SUPPORTING STATEMENT FOR PAPERWORK REDUCTION ACT SUBMISSION

Prospective Studies of US Military Forces: The Millennium Cohort Study

OMB Control Number 0720-0029

A. JUSTIFICATION

1. Needs and Use

The concept and design manifest in the Millennium Cohort Study was recommended in the 1998 Institute of Medicine Report "The Gulf War Veterans: Measuring Health". Under the subheading "Strategies to Protect the Health of Deployed US Forces" IOM recommended that prospective investigations be planned to evaluate multi-dimensional factors relevant to health and health change so that these factors can be assessed over the lifetime of the service member.

Section 743 of the Strom Thurmond National Defense Authorization Act for FY1999 authorized the Secretary of Defense to *"...establish a center devoted to a longitudinal study to evaluate data on the health conditions of members of the Armed Forces upon return from deployment on military operations for purposes of ensuring rapid identification of any trends in diseases, illnesses or injuries among such members as a result of such operation."*

Language in the Floyd D. Spence FY2001 National Defense Appropriations Act *"...longitudinal studies of military personnel before they are deployed to potentially hostile situations and after their return"*, funded the activity.

Thus, the Millennium Cohort Study, as a prospective, 21-year-long, three-panel, seven-wave cohort investigation, responds to the IOM recommendation and to Congress's authorization and funding.

The main objectives of the undertaking are to (1) develop a long term profile of health change among current and former members of the Armed Services, especially in relation to individual deployment experience, and (2) to better define the nature of and risk factors for the development of post war illness among US military personnel. These will be accomplished by joining objective healthcare utilization, exposure, and demographic data available from other DoD sources for all participants, with subjective health status information collected from participants themselves. Self-reported data is collected in a baseline (pre-deployment) survey and over a series of seven follow-up surveys that will be collected once every three years, post-deployment, **and/or post-military separation** through CY2022.

The respondent universe is randomly selected, probability based, and stratified for deployment (versus no deployment), gender, and service component (Regular Active Duty versus Reserve/Guard). All potential participants must be on active duty at the time of initial contact.

Since the investigation is currently in the process of setting the cohort for Panel 2. the following numbers should be understood as estimates:

By July 1, 2003, 77,047 (37 percent) had returned a panel 1 baseline questionnaire. Participation consisted of 53% web and 47% paper. Panel 1 targeted 253,400 service members of whom 213,781 had valid addresses.

Panel 2 enrollment targeted 147,629 of whom 118,085 had valid addresses.

Panel 3 will attempt to initiate contact with 200K active duty service members in order to enroll an additional 40,000 individuals.

Since enrollment began in 2001, more than 100,000 service members have enrolled and submitted a baseline survey (36.1% and 26.8% baseline response rates for panels 1 and 2).

A total of 281 deaths occurred within the Panel 1 respondent group. A total of 484 deaths occurred among the 147K selected for participation in Panel 2.

More than 55,000 Panel 1 participants have submitted a first follow-up survey.

Approximately 15,000 of 77,047 Panel 1 respondents had left military service and returned to civilian life by the time they submitted their first follow-up survey. We estimate that slightly more than 34,000 participants from panels 1 & 2 will have separated by the time they are contacted for their first and second follow-up surveys in early 2007.

At the end of this third enrollment phase, we expect we will have enrolled 140,000 service members all together. As of our first OMB approval in September 2003 and over time till the end of the study, proportions of military versus civilian participants will shift in favor of the civilian.

2. **Purpose and users of the information**

As noted in the response to item 1, overall, the purpose of the information collected by the Millennium Cohort Study is to assist US policymakers in developing a better understanding of the long term health consequences of military service, especially, of deployment and service in hostile operations. More specifically, the study seeks to track the development of major chronic physical and psychiatric disease and illness among veterans, and to define the nature of and risk for developing them. Finally, the study will investigate the phenomenon of post-war syndrome; its definition, manifestations and risk factors.

DoD and VA policy makers will use the knowledge base created by this investigation for development of prevention and treatment strategies that better serve American citizens who serve in defense of their country.

3. Information Collection Techniques

Objective information pertaining to inpatient and outpatient healthcare utilization, immunization, demographic and deployment status is collected for and during each participant's period of service. Subjective health status information is obtained both during and after military service when participants complete either a paper or electronic health status questionnaire, every three years, through 2021.

Approximately 46,000 of 77,047 panel 1 respondents and 27,000 of 31,657 panel 2 respondents elected to fill out the web-based version of the Millennium Cohort Study Questionnaire. Study management is pushing toward 100% web participation in this next panel. The combined entry of the subject's randomly assigned study id and last 4 digits of their SSN are verified prior to allowing access to the questionnaire or the entry of any survey responses. All exchanges between survey participant web browsers and web server software are made over secure (128-bit encrypted) connections based upon well-established and widely accepted Secure Sockets Layer (SSL) technology.

4. Duplication and Similar Information

Independent high echelon reviews conducted by the Defense Technical Objectives Board prior to the beginning and since completion of panel 1 (see MD.25) suggest that the work of the Millennium Cohort Study is not being duplicated anywhere else in DoD, or indeed, across the Federal Government. Annual reviews by the American Institute of Biological Sciences (AIBS) similarly have reported no duplication of effort. On-going oversight by the Millennium Cohort Scientific Steering and Advisory Committee, made up of high-level civilian and military science professionals continues to report that this investigation remains unique among government funded military investigations. In sum, at this time the Millennium Cohort Study does not seem to be duplicating any other federally sponsored military data collection effort.

5. Small Business

This collection of information does not involve small businesses or other small entities.

6. Less Frequent Collections

Policymakers, on the recommendation of the Institute of Medicine and the US Congress have called for longitudinal prospective investigations of deployment related health effects. Scientific review of the Millennium Cohort Study protocol has found that the frequency of data collection, i.e., every three years for 21 years, will provide adequate prospective control to permit meaningful statistical evaluation of long-term health changes in the two sub-cohorts.

7. **Special Circumstances**

There have been (and we continue to anticipate) no special circumstances requiring the collection to be conducted in a manner inconsistent with the guidelines in 5 CFR 1320.5 (d) (2)

8. **Federal Register Notice/Consultations**

The Federal Register Notice for this collection was published in Volume 71 Number 43 on 6 March 2006. There have been no inquiries or comments as of 5 May 2006. See attached copy of FR Document DoD. 2006 OS 0024 (filed 3-3-2006 – 8:45AM)

A Scientific Steering & Advisory Committee (SSAC) consisting of twelve civilian and military experts in epidemiology, preventive medicine, statistics, questionnaire design, survey methodology, and veteran affairs, oversees the study on an ongoing basis. This committee meets annually to review progress and recommend course corrections when needed. In addition, study staff confers regularly with experts in the nature and availability of demographic, deployment, and healthcare data from the Defense Manpower Data Center, Monterey CA.

9. **Payment/Gift to Respondents**

The Millennium Cohort Study's Scientific Steering & Advisory Committee decided (1) that the establishment of group identity among study participants would be critical to long-term (21-year) viability of the investigation and (2) incentives would be cost-effective if they prompted use of the secure internet site for response over mailed paper surveys (estimated cost savings is at least $50/survey for internet response). Co-investigators subsequently designed and implemented a plan to employ modest incentives to serve these ends. The Institutional Review Board (IRB) at the Naval Health Research Center has reviewed changes to the original study protocol providing for the delivery of modest (under $10.00) incentives, such as phone cards and T-shirts, to participants who fill out and submit the questionnaire over the secure internet site. The NHRC IRB continues to monitor use of incentives closely.

10. **Confidentiality**

The Privacy Act, as defined under Title 5, US Code 136, DoD Regulations, Executive Order 9396, is printed on the front page of the paper copy of the Millennium Cohort Questionnaire. This document specifies the Authority supporting the request for information, the purpose for its collection, the routine uses to which it will be put, the scope of anonymity in the use of personal identifiers and the voluntary nature of participation.

There were no firmly established procedures for on-line informed consent for the field of human subjects research as this protocol was being reviewed and initially implemented. However, a report sponsored by the American Association for the Advancement of Science released in November 1999, focused on internet-based human subject research. The report, titled, "Ethical and Legal Aspects of Human Subjects Research on the Internet," states that the three principles of protecting

human subjects, autonomy, beneficence, and justice, must be applied in on-line informed consent documents. The informed consent document used for the Millennium Cohort Study meets those principles, outlining risks for both on-line and hardcopy completion. Further, in terms of the physical signature issue, a main concern for on-line consent deals with the validity of the consent in terms of the researcher not knowing the "age, competency, or comprehension" of the participant. The Millennium Cohort Study does not have those concerns since the study population will be drawn from a known source, rather than soliciting unknown respondents. Additionally, the validity check at the very beginning of the survey process and at the end of the informed consent document will confirm that the participant is part of the known sample population.

In addition, the Principal Investigator and all co-investigators are held responsible for performing and monitoring the research under the protocol titled, "Prospective Studies of U.S. Military Forces: The Millennium Cohort Study". They have read and understood the provisions of Title 32 Code of Federal Regulations Part 219 (Protection of Human Subjects), Department of Defense (DoD) Directive 3216.2 (Protection of Human Subjects in DoD-Supported Research), Secretary of the Navy Instruction (SECNAVINST) 3900.39B (Protection of Human Subjects), Naval Medical Command Instruction (NAVMEDCOMINST) 6710.4 "Use of Investigational Agents in Human Beings" - if applicable), and Naval Medical Research and Development Command Instruction (NMRDCINST) 3900.2 (Protection of Human Research Volunteers from Research Risks), SECNAVINST 5370.2H (Standards of Conduct) (and local instructions, as applicable). They have agreed to abide by all applicable laws and regulations, and agreed that in all cases, the most restrictive regulation related to a given aspect of research involving protection of research volunteers will be followed. In the event that they have a question regarding their obligations during the conduct of this DoD-sponsored project, they have ready access to each of these regulations, as either a personal copy or as available on file from the Chair, Committee for the Protection of Human Subjects at the NHRC, San Diego. They understand that their immediate resource for clarification of any issues related to the protection of research volunteers is the Chair, Committee for the Protection of Human Subjects.

11. **Sensitive Questions**

It is understood by the study Principal and co-investigators, and by the study staff that all questions regarding health can be understood as sensitive in nature. It is for this reason that assiduous attention is paid every day by all connected with the study to maintaining participant privacy and confidentiality.

In regard to particularly sensitive topics, there are no questions concerning religious beliefs in the survey. There are no questions concerning sexual attitudes. There are two questions, (56c & 56d) addressing potential exposure to traumatic life events, in which participants are asked whether they have ever been (a) forced into sexual relations, i.e., been sexually assaulted, or (b) sexually harassed. Both questions came from the National Health Survey of Persian Gulf War Era Veterans. (US Department of Veterans Affairs, Veterans Health Administration. See OMB # 2900-0558 - Expiration Date 9/98; Q9a21 & Q9a22). There is also one question, (20c) which is

framed so as to provide insight into a participant's recent experience with depressive symptoms. They are asked whether in the past four weeks they have had little or no sexual desire, or taken little pleasure in sex. This question derives from the Patient Health Questionnaire (PHQ). (Spitzer R, Williams J, Kroenke K, et al. (Q12)). Although both questions address sexual issues, they are both questions commonly asked as part of clinical psychiatric assessments. Answers to such questions can and do provide useful insights into an individual's current and historical quality of life and into possible clinical psychiatric status.

12. **Burden Estimated (hours)**

Based on experience from panels 1 and 2, the questionnaire, whether web-based or paper, will take approximately 30 to 45 minutes to complete for the average individual. Total time for the entire civilian component of the sample will be 25,578 hours.

13. **Cost to Respondents**

None

14. **Cost to Federal Government**

The estimated total annualized cost to the federal Government for this collection is $423,628.00.

15. **Change in Burden**

During data collection phase 2 approximately 15,500 civilian members of panel 1 completed and submitted the first follow-up questionnaire. This amounted to a civilian burden of 11,625 hours. A total of 14,400 hours was projected for phase 2. Given an estimated civilian burden for data collection phase 3 of 25,578 hours there is a change in burden of positive 11,178 hours.

The change in total annualized cost to the Federal Government is positive $185,132.00. This increase attributes in direct proportion to the increase in numbers of civilian-former military participants in this third data collection wave.

16. **Publication/Tabulation**

The DoD Center for Deployment Health Research, as the lead agent for implementing the Millennium Cohort Study, has responsibility for all data collection & management, all data security, the maintenance of all assurances including but not limited to human subjects protection, and other Privacy Act considerations. As part of these responsibilities the Center has defined a set of parameters for the maintenance of data security and integrity, a process for submission and review of collaborative research requests, and a set of requirements and guidelines, with which collaborators must comply during the investigative process.

17. **Expiration Date**

DoD is not seeking an exception to displaying the expiration date of this information collection.

18. **Exceptions to Certification Statement in item 19 of OMB Form 83-I**

There are no exceptions to the certification statement in Item 19 of OMB Form 83-1.