

# Ongoing Survey Research on Post-9/11 Veterans

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## Key findings

- There are 11 nationally representative and repeated surveys of post-9/11 U.S. veterans.
- All 11 surveys were funded through federal agencies.
- Seven surveys were repeated cross-sectional surveys, one was a longitudinal survey, and three were overlapping panel surveys.
- Four surveys were focused specifically on sampling veteran populations, while the other seven surveys sampled the civilian population more broadly. Three of the four veteran-focused surveys had veteran health outcomes as their primary research questions, while the fourth focused on veteran service utilization.
- Many of these surveys can be used to examine issues related to the veteran transition to civilian life at one point in time or over multiple points. However, these surveys are not able to examine how individual veterans fare over time in their transitions to civilian life.
- There is no longitudinal or overlapping panel survey that specifically examines issues uniquely relevant to the transition to civilian life for post-9/11 veterans and related outcomes.

Federal agencies, researchers, and veterans' advocacy groups have issued imperatives highlighting important gaps in our knowledge of the trajectory of reintegration and related problems faced by post-9/11 veterans.<sup>1</sup> There are a number of ongoing surveys that can be used to address the needs of post-9/11 veterans, but no comparative information exists that assesses the strengths and weaknesses of these efforts. To that end, this report documents the results of a review of the survey research landscape examining post-9/11 veterans. We limited our search to repeated surveys because surveys conducted in an ongoing way can provide rich information about the trajectory of veterans' well-being over time.

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## METHODOLOGY

This report is based on an environmental scan (conducted between January 1, 2007, and January 1, 2014) of repeated surveys of post-9/11 U.S. military veterans. The results include repeated cross-sectional surveys and longitudinal surveys following the same individuals or households over time.

We included surveys with sample sizes of more than 1,000 post-9/11 veterans per administration and excluded hundreds of studies conducted within specific veteran populations for use in clinical trials. We only included surveys intended to be nationally representative of the veteran population or nationally representative of a specific subpopulation of veterans (e.g., women veterans or veterans with posttraumatic stress disorder [PTSD]). To that end, we excluded surveys with a specific region of focus (e.g., by state or county), as well as

member surveys conducted by veterans' service organizations, and we excluded surveys that used nonprobabilistic selection procedures, such as convenience or snowball sampling. We also included those nationally representative surveys of the general U.S. population with an estimated sample size of at least 1,000 post-9/11 veterans per administration with data on veteran status even if the surveys did not explicitly report veteran

These surveys are able to examine group-level changes over time and can therefore be useful in analyzing population trends.

outcomes. Note that some of these national surveys did not ask about dates of service, so post-9/11 veterans were not possible to directly identify in some cases.

To execute the scan, we conducted targeted searches of Google, Google Scholar, and PubMed to locate highly cited publications and technical reports, as well as grey literature produced by veteran-serving and other organizations. We furthermore identified surveys using *reference mining* (i.e., locating reports that cited key reports or were cited by those reports).

Identified surveys were categorized according to sampling frame, design and frequency of administration, population of focus, method of administration, funding source, and overarching purpose.

The survey sampling frame is the source from which the survey sample is drawn. Understanding the sampling frame can provide important information related to the broad representativeness of a survey. Veterans can be difficult to locate for survey research, and in fact there is no complete administrative list that houses up-to-date contact information for all veterans.<sup>2</sup> Despite this, researchers often employ sampling frames based on Department of Veterans Affairs (VA) or Department of Defense (DoD) administrative lists to identify veterans. In one common list-based sampling frame, veteran survey participants are identified via their connections to programs and services, most commonly through veterans' engagement with VA health centers. While this is an appropriate sampling frame in certain situations, this type of sampling has been found to be particularly inadequate when the goal is to obtain comprehensive rep-

resentativeness of the veteran population, because most veterans obtain their health care outside the VA health system, and VA users are distinctly different from non-VA users.<sup>3</sup> Alternatively, address-based sampling (ABS) frames are those that sample from the entire universe of residential addresses. These frames are considered the gold standard for obtaining broad representativeness of the civilian noninstitutionalized population but can be low-yield and thus costly for researchers or institutions interested only in surveying a small subset of the entire population, such as veterans.<sup>4</sup>

Survey designs included repeated cross-sectional surveys, longitudinal surveys, and overlapping panel surveys. Repeated cross-sectional surveys ask similar information of a different sample of individuals or households for each survey administration. These surveys are able to examine group-level changes over time and can therefore be useful in analyzing population trends. These surveys cannot be used to look at individual-level changes over time, apart from retrospective reports within surveys. Longitudinal surveys, on the other hand, involve following the same individuals or households prospectively over time and are useful for following individual-level trends.<sup>5</sup> For our purposes, *longitudinal survey* refers to the typical longitudinal survey following a single panel of individuals over the medium or long term. One subset of longitudinal surveys, called *overlapping panel surveys*, follow multiple groups of individuals over a fixed period, with each group's survey timeline overlapping.<sup>6</sup> We categorized these separately because they represent something of a hybrid approach between cross-sectional and longitudinal survey designs.

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## RESULTS

Our search identified 11 surveys, which are described in detail in Table 1. Surveys of exclusively veteran samples are in bold; longitudinal and overlapping panel surveys have been highlighted in gray.

All identified surveys were funded through federal agencies. Seven surveys were repeated cross-sectional surveys, one was a longitudinal survey, and three were overlapping panel surveys. Eight of the identified surveys utilized ABS frames, such as the U.S. Postal Service address file or the U.S. Census

Table 1. Identified Surveys

Survey	Population	Sample Frame	Data-Collection Method	Design and Frequency	Funder	Purpose
American Community Survey (ACS) <sup>a</sup>	U.S. households	U.S. Census Bureau's Master Address File	Online, mail, telephone, and personal-visit interviews	Repeated cross-sectional; conducted monthly to produce annual estimates	U.S. Census Bureau	The ACS provides estimates of selected social, economic, and housing characteristics of the U.S. population
Current Population Survey (CPS) <sup>b</sup>	U.S. civilian non-institutionalized population ages 16 and older	U.S. Census	Telephone and personal-visit interviews	Repeated cross-sectional; conducted monthly	U.S. Census Bureau	The CPS produces demographic and socioeconomic information for the U.S. population
Medical Expenditure Panel Survey (MEPS) Household Component <sup>c</sup>	U.S. civilian non-institutionalized population ages 18 and older	Respondents to the National Health Interview Survey	Mail, telephone, and personal-visit interviews	Overlapping panel; a new panel is selected each year and data for each panel are collected in 5 rounds of interviewing over two and a half years	The Agency for Healthcare Research and Quality (AHRQ)	The MEPS Household Component collects data on health insurance costs, as well as utilization and costs of specific health services for the U.S. population
<b>Millennium Cohort Study (MCS)<sup>d</sup></b>	<b>Active-duty, reserve, and National Guard members from all services</b>	<b>Department of Defense Manpower Data Center (DMDC)</b>	<b>Mail, online</b>	<b>Overlapping panel; data for each of four panels are collected every 3 years</b>	<b>U.S. Department of Defense</b>	<b>The MCS examines the impact of military exposures on long-term veteran health outcomes</b>
<b>National Health Interview Survey (NHIS)<sup>e</sup></b>	<b>U.S. civilian non-institutionalized population ages 18 and older</b>	<b>U.S. Census</b>	<b>Personal-visit interviews</b>	<b>Repeated cross-sectional; conducted continuously to produce annual data files</b>	<b>U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, and National Center for Health Statistics</b>	<b>The NHIS collects a broad range of information on the health of the U.S. non-institutionalized civilian population</b>

Table 1—Continued

Survey	Population	Sample Frame	Data-Collection Method	Design and Frequency	Funder	Purpose
National Survey of Veterans (NSV) <sup>f</sup>	U.S. non-institutionalized veteran population	U.S. Postal Service list of all residential addresses (for veteran portion)	Mail, online	Repeated cross-sectional; conducted in 1979, 2001, and 2010	U.S. Department of Veterans Affairs	The NSV collects information for the Department of Veterans Affairs to use in planning and allocating resources for programs and services for veterans
National Survey on Drug Use and Health (NSDUH) <sup>g</sup>	U.S. civilian non-institutionalized population ages 12 and older	Individuals within observed dwelling units within U.S. Census tracts	Personal-visit interviews	Repeated cross-sectional, conducted annually	The Substance Abuse and Mental Health Services Administration, an agency in the U.S. Department of Health and Human Services	The NSDUH examines the use of tobacco products, alcohol, and illicit drugs (including nonmedical use of prescription drugs), as well as mental health in the United States
<b>Project VALOR<sup>h</sup></b>	<b>U.S. Army or Marine Corps veterans who were deployed to combat in support of Operation Enduring Freedom or Operation Iraqi Freedom, with PTSD and without PTSD (comparison group)</b>	<b>Department of Veterans Affairs health care system inpatient or outpatient databases</b>	<b>Online, telephone</b>	<b>Longitudinal; conducted annually</b>	<b>U.S. Department of Defense</b>	<b>Project VALOR examines patterns and predictive measures for development or remission of PTSD</b>
Survey of Business Owners and Self-Employed Persons (SBO) <sup>i</sup>	U.S. business owners	IRS databases on all companies reporting any business activity	Online	Repeated cross-sectional; conducted every 5 years	U.S. Census Bureau	The SBO collects information on economic and demographic characteristics of businesses and business owners

Table 1—Continued

Survey	Population	Sample Frame	Data-Collection Method	Design and Frequency	Funder	Purpose
Survey of Income and Program Participation (SIPP) <sup>i</sup>	U.S. civilian non-institutionalized population ages 15 and older	U.S. Census Bureau's Master Address File	Personal-visit interviews	Overlapping panel; a new panel is selected every 3–4 years, and data for each panel are collected every 4 months for up to 5 years	U.S. Census Bureau	SIPP collects data on socioeconomic status, well-being, and program participation
<b>Survey of Veteran Enrollees' Health and Reliance upon VA (Survey of Enrollees)<sup>k</sup></b>	<b>Veterans enrolled in the Veterans Health Administration (VHA)</b>	<b>VHA Enrollment File</b>	<b>Telephone</b>	<b>Repeated cross-sectional; conducted annually</b>	<b>U.S. Department of Veterans Affairs</b>	<b>The Survey of Enrollees provides essential information on veteran utilization of health services to the U.S. Department of Veterans Affairs</b>

NOTE: Surveys including exclusively veteran samples are in bold; longitudinal and overlapping panel surveys are in gray.

<sup>a</sup> C. H. Alexander, "Still Rolling: Leslie Kish's 'Rolling Samples' and the American Community Survey," *Survey Methodology*, Vol. 28, No. 1, 2002, pp. 35–42; U.S. Census Bureau, "Sample Design and Selection," in *American Community Survey Design and Methodology* (January 2014), version 2.0, Washington, D.C., 2014.

<sup>b</sup> U.S. Census Bureau, *Technical Paper 66: Design and Methodology, Current Population Survey*, Washington, D.C., 2006.

<sup>c</sup> J. W. Cohen, A. C. Monheit, K. M. Beauregard, S. B. Cohen, D. C. Lefkowitz, D. E. Potter, J. P. Sommers, A. K. Taylor, R. H. Arnett III, "The Medical Expenditure Panel Survey: A National Health Information Resource," *Inquiry*, Vol. 33, No. 7, 1996–1997, pp. 373–389; S. B. Cohen, "Design Strategies and Innovations in the Medical Expenditure Panel Survey," *Medical Care*, Vol. 41, No. 7, 2003, pp. III-5–III-12.

<sup>d</sup> M. A. Ryan, T. C. Smith, B. Smith, P. Amoroso, E. J. Boyko, G. C. Gray, G. D. Gackstetter, J. R. Riddle, T. S. Wells, G. Gumbs, T. E. Corbeil, and T. I. Hooper, "Millennium Cohort: Enrollment Begins a 21-Year Contribution to Understanding the Impact of Military Service," *Journal of Clinical Epidemiology*, Vol. 60, No. 2, 2007, pp. 181–191.

<sup>e</sup> Centers for Disease Control and Prevention, "About the National Health Interview Survey," October 8, 2015 (as of August 1, 2016: [http://www.cdc.gov/nchs/nhis/about\\_nhis.htm](http://www.cdc.gov/nchs/nhis/about_nhis.htm)).

<sup>f</sup> Westat, *National Survey of Veterans, Active Duty Service Members, Demobilized National Guard and Reserve Members, Family Members, and Surviving Spouses*, Washington, D.C.: U.S. Department of Veterans Affairs, 2010.

<sup>g</sup> Substance Abuse and Mental Health Services Administration, *Behavioral Health Trends in the United States: Results from the 2014 National Survey on Drug Use and Health*, Washington, D.C.: U.S. Department of Health and Human Services, 2015.

<sup>h</sup> R. C. Rosen, Brian P. Marx, Nancy N. Maserejian, Darren W. Holowka, Margaret A. Gates, Lynn A. Sleeper, Jennifer J. Vasterling, Han K. Kang, and Terence M. Keane, "Project VALOR: Design and Methods of a Longitudinal Registry of Post-Traumatic Stress Disorder (PTSD) in Combat-Exposed Veterans in the Afghanistan and Iraqi Military Theaters of Operations," *International Journal of Methods in Psychiatric Research*, Vol. 21, No. 1, 2012, pp. 5–16.

<sup>i</sup> U.S. Census Bureau, "Survey of Business Owners and Self-Employed Persons (SBO): Methodology," February 9, 2016 (as of May 11, 2016: <https://www.census.gov/programs-surveys/sbo/technical-documentation/methodology.html>).

<sup>j</sup> U.S. Census Bureau, "Survey of Income and Program Participation: Methodology," January 18, 2016 (as of May 11, 2016: <http://www.census.gov/programs-surveys/sipp/methodology.html>).

<sup>k</sup> U.S. Department of Veterans Affairs, *2011 Survey of Veteran Enrollees' Health and Reliance upon VA: With Selected Comparison to the 1999–2010 Surveys*, Washington, D.C., March 2012.

## There is no longitudinal or overlapping panel survey that specifically examines issues uniquely relevant to the transition to civilian life for post-9/11 veterans and related outcomes.

Master Address File. Note that no identified surveys followed a random-digit-dial approach with lists of telephone numbers for identifying a sampling frame. The other three surveys used VA or DoD administrative lists to identify a sample. All three surveys utilizing list-based sampling were focused on issues related to health, and three of the eight ABS surveys were focused specifically on health.

Four surveys were focused specifically on sampling veteran populations (bolded in Table 1), while the other seven surveys sampled the civilian population more broadly. Three of the four veteran-focused surveys had veteran health outcomes as their primary research questions, while the fourth focused on veteran service utilization.

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### DISCUSSION

This review provides a comprehensive look at nationally representative and repeated surveys of post-9/11 U.S. military veterans. We identified 11 surveys as having sufficient sample sizes (or estimated sample sizes) of post-9/11 veterans and robust sampling procedures. Most of the identified surveys were very large national surveys of the civilian population, with estimated sample sizes of greater than 1,000 post-9/11 veterans.

There is no longitudinal or overlapping panel survey that specifically examines issues uniquely relevant to the transition to civilian life for post-9/11 veterans and related outcomes. The SIPP is the only longitudinal or overlapping panel survey that includes a sufficient estimated sample of post-9/11 veterans and does not focus exclusively on health-related issues. The SIPP

is a survey of the general population conducted by the U.S. Census Bureau and uses the U.S. Census's Master Address File. The survey contains questions related to socioeconomic status, including well-being, labor force participation, income, assets, education, and program utilization. The SIPP includes veteran-specific questions related to VA benefits and service utilization, including GI Bill utilization. The SIPP is not designed to follow veterans through the trajectory of their transitions to civilian life, as the duration of each SIPP panel ranges from two and a half years to four years.

There is a broader assortment of repeated cross-sectional surveys with a sufficient estimated sample of post-9/11 veterans. The majority of these surveys use U.S. Census data to conduct ABS, and they cover a range of topics. These surveys are most frequently concerned with topics related to health and health care utilization but also address employment, socioeconomic status, benefit utilization, and housing. Many of these surveys, particularly those aimed specifically at veteran populations, can be used to examine issues related to the veteran transition to civilian life at one point in time or over multiple points. Because of their cross-sectional nature, however, these surveys are not able to examine how individual veterans fare over time in their transition to civilian life.

Here we have identified the resources that are currently available to examine trends in issues related to post-9/11 veterans. This information should be useful to researchers and policymakers interested in the breadth, quality, and representativeness of longitudinal and ongoing cross-sectional research on veterans.

## Notes

<sup>1</sup>U.S. Department of Veterans Affairs, *Veterans Policy Research Agenda*, Washington, D.C.: Office of Policy and Planning, 2016; U.S. Interagency Council on Homelessness, *National Research Agenda: Priorities for Advancing our Understanding of Homelessness*, Washington, D.C., 2012; E. M. Yano, Lori A. Bastian, Susan M. Frayne, Alexandra L. Howell, Linda R. Lipson, Geraldine McGlynn, Paula P. Schnurr, Margaret R. Seaver, Ann M. Spungen, and Stephan D. Fihn, “Toward a VA Women’s Health Research Agenda: Setting Evidence-Based Priorities to Improve the Health and Health Care of Women Veterans,” *Journal of General Internal Medicine*, Vol. 21, Supp. 3, 2006, pp. S93–S101.

<sup>2</sup>D. L. Washington, S. Sun, and M. Canning, “Creating a Sampling Frame for Population-Based Veteran Research: Representativeness and Overlap of VA and Department of Defense Databases,” *Journal of Rehabilitation Research and Development*, Vol. 47, No. 8, 2010, pp. 763–771.

<sup>3</sup>J. A. Long, D. Polsky, and J. P. Metlay, “Changes in Veterans’ Use of Outpatient Care from 1992 to 2000,” *American Journal of Public Health*, Vol. 95, No. 12, 2005, pp. 2246–2251; M. Cefalu, et al., “Enrollment in and Reliance on the VA Health Care System,” in *Current and Projected Characteristics and Unique Health Care Needs of the Patient Population Served by the Department of Veterans Affairs*, Santa Monica, Calif.: RAND Corporation, RR-1165/1-VA, 2015, pp. 57–78 (as of August 11, 2016: [http://www.rand.org/pubs/research\\_reports/RR1165z1.html](http://www.rand.org/pubs/research_reports/RR1165z1.html)).

<sup>4</sup>M. W. Link, *Address Based Sampling: What Do We Know So Far?* webinar, Alexandria, Va.: American Statistical Association, 2010.

<sup>5</sup>A. Rafferty, P. Walthery, and S. King-Hele, *Analysing Change over Time: Repeated Cross Sectional and Longitudinal Survey Data*, UK Data Service, University of Essex and University of Manchester, 2015.

<sup>6</sup>N. Buck, J. Ermisch, and S. P. Jenkins, *Choosing a Longitudinal Survey Design: The Issues*, Colchester: ESRC Research Centre on Micro-Social Change, University of Essex, 1996.

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## About This Report

This report provides a detailed listing and analysis of surveys identified in the course of an assessment of ongoing survey research on post-9/11 U.S. military veterans. This information should be useful to researchers and policymakers interested in the breadth, quality, and representativeness of research on post-9/11 veterans that shows the trajectory of these individuals' reintegration into civilian life.

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