

## VHA Office of Public Health:

### Update on Gulf War Veterans' Health Surveillance Activities

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## Overview

- Update on surveillance studies in recent conflict cohorts
  - Follow-Up Study of a National Cohort of Gulf War and Gulf War Era Veterans
  - Post War Mortality from Neurological Diseases in Gulf War Veterans
  - Health Surveillance for a New Generation of U.S. Veterans

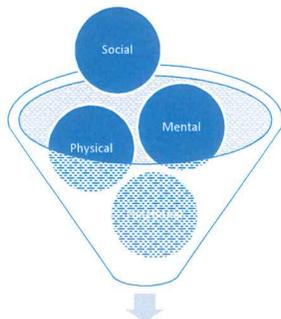
## Follow-Up Study of a National Cohort of Gulf War and Gulf War Era Veterans

VETERANS HEALTH ADMINISTRATION

2

### Survey Goal

Follow-up Study of a National Cohort of Gulf War and Gulf War Era Veterans  
(Phase III)



**Overall Health of Veterans**

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- Comprehensive assessment of health and wellness
- Domains: physical (such as neurologic, immunologic and respiratory), mental, women's health, functional, and social
- Provide a population-level assessment of overall health, will look at multiple domains and health conditions
- Medical records validation

3

## Survey Timeline

Survey Launch

Data  
Collection

Analyze  
Results

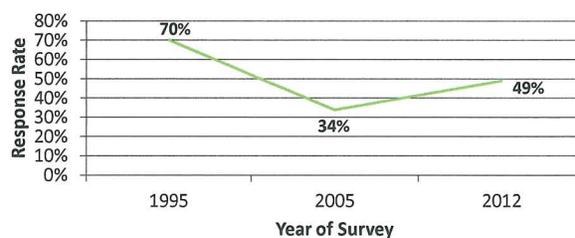
- Phase III protocol approved by IRB: 09/15/2010
- Survey instrument approved by Office of Management and Budget: 2/27/2012
- Mailing of survey for pilot study began: 6/25/2012
- Mailing of survey for main study began: 10/15/2012
- Computer Assisted Telephone Interviews (CATI) began: 3/6/2013
- Data collection for the health survey will close 7/01/2013
- Analytical plan to be completed: 09/03/2013
- Data set ready for OPH analysis : 10/1/2013
- **Dissemination of Results:** Initial reports anticipated mid-2014

4

## Survey Response: As of June 1, 2013

- 13,979 (49%) have completed the survey
  - 34% by mail; 13% by web; 2% by CATI
  - 59% Gulf War Veteran (Deployed); 41% Gulf War Era (Non-deployed)

Response Rate Over Time



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5

## Medical Records Validation Sub-study

- A random sample of 2,000 Veterans will be asked to participate in a medical records validation study
  - Eligibility for selection:
    - Seen a doctor or been hospitalized in the past year
    - Included the reason for the outpatient visit/hospitalization
    - Proportional sample of paper and web-based respondents
    - Sample will be 50/50 outpatient visits/hospitalizations
- Self reported conditions reported by sample will be verified in the medical record
- This sub-study will inform us as to the degree of agreement between self reported conditions and the medical record

## Sub-study of Veterans Expressing Suicidal Ideation

- This is clinical outreach to study participants who expressed suicidal ideation in their questionnaire responses
- Suicidal ideation was measured by the Patient Health Questionnaire (PHQ9)
  - A nine item screening tool for mental health disorders
  - Queries 2 week history regarding thoughts of suicide or self harm
- Veterans who indicated suicidal thoughts were flagged for follow-up by a mental health clinician
  - Coordinated by Washington DC, War Related Illness and Injury Study Center (WRIISC)
  - Team composed of social workers and psychologists
  - Calls made during and after normal business hours

## Sub-study of Veterans Expressing Suicidal Ideation

- Manuscript submitted for publication to a peer-reviewed journal
- This clinical outreach sub-study for survey respondents with suicidal ideation
  - Extends previous work done by OPH in call backs to New Generation study respondents
  - May have future implications for the relationship between the survey researcher and the survey respondent
- Lessons learned:
  - Veterans appreciated the calls
  - This outreach by study clinicians linked Veterans to care

## Post War Mortality from Neurological Diseases in Gulf War Veterans

## Neurological Mortality

- Background
  - A follow up study of Gulf War Veterans' (n=621, 902) and Gulf War Era Veterans' (n=746,248) mortality from 1991 through 2008
  - Study examines deaths from brain cancer, multiple sclerosis (MS), Parkinson's Disease, and amyotrophic lateral sclerosis (ALS)
  - This cohort was previously followed at 2, 7, and 13 years after the war (Kang et al, 1996; Bullman et al, 2005; Barth et al, 2009)

## Neurological Mortality

- Methods
  - Determine vital status through December 31, 2008 using the National Death Index (NDI)
  - Determine cause of death using NDI data
  - Obtain consent from next of kin; collect medical records for expert validation of neurological deaths
  - Calculate adjusted rate ratios for cause specific mortality
  - Compare Veteran mortality to U.S population mortality by calculating standardized mortality ratios

## Neurological Mortality

- **Current status**
  - Vital status update through December 2008 completed
  - Medical record retrieval for neurological deaths completed
  - Review of medical records and preliminary data analysis in process
- **Next Steps**
  - Expand vital status update through 2011 (or latest available from NDI) for Gulf War Veterans
  - Will include OEF/OIF/OND Veterans who have similar cause of death

## Health Surveillance for a New Generation of U.S. Veterans

## New Generation Study Update

- Background/Methods
  - Study of Operation Enduring Freedom and Operation Iraqi Freedom Veterans
  - Sample of 30,000 deployed & 30,000 non-deployed
  - Survey of health, exposures, & functional status
  - Web-based and paper survey; Computer Assisted Telephone Interviews (CATI)
  - Data collection 2009-2011
- Current status
  - Data analysis and manuscript preparation underway

## New Generation Study Update

- Analyses completed
  - Methods overview
  - Prevalence of respiratory health outcomes (asthma, sinusitis, bronchitis)
  - Development of statistical weighting (for estimating population prevalence)
  - History of infertility among men and women OEF /OIF Veterans
- Analyses underway
  - Prevalence of positive screen for traumatic brain injury (TBI) / PTSD
  - Prevalence of illness and functional status measures
  - Use of complementary and alternative medicine (CAM) modalities
  - Prevalence of Military Sexual Trauma

## New Generation Study Update

- Analyses planned
  - Assessment of potential risk factors for respiratory disease
  - Association between screening for TBI/PTSD and self reported suicidal ideation
  - Prevalence of health risk behaviors (e.g., tobacco use and smoking)
  - HIV risk-taking behaviors: exploratory analysis
  - Risky driving behaviors among OEF/OIF Veterans
  - Self-reported birth outcomes

## Summary

- These studies help us understand the post-war experience of Gulf War Veterans and OEF/OIF Veterans who may be suffering from Chronic Multi-Symptom Illness associated with their service, developing chronic illness, or experiencing decline in health associated with their military service. The findings from our studies help support development of policy and the design of further research efforts.
- Ongoing and future efforts
  - Collaboration with Millennium Cohort Study
  - Veterans Health Examination Study
  - Continued longitudinal follow-up of deployed cohorts