

VA



U.S. Department
of Veterans Affairs

Gulf War Follow Up Study: History and Update

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Post Deployment Health Services

1 August 2017



GULF WAR FOLLOW UP STUDY: HISTORY

- In response to Gulf War Veterans' health concerns VA Environmental Epidemiology Service initiated the National Health Study
- First data collection conducted in 1995
- Follow up data collections conducted in 2005 and 2012



GULF WAR FOLLOW UP STUDY: SAMPLE POPULATION

- Sampled from the known population of Gulf War Veterans and Gulf War-era Veterans
- Permanent panel of 15,000 Gulf War and 15,000 Gulf Era Veterans

Unit	Male	Female	Total
Active	4,800	1,200	6,000
Reserve	4,000	1,000	5,000
Guard	3,200	8000	4,000
Total	12,000	3,000	15,000



GULF WAR FOLLOW UP STUDY: HISTORY

OMB Number: 2900-0558
Expiration Date: 4/1/98
Estimated Burden: 30 minutes

Department of Veterans Affairs

NATIONAL HEALTH SURVEY OF PERSIAN GULF WAR ERA VETERANS


QUESTIONNAIRE

SPONSORED BY
U.S. DEPARTMENT OF VETERANS AFFAIRS
VETERANS HEALTH ADMINISTRATION

PRIVACY ACT STATEMENT
The information requested on this survey is solicited under authority of 38 U.S.C. Section 7305. It is being collected to assist VA in learning more about the health of Persian Gulf War Era veterans and their families and will help VA to provide better medical care. This survey is the result of enactment of Public Law 105-368 which requires that the health concerns of Persian Gulf War era veterans be addressed by VA. The information you supply will be confidential and protected by the provisions of the Privacy Act of 1974 (5 U.S.C. 552a) and specifically the VA system of records entitled 38VAV12, "Veteran, Patient, Employee and Volunteer Research and Development Project Records - VA." Disclosure of the information may only be made with your consent or as identified in a "routine use" of the system of records. Routine uses include releases of statistical data and non-identifying data for research and associated administrative purposes. Disclosure is voluntary; failure to furnish the requested information will have no adverse effect on any other VA benefit to which you may be entitled.

PAPERWORK REDUCTION ACT INFORMATION: Public reporting burden for this collection of information is estimated to average about 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed to complete and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to VA, Clearance Officer (245-A), 810 Veterans Avenue NW, Washington, DC 20340.

- Use any pencil or blue or black ink pen only.
- Do not use pens with ink that soaks through the paper.
- Make solid marks that fill the circle's completely.
- Make no stray marks on this form.
- Do not fold, tear, or mutilate this form.



CORRECT MARKS INCORRECT MARKS


VA FORM 10-20986(NR)
JUN 1985

Department of Veterans Affairs

LONGITUDINAL HEALTH STUDY OF PERSIAN GULF WAR ERA VETERANS

QUESTIONNAIRE

SPONSORED BY
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OMB Number: 2900-0657
Estimated Annual Burden: 30 min
OMB approval expires 11/30/2005

VA FORM 10-21055(NR)
MAR 2002
PLEASE DO NOT WRITE IN THIS AREA
SERIAL #

OMB Number: 2900-0780
Expiration Date: 02/28/2015
Estimated Burden: 30 minutes

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

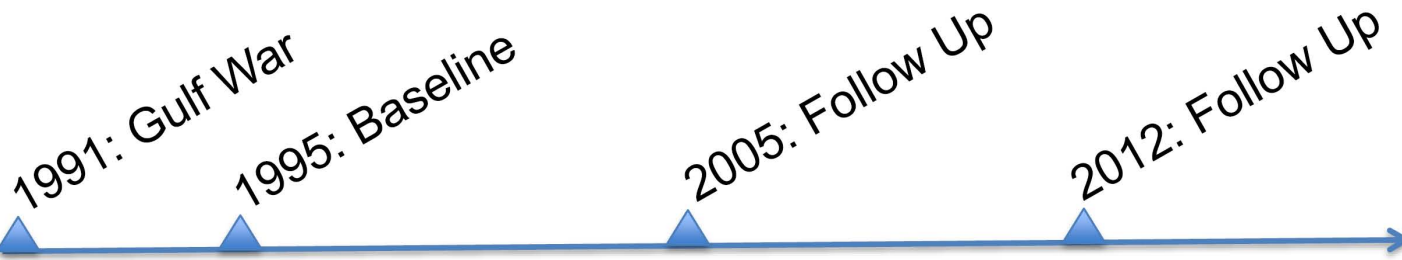
Questionnaire

Sponsored by the Department of Veterans Affairs



PRIVACY ACT STATEMENT: The information requested on this survey is solicited under authority of 38 U.S.C. Section 7305. It is being collected to assist VA in learning more about the health of veterans and will help VA to provide better medical care. The information you supply will be confidential and protected by the provisions of the Privacy Act of 1974 (5 U.S.C. 552a) and specifically the VA system of records entitled 34VA12, "Veteran, Patient, Employee and Volunteer Research and Development Project Records - VA." Release of the information may only be made with your consent or as identified in a "routine use" of the system of records. Routine uses include releases of statistical data and non-identifying data for research and associated administrative purposes. Disclosure is voluntary; failure to furnish the requested information will have no adverse effect on any VA benefit to which you may be entitled.

PAPERWORK REDUCTION ACT INFORMATION: This information is collected in accordance with the clearance requirements of section 3507 of the Paperwork Reduction Act of 1995. Accordingly, VA may not conduct or sponsor, and you are not required to respond to, a collection of information unless it displays a valid OMB control number. VA anticipates that the time expended by all individuals who complete this survey will average 30 minutes. This includes the time it will take to read instructions, gather the necessary facts, and fill out the survey. The information requested on this survey will be used to help VA assess the health status of veterans and plan health care services. A response to this survey is voluntary.





GULF WAR FOLLOW UP STUDY: HISTORY

Year	Response Rate	Modes
1995	70%	Paper and CATI*
2005	34%	Paper and CATI
2012	50%	WEB, Paper, and CATI

*CATI = computer assisted telephone interview

- Paper survey data entered by optical scanner
- CATI (computer assisted telephone interview) data entered by interviewer
- WEB (2012 only) direct into survey form by Veteran
- Our first step-conduct analysis on 2012 data



GULF WAR FOLLOW UP STUDY: UPDATE

- First analysis of the 2012 data looked at cross-sectional disease prevalence twenty years after the war (Dursa et al 2016)
- Longitudinal view of the data required looking at the 2005 and 1995 data to compare it with the new 2012 data
- We observed decreased lifetime prevalence of medical conditions in 2012 compared to prevalence reported in 2005



GULF WAR FOLLOW UP STUDY: UPDATE

- We were confident in the 2012 data collection and analysis
- Performed initial data quality checks of the 2005 data – comparing survey pages to electronic data
- Data recorded in 2005 electronic database did not match the data written on the paper surveys



GULF WAR FOLLOW UP STUDY: UPDATE

- PDHS Leadership contacted the following groups to decide next steps
 - Institutional Review Board
 - Office of Research Oversight
 - National Center for Ethics in Health Care
 - Previous PIs of the 2005 study/authors
 - Journal
- Briefed VA and RAC Chair
- Our goal throughout-transparency and integrity of data and processes



GULF WAR FOLLOW UP STUDY: UPDATE

- We performed a thorough audit of the 2005 data-Dr. Dursa will describe in detail
- Findings on prevalence based on 2005 survey data have not put any Veterans at risk
- Re-examining the 2005 data should have no bearing on existing policy
- We take full responsibility and have safeguards in place to ensure integrity of the data and transparency of processes

VA



U.S. Department
of Veterans Affairs

Erin K. Dursa, PhD, MPH
Epidemiology Program
Post Deployment Health Services



GULF WAR FOLLOW UP STUDY: UPDATE

- Principal investigator for Follow Up Study of a National Cohort of Gulf War and Gulf Era Veterans
- Performed cross sectional analysis of the 2012 follow up study
- Began to prepare data for longitudinal analysis



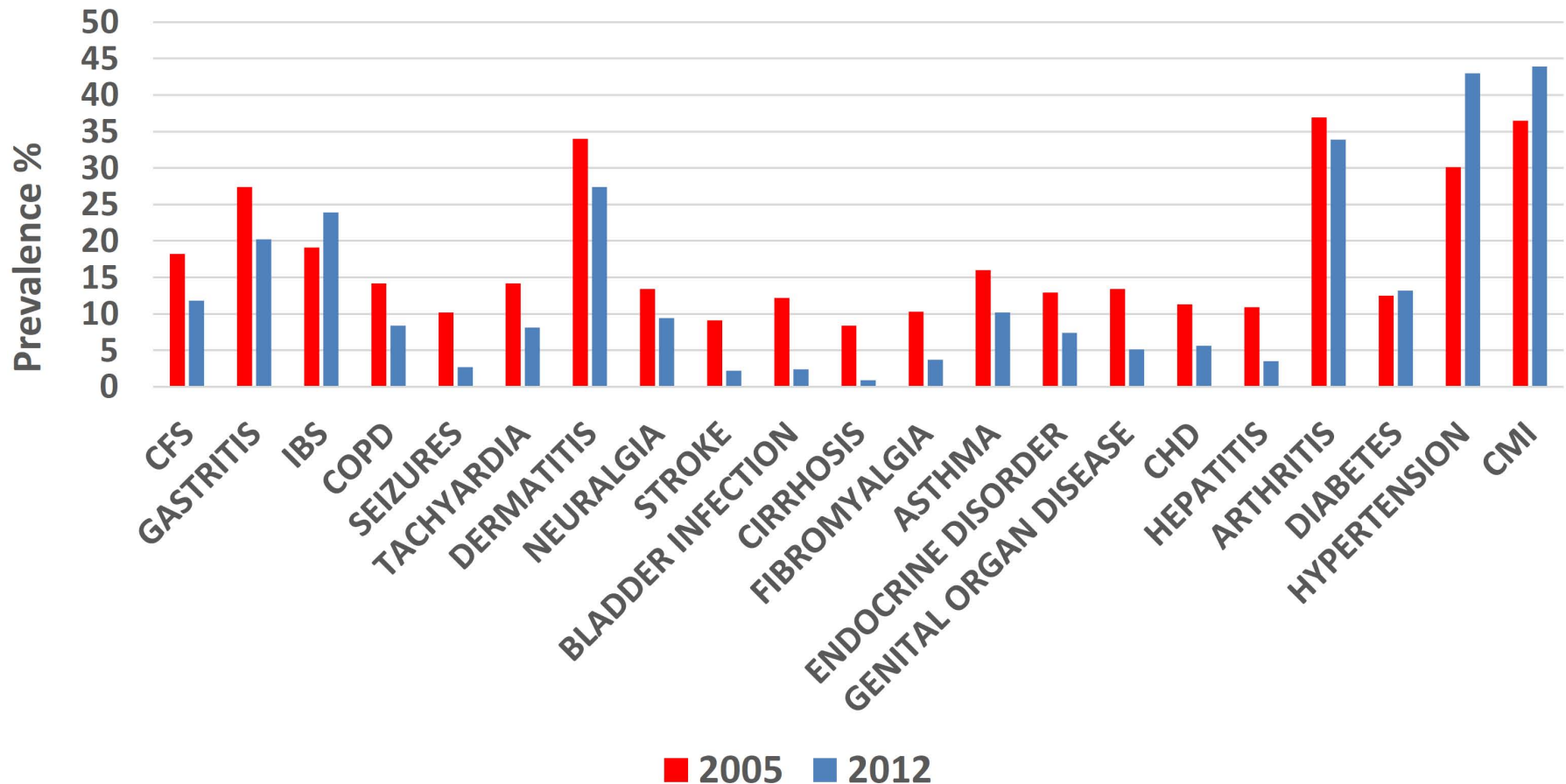
GULF WAR FOLLOW UP STUDY: UPDATE

- “Has a doctor ever told you that you have any of the following conditions?”
- Comparison of overall published results from these data collections showed a markedly higher lifetime prevalence of conditions reported in 2005 than was observed in 2012



GULF WAR FOLLOW UP STUDY: UPDATE

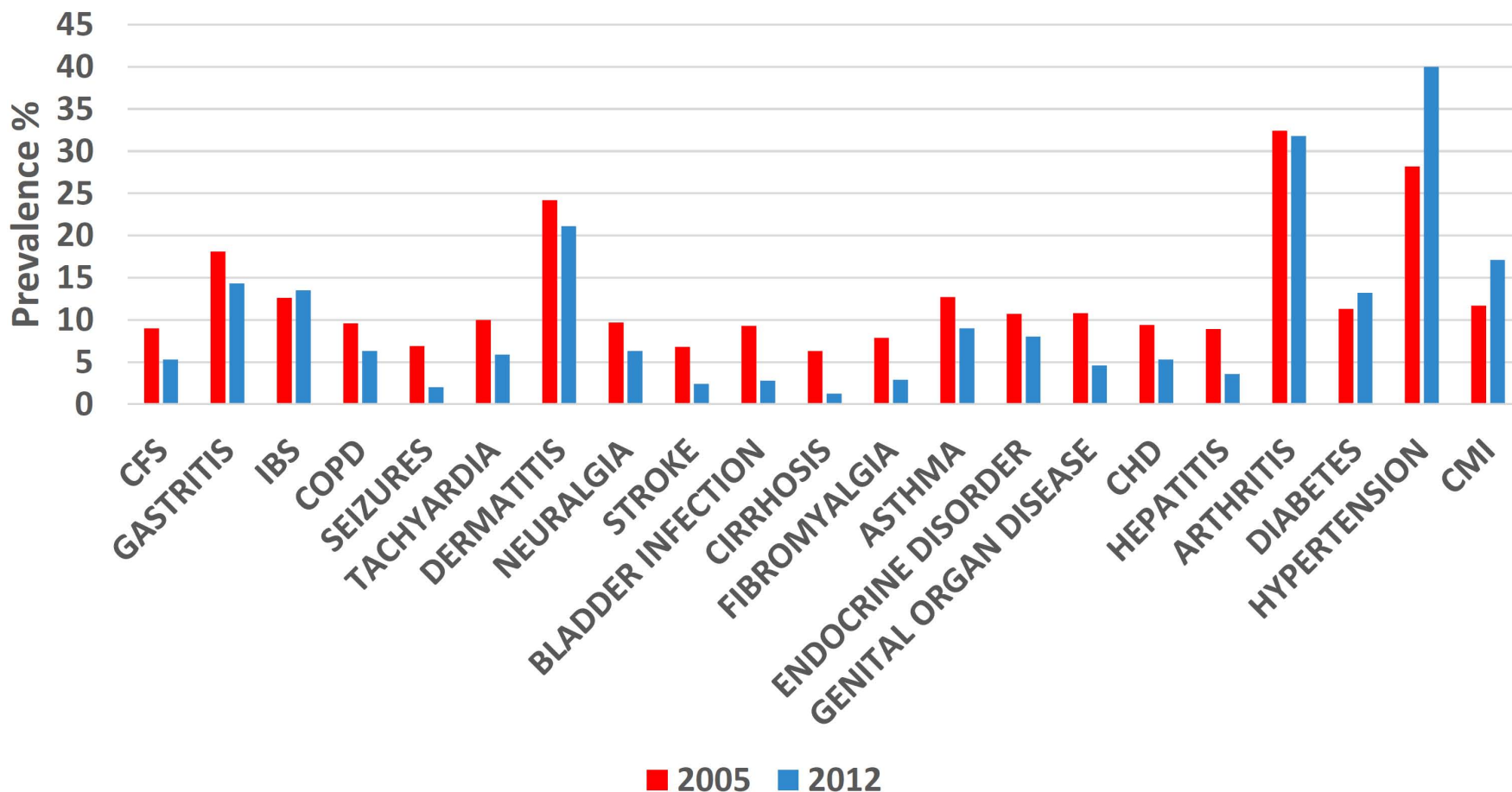
Self Reported Prevalence of Medical Conditions in 2005 and 2012:
Deployed





GULF WAR FOLLOW UP STUDY: UPDATE

Self Reported Medical Conditions in 2005 and 2012:
Non Deployed





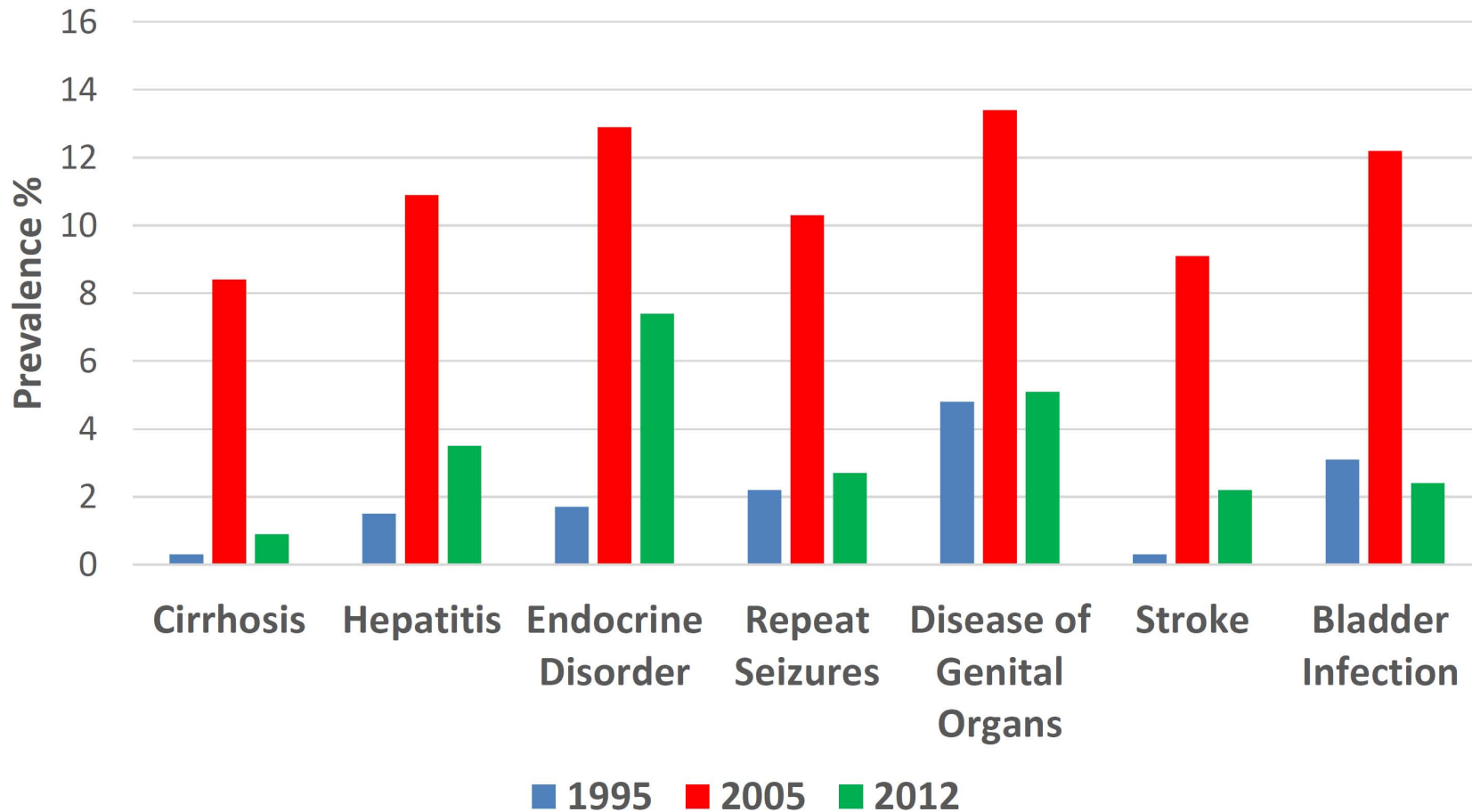
GULF WAR FOLLOW UP STUDY: UPDATE

- Three data points are necessary to adequately evaluate trend that was observed in this data
- Reviewed published data from the 1995 study of the cohort and compared to results reported in 2005 and 2012



GULF WAR FOLLOW UP STUDY: UPDATE

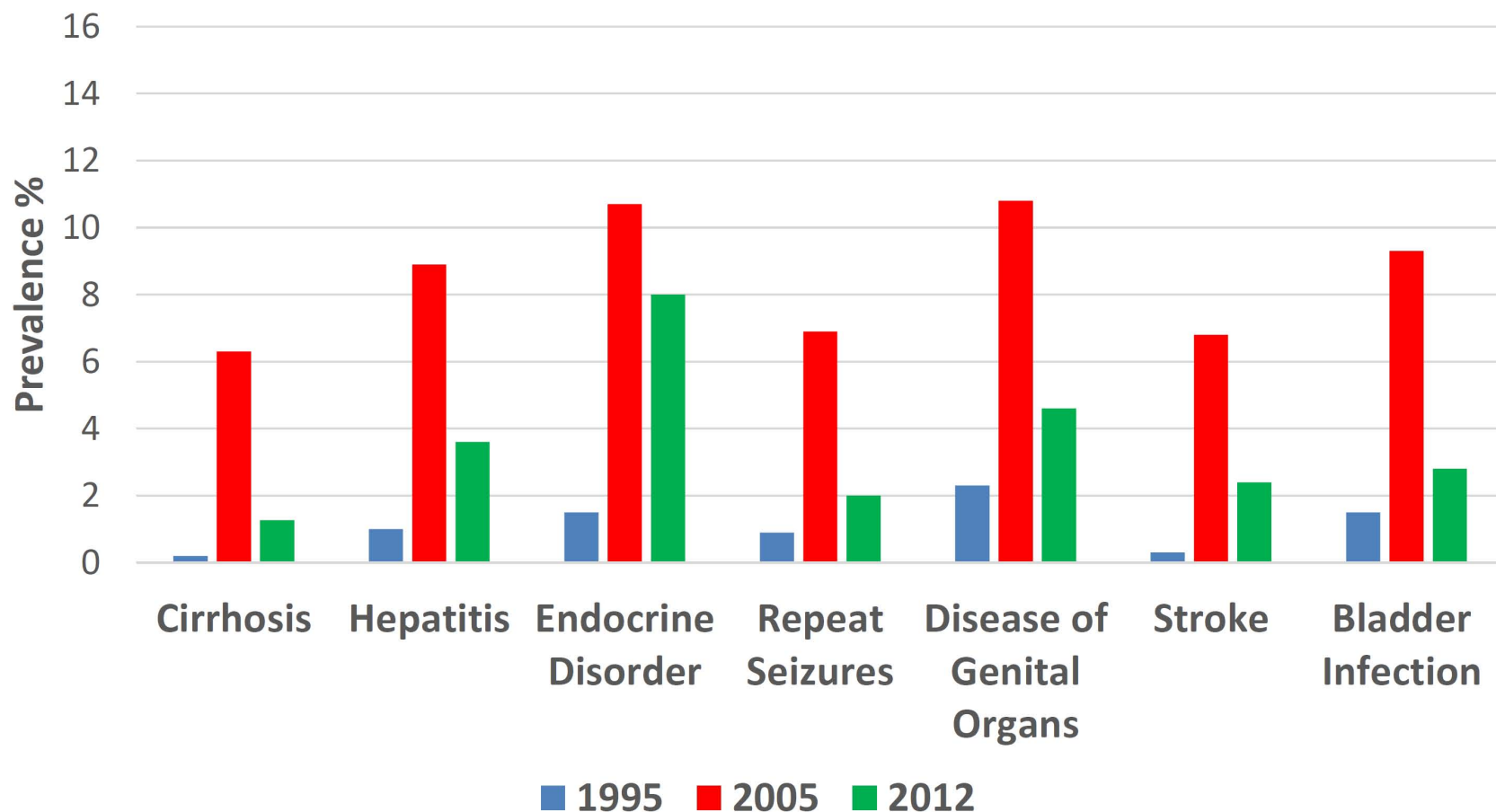
Prevalence of Self Reported Medical Conditions Over Time: Deployed





GULF WAR FOLLOW UP STUDY: UPDATE

Prevalence of Self Reported Medical Conditions Over Time:
Non Deployed





GULF WAR FOLLOW UP STUDY: UPDATE

- Performed a subgroup analysis of the same Veterans who responded to survey in both 2005 AND 2012
 - Make sure the increased prevalence was not due to selection bias
 - In over 500 cases, respondents endorsed having been told by a doctor that he/she had ALL 23 medical conditions listed in the 2005 data collection; this pattern was not repeated in 2012



GULF WAR FOLLOW UP STUDY: UPDATE

Next:

- Visually inspected a random sample of PDFs of original paper surveys from the 2005 study to compare to the responses recorded in the electronic database (n=50)
- In all 50 surveys, the values reported on the paper survey were not the values recorded in the electronic database



GULF WAR FOLLOW UP STUDY: UPDATE

8a. Has your doctor **ever** told you that you have any of the following conditions?

NO YES

8b. Has this condition been present in the **past 4 weeks**?

NO YES

1. Arthritis of any kind (including rheumatoid or osteoarthritis)	<input type="radio"/>	<input type="radio"/>	→	<input type="radio"/>	<input type="radio"/>
2. Fibromyalgia	<input type="radio"/>	<input type="radio"/>	→	<input type="radio"/>	<input type="radio"/>
3. Skin cancer	<input type="radio"/>	<input type="radio"/>	→	<input type="radio"/>	<input type="radio"/>
4. Any other cancer	<input type="radio"/>	<input type="radio"/>	→	<input type="radio"/>	<input type="radio"/>
5. Dermatitis or any other skin trouble	<input type="radio"/>	<input type="radio"/>	→	<input type="radio"/>	<input type="radio"/>
6. Cirrhosis of the liver	<input type="radio"/>	<input type="radio"/>	→	<input type="radio"/>	<input type="radio"/>
7. Hepatitis	<input type="radio"/>	<input type="radio"/>	→	<input type="radio"/>	<input type="radio"/>
8. Chronic Fatigue Syndrome	<input type="radio"/>	<input type="radio"/>	→	<input type="radio"/>	<input type="radio"/>
9. Gastritis (irritation of the stomach)	<input type="radio"/>	<input type="radio"/>	→	<input type="radio"/>	<input type="radio"/>
10. Irritable bowel syndrome	<input type="radio"/>	<input type="radio"/>	→	<input type="radio"/>	<input type="radio"/>
11. Diabetes	<input type="radio"/>	<input type="radio"/>	→	<input type="radio"/>	<input type="radio"/>
12. Other endocrine disorder (including thyroid problems)	<input type="radio"/>	<input type="radio"/>	→	<input type="radio"/>	<input type="radio"/>
13. Repeated seizures, convulsions, or blackouts	<input type="radio"/>	<input type="radio"/>	→	<input type="radio"/>	<input type="radio"/>
14. Depression	<input type="radio"/>	<input type="radio"/>	→	<input type="radio"/>	<input type="radio"/>
15. Neuralgia or neuritis (nerve inflammation)	<input type="radio"/>	<input type="radio"/>	→	<input type="radio"/>	<input type="radio"/>
16. Any disease of the genital organs	<input type="radio"/>	<input type="radio"/>	→	<input type="radio"/>	<input type="radio"/>
17. Coronary heart disease	<input type="radio"/>	<input type="radio"/>	→	<input type="radio"/>	<input type="radio"/>
18. Hypertension (high blood pressure)	<input type="radio"/>	<input type="radio"/>	→	<input type="radio"/>	<input type="radio"/>
19. Stroke or cerebral-vascular accident	<input type="radio"/>	<input type="radio"/>	→	<input type="radio"/>	<input type="radio"/>
20. Tachycardia or rapid heart	<input type="radio"/>	<input type="radio"/>	→	<input type="radio"/>	<input type="radio"/>
21. Asthma	<input type="radio"/>	<input type="radio"/>	→	<input type="radio"/>	<input type="radio"/>
22. Emphysema or chronic bronchitis (or chronic obstructive pulmonary disease)	<input type="radio"/>	<input type="radio"/>	→	<input type="radio"/>	<input type="radio"/>
23. Repeated bladder infections	<input type="radio"/>	<input type="radio"/>	→	<input type="radio"/>	<input type="radio"/>



GULF WAR FOLLOW UP STUDY: UPDATE

8a. Has your doctor **ever** told you that you have any of the following conditions?

NO YES

8b. Has this condition been present in the **past 4 weeks**?

NO YES

1. Arthritis of any kind (including rheumatoid or osteoarthritis) →

2. Fibromyalgia →

3. Skin cancer →

4. Any other cancer →

5. Dermatitis or any other skin trouble →

6. Cirrhosis of the liver →

7. Hepatitis →



GULF WAR FOLLOW UP STUDY: UPDATE

- In collaboration with ORD Cooperative Studies Coordinating Center at Hines we conducted a larger audit of surveys
 - Reviewed all paper surveys with the 100% endorsement response pattern in the 2005 database
 - In all of these surveys, the recorded response in the database was a yes, the reported response on the survey was a no



GULF WAR FOLLOW UP STUDY: UPDATE

- Previously reported data overestimated prevalence of medical conditions in this population
- Bias is non-differential by deployment status
 - Overestimated prevalence in both Gulf War and Gulf Era populations



GULF WAR FOLLOW UP STUDY: UPDATE

- Full data re-entry of all 9,397 surveys is underway
 - Double data by teams of 2 data entry specialists
 - Data entry program flags records with discrepant values for data entered by each specialist on the team
 - Each week the flagged records for each team are adjudicated by the opposite team and the onsite QA/QC manager



GULF WAR FOLLOW UP STUDY: UPDATE

- Onsite QA/QC manager validates a random sample of 25% of surveys entered in each week
- VA team performs monthly quality checks on 10% of the surveys entered each month



GULF WAR FOLLOW UP STUDY: UPDATE

- Completion of data re-entry is scheduled for December 2017
- Re-analysis of 2005 survey data will be performed
- Longitudinal database will be built and analyzed