

HCFE Data Brief

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Characteristics of Uninsured Veterans: Evidence from the Medical Expenditure Panel Survey

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1. Introduction and Background

In the last several decades much has been learned about the characteristics of the uninsured, health insurance markets, and the health and economic consequences of being uninsured. Very little of the research in these areas has focused on the non-elderly veteran population. This is surprising since the VA has considered itself a safety net, providing care for veterans who have difficulty obtaining care elsewhere (Wilson and Kizer, 1997). Using Medical Expenditure Panel Survey (MEPS) data, in this Data Brief I descriptively characterize the uninsured, nonelderly veteran population and estimate factors that contribute to veterans' insurance status. I compare these results to those estimated for the entire nonelderly population.

The results presented here are based on work funded by the VA HSR&D grant "Health and Economic Outcomes for Uninsured Non-Elderly Veterans" (IIR 06-238-2). In particular aspects of two of that project's objectives are addressed: (1) investigating the characteristics of the uninsured veteran population and (2) estimating a multivariate model of insurance status for the non-elderly veteran population.

Some of the literature anticipates a few results presented. Using data from the Current Population Survey and a VHA Office of Policy and Planning Survey, Stockford, et al. (2002) find that uninsurance rates for veterans are well below those for the general population (6 percent for veterans and 14 percent for the population in 1999). Veterans are more likely to be insured than the general population because they are older (thus more likely in their peak earning years) and have job or vocational training and other employment-enhancing opportunities and resources. Several older studies have also determined that veterans without private insurance are more likely to use VA services (Kosloski, 1987; Page, 1982; Schlesinger, et al., 1984; Wolinsky, 1985). Jonk et al. (2003, 2005) investigated the relationship between health insurance coverage and access to care for Minnesota veterans using the 2001 Minnesota Health Access Survey. The authors found that veterans are less likely to be uninsured than the general population. Uninsured veterans were of lower income, less likely to have a usual source of care, and less confident about obtaining needed care.

Other findings include:

- Rates of uninsurance for low-income veterans and non-veterans are well above national averages in all regions and highest in the South. This is likely due to regional variations in Medicaid eligibility rules.
- Less than one percent of the non-elderly population is comprised of veterans with low income (below 125% of the federal poverty level). However, a very large proportion—42.7%—of this sub-group that is not in federal Medicaid eligibility categories is uninsured.
- Controlling for demographic factors (age, sex, race/ethnicity, education, income, insurance status) veterans are more likely to experience problems accessing care.

- Multivariate probit models of insurance status revealed very few qualitative differences between the model for veterans and non-veterans, suggesting that results of broader study of insurance status of the non-elderly population are applicable to veterans.

The remainder of this Data Brief is organized as follows. Section 2 describes the data. Section 3 presents descriptive, univariate, analysis and Section 4 multivariate analysis. Conclusions are provided in Section 5.

2. Data

Overseen by the federal Agency for Healthcare Research and Quality, the Medical Expenditure Panel Survey (MEPS) aims to provide ongoing nationally representative estimates of health care use, spending, payment sources, and insurance coverage for the civilian, community-dwelling U.S. population (Cohen, 1997) The study relied on person-level data from the household and medical provider components of MEPS, pooled across 2000–2006. Because MEPS has a rotating panel design with two-year panels, the sample contains more than one observation per respondent. To account for this and other sources of potential bias, I used survey weights and adjustments for complex survey design (sampling strata, primary sampling unit) as recommended in the MEPS documentation (AHRQ, 2007; AHRQ, 2008).

I used MEPS because it reports detailed and frequent measures of health insurance status as well as a wide range of health and disability measures. Certainly other surveys can provide counts and characteristics of uninsured populations, and results may differ slightly depending on which survey is used (Fronstin, 2000). Differences across surveys in estimates of the size of the uninsured population arise as a result of differences in instrument, survey timing, and sampling (Short, 2001). Study definitions and categories. Using various MEPS items, I defined the key analytical variables, including insurance coverage, health conditions, disability status, geographic region, and potential Medicaid eligibility under federally mandated categories. I used a definition of uninsurance that is common in the literature. People were considered to be uninsured if they lacked health insurance for an entire year.

VA care is not considered insurance in MEPS data. MEPS questions on insurance never mention or imply the VA (other than CHAMPVA). Consequently, for the purposes of this Data Brief, the correct interpretation of “uninsured” is no non-VA coverage. I did not attempt to infer VA care from MEPS health expenditure data, though this would be a possible future enhancement of this work.

To describe geographic variation in uninsurance, I was limited to the broad census regions identified in MEPS public-use files: Northeast, Midwest, South, and West. MEPS data do not identify individual states because of confidentiality concerns. The breadth of these large geographic categories kept us from attempting to use geographic variation to separate the effects of local economic conditions from the effects of public policy relevant to coverage, such as Medicaid policy. I explored Medicaid policy effects by looking at Medicaid eligibility requirements that apply across states.

Federal law specifies that adults with low incomes and assets can qualify for Medicaid if they belong to specific eligibility categories, including old age, blindness, disability, being pregnant, or having young children. States, in turn, establish their own income and asset thresholds, which can vary greatly from state to state. For example, although the federal income threshold for people with disabilities in most states is approximately 74 percent of the federal poverty level, the Balanced Budget Act of 1997 authorized states to optionally enroll disabled people with family incomes up to 250 percent of poverty. States also have limited power to expand eligibility to other categories of people through demonstration programs, as long as they obtain federal approval first. These programs remain relatively small nationally (US House Committee on Ways and Means 2004).

For the analyses, I defined low income as income less than 125 percent of poverty. I selected this level to include people with incomes moderately above the Medicaid eligibility threshold in most states because this group has high uninsurance rates and is a likely target of policy initiatives. To investigate the potential importance of Medicaid eligibility for people with disabilities or chronic conditions, I constructed a variable to identify those who are potentially eligible for Medicaid based on the mandatory federal categories that are relevant to the study population and for which variables exist in MEPS (blind, disabled, families with children). Based on MEPS survey items, I considered people to be in a federal Medicaid eligibility category if they (1) were blind; (2) were a parent of a child age eighteen or younger; or (3) had zero wages, reported not working due to disability, and had an income source that suggests disability (SSI, SSDI, veteran's pension, or workers' compensation). For brevity, I typically refer to such people as belonging to a "federal category."

The data included 109,703 observations from MEPS respondents ages 25–61. Of these, 8,431 represent veterans. I set the lower age cutoff at twenty-five to eliminate college students who might have parental insurance. I set the upper age cutoff at sixty-one because of a limitation of the MEPS income-source response categories: MEPS indicates when respondents have Social Security income but does not distinguish between disability and retirement income. People can start drawing Social Security income under old age provisions at age sixty-two, so excluding those over age sixty-one increases the accuracy of inferring that those reporting Social Security income have it through SSDI.

3. Univariate Descriptive Analysis

Non-elderly veterans are less likely to be uninsured than the general non-elderly population, overall and in the regional, income, and Medicaid eligibility categories captured in Table 1. Like the general population, uninsurance rates for veterans are highest in the South and particularly high for low-income individuals. There are at least two possible explanations for lower rates of uninsurance among veterans. One is that they are more likely to be employed. Another is that they may be relatively more willing to and successful at navigating the administrative processes to receive public insurance, perhaps due to their prior (the military health system) or current (the VA) affiliation with government-sponsored care.¹ Finally, they may qualify at higher rates for Medicare due to higher rates of disability.

¹ Recall that VA care is not considered insurance in MEPS data.

Table 1. Uninsurance Rates for the Total Population and Veterans, by Region, Income and Medicaid Category Adults Aged 25-61, 2000-2006		
	All	Veterans
All	15.0%	10.8%
Northeast	10.5%	9.5%
Midwest	11.4%	9.7%
South	18.6%	12.1%
West	16.8%	10.5%
< 125% FPL	35.6%	32.5%
Not in federal Medicaid category	15.2%	11.2%

Source: Authors' tabulations of MEPS data.
FPL: Federal Poverty Level.
Percent uninsured: Percent of person-years with no health insurance for whole year.
Federal Medicaid eligibility categories: blind; parent of child 18 or under; or zero wages and not working due to disability and income from SSI, SSDI, VA pension, and/or workers' compensation.

Table 2 shows that rates of uninsurance for low-income veterans and non-veterans are well above national averages in all regions and highest in the South. This is likely due to regional variations in Medicaid eligibility rules, as described by Pizer, Frakt, and Iezzoni (2009). Low-income veterans relative to non-veterans are more likely to be uninsured in the Northeast and Midwest and less likely in the South and West. Perhaps this is due to degree of access to or use of VA care. Where VA access and use is greater one might expect higher levels of uninsurance since VA care is a substitute for insurance.

Higher-income veterans are less likely than non-veterans to be uninsured in all regions.

Table 2. Percent Uninsured by Region, Income, and Veteran Status; Adults Aged 25-61, 2000-2006					
	All	North-east	Midwest	South	West
Veterans					
All	10.8%	9.5%	9.7%	12.1%	10.5%
< 125% FPL	32.5%	23.7%	32.4%	41.4%	20.5%
> 125% FPL	9.0%	8.3%	7.7%	9.7%	9.9%
Non-Veterans					
All	15.4%	10.6%	11.6%	19.3%	17.4%
< 125% FPL	35.8%	21.4%	30.2%	44.6%	35.6%
> 125% FPL	12.4%	9.2%	9.3%	14.9%	14.5%

Source: Authors' tabulations of MEPS data.

FPL: Federal Poverty Level.

Percent uninsured: Percent of person-years with no health insurance for whole year.

Less than one percent of the non-elderly population is comprised of veterans with low income. However, as shown in Table 3, 42.7% the sub-group of this population that is not in federal Medicaid eligibility categories is uninsured.

	Federal categories	Not federal categories	Share of population
Veterans			
All	10.1%	11.2%	8.5%
< 125% FPL	25.4%	42.7%	0.6%
> 125% FPL	8.3%	9.5%	7.9%
Non-Veterans			
All	15.2%	15.7%	91.5%
< 125% FPL	31.0%	48.3%	12.0%
> 125% FPL	11.8%	13.0%	79.5%

Source: Authors' tabulations of MEPS data.
 FPL: Federal Poverty Level.
 Percent uninsured: Percent of person-years with no health insurance for whole year.
 Federal Medicaid eligibility categories: blind; parent of child 18 or under; or zero wages and not working due to disability and income from SSI, SSDI, VA pension, and/or workers' compensation.

Table 4 reports demographic variables for veterans and the entire working-age population overall and for the uninsured. On average and relative to the entire working-age population, veterans earn higher incomes, are older, more educated, less likely to be female, more likely to be black, and less likely Hispanic. Uninsured veterans differ from all veterans across these demographic categories in much the same way the uninsured working population differs from the entire working population.

	Veterans		US Working-Age Population	
	All	Uninsured	All	Uninsured
sample size	8,431	1,058	109,703	22,599
mean age	47.9	46.9	42.3	40.1
% female	8.3%	5.9%	51.1%	44.0%
% black	12.8%	17.2%	11.8%	14.2%

% Hispanic	5.3%	7.2%	13.0%	30.5%
% HS dropout	3.2%	6.6%	12.3%	29.5%
% with HS diploma	40.5%	52.8%	33.9%	39.3%
% with some college	19.5%	16.8%	15.4%	13.0%
% with college degree	36.4%	23.9%	38.0%	17.6%
mean family income	\$41,955	\$86,763	\$35,644	\$19,838
median family income	\$35,454	\$19,861	\$29,000	\$15,000

Source: Authors' tabulations of MEPS data.

Table 5 reveals why veterans have, on average, higher incomes than non-veterans. The difference is due in large part to a greater proportion with incomes above 400% of poverty. This is true for both the insured and uninsured.

	Veterans		US Working-Age Pop.	
	All	Uninsured	All	Uninsured
0-100%	5.4%	16.6%	9.3%	22.2%
100-125%	2.1%	6.1%	3.3%	7.7%
125-200%	7.8%	17.7%	11.1%	22.6%
200-400%	29.7%	33.7%	31.1%	30.9%
400% and above	55.0%	25.9%	45.3%	16.7%
TOTAL	100%	100%	100%	100%

Source: Authors' tabulations of MEPS data.

With the exception of access to medications, veterans report better access to medical care (Table 6). In particular, uninsured veterans are far more likely to have a usual source of care than their non-veteran counterparts. This is likely due to access to VA care. It is unclear why uninsured veterans would have higher rates of delays and inability to get necessary medications.

	Veterans		US Working-Age Pop.	
	All	Uninsured	All	Uninsured
% w/ usual source of care *	78.4%	53.2%	75.4%	4.6%
% w/ problems getting needed care	2.0%	5.8%	2.6%	7.4%
% delayed getting nec. care	5.0%	8.1%	5.1%	8.4%
% unable to get nec. med. care	3.1%	9.5%	3.8%	10.5%
% unable to get nec. dental care	4.6%	11.8%	5.3%	12.5%
% delayed getting meds	3.3%	6.3%	3.8%	5.4%
% unable to get nec. meds	2.2%	6.5%	2.9%	6.1%

Source: Authors' tabulations of MEPS data.
 * Only the usual source of care question was posed in all years 2000-2006. The remaining entries are based on 2001-2006 data.

4. Multivariate Regression Analysis

With the exception the usual source of care indicator, all variables in Table 6 were combined to form an “access problems” indicator. Table 7 reports adjusted odds ratios for various predictors of an access problem. After controlling for other factors veterans are more likely to experience problems accessing care, contradicting the descriptive results of Table 6. That suggests that the principal reasons veterans appeared to have better access in Table 6 is due to demographic differences between veterans and non-veterans.

Predictor variable	Adjusted odds ratio	95% confidence interval	p value
Veteran	1.29	[1.22, 1.36]	< 0.0005
Age ^a	1.00	[1.00, 1.00]	0.008
Female (male = reference)	1.12	[1.08, 1.15]	< 0.0005
Black race (white = reference)	0.93	[0.85, 1.01]	0.092
Hispanic (not Hispanic = reference)	0.72	[0.65, 0.81]	< 0.0005
High school dropout	1.07	[1.00, 1.15]	0.041
Some college	1.00	[0.93, 1.07]	0.961
College degree	0.95	[0.90, 1.00]	0.073
Income ^b	0.99	[0.99, 1.00]	< 0.0005
Uninsured (insured = reference)	1.88	[1.11, 1.26]	< 0.0005

Source: Authors’ analysis of MEPS data.
^a Age was entered into model as a continuous variable, in one year increments
^b Income was entered into model as a continuous variable, in \$1,000 increments

Table 8 reports probit model results on insurance status (the dependent variable is one if the respondent is insured, zero otherwise). There are very few qualitative differences between the model for veterans and non-veterans. One difference of note is that veterans with cognitive impairments are less likely to be insured while non-veterans with cognitive impairments are more likely. Perhaps this is due to the provision of good mental health benefits through the VA, which substitutes for non-VA mental health care and the insurance that would be required to render that care more affordable.

Variable	Veterans Coefficient (Std. Err.)	Non-Veterans Coefficient (Std. Err.)
age	0.046 (0.018)*	0.054 (0.0041)***
age squared	-0.00036 (0.00021)	-0.00049 (0.000049)***
black	-0.26 (0.048)***	-0.23 (0.014)***
Hispanic	-0.22 (0.062)***	-0.59 (0.012)***
high school dropout	-0.81 (0.086)***	-0.92 (0.015)***
high school diploma	-0.36 (0.047)***	-0.50 (0.013)***
some college	-0.046 (0.059)	-0.25 (0.017)***
very good health	-0.074 (0.054)***	0.049 (0.013)***

good health	-0.18 (0.055) ***	-0.056 (0.013)***
fair health	-0.37 (0.073) ***	-0.12 (0.018)***
poor health	-0.72 (0.098)	-0.098 (0.031)**
functional limitations	0.076 (0.096)	0.062 (0.030)*
cognitive impairment	-0.053 (0.14)**	0.19 (0.048)***
vision impairment	-0.23 (0.077)*	-0.13 (0.022)***
hearing impairment	0.14 (0.067)	0.023 (0.027)
assistive device	0.050 (0.16)	0.38 (0.068)***
constant	0.42 (0.40)	0.28 (0.085)***
year fixed effects	not shown	not shown
Source: Authors' analysis of MEPS data. Significance: * p < 0.05, ** p < 0.01, *** P< 0.001		

5. Conclusion

In this Data Brief I explored descriptive characteristics of veterans and their insurance status, comparing them to those of the broader population. The main findings include:

- On average and relative to the entire working-age population, veterans earn higher incomes, are older, more educated, less likely to be female, more likely to be black, and less likely Hispanic.
- Non-elderly veterans are less likely to be uninsured than the general non-elderly population. One possible explanation is that they are more likely to be employed. Another is that they may be relatively more willing to and successful at navigating the administrative processes to receive public insurance. Finally, they may qualify at higher rates for Medicare due to higher rates of disability.
- Rates of uninsurance for low-income veterans and non-veterans are well above national averages in all regions and highest in the South. This is likely due to regional variations in Medicaid eligibility rules.
- Less than one percent of the non-elderly population is comprised of veterans with low income. However, a very large proportion—42.7%—of this sub-group that is not in federal Medicaid eligibility categories is uninsured.
- With the exception of access to medications, veterans report better access to medical care. However, after controlling for other factors (age, sex, race/ethnicity, education, income, insurance status) veterans are more likely to experience problems accessing care.

- Multivariate probit models of insurance status revealed very few qualitative differences between the model for veterans and non-veterans, suggesting that results of broader study of insurance status of the non-elderly population are applicable to veterans.

A limitation of the data is that it doesn't clearly identify veterans with access to VA care. One could infer VA patient status from MEPS expenditure variables, something I'll consider in future work.

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