

**MAKING A CASE FOR QUALITY:  
THE BUSINESS CASE FOR TRICARE  
HEALTH PROMOTIONS PROGRAMS**

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**HEALTH AND WORK PERFORMANCE  
QUESTIONNAIRE (HPQ)  
DoD EDITION**

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**FINAL REPORT**

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## EXECUTIVE SUMMARY

The mission of the United States (US) military and its need for force readiness and combat effectiveness requires a strong and healthy workforce. It is critical to understand how health influences work performance which in turn affects military readiness and effectiveness. The cyclical nature of deployment and the complexity, scope and critical nature of armed forces work makes this need even more pressing at the current time. The Department of Defense (DoD) collects a large amount of data on health and injuries, but does not routinely link information about service members' health with work performance measures. The armed services lack critical information about how specific health conditions, both treated and untreated, affect absenteeism and work performance. This information makes it easier to target military health promotion and treatment programs for the conditions that are associated with the greatest losses in work time and with poor on-the-job performance.

The Health and Work Performance Questionnaire (HPQ), developed by Dr Ron Kessler of Harvard University, is the most widely-used instrument for measuring the relationship between health and work performance in the civilian sector. The HPQ has been rigorously tested in a series of validity studies. Some of the largest private and public employers and business and health coalitions in the US have implemented the HPQ as a routine decision-making tool. The HPQ is also being used in series of federally-funded experiments to test targeted disease management programs.

The DoD contracted with John Snow, Inc (JSI) to adapt and pilot the HPQ for a military population. The HPQ meets the needs of the military because: (1) it is a widely-used instrument that examines to the association between health and work performance; (2) it is based on rigorous scientific research and validated scales and instruments; (3) it allows the documentation of absenteeism and the relationship between health and absenteeism as well as the relationship between health and presenteeism (i.e., the impact of serious health conditions and illnesses on the work environment and productivity); (4) it is relatively inexpensive to administer via the web; and (5) it can be benchmarked against other civilian HPQ surveys and data. The DoD HPQ instrument was developed to address DoD issues related to health need and access to health care services, to estimate the indirect workplace costs of high risk and chronic illnesses among the armed forces, and to estimate the value of health promotion and disease management programs.

In this project, our research team developed a web-based version of the HPQ and pilot-tested it in a small sample of military and DoD employees. We adapted the HPQ by adding scales on conditions that are particularly relevant to the military and work performance (e.g., PTSD), by expanding the module on injuries and accidents, and by replacing civilian with military terminology. Once the HPQ was adapted for the military, a web version was developed and pilot-tested.

The next steps are to conduct a demonstration project to test the usefulness of the DoD HPQ in achieving the military's goal of improving health and reducing injuries and accidents. Because the web based survey has already been developed, an IRB exemption obtained, and implementation plan drafted, the DoD HPQ is ready for fielding with proper service level

approvals. The initial results could be available within three to six months depending on the scale of the sample and complexity of the data analyses proposed.

This report details the rationale for the utility of the questionnaire for the military, outlines the variations from the civilian version, and recommends processes for administration to military populations.

## A. INTRODUCTION

The mission of the United States (US) military and its need for force readiness and combat effectiveness requires a strong and healthy workforce. It is critical to understand how health influences work performance which in turn affects military readiness and effectiveness. The cyclical nature of deployment and the complexity, scope and critical nature of armed forces work makes this need even more pressing at the current time. The Department of Defense (DoD) collects a large amount of data on health and injuries, but has not routinely linked information about service members' health with work performance measures. The armed services lack critical information about how specific health conditions, both treated and untreated, affect absenteeism and work performance. This information makes it easier to target military health promotion and treatment programs for conditions that are associated with the greatest losses in work time and with poor on-the-job performance.

The Health and Work Performance Questionnaire (HPQ), developed by Dr Ron Kessler of Harvard University, is the most widely-used instrument for measuring the relationship between health and work performance in the civilian sector. The HPQ has been rigorously tested in a series of validity studies. Some of the largest private and public employers and business and health coalitions in the US have implemented the HPQ as a routine decision making tool. The HPQ is also being used in series of federally-funded experiments to test targeted disease management programs.

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Implementation of the DoD HPQ can be an easy way to assess workplace costs of illness. By identifying which illnesses impact work performance the most, more cost-effective interventions can be employed. Data from the HPQ assessing work-related health care costs can assist in achieving the DoD's objective of developing a prevention-based health system and maintaining the highest levels of military readiness (DoD, 2001). In addition, the improvement of DoD health promotion and disease management programs for active duty members can potentially yield long-term cost savings.

The HPQ survey can be implemented at the installation or command level to address issues specific to certain installations or missions (e.g., injuries, issues affecting returnees from combat theater) or at the general service level to determine the focus of health coverage and prevention and health promotion programs. Additionally, data from the HPQ can be used to inform health

policy. Accurate data regarding health and mental health conditions and their associated costs is critical for assessing the relationship between health and work performance, analyzing investments in health and health insurance, and making decisions about how to improve health among the workforce, ultimately improving force readiness and military effectiveness.

This report provides background on studies and programs linking health and work performance, describes the development of the HPQ, details the rationale for the utility of the questionnaire for the military, outlines the variations from the civilian version, recommends processes for administration to military populations, and provides examples of expected results.

## **B. BACKGROUND**

Worker productivity and output efficiency are major measures of an employer's overall financial stability. Employee health risks and the consequential adverse health outcomes are a hindrance to work performance, causing significant impairment on both a physical and mental level. Health problems can reduce the effective workforce by 5-10% (Berger 2003); reduced productivity can lead to increased administrative and personal costs related to covering absent employees, as well as the cost of earlier retiring staff. For workers in professions involving physical or manual labor that directly affects other individuals (e.g., operating heavy machinery, serving in the armed forces), the health and "readiness" of a worker is crucial to both the security of the employer, as well as the health of others both in and out of the workplace. Many millions of employees have high rates of varying medical conditions that go untreated.

### **Studies in the Civilian Sector**

Recent research has confirmed that presenteeism, the act of reporting to work but demonstrating poor performance due to physical or mental health problems, presents an increasingly critical risk for employers in terms of loss of life, dollars, and brand impairment; almost 50% of all American employees report that they have presented to the workplace while being too ill or stressed to be productive for at least one to four days per year (Milano 2005). Half (48%) of employers reported that presenteeism is a problem (CCH, Inc., 2005). It costs US companies over \$150 billion a year and cuts individual productivity by at least one third, proving to be significantly more financially detrimental than absenteeism, or simply not reporting to work at all (Hemp 2004). In addition to the impact of stress and other mental health related conditions, workers' physical health status is a major determinant of a company's rates of presenteeism.

Symptoms associated with physical illness or disease can critically influence work performance by causing loss of focus, delay time in beginning work, task repetition, higher rates of inaccuracy, and overall fatigue and inefficiency. Compared to severe or progressive conditions, more manageable chronic medical conditions are mainly responsible for causing presenteeism, as these are the types of conditions which are more prevalent, often go untreated, do not necessarily confine people to their homes, and typically occur during peak working years (Hemp 2004). The most common chronic health conditions contributing to presenteeism include arthritis, back and musculoskeletal pain, obesity, irritable bowel syndrome, hypertension, asthma, migraines and the flu. One study by researchers at Cornell University found that the overall economic burden of illness (including losses due to both absenteeism and presenteeism) for US employers was highest for hypertension, at \$392 per eligible employee per year, followed by heart disease at \$368, depression/sadness/mental illness at \$348, and arthritis at \$327 (Goetzel et al., 2004). Across all ten conditions evaluated, including the remaining conditions of allergies, diabetes, migraines/headaches, cancers, respiratory disorders, and asthma, presenteeism costs accounted for 61% of total costs associated with productivity loss. Among chronic diseases, the conditions that appeared to be the most harmful to presenteeism-related productivity rates were seasonal illnesses such as allergies and conditions prone to symptomatic "flare-ups" such as migraines/headaches, depression, arthritis and asthma. A study by the Tufts New England Medical Center investigating the Lockheed Martin company estimated the condition with the most impact on work performance to be allergies or sinus trouble, with a 59.8% prevalence rate and an aggregate annual loss of \$1,809,945 (Hemp 2004). Other highly harmful conditions were

arthritis, with 19.7% prevalence rates and \$865,530 annual losses, and chronic lower back pain, at 21.3% and \$858,825, likewise (Hemp 2004). The distinct effect of various medical conditions differs according to the type of labor required of the employees, though each of these ailments has been shown to consistently yield negative impacts on work performance and employer economy throughout the country.

Several studies document a correlation between presenteeism and numerous individual adverse health outcomes. For example, arthritis has been determined to cause high levels of productivity loss equal to \$5.4 million a year for one major financial services corporation (Burton et al., 2006). Compared to healthy workers, those who reported receiving treatment for arthritis had a 2.5% excess productivity loss, due to burdens on both physical and mental tasks, as well as time and output capacities. Another study investigating the effect of pain found that the presence of pain was associated with a 45% drop in physical health, an increase in health-generated limitations in work performance five times the normal, and almost three and two-thirds workdays lost to presenteeism and absenteeism over a four-week period (Allen et al., 2005). The strong relationship between the burden of pain and musculoskeletal conditions suggests that professions involving more physical labor may sustain greater health risks and thereby cause higher productivity losses, which could have important implications for military employees. Obesity is another large contributor to lower workplace efficiency rates, causing significant increases in workers' associated health risks and consequently boosting a company's medical expenditures. The costs of obesity at a firm with 1,000 employees are estimated to be \$285,000 per year (Finkelstein et al., 2005). One study found that obese employees cost an excess of \$11.70 billion compared to normal-weight employees, and nearly 70% of this cost was attributed to presenteeism (Ricci et al., 2005). Finally, research on the impact of irritable bowel syndrome (IBS) on work performance has revealed that IBS is linked to a 21% reduction in productivity, comparable to working less than four out of five days during the work week (Dean et al., 2005). The costs of IBS are similar to those of other long-term medical conditions, namely asthma, migraine and hypertension (Cash et al., 2005).

Two of the most widespread conditions affecting people in the workplace are allergies and migraine headaches. These relatively innocuous medical problems may be treated with non-reimbursable, over-the-counter medications; thus, they do not create substantial claims data and employers are often uninformed about the numbers of workers who suffer from such conditions (Hemp 2004). Seasonal allergies affect 25% of the country, causing itchy nose, sneezing, and congestion that can disturb a worker's productivity. A study on an extensive sample of service representatives at one banking firm discovered that allergy sufferers' productivity was 7% lower than those who were free of allergy symptoms (Hemp 2004). Similarly influential in its harmful impact on employees' capabilities are migraines, affecting approximately 6% of men and 18% of women in the US (Burton et al., 2002). A study of Bank One, one of the country's largest financial services corporations, found that migraines affected approximately 20% of employees, caused an estimated 8.1 lost workdays per year, and that migraine-related presenteeism accounted for 60% of total lost workdays and cost the employer an annual \$24.4 million (Burton et al., 2002).

The striking evidence of such a strong correlation between workers' physical health and productivity on the job suggests that increased employer efforts focused on their employees'

health status could help to lessen losses due to work inefficiency. Research indicates that there is compelling potential for employers to improve productivity through outreach efforts such as educating their employees about appropriate medications and necessary precautions to decrease health risks. Furthermore, investing in the health of the workers through changes such as greater health insurance benefits is actually more cost-effective for the employer than meeting the costs of presenteeism (Hemp 2004).

An example of one company that reaped such gains is International Truck and Engine. After offering employees free consultations with an allergy specialist, several people suffering from allergies reported increases in productivity by as much as 25% (Hemp 2004). By allowing people to access healthcare through the company, the employer helps advocate for better health by providing easily available, low-cost services that appeal to employees because confidentiality is high and any possible stigmatization is often avoided. Lockheed Martin is another corporation that enjoyed the results of its efforts to reduce presenteeism. The introduction of various disease management and wellness programs offered to employees elicited voluntary participation that has shown an 11% decrease in workers compensation costs, a 30% decrease in disability, and a 20% decrease in absenteeism during a one-year period (Milano 2005). The provision of prescription drug coverage, or educational programs about the benefits of certain drugs, can greatly reduce health-related productivity losses for several common medical conditions. One comprehensive review of randomized, placebo-controlled drug studies found consistently lower rates of productivity loss and inefficiency among the treatment groups compared to the control groups (Burton et al., 2003). For example, allergy patients receiving antihistamines showed a 13% higher daily work output than those not on any allergy medication, asthma patients using beta-antagonist inhalers showed a 57% decrease in number of work or school days missed due to their condition, and diabetes patients who received glipizide treatment had estimated productivity losses of \$24 compared to \$115 for those in the placebo group (Burton et al., 2003). Since the conditions that typically generate the most productivity loss are usually very prevalent and frequently go untreated, the immediate expense for the employer may not be so apparent. However, these indirect costs are in fact a major detriment to employers' financial stability, and should be addressed with adequate education, prevention or insurance methods.

While physical health problems understandably pose great health risks and are associated with reduced employee productivity, mental health conditions also pose great risks and impact productivity. The mental health of employees is a growing concern among corporations worldwide (Gray 1999; Mental Health Foundation 2000) for good reason as recent estimates indicate that 91 million working days per year are lost to mental health conditions (Gray 2000).

The leading contributor to productivity loss from mental health conditions is stress, which accounts for half of all lost working days (Mental Health Foundation 2000). Stress causes fatigue, impaired judgment and decision-making, exhaustion, and the onset of more serious health problems. Stress manifests physically in the development of conditions such as heart disease and asthma, and psychologically through conditions such as disturbed sleep and aggressive behavior. Stress is highly prevalent among the majority of working adults, affecting employees across a wide range of professions. In a recent survey of company line-managers, 88% claimed a moderate or high level of stress in their work, and 39% claimed this stress worsened over the past year. Furthermore, 52% reported knowing someone who had suffered

stress severe enough to stop them from working and to require long-term medical treatment (Gray 2000). Other mental health issues impact employee productivity as well. One study estimated that depression causes an annual loss of \$33 billion in worker absenteeism in the United States (Greenberg et al., 1996).

Employers are becoming increasingly concerned with preventing mental health issues in the workplace by reducing stress, as the loss in productivity from absenteeism is much less than the risk of handling stressed workers due to presenteeism. Employees suffering from stress or other mental health issues yield lower output because their motivations are based on job security and fear of displacement rather than by genuine commitment to quality performance. Thus, it is in the best interest of employers to invest in their workers' well-being. AstraZeneca implemented prevention programs to increase the overall health and happiness of its employees, translating into annual savings of \$380,000 (economist.com 2006). Large private and public employers are increasingly concerned with the high costs of chronic conditions and poor quality health care.

Several studies have shown that, from an employer perspective, the indirect workplace costs of untreated illness are significant. However, employers lack specific information about: (1) the number of workers with specific health problems (including those who are treated and those not being treated); (2) the impact of specific health problems on work place functioning; and (3) the cost-effectiveness of available health care interventions. Without this information, employers are unable to calculate the return on investments (ROI) for interventions in employee health care. In order for companies to recognize the importance of addressing untreated medical and behavioral health conditions and to understand the benefits of valuing employee health in general, there is a need for feasible, cost-effective measures of health and work performance.

### **Applications of the Total Cost Approach in the Civilian Sector**

Health economists have long advocated for large employers to use a total-cost approach to calculate their health costs. This approach uses both the direct costs of employee health insurance as well as the indirect costs of lost worker productivity and job performance to calculate total health care costs. Large employers have implemented a variety of tools to measure their total health care costs. Employers like Verizon, General Motors, and the California Public Employees' Retirement System (CalPERS) have designed databases that integrate medical and pharmacy claims with information on absenteeism, disabilities, and injury rates from other administrative files. For example, CalPERS has developed an integrated data warehouse of medical and pharmacy expenditures, workplace injuries, and disabilities that will provide clinical, cost, and utilization reports for its employee population.

In addition to the identification of high-risk and chronic cases, employers also use these systems to measure the impact of wellness and disease management programs on employee health and productivity. Employee-specific clinical, cost, and utilization data are used to assess and improve the design and quality of wellness and disease management programs. This population-based approach has proven successful in targeting specific conditions within an employee population, and developing targeted interventions that can lead to lower total costs.

Employers that contract with health plans and other specialized vendors for wellness and disease management are setting performance standards in their contracting. The Pacific Business Group

on Health (PBGH) and the Midwest Business Group on Health (MBGH) have recently developed an evaluation tool to assess disease management programs across different health plans. The results are being used to develop national performance standards that employers can apply in their contracting for care and disease management programs.

**C. DEVELOPMENT OF THE HEALTH AND WORK PERFORMANCE QUESTIONNAIRE (HPQ)**

**Creation of the Civilian HPQ Survey**

Dr. Ron Kessler of Harvard Medical School developed the Health and Work Performance Questionnaire (HPQ) in 2002 as an expansion of the World Health Organization Disability Assessment Schedule (WHO-DAS). The WHO-DAS is a self-report measure aimed at reducing role impairments associated with under- or untreated health problems, but does not look exclusively at the work role (Kessler et al, 2003). This absence of data on the relationship between health and functionality in the workplace led to the initial development of the HPQ. The thinking was that if employers could observe the impact of their health care purchasing on employee health and work performance, they would be able to evaluate current programs and make more informed decisions about health care purchasing in the future. The HPQ is a short, self-administered questionnaire used to collect information about the prevalence of treated and untreated health problems, and their effects on work performance. It can be administered either electronically or by paper, and either as a stand-alone survey or in conjunction with existing health risk assessments. The HPQ evaluates the three conventional areas of productivity: absenteeism, work performance, and job-related accidents. The design is based on research that has shown that untreated and under-treated health problems create substantial individual and employer costs.

**Measures and Domains Included in the HPQ**

The HPQ includes a variety of scales and measures that address a variety of chronic conditions, physical health problems, mental health problems, and work performance. See Table 1.

**Table 1. Components of the HPQ**

<b>Domains</b>	<b>Derived from</b>	<b>Description</b>	<b>Sample Items</b>
<b>Measures and Scales in the Civilian HPQ</b>			
Measures of Absenteeism	Adapted from the WHO-DAS (WHO Disability Assessment Schedule)	Self-report measure of role functioning developed for intervention studies aimed at reducing role impairments associated with under- and untreated health problems	How many days did you miss an entire work day because of problems with your physical or mental health?
Measures of Presenteeism	Adapted from the WHO-DAS (WHO Disability Assessment Schedule)	Self-report measure of role functioning developed for intervention studies aimed at reducing role impairments associated with under- and untreated health problems	How often did you do no work at times when you were supposed to be working?
Measures of Work Performance	Adapted from the WHO-DAS (WHO Disability Assessment Schedule)	Self-report measure of role functioning developed for intervention studies aimed at reducing role impairments associated with under- and untreated health problems	How often was your work performance higher than most workers on your job?
Chronic Conditions	National Health Interview Survey (NHIS)	The NHIS is a cross-sectional household interview survey including a set of basic health and demographic questions and a set of questions on specific health topics	Do you have chronic back/neck pain? Migraine headaches?
Acute Conditions	National Health Interview Survey (NHIS)	The NHIS is a cross-sectional household interview survey including a set of basic health and demographic questions and a set of questions on specific health topics	During the past four weeks have you been bothered by a cough or sore throat?

Depression/Mental Distress	K10 and K6 Scales of Mental Distress	Developed with support from the U.S. government's National Center for Health Statistics for use in the redesigned U.S National Health Interview Survey (NHIS)	During the past 30 days, how often did you feel...that everything was an effort?
<b>Measures and Scales Added to the Military HPQ</b>			
ADHD	WHO 18-question Adult ADHD Self-Report Scale Symptom Checklist (ASRS v-1.1)	Six question scale, based on 6 of the 18 WHO questions most predictive of symptoms of ADHD	How often do you feel overly active and compelled to do things, like you were driven by a motor?
Chronic Fatigue and Insomnia	Selected Questions from the Composite International Diagnostic Interview (CIDI)	The CIDI is a comprehensive, fully standardized interview that can be used to assess mental disorders according to the definitions and criteria of ICD-10 and DSM-IV	How often were you too tired to carry out your daily activities? Do you have problems getting to sleep, when nearly every night it takes two hours or longer to fall asleep?
Post Traumatic Stress Disorder (PTSD)	Primary Care PTSD Screen (PC-PTSD)	Brief, problem-focused, 4-item screen for PTSD designed for use in primary care and other medical settings	Have you ever had any experience that was so frightening, horrible, or upsetting that you were constantly on guard, watchful, or easily startled?
Personality/Risk-Taking Behaviors	Zuckerman-Kuhlman's Personality Questionnaire (ZKPQ)	Eighty-nine item self-report measure of five basic personality traits: Impulsive Sensation Seeking, Neuroticism-Anxiety, Aggression-Hostility, Activity, and Sociability	How true is the following statement for you:  I like doing things just for the thrill of it

Surveys addressing health and work performance generally focus only on the number of days missed due to illness in a specific recall period. Although earlier research has shown agreement between employer records of absenteeism and self-reported data, cognitive interviews conducted by Dr. Kessler's team resulted in a more detailed approach. These interviews led to four refinements in the absenteeism section of the HPQ: units of time, partial work days, overtime, and use of earned vacation time for sick days. **Units of time:** The HPQ asks about both days and hours of work missed. 'A day of work' means something quite different to a person who works a regular 9-5, five-day-a-week schedule versus people who work four-day weeks, split shifts, rotating shifts, etc. Workers differ substantially in the number of hours they work as well, as in whether they work the same number of hours each day, which has led to an increasing focus on hours worked/missed rather than days. **Partial work days:** In addition to asking about missed hours on sickness absence days, the HPQ asks about hours missed on workdays (i.e., coming in late or going home early). This measure was added because a significant amount of lost work time occurs on days where people are actually at work. **Overtime:** The HPQ includes questions about extra hours of work; for example, coming in early, going home late, or working on days off. Many people make up for sickness, absences, or missed time on actual work days by working extra days or hours. **Earned vacation time:** the HPQ asks about total hours absent for any reason instead of focusing solely on sick time. This includes holidays and personal days because employers often use integrated benefit schemes that combine vacation, personal, and sick days. These four modifications have helped elicit more accurate responses by breaking down the basic question (how much work has been missed) into separate categories. The aim is

to focus memory search by simplifying the overall task of calculating total lost work hours in response to a single question.

In addition to measures on absenteeism, presenteeism, and work performance, the HPQ also includes separate series of questions about chronic conditions and symptoms of acute conditions. Respondents are asked if they currently or previously received treatment for each reported condition. These questions are asked to gather data on the prevalence of certain conditions in the workplace and to study the strength of association between individual conditions and the HPQ outcome measures. All of the questions related to chronic and acute conditions come from validated scales; for example, many of the chronic conditions checklists are from the US Health Interview Survey. In some cases, such as symptom-based conditions, more extensive scales existed, but were not used based on concerns of survey length and content goals; the HPQ checklist assesses more important chronic conditions. Extended versions of the survey can be used to explore specific conditions with a more in-depth assessment in addition to the standard questions.

To measure mental distress, the K10 and K6 scales from the US National Health Interview Survey (NHIS) were used. The scales were designed to be sensitive enough to discriminate cases of serious mental illness (SMI) from non-cases. A small validation study carried out in a convenience sample in Boston found that the scales perform quite well and that, in fact, the six-question scale is at least as sensitive as the ten-question scale for the purpose of discriminating between cases and non-cases of SMI. The K6 is now included in the core of the NHIS as well as in the annual National Household Survey on Drug Abuse. The K10 is in the Australian and Canadian equivalents of the NHIS. The K10 is also included in the National Comorbidity Survey Replication (NCS-R) as well as in all the national surveys in the World Health Organization's World Mental Health (WMH) Initiative. The K6 is merely a truncated form of the K10 in which four questions are deleted.

### **Validation of the HPQ**

Dr. Ron Kessler led several studies to validate the HPQ in the civilian sector (Kessler et al., 2003). To validate the instrument, the HPQ work performance and absenteeism measures were compared with archival data obtained from employer records in four occupations: reservation agents for a major airline, customer service representatives working for a large telecommunications company, executives in a major automobile manufacturer, and railroad engineers working for a large railroad company. The occupations in the calibration study were chosen because employee work performance is measured by standard assessments (e.g., monthly supervisor performance ratings, 360-degree peer evaluations, etc.). More than 1,000 employees in each occupation were sent an advance letter (or email) from the medical director of their company describing the purpose of the survey and asking for their participation in a telephone interview.

Successful interviews were completed with 441 reservation agents, 505 customer service representatives, 554 executives, and 850 railroad engineers. The response rates ranged from 64 to 86% across these occupational groups. Smaller sub-samples were recruited for a one-week follow-up Experience Sample Method (ESM) evaluation where they were given a beeper and asked to fill out specific questions each time it went off. The beeper was programmed by an

auto-dialer to be called five random times throughout the day. Each time they were called, respondents were asked to fill out questions about whether they were at work, the quantity and quality of work when the beeper went off, etc. Questions were mailed back to the Harvard team at the end of each day and each participant participated in a telephone interview at the end of the study to debrief. The ESM evaluation allowed researchers to calibrate the work performance ratings in an effort to evaluate the effects of recall bias on HPQ reports.

From the calibration study, researchers were able to compare both the global work performance ratings and the absenteeism reports with employer payroll performance records. Two major patterns were found in the analysis of the work performance ratings. First, the lower end of the 0-10 self-report scale (0-7) was truncated because few respondents rated themselves less than seven in any sample. Second, the most common rating was high, but very few employees rated themselves a ten. Overall, the results showed that the HPQ provided a valid assessment of presenteeism and absenteeism if conservatively estimated. Another validity study was conducted on sample of 551 call center workers who completed the HPQ in an internet survey and who were independently rated by their supervisors on their work performance (Kessler et al, 2004). The associations between the HPQ and supervisor ratings were similar in magnitude to the earlier validity study.

### **Application of the HPQ in the Civilian Sector**

A web-based HPQ was developed to facilitate its widespread use as a decision making tool for large employers. Large employers wanted the capability not only to assess the impacts of health on their own work performance but also to benchmark their experience. A number of large employers have added the HPQ to their annual Health Risk Appraisal (HRA) surveys. To address these employer needs, business health care coalitions have also joined together to form the HPQ Data Consortium to compare their results and jointly evaluate health care interventions aimed at improving worker performance. The data consortium facilitates data sharing of HPQ results and serve as a forum on health and productivity management.

The HPQ data consortium also developed an electronic report-generating system to allow employers to quickly collect and use this information, as well as compare their results with nationally and internationally representative benchmark surveys (Kessler, Richling and Sullivan, 2004). The online reporting system was in developed in close collaboration with an advisory group of medical directors, benefit managers, and health care consultants to optimize the flexibility and user friendliness for generating useful survey results.

Each company with employees participating in the survey receives customized survey results through the Health-At-Work Reporting System. The reports include all the health conditions addressed in the HPQ and give the prevalence, percent in treatment, total days and money lost as a result of employees with these conditions. To ease analysis and provide companies with the information they are most interested in, the data is presented in a program that allows companies to sort data by any factor they choose. Table 2 is an example of a partial data table for HPQ survey results, showing that seasonal allergies were the most costly condition. Employers can use comparative data from the HPQ survey to set new performance standards in their contracting with health plans, and conduct outcome-based evaluations of their services. (Kessler et al., 2003).

**Table 2. Sample Company HPQ Survey Results**

Health Condition	Average per ill Worker/Yr					Total for all 3,835 Workers/Yr		
	Prevalence	% in Treatment	Total Days Lost	Total \$ Lost	Critical Incidents (per 100 ill workers)	Total Days Lost	Total \$ Lost	Critical Incidents
Allergies (Seasonal)	35.7	7.2	0.5	\$783	-	684.4	\$1,077,540	-
Anxiety Disorder	14.1	4.3	6.1	\$514	-	3,487.5	\$295,978	-
Arthritis	20.2	3.4	0.6	\$0	-	523.4	\$0	-
Asthma	1.9	37.8	1.8	\$1,718	-	132.4	\$127,115	-
Back/Neck Pain	21.6	4.0	0.3	\$0	-	291.7	\$0	-
Bronchitis/Emphysema	10.8	1.4	4.0	\$911	-	1,785.8	\$385,000	-
Cancer (not skin)	3.9	1.6	7.6	\$1,626	-	1,254.4	\$268,358	-
Chronic Fatigue/Low Energy	7.5	9.1	2.6	\$8	-	796.1	\$2,458	-
Chronic Heartburn/GERD	2.3	40.7	0.0	\$0	-	0.0	\$0	-
Chronic Sleeping Problems	43.5	1.4	3.6	\$159	-	6,462.8	\$283,070	-
Congestive Heart Failure	1.2	6.5	42.9	\$7,224	-	2,069.9	\$353,959	-

The Midwest and Atlanta Business Groups on Health have launched a major demonstration project in which the HPQ is being administered on a yearly basis to hundred of thousands of employees and being used to evaluate the effectiveness of various health interventions. The data from the HPQ is being combined with pharmacy and medical claims data, and data on disability and absenteeism into a large integrated data base. The purpose of this demonstration project is to assess the workplace costs of illness and the cost effectiveness of treatment approaches as well as the return of investment on any modifications health plans make in their services as result of feedback from this demonstration project. In the future, it is hoped that this demonstration will turn into a natural laboratory to test ideas about targeted disease management programs.

Additionally, the WHO has selected HPQ for inclusion in a series of international health surveys to assess the prevalence and societal burdens of physical versus mental disorders in 28 different countries (Kessler, Richling and Sullivan, 2004). These surveys will include interviews with nearly 200,000 respondents from around the world. The HPQ is also being used in a series of workplace experiments. The largest of these is a six-million dollar workplace project funded by the National Institute of Mental Health to study depression in a number of large national companies.

Many employers are using the HPQ survey to help pinpoint health problems that have high individual-level indirect costs on work performance (e.g., chronic migraine headaches or seasonal allergies) for purposes of rationalizing healthcare investments. Importantly, a number of under-treated health problems have been found in these studies to be strong risk factors for poor work performance, absenteeism, and injuries, although the magnitude and effects of these conditions vary across industries and segments of the workforce. Given the unique demographic profile and hazards found in the armed forces, we cannot assume that the same patterns of association hold in the armed forces as in the civilian workforce. A targeted series of HPQ surveys is consequently needed if we want to make inferences about the health problems that have the largest effects on work performance in the armed forces.

### **Adapting the Survey for the Military\***

Under the guidance of the federal project officer, an expert work group adapted the HPQ to a format appropriate for use in an active military population. The work group, led by Dr. Ron Kessler of Harvard Medical School, included Drs. James Maxwell and Thomas Mangione, and Ms. Eugenie Coakley of John Snow Inc., and COL Paul Amoroso, M.D., Chief, Department of Clinical Investigation at Madigan Army Medical Center. The work group reviewed comparable studies of health risks and behaviors among the military and recommended modifications to the HPQ to improve its usefulness to the military.

Three major modifications were made to the survey. First, the work group added scales on health and personality that are particular relevance to military personnel. (See Table 1 for a description of the additional scales and measures.) Second, a section on accidents and injuries (both on- and off-duty) was expanded and modified to assess their impact on work performance in the military. Finally, the work group adapted the survey to fit general military terminology. Each of these three modifications is described below.

The first area of modification involved adding several scales to address common mental health conditions including: PTSD, risk-taking and impulsiveness, insomnia and sleep, and ADHD. An assessment of PTSD was added because studies have shown a strong correlation between work performance and PTSD. The questions for PTSD are from the Primary Care PTSD Screen (PC-PTSD) and are currently being used in the Post Deployment Health Assessment (PDHA, DD Form 2796) which is used in screening all service members returning from an overseas deployment.

Scales on insomnia and ADHD were included as these conditions were identified as common problems among military personnel, particularly among younger populations. The ADHD measure is a six-question scale, based on six of the 18 WHO questions most predictive of the symptoms of ADHD. The insomnia and chronic fatigue items are comprised of selected items from the Composite International Diagnostic Interview (CIDI).

The screening version of the Adult ADHD Self-Report Scale (ASRS) is a six-question scale developed by a World Health Organization (WHO) work group designed to screen for adult ADHD in community samples. The ASRS v 1.1 is a subset of the WHO's 18-question Adult Self-Report Scale Symptom Checklist, an instrument consisting of the 18 DSM-IV-TR criteria (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision). Six of the 18 questions were found to be the most predictive of symptoms consistent with ADHD and are the basis for the ASRS v1.1 Screener.

The questions related to both Chronic Fatigue and Insomnia are from the Composite International Diagnostic Interview (CIDI), a comprehensive, fully standardized interview that can be used to assess mental disorders according to the definitions and criteria of ICD-10 and DSM-IV. It was developed as a collaborative project between the World Health Organization and the US National Institutes of Health and is the most widely used structured diagnostic interview in the world. Slight modifications were made in the phrasing of the original CIDI questions to fit with the self-administered aspect of the HPQ (and to fit with the style of the rest

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\* A copy of the DoD HPQ, detailed descriptions of all modifications, and scale sources are included in the appendix.

of the survey). Also, only the first few stem questions were used instead of the entire section on neurasthenia (with a total of 47 questions) so that some data could be collected without overburdening the respondents.

A scale of behavioral traits based on the Zuckerman-Kuhlman Personality Questionnaire (ZKPQ) was added to determine specific personality attributes related to impulsivity and risk taking behaviors. These behaviors are often linked to injury/ work performance though they may not be easily modifiable causes. The Zuckerman-Kuhlman's Personality Questionnaire (ZKPQ) is an 89-item self-report measure of another five basic normal personality traits: Impulsive Sensation Seeking, Neuroticism-Anxiety, Aggression-Hostility, Activity, and Sociability. It was hypothesized that these traits might have a higher prevalence in a military population due to the nature of the profession (i.e., that there might be a higher-prevalence of risk-takers in the military because of the potentially dangerous nature of deployment and combat). Clearly too large to use in its original form in the DoD HPQ, modifications were made to keep the screen shorter (10 questions) and only measure impulsivity and aggression-hostility traits.

The second major area of modifications involved expanding the injury section of the HPQ. The injury section of the HPQ was based on the injury module from the National Health Interview Survey and required adaptation for a military population. For example, one question asks if the respondent's most recent accident occurred while they were deployed or not deployed, on- or off-duty. Unlike most office settings, the lines of "at work" and "at home" are blurred in the military; SMs could be injured off-duty, but while deployed and living on a base. Similarly, a question about what the respondent was doing while they were injured includes answers such as "training for combat", "physical fitness testing", and "in combat".

Based upon a review of peer-reviewed health literature, the DoD version of the HPQ was supplemented with questions that measure common worker-related risk factors commonly correlated with injury. This includes environmental risk factors at the time of the most recent injury, such as on-duty status, shift work, and physical conditions (e.g., amount of light, heat/cold, etc). While environmental factors clearly influence the civilian workforce, people with seasonal allergies may be prone to higher scores on the fatigue scale (e.g., due to taking sedating antihistamines), they have a distinctive meaning in a military setting. For example, in theater, it might be quite common for a unit to be exposed to radiation, pesticides, or excessive fuel exhaust fumes. When these service members (SMs) are performing rotating shift-work they may be at higher risk of injury as a result of their exposure. Since the primary intention of the HPQ is to link health with productivity, the DoD HPQ data can be used to estimate the number of work days lost due to injury and the associated direct costs of that lost productivity in addition to lost days/productivity related to chronic or acute health conditions. Estimates can be made from data on current patterns of treatment about the most promising conditions to target for intervention in order to reduce injury incidence.

The third major area of modifications involved modifying the languages on scales to fit with common military terminology. Many HPQ questions related to civilian work performance were still appropriate for the military but did not use the correct or common military terminology. The most common example of this practice was the replacement of the term "work day" or "at work" with "on-duty" and "off-duty." While SMs would have understood the original questions, the

revisions allowed for a more readable and relevant survey. Vocabulary changes were also important when the civilian counterpart was confusing or unrelated. For example, SMs might be placed on “light duty restrictions” when they are sick, injured, or have a medical condition that requires a change in daily activity (e.g., pregnancy). Light duty is not really the equivalent of a civilian sick day since the SMs are still working, but it contributes to a change in overall productivity and work performance.

Modifications of the HPQ were made to maintain the ability to compare data to the HPQ archive. Of the 147 total questions on the DoD version of the HPQ, 60 are directly from the original HPQ and 30 questions have only minor revisions. The DoD HPQ represents a new version of the HPQ, but it is possible to benchmark the majority of questions against the civilian version.

### Piloting the HPQ

Although the HPQ has been used extensively in the civilian sector, we considered it very important to pre-test the DoD version. Conducted in the summer of 2006, the pre-test was with a small sample of military and DoD employees. Participants were sent the survey link, asked to fill out the HPQ, and respond with comments on the overall survey. On average, the survey took 20 –30 minutes to complete. Most respondents reported few problems with the survey and indicated it was easy to navigate. There were a number of specific technical issues that were addressed regarding how things look on screen, placement of items in the questionnaire, question clarity, and coding. See Table 3 for examples of issues that were identified.

**Table 3. Examples of Issues Identified in DoD HPQ Pilot - Pre-Test Comments\***

\* A full list of comments, responses, and actions is included in the appendix.

Question #	Question	Comment
A4	“Do you have any of the following conditions? If YES, mark whether you <u>never</u> , <u>previously</u> , or <u>currently</u> receive professional treatment. (Professional treatment is any treatment supervised by a health professional.) If you are unsure if you have a condition, mark the NO response option.”	Question is too long to be viewed on one screen – need to put answer categories at top and bottom of the screen.
A10c	“How many days was your work restricted (for example: light duty restrictions, medical profile, job transfer, etc.) as a result of any accident, injury, or poisoning?”	The light duty restriction only appears when we answer yes to injury, accident, or poisoning. Many people have light duty restrictions for other reasons. It looks like we are missing a big chunk of presenteeism if asked like this (pregnancy, surgery, illness; to include mental illness) We want to know who is out of their intended work...someone has to cover.
A15b	“(Women only) A doctor, hospital, or clinic for pregnancy related care (if male, enter 000)”	Concern about confusion with the “if male, enter 000”

**D. IMPLEMENTATION OF THE HPQ**

The DoD version of the Health and Work Performance Questionnaire (HPQ) has been developed and piloted. The DoD HPQ previously received an exemption from the New England Institutional Review Board. As part of this project, JSI has developed a plan to implement the DoD HPQ in one or more military installations.

**IRB Exemption and Approvals**

The protection of human subjects and privacy are important concerns in any health project. The DoD HPQ, in its current form, received exemption from the New England IRB in 2006 for its use as an anonymous survey. In this situation, no information is collected on the survey that would allow individuals to be identified in any way. In addition, care should be taken during data analysis to not over-stratify the data, particularly by demographic and geographic variables, to ensure the respondent cannot be indirectly associated with survey results. Any cell in a table with less than five respondents per base should be represented with a dash. When describing results of cross-tabulations of data, statistical inferences should not be made if one of the cells contains less than five respondents. If an individual base decides to implement the DoD HPQ to survey its population, local or service requirements for surveying individuals need to be met.

**Data Collection**

Web surveys are increasingly relied upon as a method of data collection because of their low cost and administrative flexibility and simplicity. One concern is that response rates can be low. However, with strong organizational support and the proper protocol, response rates can be equivalent to those in mail surveys. The Millennium Cohort Study and other DoD studies have successfully relied upon web administered surveys.

The sample size will be determined based on resources available and analytic requirements; however, the order of magnitude of a study at an individual installation will likely be in the range of 3,000-5,000 solicitations to obtain 450-750 completed surveys. We would recommend a total of six solicitation emails for a five to six week data collection period. These emails and reminders could be signed by the Installation Commander (or other ranking official). The first email would announce the survey to the total sample and include a link to the online survey (see accompanying materials in the Briefing Book). All non-respondents would receive an email reminder every four days for approximately two weeks for a maximum of four times (see accompanying materials in the Briefing Book). All communication would provide a deadline of the end of the fifth week for respondents to complete and submit the survey. The link would remain live for one week following the last reminder in order to maximize response. Table 4 describes the recommended notification/reminder protocol described above.

**Table 4. Notification/Reminder Protocol**

Mailing	Week 1	Week 2	Week 3				Week 4				Week 5			
Email 1:	x													
Email 2:					x									
Email 3:							x							
Email 4:										x				



## **E. CONCLUSION AND NEXT STEPS**

The management of employee health and productivity (including the reduction of absenteeism, presenteeism and injury) has become a growing priority of large public and private employers. Studies show that untreated illnesses cost the American economy billions of dollars each year. To address this issue, researchers have developed self-report instruments that document the prevalence of treated and untreated illnesses and their impacts on absenteeism, presenteeism, and work performance. The use of these instruments is designed to help large public and private employers rationalize their investments in health by allowing them to assess costs and work performance, and prioritize spending across various options for health insurance and health promotion.

The promotion and maintenance of workforce health are even more important concerns for the U.S. Military, given the complexity and scope of current military commitments. The promotion of health and reduction of injury and absenteeism are vital to the achievement of force readiness and military effectiveness. Although the U.S. Military collects large amounts of information on health conditions and injuries, there is no unified data base or instrument that allows the military services to analyze the relationship between specific health conditions and work performance and absenteeism. This is a critical gap in DoD's data collection and research activities related to the TRICARE program.

To address this issue, the DoD contracted with John Snow, Inc. to adapt the HPQ, for a military population. In this project, our research team developed a web-based version, and pilot tested the DoD HPQ in a small sample of military and DoD employees. We adapted the HPQ by adding scales on conditions that are particularly relevant to the military and work performance (e.g., PTSD), by expanding the module on injuries and accidents, and by replacing civilian with military terminology (e.g., duty days). Once the HPQ was adapted for the military, a web version was developed and pilot tested.

The next steps are to conduct a demonstration project to test the usefulness of the DoD HPQ in achieving the military's goal of improving health and reducing injuries and accidents. Because the web based survey has already been developed, an IRB exemption obtained, and implementation plan drafted, the DoD HPQ is ready for fielding with proper Service level approvals. The initial results could be available within three to six months depending on the scale of the sample and complexity of the data analyses proposed.

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## **APPENDIX**

**A. YOUR HEALTH**

**FORMATTING NOTE**

The DoD Adaptation of the Health and Work Performance Questionnaire (HPQ) is a web-based survey. Some formatting may appear strange or unclear in this paper version.

	Excellent	Very Good	Good	Fair	Poor
A1. In general, how would you rate <u>your overall health</u> now?	<input type="radio"/>				
A2. In general, how would you rate your overall <u>mental</u> health now?	<input type="radio"/>				

A3. Do you have any of the following conditions? If YES, mark whether you never, previously, or currently receive professional treatment. (Professional treatment is any treatment supervised by a health professional.) If you are unsure if you have a condition, mark the NO response option.

	NO, I don't have this condition	YES, but <u>never</u> received professional treatment	YES, <u>previously</u> received (but don't currently receive) professional treatment	YES, and I <u>currently</u> receive professional treatment
a. Arthritis or rheumatism?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Chronic back/neck pain?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Migraine headaches?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Other frequent or severe headaches?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Any other chronic pain?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. High blood pressure or hypertension?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Congestive heart failure?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Coronary heart disease?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. High blood cholesterol?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



**A4. Do you have any of the following conditions? If YES, mark whether you never, previously, or currently receive professional treatment. (Professional treatment is any treatment supervised by a health professional.) If you are unsure if you have a condition, mark the NO response option.**

	NO, I don't have this condition	YES, but <u>never</u> received professional treatment	YES, <u>previously</u> received (but don't currently receive) professional treatment	YES, and I <u>currently</u> receive professional treatment
a. An ulcer in your stomach or intestine?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Irritable bowel disorder?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Either frequent diarrhea or frequent constipation?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Frequent nausea, gas, or indigestion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Chronic heartburn or GERD?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Seasonal allergies or hay fever?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Asthma?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Chronic bronchitis or emphysema?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Chronic Obstructive Pulmonary Disease?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. Urinary or bladder problems?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k. Diabetes?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l. Osteoporosis?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m. Skin cancer?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
n. Any other kind of cancer?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
o. Anxiety disorder?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
p. Depression?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
q. Any other emotional problem?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
r. Substance problems (drugs)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**A5. Do you smoke cigarettes?**

- Currently → **continue with question A5a**
- Ex-smoker → **skip to question A6**
- Only smoked a few times → **skip to question A6**
- Never → **skip to question A6**

**A5a. How many cigarettes do you smoke a day**

- Less than 1 pack
- 1 pack
- More than 1 pack

**A6. The next questions are about your current use of alcohol—that is beer, wine, and liquor. In the past 30 days, on how many days did you drink alcohol?**

- Didn't drink any alcohol in the past 30 days → **skip to question A7**
- Once in the past 30 days → **continue with question A6a**
- 2-3 days in the past 30 days → **continue with question A6a**
- 4-10 days (1-2 days a week, average) → **continue with question A6a**
- 11-19 days (3-4 days a week, average) → **continue with question A6a**
- 20-27 days (5-6 days a week, average) → **continue with question A6a**
- 28-30 days (about every day) → **continue with question A6a**

**A6a. When you drank alcohol in the past 30 days, about how many drinks did you typically have? (By drink we mean a bottle or can of beer, a wine cooler or a glass of wine, a shot of liquor, or a mixed drink or cocktail.)**

- Less than 1 drink
- 1 drink
- 2 to 3 drinks
- 4 drinks
- 5 drinks
- 6 to 7 drinks
- 8 to 9 drinks
- 10 to 11 drinks
- 12 or more drinks

**A7. The next questions are about problems you may have with attention or concentration.**

	Never	Rarely	Sometimes	Often	Very Often
a. How often do you have trouble wrapping up the final details of a project, once the challenging parts have been done?	<input type="radio"/>				
b. How often do you have difficulty getting things in order when you have to do a task that requires organization?	<input type="radio"/>				
c. How often do you have problems remembering appointments or obligations?	<input type="radio"/>				
d. When you have a task that requires a lot of thought, how often do you avoid or delay getting started?	<input type="radio"/>				
e. How often do you fidget or squirm with your hands or feet when you have to sit down for a long time?	<input type="radio"/>				
f. How often do you feel overly active and compelled to do things, like you were driven by a motor?	<input type="radio"/>				

**A8. The next questions are about how often you got tired over the past 12 months. How often did you become very tired, weak, or exhausted while performing minor everyday physical tasks like working, shopping, housekeeping, and walking or while performing everyday mental tasks like reading, writing, and doing paperwork?**

- Never → go to question A9
- Rarely → go to question A9
- Sometimes → continue with question A8a
- Often → continue with A8a
- Very Often → continue with A8a

**A8a. During those times, what would happen when you tried to rest or relax? Would you...**

- ...fully regain your energy and strength?
- ...still feel tired or weak?

**A8b. When this problem was more severe over the past 12 months, how often did you get tired?**

- Never
- Less than once a month
- 1-3 days per month
- 1-2 days per week
- Several days a week
- Nearly everyday

**A8c. How often were you too tired to carry out your daily activities?**

- Never
- Rarely
- Sometimes
- Often
- Very Often

**A9. The next few questions are about problems with your sleep. Do you currently, or have you ever, had problems ...**

	Yes	No
a. ...getting to sleep, when nearly every night it took you two hours or longer before you could fall asleep?	<input type="radio"/>	<input type="radio"/>
b. ...staying asleep, when you woke up nearly every night and took an hour or more to get back to sleep?	<input type="radio"/>	<input type="radio"/>
c. ...waking too early, when you woke up nearly every morning at least two hours earlier than you wanted to?	<input type="radio"/>	<input type="radio"/>
d. ...feeling sleepy during the day?	<input type="radio"/>	<input type="radio"/>
e. ...waking up and not feeling rested?	<input type="radio"/>	<input type="radio"/>

**A9a. (If yes to ANY of the above questions) How many weeks in the past year did you have these problems?**

\_\_\_ \_\_\_ (write in number of weeks, 1-52)

**A10. During the past 12 months, did you have an accident, injury, or poisoning that interfered with your daily activities for at least one day?**

- Yes → continue with question A10a.
- No → If no, go to question A11.

**A10a. How many accidents, injuries, or poisonings did you have during the past 12 months?**

\_\_\_\_\_ Number of accidents, injuries, or poisonings

**A10b. How many duty days did you miss during the past 12 months because of any accident, injury, or poisoning?**

\_\_\_\_\_ days

**A10c. In what month did your most recent accident, injury, or poisoning occur?**

Month

(write in number representing month, for example: 01 = January, 12=December, etc)

**A10d. Did you report your most recent accident, injury, or poisoning to your immediate supervisor?**

- Yes
- No

**A10e. Did your most recent accident, injury, or poisoning happen while you were:**

- Deployed?
- Not deployed, on-duty?
- Not deployed, off-duty?

**A10f.** Did your most recent accident, injury, or poisoning occur on a military installation/Base? (The word "installation" refers to your post, camp, base, station, or other geographic duty location. Navy and Marines assigned to ships: refers to your ship when in home port.)

- Yes
- No

**A10g.** Were any of the following related to your most recent accident, injury, or poisoning? (*Check all that apply*)

- DEET insect repellent applied to skin
- Pesticide-treated uniforms
- Environmental pesticides (like area fogging)
- Flea or tick collars
- Pesticide strips
- Smoke from oil fire
- Smoke from burning trash or feces
- Vehicle or truck exhaust fumes
- Tent heater smoke
- JP8 or other fuels
- Fog oils (smoke screen)
- Solvents
- Paints
- Ionizing radiation
- Radar/microwaves
- Lasers
- Loud noises
- Excessive vibration
- Industrial pollution
- Sand/dust
- Depleted Uranium
- Other exposures

**A10h. Which of the conditions on this list resulted from your most recent accident, injury, or poisoning? Please check all that apply.**

- Broken or dislocated bones
- Sprain, strain, or pulled muscle
- Cuts, scrapes, or puncture wounds
- Head injury, concussion
- Bruise or contusion
- Internal bleeding
- Burn, scald
- Poisoning from chemicals, medicines, or drugs
- Allergic reaction
- None

Other, please describe: \_\_\_\_\_

**A10i. Did you receive medical treatment for this most recent accident, injury, or poisoning?**

Yes       No → **SKIP to A10k**

**A10j. Did you stay overnight in a medical treatment facility?**

Yes       No

**A10k. What were you doing during your most recent accident, injury, or poisoning? (Mark ALL that apply)**

- Training for combat
- In combat
- Physical fitness training
- Physical fitness testing
- Sports or recreation
- Driving/Riding in an automobile
- Driving/Riding a motorcycle
- In a fight (personal assault, not combat)
- Using tools or machinery
- Other, please describe: \_\_\_\_\_

**A10l. Was there any property destroyed or damaged as a result of this accident, injury, or poisoning?**

Yes  
 No

Unrelated to any injuries you might have had, the next questions are about your general health.

**A11. These questions are about things that may have occurred in the past 30 days. During the past 30 days, how much were you bothered by the following conditions?**

	Not at all	A little	Some	A lot
<b>a. Headaches?</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>b. Back or neck pain?</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>c. Feeling dizzy?</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>d. Pain in your arms, legs, or joints (knees, hips, etc.)</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>e. Muscle soreness</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>f. Watery eyes, runny nose, or stuffy head</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>g. Cough or sore throat</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>h. Fever, chills, or other cold/flu symptoms</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



**A12. During the past 30 days, how much of the time did you feel...**

	None of the time	A little of the time	Some of the time	Most of the time	All of the time
a. ...so sad nothing could cheer you up?	<input type="radio"/>				
b. ...nervous?	<input type="radio"/>				
c. ...restless or fidgety?	<input type="radio"/>				
d. ...hopeless?	<input type="radio"/>				
e. ...that everything was an effort?	<input type="radio"/>				
f. ...worthless?	<input type="radio"/>				
g. ...unable to relax?	<input type="radio"/>				
h. ...impatient or irritable?	<input type="radio"/>				

The next questions are about life-threatening or other terrible events. Some examples include:

- Being in combat
- Being in a life-threatening accident
- Being in a life-threatening flood, fire, or other natural disaster
- Being sexually assaulted or raped
- Being physically attacked or mugged

**A13. Have you ever had any experience that was so frightening, horrible, or upsetting that, IN THE PAST 30 DAYS, you ....**

	Yes	No
a. ...Have had any nightmares about it or thought about it when you did not want to?	<input type="radio"/>	<input type="radio"/>
b. ...Tried hard not to think about it or went out of your way to avoid situations that remind you of it?	<input type="radio"/>	<input type="radio"/>
c. ...Were constantly on guard, watchful, or easily startled?	<input type="radio"/>	<input type="radio"/>
d. ...Felt numb or detached from others, activities, or your surroundings?	<input type="radio"/>	<input type="radio"/>

**A14.** How true is each of the following statements for you? *The best answer is usually the one that comes to your mind first, so don't take too much time thinking before you answer.*

	<b>Not at all true</b>	<b>Not Very true</b>	<b>Somewhat true</b>	<b>Very true</b>
<b>a.</b> I enjoy getting into new situations where you can't tell how things will turn out.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>b.</b> I like doing things just for the thrill of it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>c.</b> I sometimes like to do things that are a little frightening.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>d.</b> I often get so carried away by new and exciting things and ideas that I never think of possible difficulties or problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>e.</b> I often do things without thinking of the consequences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>f.</b> Before I begin a complicated job, I make careful plans.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>g.</b> I usually think about what I am going to do before doing it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>h.</b> I am always patient with others even when they are annoying.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>i.</b> I sometimes want to do things so much that I can't stop myself no matter how hard I try.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>j.</b> I have a very hard time resisting temptations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**A15. How many times did you see each of the following types of professionals in the past 12 months? Include only visits regarding your own health, not visits when you took someone else to be examined.**

**Example:** If you visited a dentist 2 times in the past year and an optician once, your answer to A15c would be 003.

	Number of times (000-365)
A15a. A doctor, hospital, or clinic for a routine physical check-up or gynecological exam (not counting pregnancy related care)	<input type="text"/> <input type="text"/> <input type="text"/>
A15b. (Women only) A doctor, hospital, or clinic for pregnancy related care (if male, enter 000)	<input type="text"/> <input type="text"/> <input type="text"/>
A15c. A dentist, optician, or optometrist for a routine check-up or exam	<input type="text"/> <input type="text"/> <input type="text"/>
A15d. A doctor, emergency room, or clinic for urgent care treatment (for example because of new symptoms, an accident, or something else unexpected)	<input type="text"/> <input type="text"/> <input type="text"/>
A15e. A doctor, hospital, clinic, orthodontist, or ophthalmologist for scheduled treatment or surgery	<input type="text"/> <input type="text"/> <input type="text"/>
A15f. A psychiatrist, psychologist, or other mental health professional	<input type="text"/> <input type="text"/> <input type="text"/>
A15g. A chaplain to discuss issues relating to your emotional, physical, or mental health	<input type="text"/> <input type="text"/> <input type="text"/>

**A16. How many nights did you stay in a hospital during the past 12 months (not including nights associated with childbirth)?**

     Number of nights (000-365)

**A17. (Women only) How many nights did you stay in a hospital during the past 12 months for nights associated with childbirth? (if male, click "I am male" button to skip this question)**

     Number of nights (000-365)

**B. YOUR MILITARY DUTY**

For these next questions, please concentrate on those activities related to your active duty role in the military.

**B1. How long have you been in the military?**

Years        Months

**B2. Are you in the**

- Army
- Navy
- Marine Corps
- Air Force

**B3. Where are you based?**

(Drop down menu with list of bases being surveyed)

**B4. What is your service rank?**

- Enlisted → **continue with question B4a**
- Officer (Warrant/Commissioned) → **skip to question B4b**

**B4a. (If answered “Enlisted” for question B4) Please choose the category that best describes your current primary MOS/PS/Rating/Designator/AFSC. If none of the categories fits you exactly, please respond with the closest category to your experience. (Please select only one. Click here for examples of each job category.)**

- Infantry, Gun Crew, or Seamanship Specialist
- Electronic Equipment Repairman
- Communications or Intelligence Specialist
- Health Care Specialist
- Other Technical or Allied Specialist
- Functional Support and Administration
- Electrical/Mechanical Equipment Repairman
- Craftsman
- Service and Supply Handler
- Non-Occupational

**B4b. (If answered “Officer” for question B4) Please choose the category that best describes your current primary MOS/PS/Rating/Designator/AFSC. If none of the categories fits you exactly, please respond with the closest category to your experience. (Please select only one. Click here for examples of each job category.)**

- Senior/Executive Level Supervisor
- Tactical Operations Officer
- Intelligence Officer
- Engineering or Maintenance Officer
- Scientist or Professional (not involved with health care)
- Health Care Officer
- Administrator
- Supply, Procurement, or Allied Officer
- Non-Occupational



**B5. Were you deployed to a combat theater of operation at any time in the past 12 months?**

- Yes
- No

**B5a. Please check off every month in which you were deployed to a combat theater of operations [Check all that apply]**

- January
- February
- March
- April
- May
- June
- July
- August
- September
- October
- November
- December

**B6. Is your duty schedule best described as a regular schedule (roughly the same hours every day), a rotating schedule (e.g., working a day shift some days and a night shift other days), or an irregular schedule (e.g., unpredictable hours controlled by situations or workload)?**

- Regular schedule
- Rotating schedule
- Irregular schedule

**B7. What percent of your total duty hours in an average week are in each of the following times of day? (The sum should add up to 100%)**

	%
<b>Morning (6:00AM-12:00PM)</b>	___
<b>Afternoon (12:00PM-6:00PM)</b>	___
<b>Evening (6:00PM-12:00AM)</b>	___
<b>Nights (12:00AM-6:00AM)</b>	___
<b>Total</b>	<b>100</b>

**B8. What time do you usually begin duty?**  
 \*\*\*create dropdown that begins at midnight

**B9. What time do you usually end duty?**  
 \*\*\*create dropdown that begins at midnight

**B10. About how many hours altogether were you on duty in the past 7 days?**

(Enter a number between 0 and 168. 168 = 24 hours a day for 7 days in a row)

Number of hours (00-168)

**B11. How many hours are you expected to be on duty in a typical 7-day week?**

(Enter a number between 0 and 168, where 168 equals 24 hours a day for 7 days in a row).  
If it varies, estimate the average.

Number of hours (00-168)

**B12. Now please think of your on-duty experiences over the past 4 weeks (28 days). In the spaces provided below, write the number of days you spent in each of the following situations.**

In the past 4 weeks (28 days), how many days were you...

	Number of days (00-28)
a. Absent an <u>entire</u> duty day because of problems with your physical or mental health? (Please include only days missed for your <u>own</u> health, not someone else's health.)	<input type="text"/> <input type="text"/>
b. Absent an <u>entire</u> duty day for any other reason (including leave, sick call, wait time at a clinic, etc.)?	<input type="text"/> <input type="text"/>
c. Absent <u>part</u> of a duty day because of problems with your physical or mental health? (Please include only days missed for your <u>own</u> health, not someone else's health.)	<input type="text"/> <input type="text"/>
d. Absent <u>part</u> of a duty day for any other reason (including leave, sick call, wait time at a clinic, etc.)?	<input type="text"/> <input type="text"/>
e. How many days was your work restricted (for example: light duty restrictions, medical profile, job transfer, etc.) as a result of any accident, injury, or poisoning?	<input type="text"/> <input type="text"/>

**B13. About how many hours altogether were you on duty in the past 4 weeks (28 days)? (See examples below.)**

Number of hours in the past 28 days

**Examples for Calculating Hours on duty in the Past 4 Weeks**

- 40 hours per week for 4 weeks = 160 hours
- 50 hours per week for 4 weeks = 200 hours
- 70 hours per week for 4 weeks = 280 hours
- 40 hours per week for 4 weeks with 2 8-hour days absent = 144 hours
- 50 hours per week for 4 weeks with 3 4-hour partial days missed = 188 hours

**B14. Did you have any of the following experiences while on duty in the past 4 weeks (28 days)?**

	Yes	No
a. Any special on duty success or achievement?	<input type="radio"/>	<input type="radio"/>
b. Any special on duty failure?	<input type="radio"/>	<input type="radio"/>
c. Any on duty accident that caused damage, work delay, a near miss, or a safety risk?	<input type="radio"/>	<input type="radio"/>

d. If you answered "Yes" to any of the questions B14a, B14b, B14c, please describe what happened.

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**B15. The next questions are about the time you spent during your duty hours in the past 4 weeks (28 days). Select the one response for each question that comes closest to your experience.**

	None of the time	A little of the time	Some of the time	Most of the time	All of the time
a. How often was your duty performance <u>higher</u> than most others on your job?	<input type="radio"/>				
b. How often was your duty performance <u>lower</u> than most others on your job?	<input type="radio"/>				
c. How often did you do no work when you were on duty and supposed to be working?	<input type="radio"/>				
d. How often did you find yourself not working as <u>carefully</u> as you should?	<input type="radio"/>				
e. How often was the <u>quality</u> of your work lower than it should have been?	<input type="radio"/>				
f. How often did you not concentrate enough on your work?	<input type="radio"/>				
g. How often did health problems limit the kind or amount of work you could do?	<input type="radio"/>				

**B16. On a scale from 0 to 10 where 0 is the worst duty performance anyone could have at your job and 10 is the best duty performance, how would you rate the usual performance of most others in a job similar to yours?**

Worst Performance											Top Performance
	0	1	2	3	4	5	6	7	8	9	10
	<input type="radio"/>										

**B17. Using the same 0-to-10 scale, how would you rate your usual duty performance over the past year or two?**

Worst Performance											Top Performance
	0	1	2	3	4	5	6	7	8	9	10
	<input type="radio"/>										

**B18. Using the same 0-to-10 scale, how would you rate your overall duty performance on the days you worked during the past 4 weeks (28 days)?**

Worst Performance											Top Performance
	0	1	2	3	4	5	6	7	8	9	10
	<input type="radio"/>										

**B19. How would you compare your overall duty performance on the days you worked during the past 4 weeks (28 days) with the performance of most others who have a similar type of job? (Select only one.)**

- A lot better
- Somewhat better
- A little better
- About average
- A little worse
- Somewhat worse
- A lot worse

**B20. Do you have a civilian job at this time?**

- Yes
- No civilian employment at this time

**C. DEMOGRAPHICS**

**C1. How old are you?**

YEARS OLD (00-99)

**C2. Are you male or female?**

- Male
- Female

**C3. How tall are you?**      \_\_\_\_ Ft.      \_\_\_\_ Inches

**C4. How much do you weigh?**      \_\_\_\_ Lbs.

**C5. What is your current marital status?**

- Married
- Living as married (living with significant other, but not married)
- Separated
- Divorced
- Widowed
- Never Married

**C6. How many children do you have?**

- None → if entered “female” on C2 - skip to question C9, if entered “male” on C2 – skip to question C10
- One → continue with question C7
- Two → continue with question C7
- Three → continue with question C7
- Four or more → continue with question C7

**C7. (Women with any children) Have you ever breastfed or pumped milk while serving in the military?**

- Yes
- No

**C8. (Women with any children) Was there a time when you wanted to breastfeed or pump milk while serving in the military, but couldn't because of military policy, command climate, or attitude of supervisory chain?**

- Yes
- No

**C9. (Women Only) Are you currently pregnant, or have you been pregnant in the past 12 months?**

- Yes
- No
- Not Sure



**C10. What is the highest grade or level of school that you have completed?**

- 8th grade or less
- Some high school, but did not graduate
- High school graduate or GED
- Some college or 2-year degree
- 4-year college graduate
- More than 4-year college degree

**Thank You!**

**You have just completed the Department of Defense Health and Work Survey.  
We appreciate your interest and participation in the study, and  
we thank you for your time and patience.**

The DoD realizes that your work climate influences your health status, your job satisfaction, and your job stress. We want to offer solutions that reduce the factors that you feel may have a negative impact on your morale and emotional health. We encourage you to discuss any health related concerns with a medical professional such as your primary care manager. For any concerns you may have regarding your emotional or mental health contact your mental health provider or primary care manager. Not sure about your benefits...don't have a primary care manager or know a mental health provider? Contact the TriCare Service Center in your region:

<b>North</b>	<b>1-877-874-2273</b>
<b>South</b>	<b>1-800-444-5445</b>
<b>West</b>	<b>1-888-777-9378</b>
<b>Overseas</b>	<b>1-888-777-8343</b>

Another source if you don't know how to find a mental health provider is  
Military OneSource.  
Call **Stateside 1-800-342-9647**  
Or **Overseas 1-800-3429-6477**

The website is: [www.tricare.osd.mil/tricare-servicecenters](http://www.tricare.osd.mil/tricare-servicecenters)

Having trouble getting an appointment for a deployment-related health condition?  
Call the Deployment Health Helpline:  
**1-866-559-1627** (8am - 5 pm EST)

Emergencies: Call **911** in the U.S. right away.  
International SOS Call Center: **1-442-087-628-133**

**A. YOUR HEALTH**

**FORMATTING NOTE**

The DoD Adaptation of the Health and Work Performance Questionnaire (HPQ) is a web-based survey. Some formatting may appear strange or unclear in this paper version.

	Excellent	Very Good	Good	Fair	Poor
A1. In general, how would you rate <u>your overall health</u> now?	<input type="radio"/>				
A2. In general, how would you rate your overall <u>mental</u> health now?	<input type="radio"/>				

A3. Do you have any of the following conditions? If YES, mark whether you never, previously, or currently receive professional treatment. (Professional treatment is any treatment supervised by a health professional.) If you are unsure if you have a condition, mark the NO response option.

	NO, I don't have this condition	YES, but <u>never</u> received professional treatment	YES, <u>previously</u> received (but don't currently receive) professional treatment	YES, and I <u>currently</u> receive professional treatment
a. Arthritis or rheumatism?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Chronic back/neck pain?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Migraine headaches?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Other frequent or severe headaches?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Any other chronic pain?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. High blood pressure or hypertension?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Congestive heart failure?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Coronary heart disease?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. High blood cholesterol?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

A4. Do you have any of the following conditions? If YES, mark whether you never, previously, or currently receive professional treatment. (Professional treatment is any treatment supervised by a health professional.) If you are unsure if you have a condition, mark the NO response option.

	NO, I don't have this condition	YES, but <u>never</u> received professional treatment	YES, <u>previously</u> received (but don't currently receive) professional treatment	YES, and I <u>currently</u> receive professional treatment
a. An ulcer in your stomach or intestine?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Irritable bowel disorder?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Either frequent diarrhea or frequent constipation?	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
d. Frequent nausea, gas, or indigestion	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
e. Chronic heartburn or GERD?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Seasonal allergies or hay fever?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Asthma?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Chronic bronchitis or emphysema?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Chronic Obstructive Pulmonary Disease?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. Urinary or bladder problems?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k. Diabetes?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l. Osteoporosis?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m. Skin cancer?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
n. Any other kind of cancer?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
o. Anxiety disorder?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
p. Depression?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
q. Any other emotional problem?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
r. Substance problems (drugs)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**A5. Do you smoke cigarettes?**

- Currently → continue with question A5a
- Ex-smoker → skip to question A6
- Only smoked a few times → skip to question A6
- Never → skip to question A6

**A5a. How many cigarettes do you smoke a day**

- Less than 1 pack
- 1 pack
- More than 1 pack

**Alcohol questions (A6 series): 2005 DoD Survey of Health Related Behaviors Among Military Personnel**

**A6. The next questions are about your current use of alcohol—that is beer, wine, and liquor. In the past 30 days, on how many days did you drink alcohol?**

- Didn't drink any alcohol in the past 30 days → skip to question A7
- Once in the past 30 days → continue with question A6a
- 2-3 days in the past 30 days → continue with question A6a
- 4-10 days (1-2 days a week, average) → continue with question A6a
- 11-19 days (3-4 days a week, average) → continue with question A6a
- 20-27 days (5-6 days a week, average) → continue with question A6a
- 28-30 days (about every day) → continue with question A6a

**A6a. When you drank alcohol in the past 30 days, about how many drinks did you typically have? (By drink we mean a bottle or can of beer, a wine cooler or a glass of wine, a shot of liquor, or a mixed drink or cocktail.)**

- Less than 1 drink
- 1 drink
- 2 to 3 drinks
- 4 drinks
- 5 drinks
- 6 to 7 drinks
- 8 to 9 drinks
- 10 to 11 drinks
- 12 or more drinks

**ADHD (A7): “The Prevalence and Effects of Adult Attention Deficit/Hyperactivity Disorder on Work Performance in a Nationally Representative Sample of Workers,” Kessler et al, Journal of Occupational and Environmental Medicine, June 2005.**

**A7. The next questions are about problems you may have with attention or concentration.**

	Never	Rarely	Sometimes	Often	Very Often
a. How often do you have trouble wrapping up the final details of a project, once the challenging parts have been done?	<input type="radio"/>				
b. How often do you have difficulty getting things in order when you have to do a task that requires organization?	<input type="radio"/>				
c. How often do you have problems remembering appointments or obligations?	<input type="radio"/>				
d. When you have a task that requires a lot of thought, how often do you avoid or delay getting started?	<input type="radio"/>				
e. How often do you fidget or squirm with your hands or feet when you have to sit down for a long time?	<input type="radio"/>				
f. How often do you feel overly active and compelled to do things, like you were driven by a motor?	<input type="radio"/>				

**Chronic Fatigue Syndrome – CFS (A8 Series): Composite International Diagnostic Interview (CIDI) (See: [http://www.hcp.med.harvard.edu/wmhcdi/instruments\\_download.php](http://www.hcp.med.harvard.edu/wmhcdi/instruments_download.php) for most recent instruments.)**

**A8. The next questions are about how often you got tired over the past 12 months. How often did you become very tired, weak, or exhausted while performing minor everyday physical tasks like working, shopping, housekeeping, and walking or while performing everyday mental tasks like reading, writing, and doing paperwork?**

- Never → go to question A9
- Rarely → go to question A9
- Sometimes → continue with question A8a
- Often → continue with A8a
- Very Often → continue with A8a

**A8a. During those times, what would happen when you tried to rest or relax? Would you...**

- ...fully regain your energy and strength?
- ...still feel tired or weak?

**A8b. When this problem was more severe over the past 12 months, how often did you get tired?**

- Never
- Less than once a month
- 1-3 days per month
- 1-2 days per week
- Several days a week
- Nearly everyday

**A8c. How often were you too tired to carry out your daily activities?**

- Never
- Rarely
- Sometimes
- Often
- Very Often

**Sleep Problems – Insomnia, Non-Restorative Sleep (NRS), etc. (A9 series): “Sleep problems, comorbid mental disorders, and role functioning in the National Comorbidity Survey Replication (NCS-R),” Roth et al, in press. The scale in A9 was validated in the paper Roth, T et al (2002) “A New Questionnaire to Detect Sleep Disorders,” Sleep Medicine, 3(2): pp 99-108.**

**A9. The next few questions are about problems with your sleep. Do you currently, or have you ever, had problems ...**

	Yes	No
a. ...getting to sleep, when nearly every night it took you two hours or longer before you could fall asleep?	<input type="radio"/>	<input type="radio"/>
b. ...staying asleep, when you woke up nearly every night and took an hour or more to get back to sleep?	<input type="radio"/>	<input type="radio"/>
c. ...waking too early, when you woke up nearly every morning at least two hours earlier than you wanted to?	<input type="radio"/>	<input type="radio"/>
d. ...feeling sleepy during the day?	<input type="radio"/>	<input type="radio"/>
e. ...waking up and not feeling rested?	<input type="radio"/>	<input type="radio"/>

**A9a. (If yes to ANY of the above questions) How many weeks in the past year did you have these problems?**

\_\_\_\_\_ (write in number of weeks, 1-52)

**A10. During the past 12 months, did you have an accident, injury, or poisoning that interfered with your daily activities for at least one day?**

- Yes → continue with question A10a.
- No → If no, go to question A11.

**A10a. How many accidents, injuries, or poisonings did you have during the past 12 months?**

\_\_\_\_\_ Number of accidents, injuries, or poisonings

**A10b. How many duty days did you miss during the past 12 months because of any accident, injury, or poisoning?**

\_\_\_\_\_ days

**A10c. In what month did your most recent accident, injury, or poisoning occur?**

Month

(write in number representing month, for example: 01 = January, 12=December, etc)

**A10d. Did you report your most recent accident, injury, or poisoning to your immediate supervisor?**

Yes

No

**A10e. Did your most recent accident, injury, or poisoning happen while you were:**

Deployed?

Not deployed, on-duty?

Not deployed, off-duty?

**A10f. Did your most recent accident, injury, or poisoning occur on a military installation/Base? (The word "installation" refers to your post, camp, base, station, or other geographic duty location. Navy and Marines assigned to ships: refers to your ship when in home port.)**

Yes

No

**Environmental Exposures (A10g): DD Form 2900, Post Deployment Health Assessment**

**A10g. Were any of the following related to your most recent accident, injury, or poisoning? (Check all that apply)**

- DEET insect repellent applied to skin
- Pesticide-treated uniforms
- Environmental pesticides (like area fogging)
- Flea or tick collars
- Pesticide strips
- Smoke from oil fire
- Smoke from burning trash or feces
- Vehicle or truck exhaust fumes
- Tent heater smoke
- JP8 or other fuels
- Fog oils (smoke screen)
- Solvents
- Paints
- Ionizing radiation
- Radar/microwaves
- Lasers
- Loud noises
- Excessive vibration
- Industrial pollution
- Sand/dust
- Depleted Uranium
- Other exposures

**A10h. Which of the conditions on this list resulted from your most recent accident, injury, or poisoning? Please check all that apply.**

- Broken or dislocated bones
  - Sprain, strain, or pulled muscle
  - Cuts, scrapes, or puncture wounds
  - Head injury, concussion
  - Bruise or contusion
  - Internal bleeding
  - Burn, scald
  - Poisoning from chemicals, medicines, or drugs
  - Allergic reaction
  - None
  - Other, please describe: \_\_\_\_\_
- 

**A10i. Did you receive medical treatment for this most recent accident, injury, or poisoning?**

- Yes
- No → SKIP to A10l

**A10j. Did you stay overnight in a medical treatment facility?**

- Yes
- No

**A10k. What were you doing during your most recent accident, injury, or poisoning? (Mark ALL that apply)**

- Training for combat
  - In combat
  - Physical fitness training
  - Physical fitness testing
  - Sports or recreation
  - Driving/Riding in an automobile
  - Driving/Riding a motorcycle
  - In a fight (personal assault, not combat)
  - Using tools or machinery
  - Other, please describe: \_\_\_\_\_
- 

**A10l. Was there any property destroyed or damaged as a result of this accident, injury, or poisoning?**

- Yes
- No

**Unrelated to any injuries you might have had, the next questions are about your general health.**

A11. These questions are about things that may have occurred in the past 30 days. During the past 30 days, how much were you bothered by the following conditions?

	Not at all	A little	Some	A lot
a. Headaches?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Back or neck pain?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Feeling dizzy?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Pain in your arms, legs, or joints (knees, hips, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Muscle soreness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Watery eyes, runny nose, or stuffy head	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Cough or sore throat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Fever, chills, or other cold/flu symptoms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**General Mental Distress Scale (A12 Series): K6 and K10 scales, National Health Interview Survey**

A12. During the past 30 days, how much of the time did you feel...

	None of the time	A little of the time	Some of the time	Most of the time	All of the time
a. ...so sad nothing could cheer you up?	<input type="radio"/>				
b. ...nervous?	<input type="radio"/>				
c. ...restless or fidgety?	<input type="radio"/>				
d. ...hopeless?	<input type="radio"/>				
e. ...that everything was an effort?	<input type="radio"/>				
f. ...worthless?	<input type="radio"/>				
g. ...unable to relax?	<input type="radio"/>				
h. ...impatient or irritable?	<input type="radio"/>				

**PTSD (A13 series): Primary Care PTSD Screen (PC-PTSD)**

The next questions are about life-threatening or other terrible events. Some examples include:

- Being in combat
- Being in a life-threatening accident
- Being in a life-threatening flood, fire, or other natural disaster
- Being sexually assaulted or raped
- Being physically attacked or mugged

**A13. Have you ever had any experience that was so frightening, horrible, or upsetting that, IN THE PAST 30 DAYS, you ....**

	Yes	No
<b>a.</b> ...Have had any nightmares about it or thought about it when you did not want to?	<input type="radio"/>	<input type="radio"/>
<b>b.</b> ...Tried hard not to think about it or went out of your way to avoid situations that remind you of it?	<input type="radio"/>	<input type="radio"/>
<b>c.</b> ...Were constantly on guard, watchful, or easily startled?	<input type="radio"/>	<input type="radio"/>
<b>d.</b> ...Felt numb or detached from others, activities, or your surroundings?	<input type="radio"/>	<input type="radio"/>

**Personality/Risk Taking Behaviors (A14):** Zuckerman, M. (2002) Zuckerman-Kuhlman Personality Questionnaire (ZKPQ): An alternative five-factorial model. In B. De Raad, & M. Perugini (Eds.) Big five assessment. (pp. 377-396) Hogrefe & Huber Publishers.

**A14.** How true is each of the following statements for you? *The best answer is usually the one that comes to your mind first, so don't take too much time thinking before you answer.*

	Not at all true	Not Very true	Somewhat true	Very true
a. I enjoy getting into new situations where you can't tell how things will turn out.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. I like doing things just for the thrill of it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. I sometimes like to do things that are a little frightening.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. I often get so carried away by new and exciting things and ideas that I never think of possible difficulties or problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. I often do things without thinking of the consequences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Before I begin a complicated job, I make careful plans.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. I usually think about what I am going to do before doing it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. I am always patient with others even when they are annoying.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. I sometimes want to do things so much that I can't stop myself no matter how hard I try.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. I have a very hard time resisting temptations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**A15. How many times did you see each of the following types of professionals in the past 12 months? Include only visits regarding your own health, not visits when you took someone else to be examined.**

**Example:** If you visited a dentist 2 times in the past year and an optician once, your answer to A15c would be 003.

	Number of times (000-365)
A15a. A doctor, hospital, or clinic for a routine physical check-up or gynecological exam (not counting pregnancy related care)	<input type="text"/> <input type="text"/> <input type="text"/>
A15b. (Women only) A doctor, hospital, or clinic for pregnancy related care (if male, enter 000)	<input type="text"/> <input type="text"/> <input type="text"/>
A15c. A dentist, optician, or optometrist for a routine check-up or exam	<input type="text"/> <input type="text"/> <input type="text"/>
A15d. A doctor, emergency room, or clinic for urgent care treatment (for example because of new symptoms, an accident, or something else unexpected)	<input type="text"/> <input type="text"/> <input type="text"/>
A15e. A doctor, hospital, clinic, orthodontist, or ophthalmologist for scheduled treatment or surgery	<input type="text"/> <input type="text"/> <input type="text"/>
A15f. A psychiatrist, psychologist, or other mental health professional	<input type="text"/> <input type="text"/> <input type="text"/>
A15g. A chaplain to discuss issues relating to your emotional, physical, or mental health	<input type="text"/> <input type="text"/> <input type="text"/>

**A16. How many nights did you stay in a hospital during the past 12 months (not including nights associated with childbirth)?**

  

Number of nights (000-365)

**A17. (Women only) How many nights did you stay in a hospital during the past 12 months for nights associated with childbirth? (if male, enter 000)**

  

Number of nights (000-365)

## B. YOUR MILITARY DUTY

For these next questions, please concentrate on those activities related to your active duty role in the military.

### B1. How long have you been in the military?

Years   Months

### B2. Are you in the

- Army
- Navy
- Marine Corps
- Air Force

### B3. Where are you based?

(Drop down menu with list of bases being surveyed)

### B4. What is your service rank?

- Enlisted → skip to question B4a
- Officer (Warrant/Commissioned) → continue with question B4b

**B4a. (If answered “Enlisted” for question B4) Please choose the category that best describes your current primary MOS/PS/Rating/Designator/AFSC. If none of the categories fits you exactly, please respond with the closest category to your experience. (Please select only one. Click here for examples of each job category.)**

- Infantry, Gun Crew, or Seamanship Specialist
- Electronic Equipment Repairman
- Communications or Intelligence Specialist
- Health Care Specialist
- Other Technical or Allied Specialist
- Functional Support and Administration
- Electrical/Mechanical Equipment Repairman
- Craftsman
- Service and Supply Handler
- Non-Occupational

**B4b. (If answered “Officer” for question B4) Please choose the category that best describes your current primary MOS/PS/Rating/Designator/AFSC. If none of the categories fits you exactly, please respond with the closest category to your experience. (Please select only one. Click here for examples of each job category.)**

- Senior/Executive Level Supervisor
- Tactical Operations Officer
- Intelligence Officer
- Engineering or Maintenance Officer
- Scientist or Professional (not involved with health care)
- Health Care Officer
- Administrator
- Supply, Procurement, or Allied Officer
- Non-Occupational

**B5. Were you deployed to a combat theater of operation at any time in the past 12 months?**

- Yes
- No

**B5a. Please check off every month in which you were deployed to a combat theater of operations [Check all that apply]**

- January
- February
- March
- April
- May
- June
- July
- August
- September
- October
- November
- December

**B6. Is your duty schedule best described as a regular schedule (roughly the same hours every day), a rotating schedule (e.g., working a day shift some days and a night shift other days), or an irregular schedule (e.g., unpredictable hours controlled by situations or workload)?**

- Regular schedule
- Rotating schedule
- Irregular schedule

**B7. What percent of your total duty hours in an average week are in each of the following times of day? (The sum should add up to 100%)**

	%
<b>Morning (6:00AM-12:00PM)</b>	<input type="text"/>
<b>Afternoon (12:00PM-6:00PM)</b>	<input type="text"/>
<b>Evening (6:00PM-12:00AM)</b>	<input type="text"/>
<b>Nights (12:00AM-6:00AM)</b>	<input type="text"/>
<b>Total</b>	<b>100</b>

**B8. What time do you usually begin duty?  
\*\*\*create dropdown that begins at midnight**

**B9. What time do you usually end duty?  
\*\*\*create dropdown that begins at midnight**

**B10. About how many hours altogether were you on duty in the past 7 days?**

(Enter a number between 0 and 168. 168 = 24 hours a day for 7 days in a row)

Number of hours (00-168)

**B11. How many hours are you expected to be on duty in a typical 7-day week?**

(Enter a number between 0 and 168, where 168 equals 24 hours a day for 7 days in a row).  
If it varies, estimate the average.

Number of hours (00-168)

**B12. Now please think of your on-duty experiences over the past 4 weeks (28 days). In the spaces provided below, write the number of days you spent in each of the following situations.**

In the past 4 weeks (28 days), how many days were you...

	Number of days (00-28)
a. Absent an <u>entire duty day</u> because of problems with your physical or mental health? (Please include only days missed for your <u>own</u> health, not someone else's health.)	<input type="text"/> <input type="text"/>
b. Absent an <u>entire duty day</u> for any other reason (including leave, sick call, wait time at a clinic, etc.)?	<input type="text"/> <input type="text"/>
c. Absent <u>part</u> of a <u>duty day</u> because of problems with your physical or mental health? (Please include only days missed for your <u>own</u> health, not someone else's health.)	<input type="text"/> <input type="text"/>
d. Absent <u>part</u> of a <u>duty day</u> for any other reason (including leave, sick call, wait time at a clinic, etc.)?	<input type="text"/> <input type="text"/>
e. How many days was your work restricted (for example: light duty restrictions, medical profile, job transfer, etc.) as a result of any accident, injury, or poisoning?	<input type="text"/> <input type="text"/>

**B13. About how many hours altogether were you on duty in the past 4 weeks (28 days)? (See examples below.)**

Number of hours in the past 28 days

**Examples for Calculating Hours on duty in the Past 4 Weeks**

- 40 hours per week for 4 weeks = 160 hours
- 50 hours per week for 4 weeks = 200 hours
- 70 hours per week for 4 weeks = 280 hours
- 40 hours per week for 4 weeks with 2 8-hour days absent = 144 hours
- 50 hours per week for 4 weeks with 3 4-hour partial days missed = 188 hours

**B14. Did you have any of the following experiences while **on duty** in the **past 4 weeks (28 days)**?**

	Yes	No
a. Any special <b>on duty</b> success or achievement?	<input type="radio"/>	<input type="radio"/>
b. Any special <b>on duty</b> failure?	<input type="radio"/>	<input type="radio"/>
c. Any <b>on duty</b> accident that caused damage, work delay, a near miss, or a safety risk?	<input type="radio"/>	<input type="radio"/>

d. If you answered "Yes" to any of the questions B14a, B14b, B14c, please describe what happened.

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**B15. The next questions are about the time you spent during your **duty hours** in the **past 4 weeks (28 days)**. Select the one response for each question that comes closest to your experience.**

	None of the time	A little of the time	Some of the time	Most of the time	All of the time
a. How often was your <b>duty performance higher</b> than most others on your job?	<input type="radio"/>				
b. How often was your <b>duty performance lower</b> than most others on your job?	<input type="radio"/>				
c. How often did you do no work when you were <b>on duty</b> and supposed to be working?	<input type="radio"/>				
d. How often did you find yourself not working as <b>carefully</b> as you should?	<input type="radio"/>				
e. How often was the <b>quality</b> of your work lower than it should have been?	<input type="radio"/>				
f. How often did you not concentrate enough on your work?	<input type="radio"/>				
g. How often did health problems limit the kind or amount of work you could do?	<input type="radio"/>				

**B16.** On a scale from 0 to 10 where 0 is the worst **duty performance** anyone could have at your job and 10 is the best **duty performance**, how would you rate the usual performance of most others in a job similar to yours?

Worst Performance											Top Performance
	0	1	2	3	4	5	6	7	8	9	10
	<input type="radio"/>										

**B17.** Using the same 0-to-10 scale, how would you rate your usual **duty performance** over the past year or two?

Worst Performance											Top Performance
	0	1	2	3	4	5	6	7	8	9	10
	<input type="radio"/>										

**B18.** Using the same 0-to-10 scale, how would you rate your overall **duty performance** on the days you worked during the past 4 weeks (28 days)?

Worst Performance											Top Performance
	0	1	2	3	4	5	6	7	8	9	10
	<input type="radio"/>										

**B19.** How would you compare your overall **duty performance** on the days you worked during the past 4 weeks (28 days) with the performance of most others who have a similar type of job? (Select only one.)

- A lot better
- Somewhat better
- A little better
- About average
- A little worse
- Somewhat worse
- A lot worse

**B20.** Do you have a civilian job at this time?

- Yes
- No civilian employment at this time

## C. DEMOGRAPHICS

**C1. How old are you?**

YEARS OLD (00-99)

**C2. Are you male or female?**

- Male  
 Female

**C3. How tall are you?**      \_\_\_\_ Ft.      \_\_\_\_ Inches

**C4. How much do you weigh?**      \_\_\_\_ Lbs.

**C5. What is your current marital status?**

- Married  
 Living as married (living with significant other, but not married)  
 Separated  
 Divorced  
 Widowed  
 Never Married

**C6. How many children do you have?**

- None → if entered “female” on C2 - skip to question C9, if entered “male” on C2 – skip to question C10  
 One → continue with question C7  
 Two → continue with question C7  
 Three → continue with question C7  
 Four or more → continue with question C7

**C7. (Women with any children) Have you ever breastfed or pumped milk while serving in the military?**

- Yes  
 No

**C8. (Women with any children) Was there a time when you wanted to breastfeed or pump milk while serving in the military, but couldn't because of military policy, command climate, or attitude of supervisory chain?**

- Yes  
 No

**C9. (Women Only) Are you currently pregnant, or have you been pregnant in the past 12 months?**

- Yes  
 No  
 Not Sure

**C10. What is the highest grade or level of school that you have completed?**

- 8th grade or less
- Some high school, but did not graduate
- High school graduate or GED
- Some college or 2-year degree
- 4-year college graduate
- More than 4-year college degree

**Thank You!**

**You have just completed the Department of Defense Health and Work Survey.  
We appreciate your interest and participation in the study, and  
we thank you for your time and patience.**

The DoD realizes that your work climate influences your health status, your job satisfaction, and your job stress. We want to offer solutions that reduce the factors that you feel may have a negative impact on your morale and emotional health. We encourage you to discuss any health related concerns with a medical professional such as your primary care manager. For any concerns you may have regarding your emotional or mental health contact your mental health provider or primary care manager. Not sure about your benefits...don't have a primary care manager or know a mental health provider? Contact the TriCare Service Center in your region:

<b>North</b>	<b>1-877-874-2273</b>
<b>South</b>	<b>1-800-444-5445</b>
<b>West</b>	<b>1-888-777-9378</b>
<b>Overseas</b>	<b>1-888-777-8343</b>

Another source if you don't know how to find a mental health provider is  
Military OneSource.  
Call **Stateside 1-800-342-9647**  
Or **Overseas 1-800-3429-6477**

The website is: [www.tricare.osd.mil/tricare-servicecenters](http://www.tricare.osd.mil/tricare-servicecenters)

Having trouble getting an appointment for a deployment-related health condition?  
Call the Deployment Health Helpline:  
**1-866-559-1627** (8am - 5 pm EST)

Emergencies: Call **911** in the U.S. right away.  
International SOS Call Center: **1-442-087-628-133**

## DETAILED SURVEY ANNOTATIONS

**Added Questions:** Questions that do not appear on the original HPQ, but have been added to the DoD version.

Item #	Question	Comment
A6	The next questions are about your current use of alcohol— <b>that is beer, wine, and liquor. In the past 30 days, on how many days did you drink alcohol?</b>	Added in place of original question about alcohol use for clearer wording. This question is taken from the 2005 DoD Health Related Behaviors Survey.
A6a	When you drank alcohol in the past 30 days, <b>about how many drinks did you typically have? (By “drink” we mean a bottle or can of beer, a wine cooler or a glass of wine, a shot of liquor, or a mixed drink or cocktail.)</b>	Added in place of original question about alcohol use for clearer wording. This question is taken from the 2005 DoD Health Related Behaviors Survey.
A9a	(Sleep Scale) <b>How many weeks in the past year did you have these problems?</b>	The original sleep scale had response categories of weeks. After the response categories were revised to read “YES/NO” this follow-up question was added to ascertain data on the frequency of the problem.
A10d	<b>Did you report your most recent accident, injury, or poisoning to your immediate supervisor?</b>	Added to gather data on the percentage of injuries that occur and go unreported (although reporting is mandatory).
A10e	Did your most recent accident, injury, or poisoning happen <b>while you were: deployed, not deployed on-duty, not deployed off-duty</b>	Based on definitions of on-duty status, interest in collecting data on where (deployed or not, on or off duty) the accident, injury, or poisoning occurred. (Military specific question - not relevant to civilian populations.)
A10f	Did your most recent accident, injury, or poisoning occur <b>on a military installation/Base?</b>	Added for clarification of A14d because it’s possible for an accident to occur on base while respondent is off-duty.

Item #	Question	Comment
A10g	<p>Were any of the following related to your most recent accident, injury, or poisoning?  <b>DEET insect repellent, pesticide-treated uniforms, environmental pesticides, flea or tick collars, pesticide strips, smoke from oil fire, smoke from burning trash or feces, vehicle or truck exhaust fumes, tent heater smoke, JP8 or other fuels, fog oils, solvents, paints, ionizing radiation, radar/microwaves, lasers, loud noises, excessive vibration, etc.</b></p>	<p>Added to obtain information on environmental exposures that could have caused or contributed to the accident. These items were taken from DD Form 2796, the Post Deployment Health Assessment (PDHA) for military vocabulary.</p>
A10h	<p>Which of the conditions on this list resulted from your most recent accident, injury or poisoning? <b>Allergic reaction</b></p>	<p>Added as a cause of illness that could cause an injury (e.g., that an injury could result from the conditions of an allergic reaction).</p>
A10k	<p><b>What were you doing during your most recent accident, injury or poisoning?</b> Training for combat, In combat, Physical fitness training, Physical fitness testing, Sports or recreation, Driving/Riding in an automobile, Driving/Riding a Motorcycle, In a fight (personal assault, not combat), Using tools or machinery, Other</p>	<p>As part of the interest in injuries, added to ascertain what the individual was doing that may have led to or caused the accident or injury, especially if it was a work-related activity (combat, training, using tools, etc). Response categories are based on a discussion with Dr. (COL) Paul Amoroso and DSOC staff.</p>
A13 series	<p><b>Have you ever had any experience that was so frightening, horrible, or upsetting that, IN THE PAST 30 DAYS, you .... (PTSD Scale)</b></p>	<p>Added because studies show a definite correlation between work performance and PTSD. Also, PTSD is the 2<sup>nd</sup> most prevalent mental health disorder in many military populations. This PTSD scale is from the Primary Care PTSD Screen (PC-PTSD).</p>
A14 series	<p>How true are the following situations: <b>I enjoy getting into new situations where you can't tell how things will turn out...(Personality/Risk Taking Behaviors scale)</b></p>	<p>Based on the Zuckerman-Kuhlman Personality Questionnaire (ZKPQ) to determine specific personality attributes (impulsivity and risk taking behaviors). These behaviors are often linked to injury/work performance although they may not be easily modifiable causes.</p>

Item #	Question	Comment
B1	<b>How long have you been in the military?</b>	Background question on military service. (Military specific question - not relevant to civilian populations.)
B2	<b>Are you in the...(choice of service branches)</b>	Background question on military service. (Military specific question - not relevant to civilian populations.)
B3	<b>Where are you based?</b>	Background question on military service to ascertain which base respondent is on.
B4	<b>What is your service rank?</b>	Background question on military service. (Military specific question - not relevant to civilian populations.)
B5	<b>Were you deployed to a combat theater of operation at any time in the past 12 months?</b>	Background question on military service. (Military specific question - not relevant to civilian populations.)
B5a	<b>Please check off every month in which you were deployed to a combat theater of operations</b>	Background question on military service. (Military specific question - not relevant to civilian populations.)
B12e	<b>How many days was your work restricted as a result of any accident, injury, or poisoning?</b> (for example: light duty restrictions, medical profile, job transfer, etc.)	This question identifies injuries that may not have been serious enough to warrant an absence, but impacted individual work performance through specific restrictions.
B20	<b>Do you have a civilian job at this time?</b>	Background question on military service. (Military specific question - not relevant to civilian populations.)

**Added Atlanta Questions:** Questions that do not appear on the original HPQ, but have been added to the new Atlanta version to be fielded in 2006. (NOTE: Question numbers correspond with the DoD version. Including questions from the Atlanta HPQ will make it possible to benchmark more civilian data with the military data.)

Item #	Question	Comment
A5	<b>Do you smoke cigarettes?</b>	This is a standard smoking question that provides general health information about the respondent. Smoking can be linked to work performance and absenteeism by the health problems that result from the habit.
A5a	<b>How many cigarettes do you smoke a day?</b>	Smoking can be linked to work performance and absenteeism by the health problems that result from the habit. This question collects data on frequency and total consumption (to see if heavier smokers will have higher rates of absenteeism and possibly injury).
A7 series	<b>The next questions are about problems you may have with attention or concentration...(ADHD scale)</b>	The impact of ADHD on work performance is greater than that of depression. Also, there is a greater prevalence of ADHD within young, male, blue collar populations (often undiagnosed). This research is based on the National Comorbidity Study.
A8, a, b, c	<b>The next questions are about how often you got tired over the past 12 months...(Chronic Fatigue scale)</b>	Sleep/energy difficulties are common among younger populations and tend to result from lifestyle choices, not actual illnesses. New study (Roth & Kessler, 2006) is coming out that shows the relationship to overall health. Also taken from the Composite International Diagnostic Interview (CIDI).
A10c	<b>In what month did your most recent accident, injury, or poisoning occur?</b>	Asked to find out when the injury occurred (how recently).
A10h	<b>Which of the conditions on this list resulted from your most recent accident, injury or poisoning?</b>	Taken from Atlanta HPQ to ascertain which injuries are most common and if specific activities lead to high percentages of a common injury.

Item #	Question	Comment
A10i	<b>Did you receive medical treatment for this most recent accident, injury or poisoning?</b>	The original HPQ asked only for injuries/accidents where respondents had received medical treatment. Since the wording of the initial injury question was changed to include more minor injuries, this question was included to find out how many cases did involve medical care.
A10j	<b>Did you stay overnight in a medical treatment facility?</b>	Instead of “hospital,” a more general term was used to include all forms of medical treatment for injuries (e.g., a field hospital, outpatient clinic, etc.)
A12g	During the past 30 days, how much of the time did you feel <b>...unable to relax?</b>	Added to Atlanta HPQ to ascertain self-reporting of ADHD symptoms and impulsivity (general behavior).
A12h	During the past 30 days, how much of the time did you feel <b>...impatient or irritable?</b>	Added to Atlanta HPQ to ascertain self-reporting of ADHD symptoms and impulsivity (general behavior).
		NOTE: The following three questions have been revised, but do not appear in that table. All uses of “work schedule” and references to “work” have been replaced by “duty schedule” and “duty” to be more tailored to a military population.
B6	<b>Is your <i>duty schedule</i> best described as a <u>regular</u> schedule (roughly the same hours every day), a <u>rotating</u> schedule (e.g., working a day shift some days and a night shift other days), or an <u>irregular</u> schedule (e.g., unpredictable hours controlled by situations or workload)?</b>	Irregular hours due to a rotating shift schedule may lead to or be associated with injury and/or work performance.
B7	<b>What percent of your total <i>duty hours</i> in an average week are in each of the following times of day?</b>	Irregular hours due to a rotating shift schedule may lead to or be associated with injury and/or work performance.
B8,9	<b>What time do you usually <u>begin</u> <i>duty</i>? What time do you usually <u>end</u> <i>duty</i>?</b>	Irregular hours due to a rotating shift schedule may lead to or be associated with injury and/or work performance.

**Revised Questions:** Questions that appeared in the original HPQ, but have been reworded or now appear in a different format. **Bolded sections are the revised parts.**

Item #	Question	Comment
A4c	Do you have: <b>Either frequent diarrhea or frequent constipation</b>	Originally in question A5, re-integrated into question A4 (“do you <b>currently</b> have or <b>have you had</b> the following conditions” instead of “have you had <b>in the past 4 weeks</b> ”)
A4d	Do you have: <b>Frequent nausea, gas, or indigestion</b>	Originally in question A5, re-integrated into question A4 (“do you <b>currently</b> have or <b>have you had</b> the following conditions” instead of “have you had <b>in the past 4 weeks</b> ”)
A4r	Do you have: <b>Substance problems (drugs or alcohol )?</b>	Revised to read “substance problems ( <b>drugs</b> )”. “Alcohol” was removed because information on alcohol consumption is gathered in question A6. Also, the two substances are different in nature - alcohol is legal for those of-age while drugs are illegal for everyone. Separating the questions will result in more specific data for analysis.
A5a	How many cigarettes do you smoke a day? <b>10 or less, 11-20, 21-30, 31 or more</b>	Response categories altered to read: “ <b>less than 1 pack, 1 pack, more than 1 pack</b> ” to be more user-friendly. JSI’s Smokers Quitline (MA, NH, RI) asks about intensity in units of packs to ascertain accurate smoking habits. Also, The 2005 DOD Survey of Heath Related Behaviors and BRFSS use “Have you smoked at least 100 cigarettes in your lifetime?” and then asks for current smoking intensity.
A9	<b>The next questions are about problems with your sleep...(insomnia, non-restorative sleep, etc)</b>	The response categories were altered to read “ <b>Yes or No</b> ” instead of asking for specific number of weeks the respondent experienced the conditions (the number of weeks is now asked as a follow-up question if an answer of “yes” was given for any category). This scale is based on the CIDI stem questions and appears in the Atlanta version of the HPQ.

Item #	Question	Comment
A10	During the past 12 months did you have an accident, injury, or poisoning <b>that required medical attention?</b>	Wording altered to read “ <b>that interfered with your daily activities for at least one day?</b> ” Assumption for DOD HPQ was that servicemen and women may not seek care even for significant injuries.
A10b	How many <b>days of work</b> did you miss during the past 12 months because of any accident, injury or poisoning?	Vocabulary altered to include military phrase “ <b>duty days</b> ” instead of civilian “days of work” terminology.
A10l	How many work related accidents did you have that either damaged <b>company property, led to a work delay, or otherwise had a financial cost to your company?</b>	Reworded to simplify reading level and fit with military terminology. Now reads “ <b>Was there any property destroyed or damaged as a result of this accident, injury, or poisoning?</b> ”
A15c	How many times did you see each of the following types of professionals in the past 12 months: A dentist, optician, <b>or optometrist</b> for a routine check-up or exam	“Optometrist” was added to simplify the reading level and include all possible eye care. Also, it is more recognizable than “optician”.
A15g	How many times did you see each of the following types of professionals in the past 12 months: <b>A chaplain to discuss issues relating to your emotional, physical, or mental health.</b>	In military populations there is a higher prevalence of going to a chaplain for mental health issues. These visits do not go on the individual’s medical record so <b>chaplain</b> was added to include undocumented mental health visits. (Detailed explanation added to avoid the inclusion of visits for religious guidance.)
B4a,b	Please choose the category that best describes your <b>current job...</b>	Vocabulary was altered to read “Please choose the category that best describes your current <b>primary MOS/PS/Rating /Designator/AFSC</b> ” to use military terminology. Responses were altered to be more specific to military occupations instead of civilian categories. The options listed are from the DoD Health Related Behaviors survey with the exception of “ <b>General Officer or Executive</b> ” which has been revised to read “ <b>Senior/Executive Level Supervisor</b> ”

Item #	Question	Comment
B12	Now please think of your <b>work</b> experiences over the <u>past 4 weeks</u> (28 days). In the spaces provided below, write the number of days you spent in each of the following <b>work situations</b> .	“Work” changed to “ <b>on-duty</b> ” and responses revised to read “ <b>duty day</b> ” instead of “work day” to be more specific to military life and terminology. Examples added ( <b>leave, sick call, wait time at a clinic, etc.</b> ) to show that waiting for an appointment is included in missed work time.
B13	About how many hours altogether were you <b>at work</b> in the <u>past 4 weeks</u> (28 days)?	Vocabulary changed to “ <b>on-duty</b> ” to be more specific to military life and terminology.
B14, a, b, c	Did you have any of the following experiences while <b>at work</b> in the <u>past 4 weeks</u> (28 days)?	Vocabulary changed to “ <b>while on-duty</b> ” to be more specific to military life and terminology.
B15, a, b, c	The next questions are about the time you spent during your <b>hours at work</b> in the <u>past 4 weeks</u> (28 days).	Vocabulary changed to “ <b>duty hours</b> ” to be more specific to military life and terminology.
B16, 17,18, 19	How would you rate... <b>work performance</b>	Vocabulary changed to “ <b>duty performance</b> ” for reasons mentioned above.
C5	What is your current marital status?: Married or <b>Cohabiting</b>	Response option “cohabiting” was changed to “ <b>living as married (living with significant other, but not married)</b> ” to reflect military life. Also, it is more conventional for younger cohorts.
C9	(Women Only) Are you currently pregnant, <b>or have you been pregnant in the past 12 months?</b>	Time period extended to include past year instead of just 4 weeks

**Removed Questions:** Questions that appear on the original HPQ which were omitted from the DoD version (NOTE: the item #s correspond to the original HPQ, NOT the DoD version).

Item #	Question	Comment
A4j	Do you have any of the following conditions?: <b>Obesity</b>	The responses from C2 and C3 (height and weight) will be used to calculate body mass index (BMI). Can be used to determine whether BMI is related to other health factors and find overall prevalence of overweight respondents. (BMI is weight adjusted for height.)
A4k	Do you have any of the following conditions?: <b>Chronic sleeping problems?</b>	Removed because the same data will result from the sleep scales (A12, 13).
A4l	Do you have any of the following conditions?: <b>Chronic fatigue or low energy?</b>	Removed because the same data will result from the sleep scales (A12, 13).
A5a	During the past 4 weeks how much were you bothered by... <b>feeling tired or having low energy?</b>	Removed because the same data will result from the sleep scales (A12, 13).
A5b	During the past 4 weeks how much were you bothered by... <b>trouble sleeping?</b>	Removed because the same data will result from the sleep scales (A12, 3).
A5j	During the past 4 weeks how much were you bothered by... <b>constipation, loose bowels, or diarrhea?</b>	Re-integrated into question A4 (do you have the following conditions instead of have you had in the past 4 weeks)
A5k	During the past 4 weeks how much were you bothered by... <b>nausea, gas, or indigestion</b>	Re-integrated into question A4 (do you have the following conditions instead of have you had in the past 4 weeks)
B2	<b>How many people do you personally supervise on your job?</b>	The concept of supervision has different meanings in military and civilian life and the data is not important for the specific survey objectives.
C11	What is your <b>annual income from your job, before taxes?</b>	Removed because it could be seen as a possible identifier. Instead we will create a proxy income level/pay grade which will be an approximation based on education level, rank, and age.

## Miscellaneous Notes & Comments

Item #	Question	Comment
A4o, p, q	Do you have any of the following conditions? ... <b>anxiety disorder?</b> ... <b>depression?</b> ... <b>any other emotional problem?</b>	Although somewhat redundant, these questions are necessary to see if respondents self-identify with symptoms/conditions. The answers can be compared with the data from corresponding scales to see if self-identification rates match.
A15b, A17	<b>(Women only)</b> a doctor, hospital, or clinic for pregnancy related care <b>(if male, enter 000)</b> <b>(Women only)</b> How many nights did you stay in a hospital during the past 12 months for nights associated with childbirth? <b>(if male, enter 000)</b>	These questions are gender specific, but appear BEFORE the question on gender (C2). Switching the sections so that gender would be asked first (Section A) was discussed, but to be true to the survey as much as possible, the sections remain intact. The data will be “logic checked” against the gender question (C2) so that if someone enters male for gender, their answer for female-only questions will automatically be ignored/discredited.
Section B	“Your Work” Section	Title revised to read “ <b>Your Military Duty.</b> ” Large portions of section B were adapted from the HPQ “Your Work” section to include military terminology such as “duty” instead of civilian vocabulary.
Multiple	Time periods: 12 months, 30 days, 4 weeks (28 days)	In several questions it appears as though there is a mistake with the specific time periods. The discrepancy is intentional and relates to the past work month (by week) or the past month (by days). The wording “in the past month” was not used to avoid confusion with the calendar month and not a time period of 30 days.

Item #	Question	Comment
Multiple	How many questions will we be able to have comparisons made with other HPQ instruments?	<p data-bbox="850 239 1377 709">Of the <b>147 total questions</b>, there are <b>60</b> that are directly from the original HPQ, <b>30</b> from the original HPQ that have been slightly revised and an additional <b>22</b> if the Atlanta data becomes accessible in time for analysis, for a total of <b>112 comparable questions (134 with Atlanta data)</b>. In addition, there are many questions that could, during analysis, be coded to compare military and civilian data with, which would increase the total number of comparable questions.</p> <p data-bbox="850 751 1377 1003">*For this total, all questions (the separate a, b, c in a grid as well as the parts a, b, c in a sub-question) count as one. (i.e., in question A3, a grid, each separate condition (a-i) counts as 1 for a total of 9, and A5 and A5a, do you smoke and how many cigarettes a day, count as 2).</p>

## QUICK REFERENCE GUIDE TO SCALE SOURCES

Scale	Instrument/Source	Modifications?
ADHD	Adult ADHD Self-Report Scale	NO
Chronic Fatigue Syndrome (CFS)	Composite International Diagnostic Interview (CIDI)	YES (slight)
Insomnia	National Comorbidity Study Composite International Diagnostic Interview	YES (slight)
Mental Distress	K6 and K10 Scales (National Health Interview Survey)	YES (additions)
PTSD	Primary Care PTSD Screen (PC-PTSD)	NO
Personality/Risk Taking Behaviors	Zuckerman-Kuhlman Personality Questionnaire (ZHPQ)	YES (omissions)

## A7 – ADHD Scale

<b>Instrument</b>	Adult ADHD Self-Report Scale (ASRS)
<b>Modifications</b>	NO
<b>Source</b>	“The Prevalence and Effects of Adult Attention Deficit/Hyperactivity Disorder on Work Performance in a Nationally Representative Sample of Workers,” Kessler et al, Journal of Occupational and Environmental Medicine, June 2005.
<b>HPQ Version</b>	Atlanta

The screening version of the Adult ADHD Self-Report Scale (ASRS) Version 1.1 is a 6-question scale designed to screen for adult ADHD in community samples. The ASRS v 1.1 is a subset of the WHO’s 18-question Adult Self-Report Scale Symptom Checklist. The Symptom Checklist is an instrument consisting of the eighteen DSM-IV-TR criteria (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision). Six of the eighteen questions were found to be the most predictive of symptoms consistent with ADHD. These six questions are the basis for the ASRS v1.1 Screener and are also Part A of the Symptom Checklist. Part B of the Symptom Checklist contains the remaining twelve questions. The ASRS was developed by a World Health Organization (WHO) work group in conjunction with the creation of the WHO World Mental Health (WMH) Survey Initiative version of the WHO Composite International Diagnostic Interview (WMH-CIDI).

### Full ADHD Self-Report Scale (ASRS)

1. How often do you have trouble wrapping up the final details of a project, once the challenging parts have been done?
2. How often do you have difficulty getting things in order when you have to do a task that requires organization?
3. How often do you have problems remembering appointments or obligations?
4. When you have a task that requires a lot of thought, how often do you avoid or delay getting started?
5. How often do you fidget or squirm with your hands or feet when you have to sit down for a long time?
6. How often do you feel overly active and compelled to do things, like you were driven by a motor?
7. How often do you make careless mistakes when you have to work on a boring or difficult project?
8. How often do you have difficulty keeping your attention when you are doing boring or repetitive work?
9. How often do you have difficulty concentrating on what people say to you, even when they are speaking to you directly?
10. How often do you misplace or have difficulty finding things at home or at work?
11. How often are you distracted by activity or noise around you?

12. How often do you leave your seat in meetings or other situations in which you are expected to remain seated?
13. How often do you feel restless or fidgety?
14. How often do you have difficulty unwinding and relaxing when you have time to yourself?
15. How often do you find yourself talking too much when you are in social situations?
16. When you're in a conversation, how often do you find yourself finishing the sentences of the people you are talking to, before they can finish them themselves?
17. How often do you have difficulty waiting your turn in situations when turn taking is required?
18. How often do you interrupt others when they are busy?

The shorter screen was used instead of the longer screen to keep the survey shorter and use the questions most predictive of symptoms consistent with ADHD.

#### **ADHD ASRS Screener/DoD HPQ ADHD Scale**

1. How often do you have trouble wrapping up the final details of a project, once the challenging parts have been done?
2. How often do you have difficulty getting things in order when you have to do a task that requires organization?
3. How often do you have problems remembering appointments or obligations?
4. When you have a task that requires a lot of thought, how often do you avoid or delay getting started?
5. How often do you fidget or squirm with your hands or feet when you have to sit down for a long time?
6. How often do you feel overly active and compelled to do things, like you were driven by a motor?

## A8 – Chronic Fatigue Syndrome

<b>Instrument</b>	Composite International Diagnostic Interview (CIDI) - Selected Questions
<b>Modifications</b>	YES
<b>Source</b>	“Multinational validation of the Composite International Diagnostic Interview (CIDI)” [Article in Italian] (1994) Tacchini, G et al. <i>Minerva Psichiatrica</i> 35(2): 63-80.
<b>HPQ Version</b>	Atlanta

The Composite International Diagnostic Interview is a comprehensive, fully standardized interview that can be used to assess mental disorders according to the definitions and criteria of ICD-10 and DSM-IV. It was developed as a collaborative project between the World Health Organization and the US National Institutes of Health. It is the most widely used structured diagnostic interview in the world. The CIDI has been designed for use in a variety of cultures and settings. It is primarily intended for use as an epidemiological tool, but can be used for other research and clinical tasks. The CIDI has been used in two major epidemiological surveys in the US and in the National Survey of Mental Health and Well-being to be conducted in Australia in 1997.

Slight modifications were made in the phrasing of the original CIDI questions to fit with the self-administered aspect of the DoD HPQ (and to fit with the style of the rest of the survey). Also, only the first few stem questions were used instead of the entire section on Neurasthenia (with a total of 47 questions) so that some data could be collected without overburdening the respondents.

### **CIDI Questions – Neurasthenia Section (N)**

- N1.** Did you ever in your life have a period lasting several months or longer when you became very tired, weak, or exhausted either while performing minor everyday physical tasks like working, shopping, housekeeping, and walking, or while performing everyday mental tasks like reading, writing, and doing paperwork?
- N2.** What would happen when you tried to rest or relax—would you fully regain your energy and strength? Or would you still feel tired or weak?
- N3.** During the months or years when this problem was most severe, how often did you get tired—nearly every day, most days, about half the days, or less than half the days?
- N4.** How much did your tiredness ever interfere with either your work, your social life, or your personal relationships—not at all, a little, some, a lot, or extremely?
- N4a.** How often were you too tired to carry out your daily activities—often, sometimes, rarely, or never?

### **DoD HPQ Chronic Fatigue Questions**

- A12.** The next questions are about how often you got tired over the past 12 months. How often did you become very tired, weak, or exhausted while performing minor everyday physical tasks like working, shopping, housekeeping, and walking or while performing everyday mental tasks like reading, writing, and doing paperwork? (Never, rarely, sometimes, often, very often)
- A12a.** During those times, what would happen when you tried to rest or relax? Would you... (fully regain your energy and strength, still feel tired or weak)
- A12b.** When this problem was more severe over the past 12 months, how often did you get tired? (Never, less than once a month, 1-3 days per month, 1-2 days per week, several days a week, nearly everyday)
- A12c.** How often were you too tired to carry out your daily activities? (Never, rarely, sometimes, often, very often)

## A9 – Insomnia, Non-Restorative Sleep (NRS) Scale

<b>Instrument</b>	National Comorbidity Survey Composite International Diagnostic Interview (CIDI) Stem Questions
<b>Modifications</b>	YES
<b>Source</b>	“Sleep problems, comorbid mental disorders, and role functioning in the National Comorbidity Survey Replication (NCS-R),” Roth et al, in press. The scale in A13 was validated in the paper Roth, T et al (2002) “A New Questionnaire to Detect Sleep Disorders,” <i>Sleep Medicine</i> , 3(2): pp 99-108. Roth, T., Zammit, G., Kushida, C., Doghramji, K., Mathias, S., & Buysse, D. Use of the global sleep assessment questionnaire to identify patients with a sleep disorder. <i>Sleep Abstract Supplement 2</i> , 23, A323.
<b>HPQ Version</b>	Atlanta (different answer categories)

The scale used on the NCS-R study is based on the 4 dimensions of the DSM IV diagnosis of insomnia. The four dimensions are: difficulty falling asleep, difficulty maintaining sleep, early waking, and non-restorative sleep (NRS). Roth has published a validation study of the scale used in the NCS-R study. It is based on 11-items which use a **YES/NO scaling** format. (Roth et al. “A New Questionnaire to detect sleep disorders”, in *Sleep Medicine* Vol 3, Issue 2, March 2002, pp99-108.

The questions for the Insomnia/Non-Restorative Sleep scale on the DoD HPQ are from the Composite International Diagnostic Interview (CIDI) stem questions. As discussed above, the CIDI is a comprehensive, fully standardized interview that can be used to assess mental disorders according to the definitions and criteria of ICD-10 and DSM-IV. It was developed as a collaborative project between the World Health Organization and the US National Institutes of Health. It is the most widely used structured diagnostic interview in the world.

### CIDI Questions – Chronic Conditions Section (CC)

**\*CC20.** The next few questions are about problems with your sleep. Did you have a period lasting two weeks or longer in the past 12 months when you had any of the following problems with your sleep: **(Y/N/Don’t Know)**

- a. ...Problems getting to sleep, when nearly every night it took you two hours or longer before you could fall asleep?
- b. ...Problems staying asleep, when you woke up nearly every night and took an hour or more to get back to sleep?
- c. ...Problems waking too early, when you woke up nearly every morning at least two hours earlier than you wanted to?
- d. ...Problems feeling sleepy during the day?

**\*CC24.** Think of the time during the past 12 months when your sleep problems were most severe and frequent. During that time, how often did you...(Often, sometimes, rarely, never, don't know)

g. ...wake up feeling rested?

**DoD HPQ Insomnia, NRS Scale**

A9. The next few questions are about problems with your sleep. Do you currently, or have you ever, had problems ...

- a. ...getting to sleep, when nearly every night it took you two hours or longer before you could fall asleep?
- b. ...staying asleep, when you woke up nearly every night and took an hour or more to get back to sleep?
- c. ...waking too early, when you woke up nearly every morning at least two hours earlier than you wanted to?
- d. ...feeling sleepy during the day?
- e. ...waking up and not feeling rested?

## A12 – General Mental Distress Scale

<b>Instrument</b>	K10 and K6 Scales (National Health Interview Survey)
<b>Modifications</b>	YES
<b>Source</b>	Kessler, R.C., Andrews, G., Colpe, L.J., Hiripi, E., Mroczek, D.K., Normand, S.-L.T., Walters, E.E., & Zaslavsky, A. (2002). Short screening scales to monitor population prevalences and trends in nonspecific psychological distress. <i>Psychological Medicine</i> . 32(6), 959-976.
<b>HPQ Version</b>	Original/Atlanta HPQ

The K10 and K6 scales were developed with support from the U.S. government's National Center for Health Statistics for use in the redesigned U.S. National Health Interview Survey (NHIS). The scales were designed to be sensitive around the threshold for the clinically significant range of the distribution of nonspecific distress in an effort to maximize the ability to discriminate cases of serious mental illness (SMI) from non-cases. A small validation study carried out in a convenience sample in Boston found evidence that the scales perform quite well and that, in fact, the six-question scale is at least as sensitive as the ten-question scale for the purpose of discriminating between cases and non-cases of SMI. The K6 is now included in the core of the NHIS as well as in the annual National Household Survey on Drug Abuse. The K10 is in the Australian and Canadian equivalents of the NHIS. The K10 is also included in the National Comorbidity Survey Replication (NCS-R) as well as in all the national surveys in the World Health Organization's World Mental Health (WMH) Initiative. The K6 is merely a truncated form of the K10 in which four questions are deleted.

### K6 SCALE

During the past 30 days, about how often did you feel...(all of the time, most of the time, some of the time, a little of the time, none of the time)

- a. ...nervous?
- b. ...hopeless?
- c. ...restless or fidgety?
- d. ...so depressed that nothing could cheer you up?
- e. ...that everything was an effort?
- f. ...worthless?

### K10 SCALE

During the past 30 days, about how often did you feel...(all of the time, most of the time, some of the time, a little of the time, none of the time)

- a. ...tired out for no good reason?
- b. ...nervous?
- c. ...so nervous that nothing could calm you down?
- d. ...hopeless?
- e. ...restless or fidgety?
- f. ...so restless that you could not sit still?

- g. ...depressed?
- h. ...so depressed that nothing could cheer you up?
- i. ...that everything was an effort?
- j. ...worthless?

**DoD HPQ Mental Distress Scale**

During the past 30 days, **how much of the time** did you feel...(all of the time, most of the time, some of the time, a little of the time, none of the time)

- a. ...so **sad** nothing could cheer you up?
- b. ...nervous?
- c. ...restless or fidgety?
- d. ...hopeless?
- e. ...that everything was an effort?
- f. ...worthless?
- g. ...**unable to relax**?
- h. ...**impatient or irritable**?

### A13 – Post Traumatic Stress Disorder (PTSD) Scale

<b>Instrument</b>	Primary Care PTSD Screen
<b>Modifications</b>	NO
<b>Source</b>	Prins, A., Ouimette P., Kimerling R., Camerond R.P., Hugelshofer D.S., Shaw-Hegwer J., Thrailkill A., Gusman F.D., and Sheikh J.I. (2004) The primary care PTSD screen (PC-PTSD): development and operating characteristics. <i>Primary Care Psychiatry</i> . 9(11), 9-14(6).
<b>HPQ Version</b>	DoD

The Primary Care PTSD Screen is a brief 4-item screen for PTSD designed for use in primary care and other medical settings. The PC-PTSD is brief and problem-focused. A positive response to the screen does not necessarily indicate that a patient has Posttraumatic Stress Disorder. However, a positive response does indicate that a patient *may* have PTSD or trauma-related problems and further investigation of trauma symptoms by a mental-health professional may be warranted. Current research suggests that the results of the PC-PTSD should be considered "positive" if a patient answers "yes" to any three items. The PC-PTSD Screen is currently being used in the U.S. Military's Post Deployment Health Assessment (PDHA), DD Form 2796, in the same format as it appears in the DoD HPQ.

#### Primary Care PTSD Screen (PC-PTSD)

In your life, have you ever had any experience that was so frightening, horrible, or upsetting that, in the past month, you...

1. Have had nightmares about it or thought about it when you did not want to? Y/N
2. Tried hard not to think about it or went out of your way to avoid situations that reminded you of it? Y/N
3. Were constantly on guard, watchful, or easily startled? Y/N
4. Felt numb or detached from others, activities, or your surroundings? Y/N

#### DoD HPQ PTSD Screen

**A13.** Have you ever had any experience that was so frightening, horrible, or upsetting that, **IN THE PAST MONTH**, you ....

- a. Have had any nightmares about it or thought about it when you did not want to?
- b. Tried hard not to think about it or went out of your way to avoid situations that remind you of it?
- c. Were constantly on guard, watchful, or easily startled?
- d. Felt numb or detached from others, activities, or your surroundings?

## A14 – Personality/Risk taking Behaviors

<b>Instrument</b>	Zuckerman-Kuhlman Personality Questionnaire (ZKPQ)
<b>Modifications</b>	YES
<b>Source</b>	Zuckerman, M., Kuhlman, D. M., Joireman, J., Teta, P., & Kraft, M. (1993). A comparison of three structural models for personality: The Big Three, the Big Five, and the Alternative Five. <i>Journal of Personality and Social Psychology</i> , 65, 757-768.
<b>HPQ Version</b>	DoD

The ZKPQ is an 89-item self-report measure of another five basic normal personality traits: Impulsive Sensation Seeking, Neuroticism-Anxiety, Aggression-Hostility, Activity, and Sociability. Clearly too large to use in its original form in the DoD HPQ, modifications were made to keep the screen shorter and only measure impulsivity and aggression-hostility traits.

In personality structure research, many theorists support the 5-factor model (McCrae & Costa 1985; Zuckerman 1991). Another model - the alternative five, Zuckerman-Kuhlman's Personality Questionnaire (ZKPQ) includes: (1) Impulsive Sensation Seeking, which represents a lack of planning and a tendency to act impulsively without thinking, and experience seeking, or the willingness to take risks for the sake of excitement or novel experience; (2) Neuroticism-Anxiety, represents emotional upset, tension, worry, fearfulness, obsessive indecision, lack of self-confidence, and sensitivity to criticism; (3) Aggression-Hostility, represents a readiness to express verbal aggression, or rude, thoughtless, or antisocial behavior, vengefulness, and spitefulness; (4) Activity, represents the need for activity and an inability to relax and do nothing when the opportunity presents itself, or a preference for hard or challenging work, an active life, and a high energy level; and (5) Sociability, represents a desire for spending more time with friends, being outgoing at parties, preferring being with others as opposed to being alone and pursuing solitary activities.

### DoD HPQ Risk Taking Behavior Scale

- A18.** How true is each of the following statements for you? *The best answer is usually the one that comes to your mind first, so don't take too much time thinking before you answer.*
- a. I enjoy getting into new situations where you can't tell how things will turn out.
  - b. I like doing things just for the thrill of it.
  - c. I sometimes like to do things that are a little frightening.
  - d. I often get so carried away by new and exciting things and ideas that I never think of possible difficulties or problems.
  - e. I often do things without thinking of the consequences.
  - f. Before I begin a complicated job, I make careful plans.
  - g. I usually think about what I am going to do before doing it.
  - h. I am always patient with others even when they are annoying.
  - i. I sometimes want to do things so much that I can't stop myself no matter how hard I try.
  - j. I have a very hard time resisting temptations.

## HPQ PRE-TEST COMMENTS July 2006

### Time to Complete Survey

- 15-20 minutes even to skim (more found it closer to 20 minutes)

### Reminder Emails

"The survey will be available at the Web site listed below on July 1, 2006."

#### **Suggest dropping dates**

All dates will be removed from DoD HPQ related documents until finalized dates are available.

### Specific Questions

**A3/A4:** "Do you have any of the following conditions? If YES, mark whether you never, previously, or currently receive professional treatment. (Professional treatment is any treatment supervised by a health professional.) If you are unsure if you have a condition, mark the NO response option."

How would you answer the question if you've never received professional treatment (wouldn't you need a professional's diagnosis on some of these?)

We're not testing if they have it or not, but if they KNOW they have it and if they're receiving treatment or not (it's a published, validated scale).

**A4:** "Do you have any of the following conditions? If YES, mark whether you never, previously, or currently receive professional treatment. (Professional treatment is any treatment supervised by a health professional.) If you are unsure if you have a condition, mark the NO response option."

Question is too long to be viewed on one screen – need to put answer categories at top and bottom of the screen.

Screen issue – there is no way to know the screen size of all participants and adapt accordingly, we can add answer categories at the very bottom or possibly have them locked to appear on top no matter how far you scroll (discussing with DataStat).

**DO THIS!**

Also, how do you differentiate between currently and previously received treatment? (How long ago is considered "previously"?)

Wording is from a published scale and it is really up to the respondent to use their best judgment. Typically, if they have stopped treatment and do not plan on making future appointments or follow-ups it is considered to be "previous" even if they were recently (a week before) in treatment.

**A8:** *“The next questions are about how often you got tired over the past 12 months. How often did you become very tired, weak, or exhausted while performing minor everyday physical tasks like working, shopping, housekeeping, and walking or while performing everyday mental tasks like reading, writing, and doing paperwork”?*

Should physical and mental be in the same question? How should we analyze this along with the first set of questions...collecting info we may not be able to analyze in a rational way.

Similar to other questions, this is from a published, validated scale and we wanted to stay as close to the original survey as possible.

**A10a:** *“How many accidents, injuries, or poisonings did you have during the past 12 months?”*

This is still confusing – accidents that result in injuries are different than accidents that are poisonings.

We know that injuries and poisonings are different (have been debating this question for awhile), but we wanted a validated injury question and we think it’s best to keep it the same as the Health Interview Survey questions.

**A10c:** *“How many days was your work restricted (for example: light duty restrictions, medical profile, job transfer, etc.) as a result of any accident, injury, or poisoning?”*

The light duty restriction only appears when we answer yes to injury, accident, or poisoning. Many people have light duty restrictions for other reasons. It looks like we are missing a big chunk of presenteeism if asked like this (pregnancy, surgery, illness; to include mental illness) We want to know who is out of their intended work...someone has to cover.

Initially, the intention was to gather data on injuries/accidents that weren’t serious enough to require missing work, but serious enough to have restrictions (light duty) placed on the individual. Perhaps placing this question in the duty section (with all the questions on total hours worked and missed) would be more appropriate? – it seems like it is relevant to both sections.

Question is relevant to both sections, but we like the idea of moving it to the duty section (so that all respondents will have to answer the question).

**A14d:** *“How true is each of the following statements for you? The best answer is usually the one that comes to your mind first, so don’t take too much time thinking before you answer.... I often get so carried away by new and exciting things and ideas that I never think of possible difficulties or problems.”*

This was very hard to read.

Difficult comment to respond to – survey respondents will always have differing opinions on usability. This is a published scale so we won’t be changing the question wording.

**A15b:** *“(Women only) A doctor, hospital, or clinic for pregnancy related care (if male, click “I am male” button to skip this question)”*

Concern about confusion with the “if male, enter 000”

Hopefully this will not cause too much confusion among respondents, but this is the way that DataStat codes their questions. If there are incorrect figures entered, the data can be “logic checked” against the gender question that appears later in the survey so that if someone entered male for gender, their answer for female-only questions will automatically be ignored/discredited.

**B3:** "Where are you based?"

Question lists base 1, base 2, etc., but does not give the base name.

All answer categories will be filled in before the survey URL is given to participants (at present time, there are not participating bases and therefore, no specific answers for this question).

**B4a,b:** "Please choose the category that best describes your current primary MOS/PS/Rating/Designator/AFSC."

For the Army, the list (AFSC, MOS, etc.) does not really cover our categories, could it be worded a little more clearly?

If you could give us the appropriate categories, we can put them in – we can't make it clearer without knowing what the proper terms for job classifications are in the military.

Categories are fine – are consistent with those in the Health Behaviors Survey (confusion with Army due to newer categories for that service branch).

**B10:** "About how many hours altogether were you on duty in the past 7 days?"

Should define duty hours (is this during the regular working hours or outside of the normal working hours such as standing over night duty?)

Again, you might have to help us clarify our military knowledge – what is standing overnight duty? I believe the intention is to gather data on total number of hours on duty regardless of whether they were regular or extra hours.

Fine – leave question as is.

**B13:** "About how many hours altogether were you on duty in the past 4 weeks (28 days)?"

May need a clarifying comment on if duty hours includes weekend days [i.e. is last 28 days last 28 M-F working days or last 28 cal days]

If regular duty hours include weekend days, then yes, we can add a clarifying comment to note this. If we only asked for M-F days, I assume we would lose some relevant data, right?

Fine – leave question as is.

Misc.

• There is no apparent "finish it later" mechanism

We will check with DataStat to ask how this works and make sure there is a way for respondents to return to their survey without starting over again.

• Ask for gender upfront

We debated moving the entire Section C (Demographics) to the front, but wanted to keep the survey as much like the original HPQ as possible. As mentioned above, the answers can be coded so that invalid data entered on the questions with "if male, enter 000" will be discarded if the answer to C2 (gender) is male.

• Edit/reword final section, not in a box.

Proposed:

The DoD realizes that your work climate influences your health status, your job satisfaction, and your job stress. We want to offer solutions that reduce the factors that you feel may have a negative impact on your morale and emotional health. We encourage you to discuss any health related concerns with a medical professional such as your primary care manager. For any

concerns you may have regarding your emotional or mental health contact your mental health provider or primary care manager. Not sure about your benefits...don't have a primary care manager or know a mental health provider? Contact the TriCare Service Center in your region:

North 1-877-874-2273

South 1-800-444-5445

West 1-888-777-9378

Overseas 1-888-777-8343

Another source if you don't know how to find a mental health provider is Military OneSource.

Call Stateside 1-800-342-9647

Or Overseas 1-800-3429-6477

The website is: [www.tricare.osd.mil/tricareservicecenters](http://www.tricare.osd.mil/tricareservicecenters)

Having trouble getting an appointment for a deployment-related health condition?

Call the Deployment Health Helpline:

1-866-559-1627 (8am - 5 pm EST)

Emergencies: Call 911 in the U.S. right away.

International SOS Call Center: 1-442-087-628-133

That is fine – we will replace with proposed changes above.