

STATEMENT OF WORK

A. GENERAL OBJECTIVES AND REQUIREMENTS

1. **Title:** Analysis of Benefits for Disabled Veterans and their Survivors
2. **Customer:** The Veterans' Disability Benefits Commission is the customer. This contract is between the Commission and the Center for Naval Analyses (CNA). VA is only serving as a fiscal means to fund the contract as required in Title XV of P.L. 108 -136.
3. **Scope:** CNA shall provide all resources necessary to accomplish the itemized deliverables. This includes contracting and monitoring subcontractors identified in the proposal. The scope includes analysis of disabled service connected veterans, non-disabled veterans for purposes of comparison, survivors in receipt of Dependency Indemnity Compensation or military survivor benefits, and military retirees receiving medical and nonmedical retirement for purpose of comparison. The scope also includes, but is not limited to, the development of an aggregated database used to furnish answers to the specified questions, completed surveys of disabled veterans and survivors, an analysis of existing data, and interim and final analytical reports providing a complete and thorough data analysis. The final analytical report incorporates all work done for the study, including work conducted by other contractors. The scope also includes periodic status reports as well as final briefings by CNA to the Commission and stakeholders. The scope does not include Information Technology deliverables beyond electronic media needed to convey data and reports.
4. **Disclaimer:** The analysis requested in this statement of work is wholly at the discretion of the Veterans' Disability Benefits Commission. Although the VA has responsibility to facilitate the work of the Commission, VA's administrative assistance of this study and associated contract does not mean that VA approves, endorses, or agrees with the proposed research tasks. The scope, research questions and supporting narrative represent work by the Commission and not VA or the Office of Naval Research.
5. **Period of Performance:** January 3, 2006 – May 31, 2007
CNA is to propose specific milestones.
6. **Type of Contract:** A task order to CNA, a Federally Funded Research Development Center (FFRDC) that has a standing contract with the Office of Naval Research (ONR) and the Department of the Navy. An interagency agreement between VA and the Office of Naval Research enables this procurement.

Comment: Language in the scope adjusted in response to the discussion on p. 3

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B. BACKGROUND

Public Law 108-136, the National Defense Authorization Act of 2004, created the Veterans' Disability Benefits Commission 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. In carrying out the study, the Commission will examine and make recommendations concerning:

- (1) The appropriateness of such benefits under the laws in effect on the date of the enactment of this Act;
- (2) The appropriateness of the level of such benefits; and,
- (3) The appropriate standard or standards for determining whether a disability or death of a veteran should be compensated.

The Commission is also directed to consult with the Institute of Medicine (IOM) of the National Academies of Science with respect to the medical aspects of contemporary disability compensation policies. Consultation with IOM is being accomplished in a separate task order contract. CNA and IOM shall coordinate issues, results, and data deliverables to ensure final incorporation of all results.

The Commission is scheduled to submit to the President and the Congress a report by August 2006; however, this contract can not be completed until May 31, 2007. Therefore, a report extension will be requested.

This contract is between the Commission and CNA. VA is only serving as an administrative means to fund the contract as required by P.L. 108 -136. The Office of Policy, Planning, and Preparedness (OPPP) is appointed as the VA point of contact for the Commission. OPPP is providing contracting assistance and analytical support. To prepare to work with the Commission, Legislative History and Literature Review reports on the disability compensation program were completed by an independent third party contractor. The Literature Review identified nine potential research issues. The Commission considered the contractor reports, different studies and reports across government, testimony by veteran service organizations and many other sources of information in selecting the final set of research questions. The following sections contain objectives, research questions and analytical tasks for the contract. Sections addressing deliverables, schedules and additional contractual stipulations follow.

C. OBJECTIVES

(1) Conduct Analysis of Disability and Survivors Benefits

Individual level data needs to be collected on persons receiving VA disability compensation and military retirement from 1985 to the present to compare disabled and non-disabled veterans to measure the extent to which the benefits are meeting the goal of replacing average loss of earnings capacity and the impact of disability on the quality of life of veterans with service-connected disabilities. Veterans in receipt of military retirement are included for the income match in order to develop data on both: (1) Nonmedical military retirees who complete 20 years of active duty and leave service with regular retirement and later possibly draw VA service connected benefits; and, (2) Medical military retirees who are those determined by a physical evaluation board to be unfit for service and are discharged with military retired pay that is calculated based on the disability, years of service and military retired pay. In order to conduct an income match for the medical military retiree sub-population of veterans, data is also needed from nonmedical military retirees for comparison. Severance pay is distinct from military retired pay and no income match is conducted for veterans who received these benefits, however, military severance lump sum payments are reviewed in this Statement of Work (p. 10).

Data on survivors of veterans who died on active duty or of service-connected disabilities must also be collected. Data are available from VA to identify disabled veterans and their survivors. Data is also available from DoD to identify disabled and non-disabled military retirees and their survivors. Data from other federal data sources such as OPM will also be needed to develop complete information for analysis. Attachment 1 identifies some of the major data sources. These data will be needed to provide information on the appropriateness and adequacy level of the benefits provided to replace lost earnings capacity and to address the impact on quality of life among disabled veterans in a variety of different disabled veteran subpopulations. Potential subpopulations to be analyzed will be formed by variables such as enlisted or officer rank, gender, age, education, period of conflict, military retiree status and race and ethnicity. Race and ethnicity will not be over sampled, but data collected will be analyzed. Data for these subpopulations are needed for many of the most prevalent diagnoses among the 15 body systems contained in the VA Schedule of Rated Disabilities (VASRD), and by the severity of disability across the rating scale as assigned in percentage increments from 0% to 100%. Finally, data are also needed to understand the progression of disability payments over the lifetime of the veteran, and to review survivor benefits with regard to the adequacy of the level of benefits provided by VA and DoD.

The major objectives for the analysis of benefits are to:

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(1) Coordinate within VA, DoD, the Social Security Administration (SSA) and other sources to secure transfer of data needed to build a database of individual level data on career earnings of disabled and non-disabled veterans and survivors. Data from OPM on veterans income is needed to provide earnings information on those veterans enrolled in the Civil Service Retirement System. Data of disabled and non-disabled veterans shall be matched to ensure comparability. The non-disabled data may consist of a representative sample rather than the entire universe.

(2) Coordinate within VA and with DoD to develop data on the additional economic value that ancillary and other benefits contribute to the disability and survivors benefits so that complete information is available on the dollar values of all benefits provided. Each different source's contribution to the benefit package needs to be identified. The economic value of other ancillary benefits needs to be identified in order to assess the total package for understanding disability compensation benefits. Program benefits for service connected veterans include at least: Veterans Health Administration (VHA) health care services, the Vocational Rehabilitation and Employment program (Chapter 35 education benefits for survivors), Specially Adapted Housing and Vehicles benefits, Home Loan assistance for survivors, the Service Disabled Veterans Insurance program and the Department of Labor.

(2) Conduct Surveys of Disabled Veterans and Survivors

Conduct a survey of a representative sample of disabled veterans, disabled retirees, and survivors addressing the impact of disability on quality of life, and then aggregate collected survey data into the database for analysis.

(3) Analyze Readily Available Data on Impact of Disability

Identify and analyze readily available quantitative and qualitative data in government, industry and the professional disability literature sources on disabled persons to provide both narrative discussion of the issues as well as existing data on the identified questions for different subpopulations, rating levels and disability conditions.

(4) Incorporate all Findings in Final Report (Including IOM)

Results from all IOM research activities shall be reflected in CNA's reports. Reports and accompanying briefings to the Commission shall be provided on the work that has been conducted. Sufficient narrative text, charts, tables and graphs to explain the work conducted and conclusions reached shall be provided.

D. OBJECTIVES, RESEARCH QUESTIONS AND TASKS

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This section is organized by the four objectives stated in the previous section. Each of the Commission's research questions for CNA is presented along with the tasks needed to answer them. Research questions are in bold italicized font and numbered in accordance with the full list of approved Commission research questions. Major CNA research questions contain brief general requirements sections to clarify the specific tasks that follow. Attachment 4 contains a full description of the Commission's approved research questions to provide complete information on the context of the Commission's efforts.

For each task CNA is expected to suggest appropriate policy options to the Commission for improvement and include cost estimates (program and administrative) that would result from implementing proposed changes.

(1) Conduct Analysis of Disability and Survivors Benefits

General Requirements

1. Review and analyze all key documents regarding benefit programs to include vocational rehabilitation and readjustment counseling services as well as published research on and socioeconomic studies of the disabled in America.
2. The data for all tasks are to be analyzed by veterans' or military retirees' disability evaluation level (all service-disabled veterans 0 to 100%). Samples shall be analyzed by age, gender, socioeconomic, and race and ethnic characteristics.¹
3. Profile of Disabled Veterans and Disabled Military Retirees: Describe the population of recipients of VA's Disability Compensation and DoD's Disability Retirement programs. Provide narrative and data tables for both populations. At a minimum, the profile should include information about age, marital status, number and ages of dependent children, gender, income, health status, employment status, educational attainment level before discharge as well as current educational attainment, and whether or not family is receiving other benefits, including federal benefits.
4. Other Benefits Programs: In addition to Disability Compensation or Military Disability Retirement, catalog (that is provide general descriptions, eligibility requirements, and benefit levels) all benefits programs currently available to meet the non-financial needs of the service-disabled veterans and disabled military retirees. Compare, contrast, and benchmark these

¹ Use the minority race and ethnic groups defined in P.L. 102-218, specifically: African American, Asian American, Hispanic American, Native Alaskan, Native American, Native Hawaiian, and Pacific Islanders.

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benefits programs designed to assist disabled veterans and disabled military retirees with an adequate number of similar public and private programs. Compare and contrast the resources available to disabled non-veterans to those available to disabled veterans. Assess any interrelationships among these programs.

5. **Impact of Length of Disability:** For the population of disabled veterans, conduct analysis by the VASRD disability evaluation level. Correlate the effects of the length of time a veteran has been disabled to his/her educational and career circumstances, as well as other indicators of quality of life. If it is determined that there is a correlation between the length of time that the veteran has been disabled and the impact on the quality of life, suggest a benefit payment plan option that addresses the impact.

6. **Future Needs of Disabled Veterans and Disabled Military Retirees:** Project the future transitional and ongoing needs for persons disabled during military service in the early 21st century using planning horizons of 2010, 2015, and 2020, including a recommendation of the appropriate level of benefit and total estimated cost using survey and database data. Suggest options in which VA and DoD can help meet the needs identified in this task. Determine the relative advantages and disadvantages of those options using cost/benefit and sensitivity analysis techniques. Consider program and administrative one-time costs, recurring costs, and benefit levels.

7. **Satisfaction with Current Programs:** To the extent captured by existing VA/DoD customer satisfaction surveys, determine the levels of satisfaction among disabled veterans, disabled military retirees with the adequacy of current programs in meeting their needs. Based on the information gathered, suggest possible program changes that may increase satisfaction levels. Project administrative and benefit costs for suggested changes.

Research Questions

1. How well do benefits provided to disabled veterans meet Congressional intent of replacing average impairment in earnings capacity?

This question directly addresses whether the full range of benefits and services provided for disabled veterans in 38 USC Parts 2 and 3 helps alleviate the effects of the veterans disabilities. For example, Section 1155 directs the VA Secretary to "adopt and apply a schedule of ratings of reductions in earning capacity from specific injuries or combination of injuries; The ratings shall be based, as far as practicable, upon the average impairments of earning capacity resulting from such injuries in civil occupations." In addition, the question is consistent with the main questions posed by previous studies on veterans' disability benefits.

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Tasks

1. Coordinate within VA, DoD, the Social Security Administration (SSA) and OPM to build a database of individual level data on disabled and non-disabled veterans and military retirees. The construction of a database will be done to aggregate pertinent information to answer the research question. Data to be aggregated include but are not limited to career earnings from individual records of veterans, and military retirees from both disabled and non-disabled populations. Identifier Social Security account numbers will also be needed.
2. Attachment 1 in the Attachment Section provides information on possible data sources and data needed such as the Beneficiary Identification Records Locator System (BIRLS). Additional key data sources have also been identified in the Document List. Specific individual level data such as the following will need to be identified and aggregated within the database: Social Security numbers for those in receipt of VA Disability Benefits and special monthly extra-schedular grants, age, gender, military retiree status, officer or enlisted rank, active duty dates, dates of claims, ethnicity and education, service connected diagnoses, rating schedule award and ratings (including those made on the basis of Individual Unemployability (IU)). In addition, Social Security numbers for those receiving both military disability retirement and regular military retirement are also needed.

Social Security numbers for individuals in receipt of disability benefits can be used to match records across different VA data systems (Vocational Rehabilitation, Veterans Health Administration, etc.) to develop needed data on utilization to estimate the total value of benefits provided. Data for the non-disabled may consist of a representative sample rather than the entire universe. Data of disabled and non-disabled veterans shall be matched to ensure comparability.

3. Coordinate within VA and DoD to develop data on the economic value that other ancillary benefits contribute to the disability compensation benefit so that complete information is available on all benefit levels provided to service connected veterans. As partially discussed in item #2 above, each source's economic contribution to the benefit package needs to be identified to provide needed context for understanding disability compensation benefits. Program benefits for service connected veterans include at least: VHA health care services (for the last five years), the Vocational Rehabilitation and Employment program, Specially Adapted Housing and Vehicles, and the Service

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Disabled Veterans Insurance program, and Veterans Mortgage Life Insurance programs.

4. Analyze collected survey data and literature review to provide findings to answer research question 1, as well as the other relevant questions listed in this objectives section. Data are needed for the different subpopulations (age, education, rank, MOS), rating levels across the VASRD and disability conditions to fully understand the pattern of compensation in replacing the average impairment to earnings capacity. Data are also needed to understand the patterns of how compensation benefits change over the lifetime of the veteran.

5. *Should the benefit package be modified?*

- a. ***Would the results be more appropriate if reduced quality of life and lost earnings were separately rated and compensated?***
- b. ***Are there negative unintended consequences resulting from the current benefit structure? Does the receipt of certain levels of compensation provide a disincentive to work or undergo therapy?***

Tasks

Data analysis findings from the database and surveys shall provide specific answers to each of the questions posed in "a" and "b," above. Policy options suggested to the Commission must be fully supported by data and be accompanied with alternatives and cost estimates that consider program and administrative one-time costs, recurring costs, and benefit levels. Suggested policy options need to be responsive to program context in consideration of such factors as operational viability, complexity and performance.

8. *How do the operations of disability benefits programs compare?*

Tasks

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Compare and contrast the VA disability compensation program's process for evaluating and adjudicating claims with similar federal disability programs. The focus of this analysis will be at a high-level of operations sufficient to identify strengths and weaknesses and suggest opportunities for improvement. Such programs minimally include SSDI, SSI, FECA, OPM and others. Note: the Institute of Medicine (IOM) is reviewing the appropriate role of health care professionals in processing claims. CNA is expected to incorporate the results of the IOM analysis and estimate the staffing and cost implications of any suggested policy options. The CNA analysis needs to provide information on the following key domains and their related issues:

- a. The role of attorneys and legal staff in the claims and appeals processes and the required number of staff for this function
- b. Compensation Claims Process
 - specification of the steps in the process
 - the location and number of processing centers
 - administrative costs (FTE, IT, Other)
 - adequacy of performance indicators (timeliness, quality, inventory, etc.)
- c. Appeals Process
 - specification of the steps in the process
 - location and number of the processing centers
 - administrative costs (FTE, IT, Other)
 - performance indicators (timeliness, quality, inventory, etc.)
 - the role of client representatives
- d. Training and certification of staff and client representatives
 - initial training
 - refresher training
 - client representative training
 - types of certification programs
- e. Quality Assurance/Control Program

9. Pertinent law and regulations require that disability compensation be based on average impairment of earnings capacity, not on loss of individual earnings capacity.

- a. ***Would the results be more appropriate if factors such as the individual's military rank, military specialty, pre-service occupation,***

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education, and skill level were taken into consideration in determining benefits?

b. Would the results be more appropriate if the effect of the veteran's medical condition on his or her occupation were taken into consideration in determining benefits?

Tasks

Economic analysis shall be conducted with the collected income data using the variables referenced in research question 1 to provide information and to suggest policy options to Commission representatives.

10. Should lump sum payments be made for certain disabilities or level of severity of disabilities? Should such lump sum payments be elective or mandatory? Consider the merits under different circumstances such as where the impairment is to quality of life and not to earnings capacity.

Tasks

1. Prepare an analytical paper that reviews and discusses existing data contained in such sources such as the Veterans' Claims Adjudication Commission's Report To Congress, VA's response to the report, a draft VA paper on lump sum to be provided to CNA and the 2000 GAO survey. In addition, explore and discuss the history of offering lump sum buy-outs in different programs (e.g., DoD, OPM and other Federal government agencies) in terms of possible application to the veterans' disability compensation benefits program. The analytical paper should also:

(a) Describe a method for ascertaining personal discount rates for veterans classified by age, and service connected rating that could be implemented in a future study considering experimental and non-experimental methods. Also, describe other research needs related to lump sum payments.

(b) Provide recommendations as to how personal discount rates are to be set by age and service connected group. Address what complications would arise by also considering the medical prognosis for the disease or other relevant factors for lump sum payments.

12. Are benefits available to service disabled veterans at an appropriate level if not indexed to cost of living and/or locality? Should the various benefits that are presently fixed be automatically adjusted for inflation?

Tasks

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1. Economic analysis needs to be conducted to determine the effects of geographic locality and to assess the current approach to indexing (e.g. first indexing benefits and such ancillary benefits as automobile allowance, specially adapted housing and burial allowance.)
2. Suggest appropriate policy options and provide supporting data that include program and administrative cost estimates.

16. Do changes need to be recommended for the Individual Unemployability (IU) benefit?

Analyze benefits provided to veterans who are unable to work (as documented by IU status) yet are rated as less than 100% by the Rating Schedule. Consider the results of the analysis of average loss of earnings capacity and the results of the IOM analysis of the Rating Schedule. Also, review existing data from federal and other professional sources and discuss in an analytical paper.

Tasks

Economic analysis shall be conducted with the collected income data to suggest policy options to the Commission. Existing data shall also be considered. Findings and issue narrative to be submitted in an analytical paper.

4. How well do benefits provided to disabled veterans and survivors meet implied Congressional intent to provide incentive value for recruitment and retention.

Tasks

1. Review existing aggregated data that exists in DoD, GAO, OIG, and the professional disability literature sources for a thorough and complete discussion of how veterans' disability benefits provide incentive value for recruitment and retention.
2. CNA is expected to suggest appropriate options for improvement and include cost estimates (program and administrative) that would result from implementing options.

(2) Conduct Survey of Disabled Veterans and Survivors

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2. How well do benefits provided to disabled veterans meet implied Congressional intent to compensate for impairment in quality of life due to service-connected disabilities?

5. Should the benefit package be modified?

(c) Are there negative unintended consequences resulting from the current benefit structure? For example, does the receipt of certain levels of compensation provide a disincentive to work or undergo therapy?

General Requirements

The main purpose of this analysis is to assess the issues that veterans with service-connected disabilities confront in their post-military lives that can be associated with conditions caused or aggravated by military service. A survey is expected to provide insight into the circumstances, employment, recruitment-retention issues, perceptions, and extent to which service-connected disabilities impact the quality of life for the veteran and the veteran's household. The survey also needs to provide information on the extent to which disability benefits address quality of life issues that arise out of the service connected disability or death.

CNA's assessment shall make an objective, third-party determination of the extent to which the service member's service-connected disability interferes with his/her ability to enjoy a well adjusted civilian life. Because perceptions of veterans with some disabilities, i.e., mental disabilities, may not be able to report objectively, it may be appropriate to gather information from caregivers for this population.

Receipt of disability compensation payments may impact on veterans' incentive to work. The Bradley Commission stated that rates should not be set so high as to undermine incentive for productive activity nor so low that they fail to meet minimum needs. A 2005 study by Rand showed that many veterans are reducing their work for reasons other than their disability². The study concluded that the reasons for not working are not clear. Further exploration of employment incentives shall be accomplished as part of a quality of life survey of disabled and non-disabled veterans and military retirees. CNA shall report on why some veterans are not working or are working at reduced levels.

The survey must be designed to provide an assessment of the disability impact on the life of veterans and their families and their loss of quality of life. Quality of

² Richard Buddin, Kanika Kapur, (2005). An Analysis of Military Disability Compensation, Rand National Defense Research Institute, p. xviii.

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life shall be defined so that it is consistent with a health-related quality of life definition which is the dominant perspective in disability research and health care. Accordingly, measurement of quality of life shall include "a combination of subjectively assessed measures of health, including physical function, social function, emotional or mental state, burden of symptoms and sense of well being," as discussed in the Quality of Life literature review contained in Attachment 5.

Tasks

1. **Data Availability:** CNA shall obtain descriptive information for comparative purposes from readily available government sources such as the Departments of Health and Human Services, Defense, Labor (Bureau of Labor Statistics), Education, Commerce (Census), and the Social Security Administration as well as from public and private data repositories. The contractor must also obtain available data for sample populations from VA and Department of Defense (Defense Manpower Data Center).

2. **Data Populations/Samples:** The populations of VA Disability Compensation beneficiaries and DoD military disability retirees include persons rated with both physical and mental disabilities. Both populations will contain persons with and without compensated work therapeutic employment. Survivors of servicemembers killed during service or who die after discharge of service connected causes also need to be surveyed as a separate population. The samples must be large enough to provide a statistically valid representation at the $p < .05$ level. Attachment 3 describes three options for sample selection. CNA will include in its proposal a methodology and cost and time estimate for each of the three options for selection by the Commission. In addressing methodology in its proposal, CNA needs to include an analysis of needed cell sizes for answering the research questions that considers the variance in the population, the magnitude of acceptable error and confidence levels.

3. **Data Analysis:** All samples are to be analyzed by gender and generally-accepted major race and ethnic characteristics (not to be over sampled, but data collected will be analyzed) as well as age, income, and level and type of disability. CNA shall analyze data by disability service connected rating. When comparing target populations, samples will be matched for health and socioeconomic characteristics.

3. How well do benefits provided to survivors meet implied Congressional intent to compensate for the loss of the veterans/service members' earning capacity and for the impairment in quality of life due to service-connected death?

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This question addresses the implied legislative intent to support survivors with Dependency Indemnity Compensation (DIC) payments and DoD survivors benefits to ameliorate the negative impact that disabilities have on the economic status and the quality of life for survivors and their households. Data on survivors receiving benefits through the Dependency and Indemnity Compensation (DIC) Program are also needed. A survey of survivors receiving DIC benefits and military survivor's benefits is needed in order to gain insights into their circumstances and perceptions of loss of quality of life. This question will need to be answered with both survey data and information on VA DIC and DoD survivor benefits program payments and career earnings. Census data on household income could be used instead of survey data. Comparison of survivor household income to common income benchmarks is needed. Options to address findings of suggested benefit changes should include a description of the suggested changes and estimated costs.

The operations and procedures for collection of the data in research question 1, also apply here. Briefly, the collected data in the database for survivors receiving DIC and DoD survivor benefits needs to be analyzed with Social Security career earnings or household income (Census or survey) to determine the adequacy of the total DIC benefit package (e.g. DIC benefits, Chapter 35 Educational Assistance, Home Loan benefit, Aid and Attendance and Health Care). The impact of the benefit on quality of life will be measured through the use of survey data. Survivors receiving DIC benefits and DoD survivors benefits shall be surveyed to assess the impact of the income benefit in addressing losses to their quality of life. It is important to note that the percent rating of the veteran prior to death is immaterial for this analysis as the service connected rating does not affect the level of DIC benefit..

Tasks

For each task CNA is expected to suggest appropriate options for improvement and include cost estimates (program and administrative) that would result from implementing proposed changes.

The survey objectives and tasks for veterans and their survivors have been discussed in the previous question with regards to veterans. Essentially, the objectives that are specific to survivors and their households are to:

1. Profile of Survivors of Disabled Veterans and Survivors of Disabled Military Retirees: Describe the population of survivor recipients of VA's DIC and DoD's survivor benefit programs including their households.

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Provide narrative and data tables for both populations. At a minimum, the profile should include information about age, marital status, number and ages of dependent children, gender, income, health status, employment status, educational attainment level before death of veteran as well as current educational attainment, and whether or not the family is receiving other benefits, including federal benefits.

2. Data Populations/Samples: The populations of VA Dependency Indemnity Compensation beneficiaries and DoD military survivor benefits program need to be surveyed as separate populations, each in two groups: those whose spouse died within the last five years; and all others. The samples must be large enough to provide a statistically valid representation at the $p < .05$ level.
3. Impact of Length of Disability: For the population of survivors, correlate the effects of the length of time a veteran has been deceased to the survivors educational and career circumstances. If it is determined that there is a correlation between the length of time that the veteran has been deceased and the impact on education and career, suggest options that would offset the impact.
4. Future Needs of Survivors: Project the future and ongoing needs for survivors and their dependents using planning horizons of 2010, 2015, and 2020, including a recommendation of the appropriate level of benefit and total estimated cost using survey and database data. Suggest options in which VA and DoD can help meet the needs identified in this task. Determine the relative advantages and disadvantages of those options using cost/benefit and sensitivity analysis techniques. Consider program and administrative one-time costs, recurring costs, and benefit levels.
5. Satisfaction with Current Programs: To the extent captured by VA and DoD customer satisfaction surveys, determine the levels of satisfaction of survivors with the adequacy of current programs in meeting their needs. Based on the information gathered, suggest possible program changes that may increase satisfaction levels. Project administrative and benefit costs for suggested changes.
6. Effect on Spouse who Provided Care to Disabled Veteran or Military Retiree: Determine what if any relationship exists between the level of care provided to the disabled veteran or retiree by the spouse, and its impact on the spouse's personal health, degree of socialization, education level, employment status, use of social services, use of income-support programs, nursing home usage rates, homeownership, and the use of CHAMPVA and TRICARE.

(3) ANALYZE READILY AVAILABLE DATA ON IMPACT OF DISABILITY

General Requirements

This objective calls for developing a literature review report to provide information on all of the research questions that CNA is asked to address. The literature review needs to review quantitative and qualitative data in government, industry and the professional disability literature sources on disabled persons to provide both narrative discussion of the issues as well as existing data findings relevant to answering the identified questions for different subpopulations, rating levels and disability conditions. The literature review also needs to identify and discuss unique issues or conditions that pertain to disabled veterans, survivors or disabled military retiree study sub-groups. In addition, the literature review also needs to be used to develop a methodological foundation to support the analytical methods that will be proposed in CNA's business proposal. Finally, compare and contrast with other disability benefit programs that exist in other countries. Attachment 1 identifies some major sources of information that need to be considered, however, the literature review will need to be comprehensive in its review of different sources.

Tasks

1. Develop Draft Literature Review: Conduct a review of the literature to develop and report on existing data for the research questions of interest, as well as possible methods to be used in the study. The report will need to be a stand alone document with a table of contents, executive summary and reference sections. The report can be used as an appendix for the final report.
2. Submit Draft Literature Review: Make needed changes and edits and submit the final draft.
3. Analyze SF-36 data. Analyze the SF-36 data that VHA has collected. Compare the findings of this analysis to the data collected for the Commission survey and provide the results of this comparison to the Commission.
4. Compare and contrast disability benefits with those disability benefits that exist in other countries.

(4) INCORPORATE FINDINGS (Including IOM)

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General Requirements

The relevant results of the IOM study shall be incorporated with the results of the CNA study into a consistent and cohesive report for submission to the Commission. Topical areas from IOM will be included in the CNA report and sufficient information shall be provided to explain respective findings. In particular, it is expected that IOM will be provided with the results from the earnings and quality of life research conducted by CNA so that these data can be addressed in their suggested recommendations and policy options regarding the Rating Schedule. In turn, CNA is expected to address the recommendations of IOM in a comprehensive report including recommendations for change and cost estimates that result from both the IOM and CNA findings.

E. SCHEDULE OF DELIVERABLES

Interim data reports and all other deliverables shall be provided to the Office of Naval Research COTR and the TOPM with a copy to the Executive Director of the Commission throughout the project when they become available. For example, a demographic analysis of the populations (disabled veterans, military retirees, and their survivors) needs to be produced as soon as practicable. Also, the results of data match with Social Security and OPM should be analyzed and presented as soon as practicable without waiting for the results of surveys. After receipt, the Chairman of the Commission may authorize release of reports to VA and DoD for the purposes of conducting final technical and legal review. The ONR COTR and the TOPM will need to review all interim and final deliverables.

All data files are to be submitted in an agreed upon format with full documentation.

1. Initialize Study. There will be a representative meeting to initialize the project. At the initial meeting, CNA, Office of Naval Research (ONR), Commission staff and the TOPM will meet to determine how communications will be structured. Participants will discuss data issues and agree upon the methods for obtaining stakeholder input. Due: Within 1 week of award of contract
2. Coordination Meeting. There will be a coordinating meeting for key participants (IOM, CNA, Commission representatives, the COTR and the TOPM) to determine how parties will coordinate cross-over issue topics. Due: Approximately 2 weeks after award.
3. Detailed Work Plan. CNA, ONR, Commission representatives and the TOPM will meet to discuss data collection needs and the approval mechanism for all

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deliverables. Agreements should be reached at this time as to number, type, and due dates of interim deliverables as well as the specific analytic techniques to be used. CNA will submit a detailed schedule of tasks and deliverables and present a briefing to the COTR, Commission and TOPM that specifies how each research question will be addressed. CNA's study plan shall contain both a general and technical plan for accomplishment of the requirements of this statement of work that includes the assessment approaches and techniques as well as potential data sources to be used for each aspect of the review. The technical proposal shall also contain proposed staffing information. Staffing shall include resumes of key personnel who will be working on this project, as well as specification of their roles, responsibilities and respective time commitments to this analytical contract.
Due: Within three weeks of award.

4. Payment Schedule. CNA will meet with Commission representatives, the COTR and the TOPM to develop a payment plan. Ten percent of the total payment will be withheld until contract and administrative closure. Due: Within 20 workdays of award.

5. Literature Review. Submit completed draft report. Existing data sources such as those contained in Attachment 1 of the appendix shall be consulted for information that will contribute to answering the research questions. Relevant data findings published in existing in government, industry and other professional literature shall be reviewed to answer the research questions of interest. Complete references shall be provided on the publications and data sources consulted. This literature review and review of other pertinent data shall be provided in a report on discussion of other data consulted (See Attachment 1). In addition, it is anticipated that CNA will substantially build upon the contractor completed literature review conducted by VA in preparation for its work with the Commission in order to answer the specified research questions. Submit final report within 12 weeks of award.

6. Analytic Paper on Individual Unemployability. Submit paper. Due following the development of the database, at 7 months after award.

7. Analytic paper on Lump Sum Payments. Submit completed draft report, due within 20 weeks of award. Submit final report within 23 weeks of award.

8. Develop Database. To conduct the income match a database will be needed of aggregated data from different federal sources. A database dictionary and descriptions of the data shall accompany the data. The database and a data dictionary shall be conveyed to the Commission, and subsequently to the VA, for secondary analysis. Due: Within 6 months of award.

9. Pilot Test Survey. Pre-test survey questionnaire with veterans and survivors. Due within 3 months of award.

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10. OMB Clearance. Prepare and submit the OMB clearance package need for authorization to conduct the survey. Due within 4 months of award.

11. Conduct Surveys. Conduct surveys with veterans and survivor populations. Aggregate data in database. Due: Within 12 months of the award.

12. IOM Integration. CNA shall coordinate closely with IOM so that final data can be incorporated in CNA's final report. CNA's final report is due after IOM's. Due: Following the IOM final report.

13. Briefings. CNA will conduct briefings as needed by the Commission to present project milestones to stakeholders and for an update at monthly Commission public meetings. In addition, after issuance of the final report, briefings shall be held for VA, ONR and DoD officials, veterans service organizations, and key Congressional staff. Due: To coincide with each major project milestone, monthly public Commission meetings and following the submission of the Commission's final report.

14. Final incorporation of all data and report drafting. Following the IOM reports, CNA will develop a draft final report reporting on all data collected. It is expected that the final report will be accompanied with a complete technical appendices that shall fully describe the data analyzed and the methodology used so that the study could be replicated. The technical report also needs to state and explain all assumptions and limitations with regards to the data.

Report drafting shall follow a written plan. CNA will submit a plan for drafting the final report as part of their workplan. It is anticipated that the Commission staff and/or Commissioners will participate in the review of each successive draft.

F. MODIFICATIONS TO THE CONTRACT

The Contracting Officer shall issue any changes to this Contract in writing. No other party is authorized to make changes to the Contract.

Staffing Modifications

CNA must notify the ONR COTR and Contracting Officer in writing immediately of any change in key personnel, with a copy of notification to be sent to the TOPM and the Executive Director of the Commission. The notification shall provide resumes and detailing roles and responsibilities of new personnel. Approval of substitute personnel by the Contracting Officer is required prior to their beginning work on this project.

Schedule Modifications

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If for any reason a deliverable cannot be delivered as scheduled, CNA is required to submit a request for a time extension to the COTR and the Contracting Officer, with a copy to the TOPM and Executive Director of the Commission. The request must include the reason(s) for the delay, the impact on the overall project, and the impact on the cost of the project. The Contracting Officer shall consider each request on the basis of its merits and will, if approved, issue a modification to the task order. CNA is required to proceed as originally scheduled until such modification is issued.

G. REPORTING REQUIREMENTS

(a) In addition to the deliverables specified above, CNA is required to provide the COTR with a written progress report on the first workday of each calendar month, with a copy to be sent to the TOPM and the Executive Director of the Commission. The progress report shall cover all work completed during the preceding month as well as the work scheduled for the subsequent month. The report must identify any problems that arose with a statement explaining how the problem was resolved. This report must also identify any problems that have arisen but were not resolved. The COTR shall use this monthly report to report any performance deficiencies to the Contracting Officer and, in conjunction with the payment schedule, as a basis for recommending authorization of payment for invoices from CNA upon the completion of an acceptable deliverable.

(b) The written report will provide the basis for a monthly conference call that shall be held between CNA, IOM, Commission representatives, the COTR and the TOPM.

H. GUIDANCE CONSIDERATION FOR DEVELOPING OPTIONS

CNA shall consider the effect of the data and information collected and presented in this effort in terms of the following factors:

1. Responsiveness to the needs and expectations of program users and external groups.
2. Utility in providing a reliable basis for making decisions for the major stakeholder groups.
3. Assurance of cost-effective use of Government resources, practicality of implementation of suggested options, and consistency with sound principles of business management.

I. OTHER CONTRACTUAL STIPULATIONS

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1. Section 508 - Compliance For Electronic and Information Technology (EIT)

The Workforce Investment Act of 1998, Public Law 105-220, was enacted on August 7, 1998. Title IV of the Act is the Rehabilitation Act Amendments of 1998. Subsection 508 (b) amended Section 508 of the Rehabilitation Act of 1973. Section 508 requires that when Federal departments or agencies develop, procure, maintain or use Electronic and Information Technology (EIT), they must ensure that the EIT allows Federal employees with disabilities to have access to and use of information and data comparable to the access and use of information and data to that of other Federal employees. Section 508 also requires that individuals with disabilities who are members of the public seeking information or services from a Federal department or agency have access to and use of information and data available to member of the public not having the disabilities.

Section 508 (a) (2) (A) required the Access Board to publish standards setting forth a definition of EIT and the technical and functional performance criteria necessary for accessibility to such technology by February 7, 2001. The Access Board published the final standards in the Federal Register at 65 FR 80500, December 21, 2000.

Unless an exception applies, all of the EIT supplies and services furnished under this contract must comply with the provisions of Section 508 of the Rehabilitation Act of 1973, as amended. Those supplies and/or services must meet the applicable accessibility standards at 36 CFR Part 1194. The contractor certifies, by execution of this contract or by entering into a contract with the Department of Veteran Affairs, that the supplies and services furnished comply with the accessibility standards to the extent required by law.

2. Protection of Data (the Privacy Act 5 U.S.C. § 552a, 38 U.S.C. § 7332, and 38 U.S.C. § 5701(a)).

Data must be protected and kept confidential as specified in the Privacy Act. HIPAA is not applicable to VBA administrative data. HIPAA protections also do not apply to health care data provided to VBA by VHA. However, VA has a responsibility for protecting personal health and benefit information. This includes ensuring that reasonable safeguards and necessary policies and procedures limiting access and governing data use are in place to protect an individual's privacy.

CNA shall sign a Data Use Agreement to protect data. The Data Use Agreement ensures the permitted uses and disclosures of the limited data set by the recipient are consistent with the purposes of the research. The Data Use Agreement shall limit who can use or receive the data and require the recipient to agree to the following:

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1. Not to use or disclose the information other than as permitted;
2. Use appropriate safeguards to prevent the use or disclosure of the information other than as provided for in the data use agreement;
3. Report to the VA any use or disclosure of the information not provided for by the data use agreement of which the recipient becomes aware;
4. Ensure that any agents, including a subcontractor, to whom the recipient provides the limited data set agrees to the same restrictions and conditions that apply to the recipient with respect to the limited data set; and
5. Not to identify the information or contact the individual.

3. CONFIDENTIALITY and NON-DISCLOSURE

This contract provides for the operation of a VA system of records, as defined in Federal Acquisition Regulation 24.101, known as the "Program Evaluation Research Data Records" (107VA008B), and is subject to Privacy Act of 1974 (5 U.S.C. 552a). Any patient, beneficiary, or dependent records created by, or provided to, the contractor under this contract are covered by this VA system of records. In accordance with Federal Acquisition Regulation 24.102(b), contractors and their employees are considered employees of the agency for the purposes of the criminal penalties of the Act.

All survey and data collection instruments, draft and final reports, all data files and associated working papers, and all other materials deemed relevant by VA which have been generated by the contractor or provided to the contractor by VA in the performance of this contract are the exclusive property of the U.S. Government and are to be submitted to the COTR and TOPM at the completion of the contract. Sensitive information collected or obtained by the contractor is protected by the Privacy Act and must not be disclosed by the contractor to unauthorized persons. Any government information made available to CNA shall be used only for the purpose of carrying out the requirements of the contract. Unless explicitly authorized by the VA, government information made available to the contractor shall not be divulged or made known in any manner to any person except as may be necessary in the performance of this contract. All data files are to be submitted in SAS format or another agreed upon format with full documentation. These restrictions are intended to maintain confidentiality and non-disclosure by the contractor without precluding VA-authorized use of products from the contract, e.g., for publication.

CNA shall not independently release information without appropriate authorization. Requests for journal publication are included in this request. Any request for information about this contract presented to CNA shall be submitted to the Contracting Officer for response.

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Tasks involving DoD records and files shall be conducted under Industrial Security Procedures specified in DoD 5220.22-M, "National Industrial Security Program Operating Manual." A need to know is established in connection with such tasks for access to classified documents, and security clearances necessary to complete the task shall be obtained through DoD.

4. KEY PERSONNEL

The technical proposal shall include resumes of key personnel who will be working on this project and shall also specify their roles, titles, responsibilities and time commitments to this contract. CNA must notify the ONR COTR and Contracting Officer immediately of any changes in personnel, with a copy of notification to be sent to the TOPM and the Executive Director of the Commission. The notification shall provide resumes and detailing roles and responsibilities of new personnel. Approval of substitute personnel by the Contracting Officer is required prior to their beginning work on this project.

5. OTHER INFORMATION

Travel: CNA shall be entitled to recover reasonable non-local transportation costs incurred for employees that are pre-approved by the COTR. Travel requests also need to be sent to the TOPM. Allowable travel cost shall be determined in accordance with Subpart 31.2 of the Federal Acquisition Regulations. Reimbursement of travel costs will be made when CNA submits an invoice for travel along with supporting documentation (receipts as required by Federal Travel Regulations). Expenses for subsistence and lodging shall be reimbursed to CNA only to the extent that overnight stay is necessary and authorized for performance of services under this contract at the per diem rates authorized by the Federal Travel Regulations in effect at that time.

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Attachment - 1

Data Sources and Their Relevant Fields

Data Source	Location and Description	Data Needed
VBA Mini-master System	Located in Austin TX; DMDC back-up	Veterans in receipt of Benefits back to 1985
BIRLS from 1940s	Created in 1960's	Need to identify relevant fields of data available.
VBA Data Warehouse	Different data from 1999 Has VRE participation from 1999	A coordination Center for data on other VBA benefits
VHA Cost Data	Decision Support System	Health care cost and utilization data to estimate the economic value of health care benefits added to the compensation package.

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Defense Manpower Data Ctr. (DMDC)	Back-up of VBA Mini-Master Disability Data	Survivor payments Survivor benefits DoD - Military Retiree Data
An Analysis of Military Disability Compensation	Report prepared by the Rand Corporation for DoD in 2005 that contains key conclusions and methods	Survey Questions, Findings for Military Retirees
Social Security Administration	VBA and DoD have existing data sharing agreements with SSA	Life-time earnings by Social Security number
U.S. Census	Survey of Income and Program Participants	Household income
Current Population Survey (DOL)	Veteran workforce participation Disabled veteran workforce participation	Statistical parameters to assess the validity and reliability of the data.
ADARE (DOL)	Longitudinal data regarding veteran workforce participation	Information on the specific variables needed. Need statistical parameters to assess the validity and reliability of the data.
National Survey for Veterans (2001)	Some race and demographic information on disabled veterans.	Survey questions
VA OACT	Transition Probabilities	Lifetime transition of the VASRD by those receiving Service Connected disability

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Attachment - 2

Document List

1. P.L. 108-136 – Law Creating the Veterans' Disability Benefits Commission
2. Contractor briefing slides on the Legislative History and Literature Review.
3. 2001 Program Evaluation of Benefits for Survivors of Veterans with Service Connected Disabilities
4. Vocational Rehabilitation and Employment Task Force Report
5. Literature Review and Legislative History Reports
6. 2001 National Survey of Veterans with its questionnaire and consideration of sampling issues
7. 1997 GAO/HEHS-97-9 - VA's Disability Rating Schedule
8. 2002 Congressional Research Service Report on Military Disability
12. 2002 GAO-02-597 - Re-Examining Disability Criteria for SSA and VA Programs
13. GAO-05-47 Transparency of VBA's Compensation and Pension Staffing Requests
14. 2003 DMDC Econometric Survey of Post Service Earnings of Military Retirees; Overview of Findings;
15. 2005 Analysis of Military Disability by Rand National Defense Research Institute
16. 2005 Presentation by the Department of Labor on the Veterans Data in the Current Population Survey
17. 1996 Veterans' Claims Adjudication Commission
18. 2005 VA Office of the Inspector General Report Review of State Variances of Disability Payments
19. 1973 VA Economic Validation of the Rating Schedule
20. 2005 A Slide Presentation on the Use of the SF-36 (VF-36)

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Attachment – 3

Options for Sample Selection

See the complete Options paper located in its own separate section in the Commission briefing book.

Attachment - 4

**Veterans' Disability Benefits Commission
Approved Research Questions**

See <http://www.va.gov/vetscommission/whatsnew.htm> for the 10/14/05 for approved research questions.

Attachment – 5

Quality of Life Professional Literature

Crispin Jenkinson, *Quality of Life*, in III Encyclopedia of Disability 1323-25 (Gary L. Albrecht gen ed, 2006)

QUALITY OF LIFE

The measurement of quality of life has become central to the evaluation of health care. This has not always been the case: until recently, quality of life was addressed only through indirect inference from more traditional medical variables. The difficulty of defining quality of life in a meaningful and operational manner was in part to blame for the apparent unwillingness of the medical profession, and those allied with it, to engage in systematic evaluation of quality of life in the past. Indeed, the term *quality of life* is inherently ambiguous, as it can refer both to the experience an individual has of his or her own life and to the living conditions in which people find themselves. Consequently, definitions of the concept have varied widely, with some writers viewing quality of life as in some way akin to the Aristotelian notion of the "good life" and others defining it in terms of capabilities (i.e., having the ability to live a good life in terms of emotional and physical well-being). Within the arena of health care, the latter view has tended to dominate, and the term *quality of life* is typically used to refer to individuals' experiences of their own health.

Academic interest in quality of life grew after World War II, when there was increasing awareness, and recognition, of social inequalities. This provided the impetus to social indicators research, and subsequently to research on subjective well-being and quality of life. The term *quality of life* first appeared in the medical literature in the 1960s, and references to it

have grown exponentially ever since. In 2003, the term appeared in more than 6,000 articles referenced on Medline alone. For the most part, health care scholars and researchers use the term to refer to outcomes based on patient self-reports. Historically, this had simply not been an integral part of how health was reported in the scientific literature. Undeniably, the patient's view of his or her own health had played some role in the medical consultation, but in terms of the health care literature, researchers did not begin collecting and reporting such data systematically until the late 1960s.

Within the arena of disability research and health care it has become increasingly commonplace to discuss *health-related* quality of life. Interest in health-related quality of life is in keeping with the World Health Organization's definition of health, which incorporates autonomy and physical, mental, and social well-being; health is not merely the absence of disease. The literature in this field covers a wide variety of areas, including role functioning (e.g., ability to perform domestic and work tasks), degree of social and community interaction, psychological well-being, pain, tiredness, and satisfaction with life. To some extent there is a tendency to equate quality of life with those factors of the health state that are not encompassed by traditional medical assessments. Such a view can lead to conceptual confusion and perhaps highlights more than anything else the difficulty in providing a simple definition of quality of life. Suffice it to say that health status and health-related quality of life have come to mean a combination of subjectively

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assessed measures of health, including physical function, social function, emotional or mental state, burden of symptoms, and sense of well-being.

Most early attempts to develop measures for assessing health-related quality of life included attempts to measure the specific impacts of disability. For example, the Katz and Barthel measures were designed to assess activities of daily living in patients undergoing rehabilitation programs. Measures of emotional health, such as the Beck Depression Inventory, were designed to assess mental health and to give an indication of the severity of depressive symptoms. However, questionnaires are now often specifically designed to cover a wide range of areas that may affect an individual's quality of life. Two broad categories of measures have emerged: those designed to evaluate health-related quality of life in any group of patients (indeed, in any population sample) and those designed to evaluate health-related quality of life in specific illness groups. The former group include measures such as the Sickness Impact Profile and the 36-item Short Form Health Survey (SF-36). These instruments cover a wide range of aspects of life that can be adversely affected by ill health, such as physical functioning, emotional well-being, and ability to undertake work and social activities. Disease-specific measures, such as the Arthritis Impact Scales Version II (AIMS II), the 39-item Parkinson's Disease Questionnaire, the Endometriosis Health Profile, and the 40-item Amyotrophic Lateral Sclerosis Assessment Questionnaire (ALSAQ-40), are designed for use with specific patient groups. They are intended to cover dimensions salient to particular patient groups; thus, like generic measures, they address areas such as physical and emotional functioning, but they also cover issues that may be predominant among patients with particular illnesses (e.g., feelings of loss of control, stigma).

A wide variety of uses have been suggested for quality-of-life data, but the most common applications are the assessment of treatment regimes in clinical trials and health surveys. Other applications include population and patient monitoring, screening, and improvement of doctor-patient communication. One of the most emotive uses of such data, however, is in the economic evaluation of health care, with

some measures designed specifically to be used in cost-utility analyses—that is, analyses that attempt to determine the benefits of an intervention in terms of both length of life gained and quality of life. Perhaps the most widely used of these measures is the EuroQol 5D (EQ-5D), which addresses five dimensions of health: mobility, self-care, usual activity, pain, and anxiety/depression. Each of these dimensions is subdivided into three levels according to whether the dimension represents no problem, a moderate problem, or a severe problem. The five dimensions and the three-level classification system generate 243 health states, which the instrument's developers have extended to 245 through the addition of death and unconsciousness. The values attached to these health states, which are based on responses from surveys of the general population, are intended to reflect societal views of the severity of each state. The EQ-5D can produce the quality-of-life component for the calculation of quality-of-life-adjusted years (QALYs), in which quality of life is combined with years of life gained as a consequence of an intervention. Costs of treatment can be linked with the number of QALYs gained to give a cost per QALY.

Clearly, quality of life represents an aspect of health that is different from that generally measured using traditional methods of assessment, such as X-rays, blood tests, and clinical judgment. The latter have tended to dominate within health care and medicine in part because they are seen to be relatively objective. The measurement of quality of life incorporates the subjective views of the patient directly and can provide health care professionals with information that can supplement or, on occasion, contradict traditional assessments. For example, there is evidence that outsiders, such as doctors and relatives, view the quality of life of patients with serious disabilities more negatively than do the patients themselves. Also, in some instances, clinical assessments remain stable over time and yet patients report a worsening of their health. Such divergences between the perceptions of those in a given health state and the perceptions of outside observers highlight the limitations of basing assessments purely on observers' assessments. The main purpose of the health care system is to increase the well-being of those it treats. This can be achieved only

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if patient views are incorporated into treatment evaluations, thereby ensuring that health and medical care are fully evidence based.

—Crispin Jenkinson

See also Activities of Daily Living (ADLs); Citizenship and Civil Rights; Health; Participation.

Further Readings

Albrecht, Gary L. 1994. "Subjective Health Assessment." In *Measuring Health and Medical Outcomes*, edited by Crispin Jenkinson. London: UCL.

Bergner, Marilyn, Ruth Bobbit, William Carter, and Betty Gilson. 1981. "The Sickness Impact Profile: Development and Final Revision of a Health Status Measure." *Medical Care* 19: 787-805.

Bowling, Anne. 2004. *Measuring Health*, 3d ed. Maidenhead, UK: Open University Press.

Brown, Roy L., ed. 1997. *Quality of Life for People with Disabilities*, 2d ed. Cheltenham, UK: Stanley Thomas.

Fayers, Peter and David Machin. 2000. *Quality of Life: Assessment, Analysis and Interpretation*. Chichester, UK: John Wiley.

Jenkinson, Crispin, Ray Fitzpatrick, Cathy Brennan, Mark Bromberg, and Michael Swash. 1999. "Development and Validation of a Short Measure of Health Status for Individuals with Amyotrophic Lateral Sclerosis/Motor Neurone Disease: The ALSAQ-40." *Journal of Neurology* 246(Suppl. 3): 16-21.

Jenkinson, Crispin and Hannah McGee. 1998. *Health Status Measurement: A Brief but Critical Introduction*. Oxford, UK: Radcliffe Medical Press.

Jenkinson, Crispin, Viv Peto, Ray Fitzpatrick, Richard Greenhall, and Nigel Hyman. 1995. "Self Reported Functioning and Well Being in Patients with Parkinson's Disease: Comparison of the Short Form Health Survey (SF-36) and the Parkinson's Disease Questionnaire (PDQ-39)." *Age and Ageing* 24:505-509.

Jones, Georgina, Crispin Jenkinson, and Stephen Kennedy. 2004. "Development of the Short Form Endometriosis Health Profile Questionnaire: The EHP-5." *Quality of Life Research* 13:705-713.

Leighton Read, J. 1993. "The New Era of Quality of Life Assessment." In *Quality of Life Assessment: Key Issues in the 1990s*, edited by Stuart R. Walker and Rachel M. Rosser. Dordrecht, Netherlands: Kluwer Academic.

McDowell, Ian and Claire Newell. 1996. *Measuring Health: A Guide to Rating Scales and Questionnaires*, 2d ed. New York: Oxford University Press.

Meenan, Robert F., John H. Mason, Jennifer Anderson, Andrew Guccione, and Lewis E. Kazis. 1992. "AIMS2: The Content and Properties of a Revised and Expanded Arthritis Impact Measurement Scales Health Status Questionnaire." *Arthritis and Rheumatism* 35:1-10.

Megone, Christopher. 1990. "The Quality of Life: Starting from Aristotle." In *Quality of Life: Perspectives and Policies*, edited by Sally Baldwin, Christine Godfrey, and Carol Propper. London: Routledge.

Patrick, Donald and Pennifer Erickson. 1993. *Health Status and Health Policy: Allocating Resources to Health Care*. Oxford, UK: Oxford University Press.

Raisch, D. W. 2000. "Understanding Quality-Adjusted Life Years and Their Application to Pharmacoeconomic Research." *Annals of Pharmacotherapy* 34:906-914.

Sprangers, Mirjam A. and Neil K. Aaronson. 1992. "The Role of Health Care Providers and Significant Others in Evaluating the Quality of Life of Patients with Chronic Disease: A Review." *Journal of Clinical Epidemiology* 45:743-760.

Staquet, Maurice J., Ron Hays, and Peter Fayers. 1998. *Quality of Life Assessment in Clinical Trials: Methods and Practice*. Oxford, UK: Oxford University Press.

Streiner, David L. and Geoffrey R. Norman. 2003. *Health Measurement Scales: A Guide to Their Development and Use*, 3d ed. Oxford, UK: Oxford University Press.

Suenkelter, Inga H., Margarete Nowak, Björn Missetwitz, Wolfgang Schreiber, Wolfgang Oenal, and Tobias Back. 2002. "Timecourse of Health-Related Quality of Life as Determined 3, 6 and 12 Months after Stroke: Relationship to Neurological Deficit, Disability and Depression." *Journal of Neurology* 249:1160-1167.

Ware, John E. and Cathy Sherbourne. 1992. "The MOS 36-Item Short Form Health Survey 1: Conceptual Framework and Item Selection." *Medical Care* 30:473-483.

World Health Organization. 1984. "The Constitution of the World Health Organisation." *WHO Chronicle* 1:13.