

# Chapter 32

## NATIONAL HEALTH STUDY FOR A NEW GENERATION OF US VETERANS

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## INTRODUCTION

The National Health Study for a New Generation of US Veterans (New Gen) is a 10-year longitudinal study designed to measure the health status of veterans who deployed to Operation Enduring Freedom (OEF) or Operation Iraqi Freedom (OIF). This study was also designed to compare their experience with nondeployed veterans who served in the military during the same time. Beginning with a sample size of 60,000, evenly split between deployed and nondeployed veterans, the New Gen study used a multimodal survey methodology to encourage participation through Web-

based, paper-and-pencil, or telephone interviews. The survey is unique in deriving the sample from the entire universe of OEF/OIF veterans, not limiting selection to those who use services provided by the US Department of Veterans Affairs (VA). Assessing a variety of physical and mental health outcomes, as well as health risk behaviors, the study results will help provide a population-based understanding of health and illness among recent veterans to support and inform policy development and hypothesis generation for future research. The study is supported by the VA, Office of Public Health.

## STUDY SAMPLE

The New Gen study established a permanent panel of 30,000 OEF/OIF veterans (*the deployed group*) and 30,000 non-OEF/OIF veterans who served in the military between October 2001 and June 2008 (*the contemporary military group*), including veterans in the Reserves or National Guard who had not separated from these military components. The sample population of deployed veterans was selected from data files provided to the VA by the US Department of Defense (DoD)/ Defense Manpower Data Center and the VA/DoD Identity Repository (VADIR) database, a VA and DoD data-sharing initiative designed to consolidate data transfers between the DoD and VA. Members of the contemporary, nondeployed military cohort were selected from VADIR. The deployed and contemporary military groups were stratified by branch of

service (Army, Air Force, Navy, and Marines), unit component (active duty, Reserves, or National Guard), and gender.<sup>1</sup>

This stratified random sampling design was intended to provide a representative sample of those who served in these recent conflicts and a comparator population. Military operations since September 11, 2001 have relied more heavily on the Reserve and National Guard components than in previous conflicts. Lengthy and multiple deployments have been a regular experience for many of these citizen soldiers. Women have also been integrated into the military's operations in ways not seen in previous decades. The increased participation of these groups made it essential that the sampling strategy ensure adequate representation to allow for statistically robust subgroup analyses.

TABLE 32-1

### TOPICS COVERED IN THE NATIONAL HEALTH STUDY FOR A NEW GENERATION OF US VETERANS SURVEY

Health Risk Behaviors	Health Conditions	General Health	Health Care Utilization	Potential Exposures
Alcohol use	Anxiety	Functional status	Doctor visits	Accidents
HIV testing	Asthma	General health perception	Hospitalizations	Blasts
Motorcycle helmet use	Cancer	Pregnancy outcomes	Prescription drug use	Chemicals
Seatbelt use	Chronic diseases	Reproductive health	Use of complementary and alternative medicines	Dust/sand
Sexual behavior	Depression	BMI	VA facility use	Falls
Smoking	Heart disease			Head injuries
Speeding	Hypertension			Military sexual trauma
	Irritable bowel syndrome			Smoke
	Migraines			Vaccinations
	Pain			
	PTSD			
	TBI			

BMI: body mass index; HIV: human immunodeficiency virus; PTSD: posttraumatic stress disorder; TBI: traumatic brain injury; VA: US Department of Veterans Affairs

Data source: US Department of Veterans Affairs. *Health Study for a New Generation of US Veterans*. VA website. <http://www.publichealth.va.gov/newgenerationstudy/index.asp>. Accessed February 11, 2014.

## STUDY QUESTIONNAIRE

The 16-page, 72-item questionnaire was developed based on lessons learned from previous studies of Gulf War era veterans and input on current interests from VA content experts in deployment health, women's health, infectious disease, mental health, and behavioral health. Survey questions addressed a broad array of topics on health status and conditions, health risk behaviors, use of healthcare services, and deployment-related exposures (Table 32-1).

Many questions and scales came from government agencies and from previously fielded surveys, such as the

- Centers for Disease Control and Prevention (Atlanta, GA),

- National Center for Health Statistics (Atlanta, GA),
- National Health Interview Survey,
- DoD Post-Deployment Health Assessment, and
- VA Longitudinal Health Study of Gulf War Era Veterans.

Specific mental health items include the Posttraumatic Stress Disorder Check List (PCL) and the Patient Health Questionnaire-9 (PHQ-9), scales used to identify symptoms and functional impairment associated with depression. The Medical Outcomes Study-Short Form 12 (MOS-SF12) was also included to assess the physical and emotional components of functional health status.<sup>1</sup>

## STUDY IMPLEMENTATION AND FUTURE PROGRESS

Data for the study were collected following a sequential mailing protocol modeled on a modified "tailored design method."<sup>2</sup> Sequential mailings to sampled veterans detailed two options for completing the survey: (1) complete the survey online using a secure access portal or (2) respond to the paper version. All nonresponders to the Web and postal surveys were approached to participate in a computer-assisted telephone interview (CATI) that assessed reasons for nonresponse and attempted to complete the survey. Data collection began in August 2009 and continued through 2010, with the last surveys accepted in January 2011.

The overall response rate for the study was 34%, with approximately 55% of responders from the deployed sample. The response from female panel members was 21%, satisfying the sampling goal of 20%. Web-based surveys were predominant over paper surveys, but moderately with 49% to 45%, respectively, of the responses. The CATI protocol realized an additional 6% of the overall response.

The first article reporting on respiratory-specific data collected by the New Gen study was published in the March 2014 issue of *Military Medicine*. Barth et al<sup>3</sup> investigated the prevalence of three self-reported respiratory diseases—(1) asthma, (2) bronchitis, and (3) sinusitis—occurring in deployed and nondeployed veterans before and after 2001. The deployed veterans had a lower prevalence of all three diagnoses before 2001. Although both deployed and nondeployed veterans had higher self-reported prevalence rates for all three diagnoses after 2001, in a model adjusting for demographic variables and smoking status, only sinusitis had a statistically significant adjusted odds ratio (1.30) among the deployed veterans (95% confidence interval: 1.13–1.49).<sup>3</sup>

Future analyses of the New Gen study data pertinent to respiratory health will investigate potential associations between other risk factors for disease, including the history of self-reported environmental exposures such as burning trash/feces, smoke from oil well fires, dust and sand, and

industrial pollution. As noted previously, respondents to the New Gen survey may not be users of VA healthcare services. However, there may be a sufficient number of VA health system users among the survey respondents to enable analyses that link survey responses to healthcare records. Such analyses could

- provide additional understanding to the natural history of disease among deployed individuals,
- provide information on the healthcare needs of individuals who are ill or symptomatic, and
- generate additional research questions to further elucidate the relationships between risk factors and respiratory disease.

The New Gen study is currently developing the follow-up survey of the panel that is scheduled for field implementation in 2015. Plans include augmenting the panel with an additional sample to capture individuals whose service ended after the close of the previous sampling period: June 2008. By extending the sample forward in time, we hope to add people who may have had slightly different experiences in the conflict regions under study.

The survey will retain many of the same scales used in the initial survey. However, in recognition of the increased attention and understanding of the issues associated with airborne hazards and burn pits, new questions concerning military and occupational exposures and additional items about respiratory disease will be included. The items are derived from efforts that supported development of the Airborne Hazards and Open Burn Pit Registry as mandated in section 201 of Public Law 112-260. This unified approach to data collection will provide another comparison for data on respiratory outcomes collected by the complementary efforts represented by the epidemiological survey and the clinical registry.

## SUMMARY

The New Gen study is designed to track the changes in health status over time for a representative population of recent veterans and provide a broad range of information regarding the effects of combat deployment on

health. In addition to being a population-based study, it includes both VA users and nonusers, and provides a more accurate description of the entire OEF/OIF veteran population.

## REFERENCES

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