



National Health Study for a New Generation of U.S. Veterans  
And  
Comparative Health Assessment Interview (CHAI)  
Research Study

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The presenter has no financial or other relationships to disclose.



# EPIDEMIOLOGY PROGRAM

- PDHS Epidemiology focus is on population level inquiry
  - Expands VA knowledge of the VHA and non-VHA using population
  - Historical focus on deployed populations
  - Support policy development and health care
  - Expand literature on Veterans' deployment exposures and health
- Primary data sources for PDHS epidemiology studies
  - Surveys (web, paper, telephone)
  - VA Health care utilization data
  - Mortality data
    - From VA/ DoD Mortality Data Repository
      - Source: National Death Index, National Center for Health Statistics, CDC



# EPIDEMIOLOGY PROGRAM

## National Health Study for a New Generation of US Veterans (NewGen)

### **Research Objective**

To assess the health status of OEF OIF era deployed (2001-2008) and non-deployed Veterans comparing chronic medical conditions, PTSD and other psychological conditions, general health perceptions and functional health status.

### **Study Design**

A multimodal survey using web-based, postal and telephone interviews to collect data from a sample of 30,000 deployed and 30,000 non-deployed Veterans. Women oversample= 20%. Field period 2009-2011. Response rate 34.3% (49% Web; 45% Paper; 6% CATI)

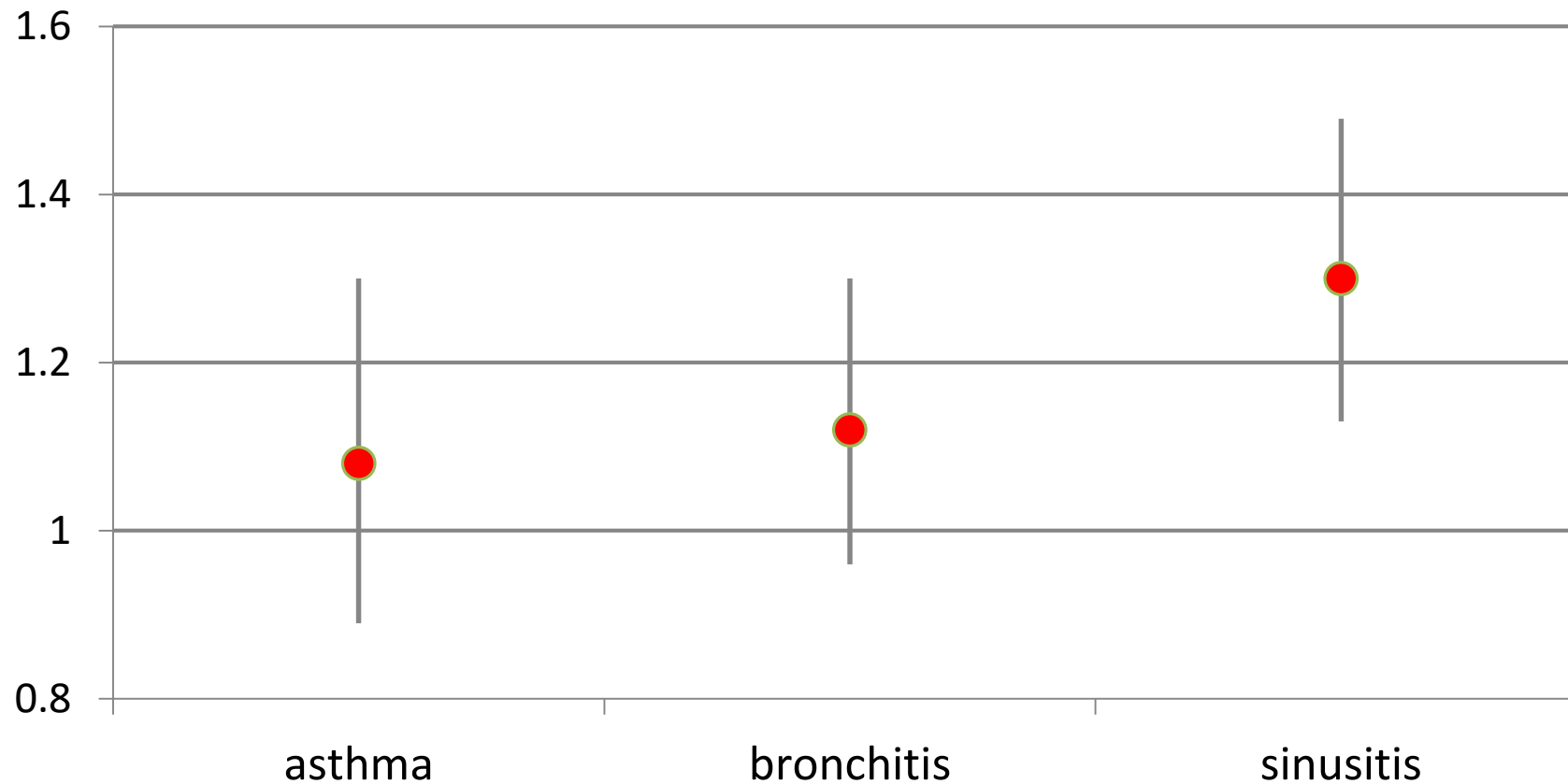


## Questions on respiratory disease

- *Has a doctor ever told you that you have any of the following conditions?*
  - *Sinusitis*
  - *Bronchitis*
  - *Asthma*
- *If yes, year first told*



## Adjusted Odds Ratios for Reported Respiratory Diseases among Deployed vs. Non-Deployed, Diagnosed During/After 2001



Barth et al, 2014

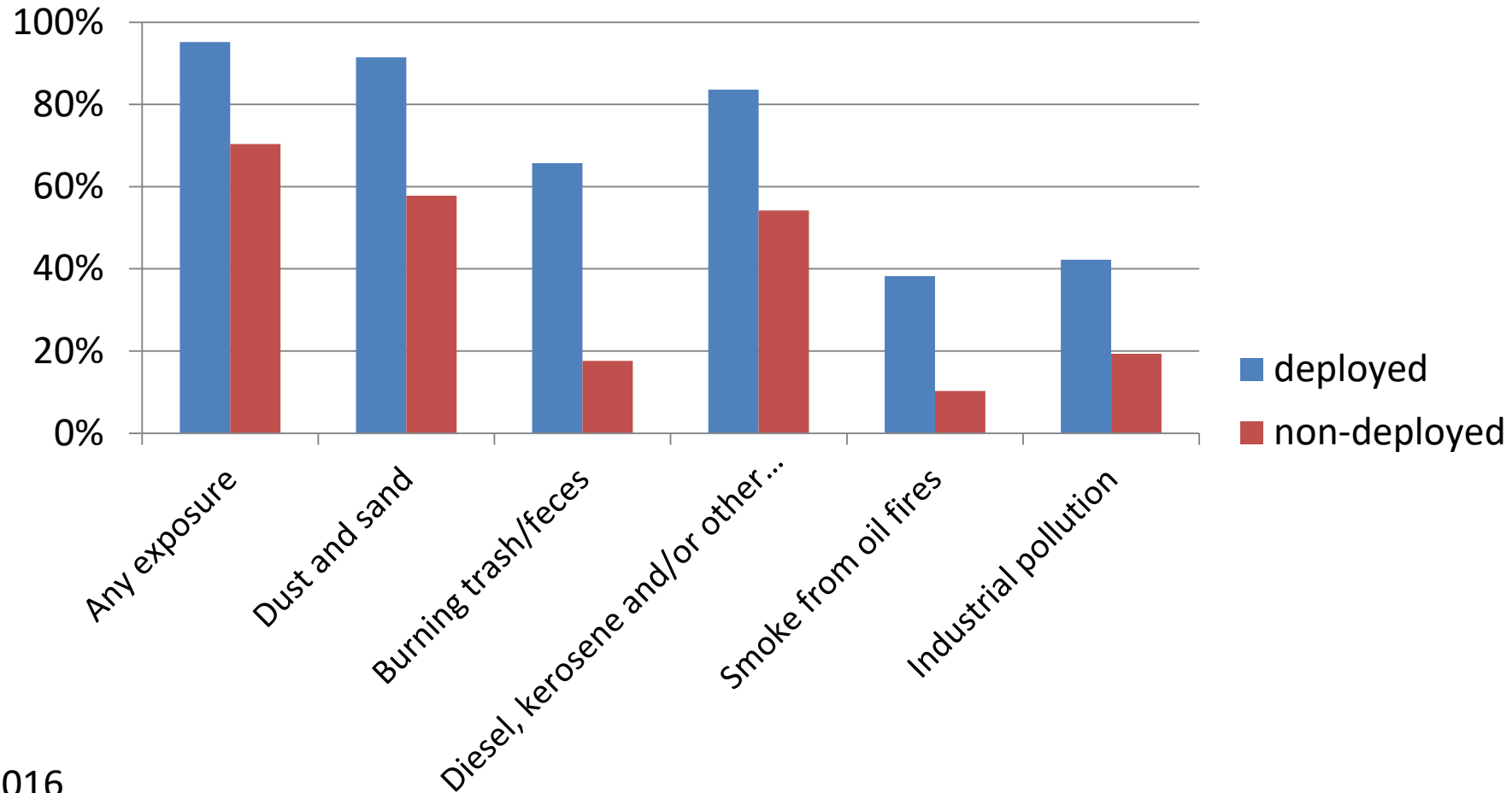


## Questions on environmental inhalational exposures

- *During military service, were you exposed to or did you experience any of the following?*
  - Dust and sand
  - Burning trash/feces
  - Diesel, kerosene and/or other petrochemical fumes
  - Smoke from oil fires
  - Industrial pollution
- Smoking history



# Prevalence of Environmental Exposures

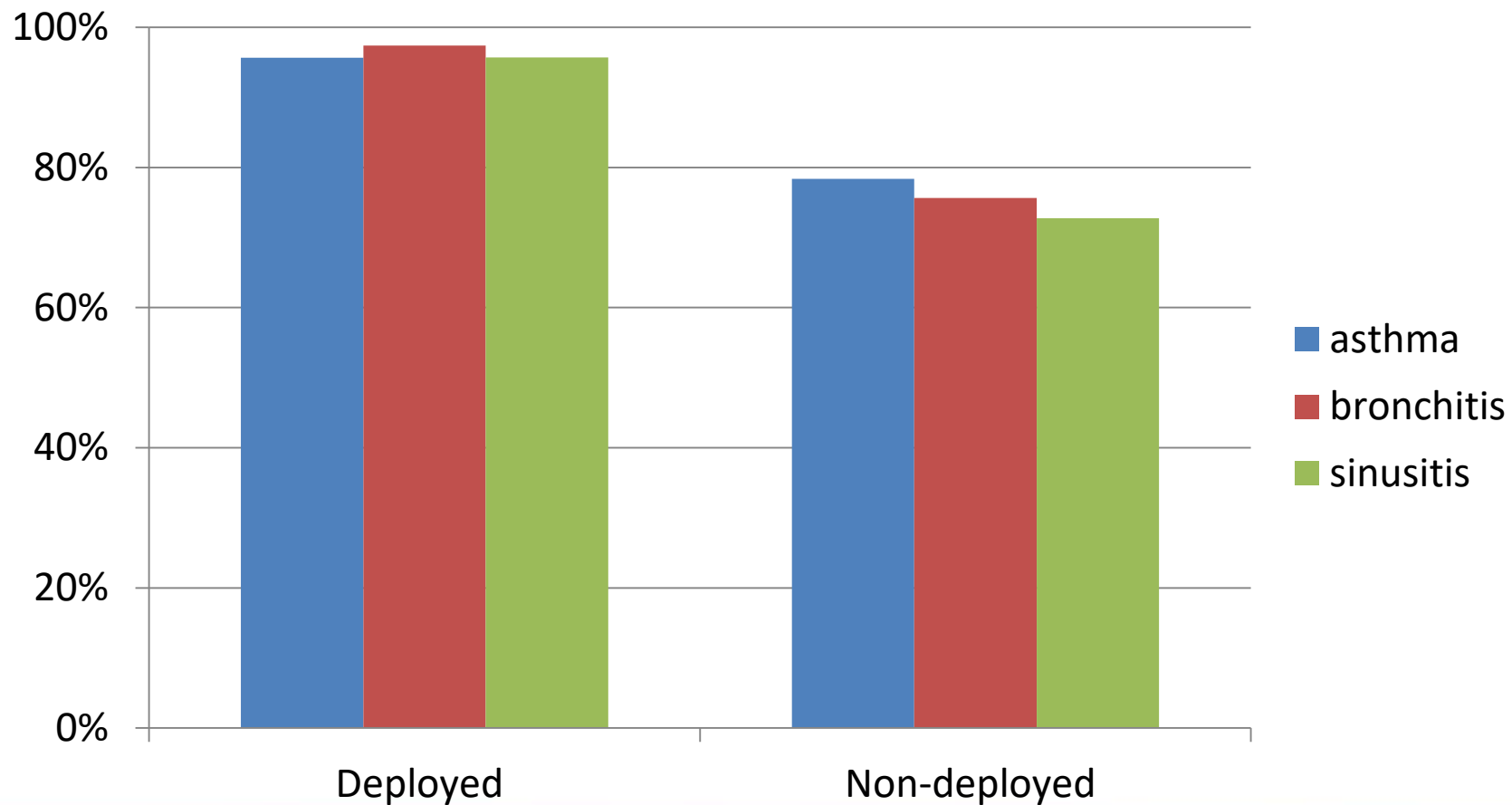


Barth et al, 2016





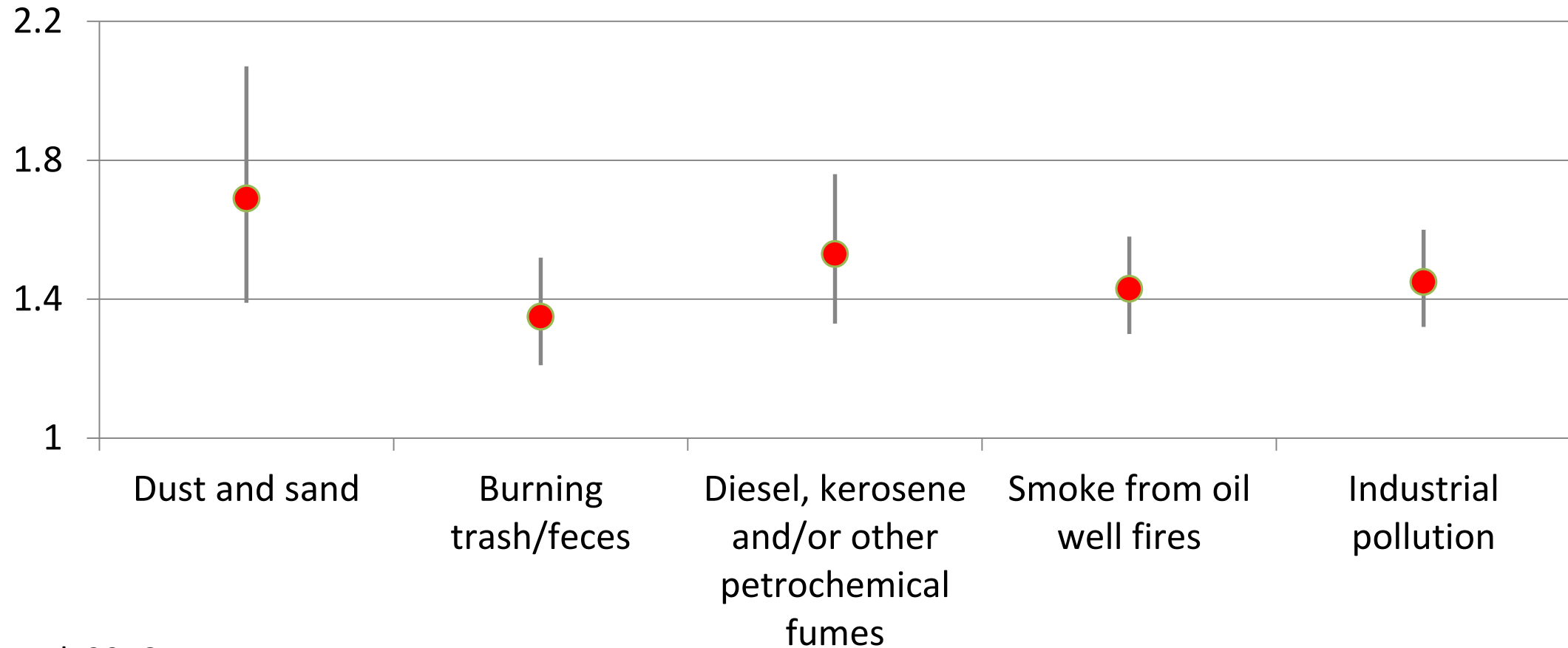
## Prevalence of Respiratory Exposures among Those With a Respiratory Condition Diagnosed in 2001 or Later



Barth et al, 2016



## Adjusted Odds Ratios for Any Respiratory Disease among Exposed vs. Non-Exposed, Deployed Group Only



Barth et al, 2016



## Conclusions based on NewGen Study

- Respiratory exposures ubiquitous regardless of deployment
- Respiratory disease prevalent regardless of deployment
- Deployed more likely to report both exposure & disease
- Better exposure measurement is required to understand associations between exposure and disease



# Comparative Health Assessment Interview

*A National Study of Health and Well-being*



# EPIDEMIOLOGY PROGRAM

## Comparative Health Assessment Interview (CHAI) Research Study

### **Objectives**

- Determine the effect of military service, deployment and combat on the health and well-being of Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF)/Operation New Dawn (OND) Veterans, across multiple domains including physical and mental health, vocation/occupation, finances, and social relationships.
- CHAI will also provide data elucidating the relationships between military service, deployment, and combat (warfare) exposure and other forms of military trauma on suicide risk or suicidality, including ideation and attempt.



- Cognitive interviews (n=9); Timing tests (n=14)
- **Mixed mode Core Survey using self administered web-based interview & computer assisted tele interview (CATI).**
  - Stratified sample of deployed and non-deployed; service b/w Oct 2001- May 2015
  - 30% oversample of women
  - Matched comparison sample of civilians (age and sex matched)
  - Field period spring/summer 2018
- In-person interviewer administered neurocognitive assessment with sub-sample of Core Survey participants (n=300)



# COMPARATIVE HEALTH ASSESSMENT INTERVIEW (CHAI) RESEARCH STUDY: RESULTS

- **Response Rate**
  - Veterans invited 38,633
  - Veterans returned surveys: N = 15,166 (RR = ~39%)
    - 6,591 deployed OEF/OIF/OND
    - 1,609 deployed in support of OEF/OIF/OND but not in SW Asia
    - 2,586 deployed abroad but not in support of OEF/OIF/OND
    - 4,380 never deployed
  - Civilian controls: Invited= 16,483;
  - Returned surveys: N = 4,654 (RR = ~28%)



## Exposure Questions

Did you ever experience any of the following before, during or after your military service?

- You were near heavy smoke from weapons, signal smoke, markers, or other combat items.
- You experienced dust storms.
  - How many days did you experience storms?

While deployed OEF/OIF/OND; Other military service; Before or after military service; Did not experience at any time





## Exposure Questions (cont.)

- When you were deployed to OEF/OIF/OND, were you ever near a burn pit (on the base or close enough to the base for you to see smoke)?
- Did your duties during deployment include working at a burn pit?
  - Yes
  - No



## Exposure Questions (cont.)

- Have you ever been exposed to gas, smoke, chemical vapors or fumes in your work **outside the military**?

How many years did you work in this job? (Round to the nearest whole year)

- Have you ever worked for a year or more in any dusty job outside the military?

How many years did you work in this job? (Round to the nearest whole year)



## Questions on disease prevalence

*Has a doctor ever told you that you have any of the following conditions?*

- COPD, chronic bronchitis or emphysema
- Asthma
- Sinusitis
- Constrictive bronchiolitis
- Pulmonary fibrosis
- Other respiratory diseases (bronchiolitis, fibrosis, etc.)
- Heart condition or disease
- Hypertension or high blood pressure
- High cholesterol
- Cancer [PLEASE SPECIFY: \_\_\_\_\_]



## CHAI Research Study Status

- *Currently data cleaning and conducting preliminary data analysis.*
- *Developing collaborations with VA and academic subject matter experts to address study specific aims and high priority topics.*



# Questions?

Contact: [Aaron.Schneiderman@va.gov](mailto:Aaron.Schneiderman@va.gov)



## • References

Barth SK, Dursa EK, Bossarte RM, Schneiderman AI. 2016. Lifetime Prevalence of Respiratory Diseases and Exposures among Veterans of Operation Enduring Freedom and Operation Iraqi Freedom Veterans: Results from the National Health Study for a New Generation of U.S. Veterans. *J Occup Environ Med.* 2016 Dec;58(12):1175-1180.

Barth S.K., Dursa E.K., Peterson M.R., Schneiderman, A.I.. 2014. Prevalence of respiratory diseases among veterans of Operation Enduring Freedom and Operation Iraqi Freedom: Results from the National Health Study for a New Generation of U.S. Veterans. *Military Medicine*;179(3):241-5. doi: 10.7205/MILMED-D-13-00338



- Back-up slides



# COMPARATIVE HEALTH ASSESSMENT INTERVIEW (CHAI) RESEARCH STUDY

Survey Domains	Source
Demographics	VE-HEROeS, New Gen, CHAI
Income and Economic Stability	Deployment Life Survey, HRBS, CHAI
Military Service	VE-HEROeS, CHAI
Combat Exposure (Veterans)	Combat Experiences Scale (DRRI-2)
Warfare Exposure (Veterans)	Warfare Exposure Scale
Hazardous Exposures	New Gen, CHAI
Aftermath of Battle (Veterans)	DRRI-2
Moral Injury (Veterans)	MIES
Traumatic Brain Injury	BTBIS
Highly Stressful Events	LSC-R, CHAI
Potentially Traumatic Events	LSC-R, CHAI
Unwanted Sexual Experience (Veterans)	VA MST Screener





# COMPARATIVE HEALTH ASSESSMENT INTERVIEW (CHAI) RESEARCH STUDY

Survey Domains	Source
Health Care Access	WBI, CHAI
Well-Being	WBI
Physical Health Assessment	New Gen, SF-12, CHAI
Health Functioning and Satisfaction	WBI
Pain	Pain Enjoyment Gen Activity (PEG), CHAI
Perceived Social Support	MultiScalePercvdSocSppt (MSPSS), CHAI
PTSD	PCL-5, CHAI
Mood (includes Suicide Risk)	DSM-5, CHAI
Anxiety	DSM-5, CHAI
Other Mental Health Conditions	DSM-5, CHAI
Substance Use	NIDA ASSIST, NM ASSIST, AUDIT, AUDIT-C, CHAI
Suicide Risk	PHQ-9, Col.- Sui. Sev. Rating Scale, CHAI



- HLTH5 CONDITION LIST
- **1. Stomach and digestion problems**
- H5\_23. Irritable bowel syndrome (IBS) or colitis (irritation of the colon)
- 
- **2. Heart, circulatory system, and blood pressure**
- H5\_6. Heart condition or disease
- H5\_7. Hypertension or high blood pressure
- H5\_8. High cholesterol
- 
- **3. Sleep and tiredness**
- H5\_26. Chronic fatigue syndrome
- H5\_14. Sleep apnea (some disagreement about whether here or breathing)
- 
- **4. Liver**
- H5\_21. Cirrhosis
- H5\_22. Hepatitis
-



- HLTH5 CONDITION LIST (continued)
- **5. Breathing and respiratory system**
- H5\_10. COPD, chronic bronchitis or emphysema
- H5\_11. Asthma
- H5\_12. Sinusitis
- H5\_13. Constrictive bronchiolitis
- H5\_14. Pulmonary fibrosis
- H5\_15. Other respiratory diseases (bronchiolitis, fibrosis, etc.)
- 
- **6. Vision, eyes, and hearing**
- H5\_1. Vision or seeing problem/loss
- H5\_2. Significant hearing loss (use of hearing aid)
- 
- **9. Pain, soreness and stiffness**
- H5\_3. Arthritis
- H5\_4. Back or neck pain
-



- HLTH5 CONDITION LIST (continued)
- **11. Injuries**
- H5\_5. Fractures, bone or joint injury
- H5\_16. Missing limbs (any part)/amputation
- H5\_17. Spinal cord injury
- H5\_18. Traumatic brain injury (TBI)
- 
- 
- **13. Other**
- H5\_9. Diabetes
- H5\_19. Migraine
- H5\_20. Epilepsy or seizures
- H5\_24. Frequent bladder infections
- H5\_25. Multiple sclerosis (MS)
- 
- **14. Cancer**
- H5\_15. Cancer [PLEASE SPECIFY: \_\_\_\_\_ ]



- SOURCES: 2014 NHIS Public Use Data Survey Description (June 2015) (pages 57-60)
- [ftp://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Dataset\\_Documentation/NHIS/2014/srvydesc.pdf](ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NHIS/2014/srvydesc.pdf)
- 2018 NHIS Questionnaire Redesign (Topics under consideration for public comment)
- [http://www.cdc.gov/nchs/nhis/2018\\_quest\\_redesign.htm](http://www.cdc.gov/nchs/nhis/2018_quest_redesign.htm)