With z as a dependent variable, a regression tree was used to predict response rate using variables available from administrative records. Exhibit 2 presents the tree, using the C&RT procedure. The many breaks for age led to the decision of treating age, net award, and number of service-connected disabilities as a continuous variable. Number of service-connected disabilities was also treated as a continuous variable.

The variables and all of their interactions were used as predictors in a logistic regression, as was the sampling cell. The interactions which did not significantly contribute to the prediction were dropped, but if an interaction was significant, the interacting variables were retained as predictors.

The model led to the calculation of a probability of responding (or propensity) for each respondent, and the correlation of these propensities with the key variables. The correlations were significant for some variables, but not for all variables. The correlations were also calculated separately for each cell. In some cells, the correlations were stronger than in others.

The propensity probabilities were calculated for all members of the initial sample. The median was obtained for each cell, and was used to divide each cell into two half cells. Then the cell allocations were revised and converted into almost equal allocations for each half cell. The allocations were not quite equal because the medians were calculated to include veterans in the deceased veteran list, but the allocations excluded them. This led to the selection of equal numbers from high propensity and low propensity half cells. Equal numbers were not achieved in every cell; cells were completed from the high propensity cell when it became impossible to reach the target sample from the low propensity cell.

Exhibit 2. C&RT Procedure for First Wave



Final Non-response Analysis, Propensity Scores, and Response Bias

The population size was estimated for each survey by removing ineligibles (e.g., deceased, spouses no longer receiving benefits) from each cell, and for the veterans, each cell and propensity combination found in the initial sample. For veterans the resulting population was 2,608,299; for surviving spouses the resulting population was 290,897. Because the number of sample cases allocated for calling is an estimate of that needed to achieve the desired number of responses in each cell, there are additional completes in some cells that exceed the required number. The number of completed surveys obtained in the veteran survey is 21,859. For spouses, 1,994 completed surveys were obtained, and 1,842 completed surveys are needed to produce the estimates at the desired level of precision in an unweighted sample. Table 14 summarizes the numbers discussed.

Table 14. Universe and Completed Surveys Available for Analysis

	Veterans	Spouses
Universe with ineligibles removed	2,608,299	290,897
Completed surveys	21,859	1,994

Results of the analyses comparing completed interviews with all cases available in the initial sample (Table 15 through Table 24) revealed that with the exception of age, all other administrative variables were similar, thereby suggesting the completed sample is representative of the initial sample and of the population. With respect to age, veterans who completed interviews were slightly older than those in the initial sample (average age 61 and 60, respectively) (see Table 16). A smaller proportion of veterans who completed interviews than the initial sample was under the age of 55 (28 and 33 percent, respectively), while larger proportions were ages 55 to 64 (37 and 33 percent, respectively) and 65 to 80 (24 and 21 percent, respectively). Surviving spouses who completed interviews were also slightly older than those in the initial sample (average age 65 and 63, respectively). The initial sample had a higher proportion of surviving spouses under the age of 55 than in the completed sample (31 and 24 percent, respectively) and a smaller proportion ages 65 to 80 (35 and 41 percent, respectively) (see Table 22). Therefore, respondents were slightly older than the overall population of the VA beneficiaries, with the discrepancy emerging for those under the age of 55, as well as those aged 65 to 80.

The similarity of those who completed the surveys to those initially sampled indicates that the actions taken to adjust the response during the survey process were successful. However, it does not guarantee an absence of bias, because some of the differences are related to both the propensity to respond and the answers to key questions in the survey. Further analysis was conducted to assess bias and to make adjustments.

Table 15. Veterans' Region of Residence Based on VA Administrative Data

Region of Residence	Initial Sample	Completes
Outside of the U.S.	1.5% N=1,589	.2% N=42
Western	21.4% N=22,442	21.5% N=4,692
Central	24.0% N=25,210	25.3% N=5,533
Southern	30.3% N=31,805	29.9% N=6,540
Eastern	22.9% N=24,058	23.1% N=5,052
TOTAL NUMBER OF VETERANS	**100.0%** **N=105,104**	**100.0%** **N=21,859**

Table 16. Veterans' Demographic Characteristics

Veterans' Demographic Characteristics	Initial Sample	Completes
Age: < 55	**33.3%** N=35,017	**28.3%** N=6,180
55 – 64	33.2% N=34,851	36.7% N=8,032
65 – 80	20.5% N=21,593	23.7% N=5,190
> 80	13.0% N=13,643	11.2% N=2,457
(i) Average Age	60.2 (s.d.=15.0) N=105,104	61.3 (s.d.=13.6) N=21,859
Gender: Female	9.4% N=9,839	8.6% N=1,890
Male	90.6% N=95,265	91.4% N=19,969
Section 90.02	3.4%	2.7%
Section 90.03 Veterans receiving aid and attendance/housebound benefits	N=3,527	N=581
Section 90.04	.5%	.1%
Section 90.05 Veterans in nursing homes	N=524	N=19
TOTAL NUMBER OF VETERANS	**100.0%** **N=105,104**	**100.0%** **N=21,859**

Table 17. Veterans' Military Service Characteristics

Veterans' Military Service Characteristics	Initial Sample	Completes
Branch of military service:		
Army	51.7%	50.9%
	N=54,325	N=11,120
Navy	18.4%	18.4%
	N=19,352	N=4,019
Marines	9.9%	9.4%
	N=10,395	N=2,054
Coast Guard	1.0%	1.0%
	N=1,026	N=221
Air Force	18.9%	20.2%
	N=19,843	N=4,410
Section 90.06		
Women Army	.0%	.0%
	N=23	N=9
Section 90.07		
	.1%	.1%
Section 90.08 Army Air Corps		
	N=78	N=18
Section 90.09		
Unknown	.1%	.0%
	N=62	N=8
Section 90.10		
Average length of military service (in years)	7.0	7.3
	(s.d.=7.4)	(s.d.=7.7)
Section 90.11		
	N=105,101	N=21,859
Section 90.12		
Average time since released from active duty (in years)	31.6	32.4
	(s.d.=17.2)	(s.d.=16.2)
	N=105,101	N=21,859
Section 90.13		
Combat disability	6.9%	6.5%
	N=7,245	N=1,420
Section 90.14		
TOTAL NUMBER OF VETERANS	**100.0%**	**100.0%**
	N=105,104	**N=21,859**

Table 18. Veterans' Benefits Characteristics

Veterans' Benefits Characteristics	Initial Sample	Completes
Monthly disability compensation payments:		
None	.1% N=123	.1% N=19
Less than $200	25.2% N=26,492	24.6% N=5,383
$200 to $600	24.7% N=25,994	24.7% N=5,407
$600 to $2,000	21.4% N=22,525	21.3% N=4,651
$2,000 to $3,000	25.8% N=27,086	26.5% N=5,795
More than $3,000	2.7% N=2,884	2.8% N=604
a) Average monthly VA disability compensation	1,126.7 (s.d.=1206.0) N=105,104	1,146.5 (s.d.=1214.7) N=21,859
Average years receiving VA payments	9.5 (s.d.=6.5) N=67,781	9.2 (s.d.=6.5) N=14,091
TOTAL NUMBER OF VETERANS	**100.0%** **N=105,104**	**100.0%** **N=21,859**

Note: 22.4% of cases in the initial sample had the award amount of $112.00

Table 19. Veterans' Medical Characteristics

Veterans' Medical Characteristics		Initial Sample	Completes
Loss of Use:	Loss of use of an eye, limb, etc.	28.4% N=29,883	29.0% N=6,331
	No loss of use of an eye, limb, etc.	5.3% N=5,588	5.1% N=1,109
	Cases with missing values	66.3% N=69,633	66.0% N=14,419
Anatomic Loss:	Anatomic loss of an eye, limb, etc.	32.4% N=34,040	32.7% N=7,147
	No anatomic loss of an eye, limb, etc.	1.4% N=1,432	1.3% N=293
	Cases with missing values	66.3% N=69,632	66.0% N=14,419
Additional Severe Anatomic Loss:	Anatomic loss of organ(s) or bed-ridden	19.9% N=20,923	19.3% N=4,213
	No anatomic loss of organ(s) or bedridden	13.8% N=14,540	14.8% N=3,226
	Cases with missing values	66.3% N=6,9641	66.0% N=14,420
Combined Degree of Disability:	10 %	23.2% N=24,399	22.9% N=5,006
	20% -- 40%	26.0% N=27,344	26.2% N=5,717
	50% -- 90%	25.8% N=27,169	26.1% N=5,712
	100%	23.3% N=24,449	23.2% N=5,062
	Not indicated	1.7% N=1,743	1.7% N=362
	Average Combined Degree of Disability	50.3 (s.d.=34.9) N=105,104	50.4 (s.d.=34.8) N=21,859
b) Unemployable		7.2% N=7,562	7.3% N=1,597
TOTAL NUMBER OF VETERANS		**100.0% N=105,104**	**100.0% N=21,859**

Table 20. Veterans' Additional Medical Characteristics

Veterans' Additional Medical Characteristics		Initial Sample	Completes
Number of diagnostic codes:	**1**	18.9% N=19,852	18.3% N=4,006
	2	15.2% N=15,938	15.4% N=3,375
	3	11.7% N=12,332	11.9% N=2,609
	4	9.8% N=10,319	9.6% N=2,100
	5	8.2% N=8,668	8.2% N=1,802
	6	36.1% N=37,995	36.4% N=7,967
Average number of diagnostic codes		3.8 (s.d.=2.0) N=105,104	3.8 (s.d.=2.0) N=21,859
Number of service-connected disabilities:	**1**	31.3% N=32,932	30.7% N=6,708
	2	19.5% N=20,527	19.7% N=4,306
	3	13.0% N=13,680	12.8% N=2,789
	4	9.4% N=9,928	9.2% N=2,005
	5	6.9% N=7,286	7.0% N=1,539
	6	7.0% N=7,305	6.9% N=1,518
	7	3.5% N=3,628	3.6% N=787
	8	2.6% N=2,687	2.7% N=597
	c) 9	6.8% N=7,131	7.4% N=1,610
	d)		
Average number of service-connected disabilities		3.3 (s.d.=2.4) N=105,104	3.4 (s.d.=2.5) N=21,859
TOTAL NUMBER OF VETERANS		**100.0% N=105,104**	**100.0% N=21,859**

Table 21. Surviving Spouses' Region of Residence Based on VA Administrative Records

Region Of Residence	Initial Sample	Completes
Outside of the U.S.	1.9% N=180	.0% N=0
Western	22.5% N=2,076	21.4% N=427
Central	24.0% N=2,214	24.6% N=491
Southern	35.4% N=3,276	36.5% N=728
Eastern	16.2% N=1,498	17.5% N=348
TOTAL NUMBER OF SURVIVING SPOUSES	**100.0%** **N=9,244**	**100.0%** **N=1,994**

Table 22. Surviving Spouses' Demographic Characteristics

Surviving Spouses' Demographic Characteristics	Initial Sample	Completes
Age: < 55	30.5% N=2,823	24.1% N=481
55 – 64	15.1% N=1,396	16.2% N=323
65 – 80	35.3% N=3,262	40.8% N=813
> 80	19.1% N=1,762	18.9% N=377
(ii) Average Age	62.7 (s.d.=18.6)	64.6 (s.d.=17.2)
	N=9,244	N=1,994
	2.4%	1.5%
Section 90.15 Surviving spouses receiving aid and attendance/housebound benefits	N=220	N=29
Section 90.16	.2%	.1%
Section 90.17 Surviving spouses in nursing homes	N=21	N=1
TOTAL NUMBER OF SURVIVING SPOUSES	**100.0%** **N=9,244**	**100.0%** **N=1,994**

Table 23. Surviving Spouses' Benefits Characteristics

Surviving Spouses' Benefits Characteristics	Initial Sample	Completes
Monthly DIC payments:		
None	.1% N=12	.1% N=1
Less than $1050	55.9% N=5,170	57.1% N=1,138
$1050 to $1250	8.8% N=811	9.3% N=185
$1250 to $1300	22.4% N=2,070	21.9% N=436
More than $1300	12.8% N=1,181	11.7% N=234
a) Average monthly DIC benefit	1,167.2 (s.d.=217.2) N=9,244	1,159.3 (s.d.=204.4) N=1,994
Average years receiving DIC benefits	7.2 (s.d.=5.8) N=8,192	7.1 (s.d.=5.9) N=1,763
Survivor Benefit Program	42.4% N=3,924	42.9% N=855
TOTAL NUMBER OF SURVIVING SPOUSES	**100.0%** **N=9,244**	**100.0%** **N=1,994**

Note: 52.0% of cases in the initial sample had the award amount of $1033.00

Table 24. Deceased Veterans' Military Service Characteristics

Deceased Veterans' Military Service Characteristics	Initial Sample	Completes
Branch of military service:		
Army	51.8% N=4,790	51.5% N=1,027
Navy	17.8% N=1,642	17.0% N=338
Marines	7.7% N=708	7.0% N=139
Coast Guard	.9% N=82	.8% N=16
Air Force	21.7% N=2,009	23.6% N=471
Section 90.18	.1%	.1%
Section 90.19 Army Air Corps	N=11	N=2
Section 90.20		
Unknown	.0% N=2	.1% N=1
Section 90.21		
Average years of military service	9.6 (s.d.=8.8) N=9,244	10.0 (s.d.=8.8) N=1,994
Section 90.22		
Average years since veteran's death	11.6 (s.d.=12.6)	11.9 (s.d.=13.1)
Section 90.23	N=9,243	N=1,994
Section 90.24	21.1%	18.6%
Section 90.25 Veteran died on active duty	N=1,950	N=370
Average time of veteran death after military service (in years)	28.3 (s.d.=16.0)	28.9 (s.d.=16.1)
Section 90.26	N=7,293	N=1,624
Section 90.27		
Average age of deceased veteran	55.2 (s.d.=19.2)	56.6 (s.d.=18.7)
Section 90.28	N=9,192	N=1,986
Section 90.29		
TOTAL NUMBER OF SURVIVING SPOUSES	**100.0% N=9,244**	**100.0% N=1,994**

Note: Average time of veteran death after military service was calculated for cases where the veteran died after being discharged from active duty

To establish the presence or absence of response bias, a logistic regression was used to predict propensity to respond. This analysis was analogous to that conducted for the first wave,

but this time for the entire released sample. The categorical propensity variable created in the first wave analysis was used in the modified sampling design, and was included in this analysis. As before, sampling cell was also included in the analysis, but unlike the first wave analysis, the interactions of the sampling cell with other waves were included in the analysis. Variables and interaction terms that were not significant were eliminated from the analysis. Significant variables in the model are shown in Table 25.

Table 25. Significant Predictors in Final Logistic Model for Veterans

Source	DF	Chi-square	Pr > Chi-square
Sampling cell	56	435.2889	<.0001
Propensity category	1	31.6185	<.0001
Sampling cell X propensity category	56	138.7346	<.0001
Award amount	1	123.5811	<.0001
Number of service connected disabilities (NSCD)	1	8.9875	0.0027
Age of veteran	1	203.1127	<.0001
Age of veteran X NSCD interaction	1	26.0732	<.0001
Award amount X NSCD interaction	1	4.7582	0.0292
Age X award amount interaction	1	77.4613	<.0001

A second model was produced for surviving spouses. No propensity category was defined for surviving spouses, and for the spouses there were three dichotomous stratifiers defining eight cells. As shown in Table 26, sampling cell and age were the only significant predictors for the surviving spouses.

Table 26. Significant Predictors in Final Logistic Model for Surviving Spouses

Source	DF	Chi-square	Pr > Chi-square
Sampling cell	7	22.6106	0.0020
Age of spouse	1	15.4753	<.0001

Correlations between propensities and most key variables were significant, but of very low magnitude for veterans (Table 27). However, for surviving spouses the correlations were much higher for six of the eight variables examined (Table 28). There was no adjustment to the survey protocol after the first wave for spouses, as there was for veterans.

Table 27. Correlations of Veteran Propensity to Respond with Key Variables

Variable	Correlation	Significance
Currently retired	-.043	< .0001
State of health	.063	< .0001
Health now limits moderate activities	-.043	< .0001
Limited by physical health in past 4 weeks	.050	< .0001
Cut down activities past 4 weeks due to emotional problems	-.014	.0384
Health problems interfered with social activities in past 4 weeks	.019	.0051
Satisfaction from life overall	-.014	.0409
Worked last week	.028	.0131

Table 28. Correlations of Surviving Spouse Propensity to Respond with Key Variables

Variable	Correlation	Significance
Are you currently retired	.394	< .0001
State of health	-.247	< .0001
Health now limits moderate activities	.313	< .0001
Limited by physical health in past 4 weeks	.284	< .0001
Cut down activities past 4 weeks due to emotional problems	-.008	.7073
Health problems interfered with social activities in past 4 weeks	.100	< .0001
Satisfaction from life overall	.002	.9211
Worked last week	.146	.0005

Propensity weights were provided to correct the bias in both the veteran and spouse completed interview samples. These weights remove or reduce the bias correlated with variables included in the analysis. Such bias is higher in the surviving spouse survey, which was unadjusted after the first wave, than the veteran survey, which was adjusted after the first wave. Accordingly, the reduction of bias by the propensity weights is greater in the spouse survey than in the veteran survey.

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