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Veteran Status, Sociodemographic Characteristics, and Healthcare Factors Associated with Visiting a Mental Health Professional

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Abstract

Using data from a nationally representative study of the community-dwelling U.S. population, we estimated the percentage of male veterans who visited a mental health professional in the past year, compared it to an estimate from non-veteran males, and examined factors associated with visiting a mental health professional. We found that 10.5% of male veterans visited a mental health professional in the past year, compared to only 5.6% of male non-veterans. In the regression models, veteran status, sociodemographic factors, and healthcare utilization were independently associated with visiting a mental health professional. These findings demonstrate the importance of using nationally representative data to assess the mental healthcare needs of veterans.

Keywords

CDC; NHANES; Mental health professionals; Veterans

Introduction

As of 2011, there were approximately 21.6 million community-dwelling veterans living in the United States (NCVAS 2013). This population includes veterans who served during conflicts that ended decades ago, recent conflicts in Iraq and Afghanistan, and also during periods of no major military conflicts. These varied military experiences can be related to health in many ways, through positive and negative selection, environmental exposures, access to healthcare, and sociodemographic trajectories (MacLean and Elder 2007). This

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large and heterogeneous population of community-dwelling veterans appears to be at increased risk for mental health problems (Black et al. 2004; Maclean and Elder 2007; Seal et al. 2009), requiring psychiatric services not only within the Veteran Affairs (VA) healthcare system and Department of Defense's (DOD) Military Health System, but also within community-based healthcare systems. The Institute of Medicine's (IOM) (2013) report on the health and well-being of Iraq and Afghanistan veterans and their families devoted substantial attention to mental health and mental healthcare. It identified access to mental healthcare as crucial to prevent potential outcomes of untreated mental disorders including suicide, functional limitations, and marital, family, and economic discord.

Clinical and epidemiological research concerning veterans who served during different eras [i.e., Vietnam-era, Gulf War, Operation Enduring Freedom (OEF), Operation Iraqi Freedom (OIF)] have found that veterans report poorer mental health than civilians; among veterans, deployment and combat experience are associated with increased rates of poor mental health (Black et al. 2004; Boscarino 1995; Luncheon and Zack 2012). This greater mental health need often results in increased mental health specialty visits and expenditures (Chan et al. 2009; Safran et al. 2009; McKibben et al. 2013) and psychotropic medication use (Frenk et al. 2015). However, the existing literature is limited in generalizability because most studies focus on a specific cohort of veterans, such as those recently deployed in OIF and OEF (Elbogen et al. 2013; Pietrzak et al. 2012). In addition, most prior studies are based on administrative data from the VA health care system, which only captures a select group of veterans who choose to participate in that particular health system. A population-based study in 2000 found that 87% of people who self-identified as having served in the military did not use the VA for health care in the past 12 months (Nelson et al. 2007). A more recent report from the 2010 National Survey of Veterans found that 32% of veterans had no plans to use the VA system in any way (NCVAS 2011). There are also significant differences between VA users and non-users in demographic factors, military experience, and health status (Sayer et al. 2015). This makes it challenging to generalize their findings to the millions of community-dwelling veterans in the United States.

New understanding of veterans' mental healthcare utilization patterns can be gained by examining veterans who participated in nationally representative surveys of the community-dwelling population. This population-based approach allows us to examine mental healthcare utilization among veterans who may not use the VA healthcare system (in addition to those who do use it) and facilitates comparisons between veterans and non-veterans, which clarifies how veterans' mental healthcare utilization differs from their civilian counterparts.

This study examined the percentage of male veterans who had visited a mental health professional in the past year. The specific aims were to (1) estimate male veterans' and nonveterans' visits to mental health professionals and (2) examine how veteran status, sociodemographic factors, and healthcare utilization are associated with visiting a mental health professional.

Methods

Study Design and Sample

Data for this analysis came from the National Health and Nutrition Examination Survey (NHANES), a continuous, cross-sectional survey conducted by the National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention. For each 2 year sample, a complex, multistage probability sampling design was used to generate a representative sample of the civilian, noninstitutionalized U.S. population residing in the 50 states and the District of Columbia (active duty military personnel are excluded from the survey). Survey participants received a detailed in-home interview followed by a standardized health examination in a mobile examination center (CDC 2014; Zipf et al. 2013). The survey's protocols were approved by the NCHS's Research Ethics Review Board, and informed consent was obtained from all participants.

Since 1999, data have been collected annually but publicly released in 2-year cycles. Data from 2005 to 2010 were combined to provide enough cases to allow us to generate statistically reliable estimates. The analytic sample includes men aged 20 years and older who had non-missing data on all covariates and the outcome variable (n= 6604). The study was limited to men due to the small number of female veterans among NHANES respondents. The interview response rate for the combined cycles was 79.4% (NCHS 2011). The research analyses reported in the manuscript involved secondary data analysis of publicly available de-identified data. Therefore, IRB approval was not required. The authors do not have any conflicts of interest to report and certify responsibility for the manuscript.

Variables

Outcome Variable—During the household interview, respondents were asked, "During the past 12 months, have you seen or talked to a mental health professional such as a psychologist, psychiatrist, psychiatric nurse or clinical social worker about your health?" Responses were categorized into a dichotomous variable (1 = visited a mental healthcare professional; 0 = no visit). Mental health professionals could include those inside the VA system as well as those in public and private systems in the community.

Military Service—Respondents' military service was based on a response to the question, "Did you ever serve in the Armed Forces of the United States?" Responses were categorized into a dichotomous variable (1 = yes, 0 = no).

Sociodemographic Variables—Sociodemographic variables included respondents' age (20–39, 40–59, 60+); self-reported race/Hispanic origin (NHANES categories: non-Hispanic White, non-Hispanic Black, Mexican–American, and other); highest level of education (less than a high school diploma, a high school diploma or equivalent, some college or an Associate's degree, or a 4 year degree or more schooling); and marital status (currently married, not currently married). Poverty level was based on the family income to poverty ratio (PIR). A PIR of 1.00 was considered representative of a family income at 100% of the federal poverty guideline (FPG). Participants were grouped into four categories: <1.00 PIR (<100% FPG, poverty) 1.00–1.99 PIR (100–199% FPG); 2.00–3.99 PIR (200–399% FPG);

4.00 + PIR (400% + FPG). Respondents' work status was categorized as "Working or with a job or business," "Retired," "Disabled or unable to work due to health," and "Not working: looking for work, a student, or taking care of family."

Health Risk Behaviors—Health risk behaviors included two variables: lifetime consumption of alcohol (abstain, former drinker, current drinker), and cigarette smoking (abstain, former smoker, current smoker). The data on alcohol consumption come from the exam, and the smoking data come from the household interview.

Healthcare Variables—Healthcare utilization variables included the number of times respondents received healthcare in the past year (0–1, 2–3, 4–9, or 10 or more times) and respondents' health insurance status (1 = has health insurance; 0 = does not have health insurance).

Data Analysis

Statistical analyses were conducted using the SVY commands in Stata 12.1 to adjust for differential probabilities of selection and the complex sampling design (StataCorp 2011). Exam sample weights were used to obtain estimates representative of the civilian, non-institutionalized U.S. population 20 years and older. Variance estimates were computed using the Taylor series linearization approximation method (Johnson et al. 2013).

The analysis was divided into two parts: descriptive and explanatory. In the descriptive part, we generated the prevalence of visiting a mental health professional in the past year by veteran status. Because of significant age and race/Hispanic origin differences between veterans and non-veterans, we also generated weighted estimates that were adjusted to the age and race/Hispanic origin distribution of the 2005–2010 analytic sample using the direct standardization method. For both sets of estimates, we tested for differences between veterans and non-veterans using an adjusted Wald test of equal means. Finally, we applied the unadjusted 2005–2010 estimate to the average number of community-dwelling, male veterans living in the U.S. between 2005 and 2010 to generate a population count of the number of male veterans who visited a mental health professional in the past year (Johnson et al. 2013; NCVAS 2013).

In the explanatory part, we ran four logistic regression models to estimate adjusted odds-ratios (AOR) assessing the association between veteran status and having at least one visit with a mental health professional while controlling for sociodemographic, health behavior, and other factors that impact decisions to utilize healthcare (Andersen 1995; Mechanic et al. 1991). These additional variables were added in a step-wise fashion: the first model included only veteran status; in the second model sociodemographic characteristics were added; in the third model health risk behaviors were added; and in the fourth model health care utilization and health insurance were added.

Results

Descriptive Statistics

Table 1 presents the sociodemographic characteristics of veterans and non-veterans in the analytic sample. There were many statistically significant differences between the two groups of men. Compared to male non-veterans, veterans were older (55% vs. 12% aged 60+) and more likely to be non-Hispanic white, have at least a high school diploma, be above the poverty line, be currently working, be a former smoker, and have health insurance. They were less likely to be currently married than non-veteran men.

Prevalence and Population Estimates

Figure 1 presents crude and adjusted estimates for visiting a mental health professional among male veterans and non-veterans. The crude estimates indicate that 7.7% (95% CI 6.3–9.2) of male veterans aged 20 years and older visited a mental health professional in the past year. This percentage was significantly larger than the percentage of male non-veterans who visited a mental health professional in the past year (5.8%; 95% CI 5.0–6.5; $p < 0.05$). After adjusting for race/Hispanic origin and age, the veteran estimate increased (10.5%) while the non-veteran estimate remained essentially the same (5.6%); this difference was also statistically significant ($p < 0.05$). We estimate that for the period 2005–2010, about 1.6 million (95% CI 1.3–1.9 million) community-dwelling male veterans visited a mental health professional in the past year.

Explanatory Models of Mental Health Visits

Table 2 presents AORs for the four regression models for the analytic sample of U.S. men age 20 and older with no missing data. In Model 1, the odds that male veterans visited a mental health professional were 36% greater than the odds for non-veteran males (AOR = 1.36, $p < 0.05$). In Model 2, controlling for sociodemographic characteristics, the association between veteran status and visiting a mental health professional remained significant and the coefficient increased in size (AOR= 1.82, $p < 0.01$). In Model 3, the addition of non-significant health risk behaviors reduced the size of the veteran status coefficient, but it remained significantly associated with visiting a mental health professional (AOR = 1.77, $p < 0.01$). In Model 4, once again, the veteran status coefficient size diminished, but still remained statistically significant. The odds that a male veteran visited a mental health professional were 72% greater than for a non-veteran male (AOR = 1.72, $p < 0.01$).

Compared to young adults (20–39), older adults 60+ were significantly less likely to visit a mental health professional (AOR = 0.34, $p < 0.01$). Non-Hispanic black and Mexican-American men were significantly less likely to visit a mental health professional compared to non-Hispanic white men (AOR = 0.60, $p < 0.01$; AOR = 0.47, $p < 0.001$, respectively). Men not currently married or cohabiting were significantly less likely to visit a mental health professional than men who were married or cohabiting (AOR = 0.62, $p < 0.01$). Compared to men without a high school diploma, men with some college or an associate degree and men with a 4 year degree or more education were more likely to visit a mental health professional (AOR = 1.56, $p < 0.05$; AOR = 1.81, $p < 0.01$, respectively). Compared to working men, men who were not working due to a disability or health issue were over six

times as likely to visit a mental health professional (AOR= 6.60, $p < 0.001$). These patterns remained stable when non-significant health risk behaviors were added in Model 3 and when significant health care factors were added in Model 4. Compared to men who did not receive healthcare or only received it once during the past year, men who received healthcare 2–3 times, 4–9 times, and 10 or more times were 2–3 times as likely to visit a mental health professional in the past year (AOR = 2.13, $p < 0.01$; AOR = 3.23, $p < 0.001$; AOR = 3.44, $p < 0.001$).

Discussion

Our analysis shows that about one in ten male veterans reported visiting a mental health professional in the past year. This prevalence estimate is approximately 10% lower than that reported in studies of OEF/OIF veterans and active duty military personnel (McKibben et al. 2013; Pietrzak et al. 2012). This is consistent with recent research demonstrating greater mental healthcare need among veterans who received VA services compared to non-users (Vaughan et al. 2014). Based on our findings, community-dwelling veterans demonstrate greater mental healthcare utilization than non-veterans; compared to prior research, these community-dwelling veterans use less mental healthcare compared to veterans within the military system. This comparative approach is important for future planning of targeted and appropriate mental health services for veterans who are not institutionalized. The community-dwelling veteran population in the U.S. has many features that make them distinct from their non-veteran counterparts, such as older age, less racial/ethnic diversity, and higher rates of health insurance coverage. These features, in turn, are associated with utilization of mental healthcare services (Lindamer et al. 2012).

In the NHANES sample, the sub-population with military service was older than those who did not serve (56 vs. 12% age 60+) and men aged 60+ were less likely to report a mental health visit compared to men age 20–39 in both groups. Because only three survey cycles are used in the analysis, we could not disentangle age and cohort effects (Frenk et al. 2013). Therefore, we are unable to determine whether these age patterns are due to compositional differences between veterans and non-veterans, age differences in mental healthcare need, cohort differences in stigma against mental healthcare utilization, cohort differences based on era of service, or mortality selection as the healthiest individuals survive to later ages.

Non-Hispanic black men and Mexican-American men were significantly less likely to have visited a mental health professional in the past year compared to non-Hispanic white men. In addition, men with some college/associate degree or a 4 year degree or more education were more likely to have visited a mental health professional than men with less than a high school diploma. Community health providers should be attuned to indicators of unmet need among veterans and non-veterans with low education, minority racial/ethnic status, and those who are currently married.

Our results also indicated strong linkages between physical and mental healthcare visits. Greater levels of general healthcare utilization were associated with 2–3 times greater odds of mental healthcare utilization in the past year, even while controlling for the significant factor of not working due to health or disability. Strategies to integrate mental health

services and general medical care have focused on increasing administrative, financial, and clinical compatibility and cooperation at multiple levels of health services provision (Kilbourne et al. 2008). Integration efforts in the VA and civilian community settings are associated with increased mental healthcare utilization and satisfaction with treatment (Ede et al. 2015; Zeiss and Karlin 2008).

This study had some limitations. First, our measure of military service is based on a single self-report question. The NHANES did not collect any further information about respondents' military history, which obscures the influence of important variables like combat experience and resulting injuries or trauma (i.e., post-traumatic stress disorder or traumatic brain injuries). Second, due to the relatively small number of veterans in the NHANES waves, some of the confidence intervals are wide and may have resulted in a lack of power to identify significant covariate effects. Due to sample size, we also could not examine mental healthcare utilization among female veterans, a growing sub-population of veterans whose health care needs may differ from male veterans (Haskell et al. 2010; Tsai et al. 2015). Third, our measure of mental health visit is limited compared to more detailed measures of frequency, type of visits, and includes a relatively large time span (12 months). Selfreported dichotomous measures of recent mental health care utilization, however, are represented in the literature, especially for large epidemiological surveys (Safran et al. 2009; McKibben et al. 2013; Elbogen et al. 2013).

The strengths of this study are that it is based on a large, nationally representative sample of U.S. adults that includes veterans who may not use the VA healthcare system and thus are excluded from studies based on VA administrative data. The relatively recent experience of OIF/OEF veterans and the aging of previous generations of veterans has garnered calls for increased provision of mental health services in the community for these population (IOM 2013; Chan et al. 2009). Adequate provision of mental health care services for all veterans is an important public health goal, but challenges include negative perceptions about mental healthcare, reluctance to seek care due to social stigma within the military, and insufficient capacity of the current healthcare system (Burnam et al. 2009; Elbogen et al. 2013; Matarazzo et al. 2016). Monitoring and understanding of patterns of need for community-dwelling veterans can improve service provision in both public and private healthcare systems.

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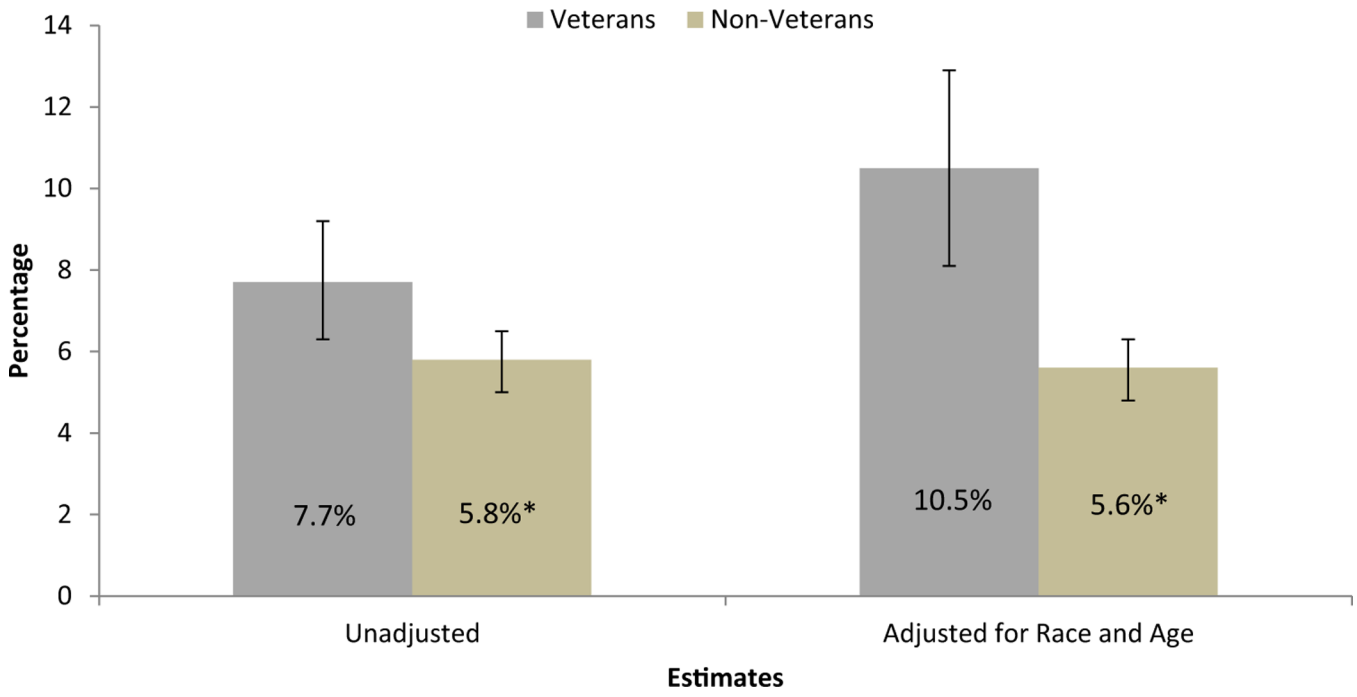

Fig. 1.

Percentage of male veterans and non-veterans 20 years and older who visited a mental health professional in the past year, 2005– 2010. Statistically significant difference (*$p < 0.05$) between veterans and non-veterans. Visiting a Mental Health Professional, “During the past 12 months, have you seen or talked to a mental health professional such as a psychologist, psychiatrist, psychiatric nurse or clinical social worker about your health?” Exam sampling weights utilized to adjust for differential probabilities of selection and the complex sampling design

Table 1

Descriptive statistics for men 20 years and older by veteran status, NHANES 2005–2010 (n = 6604)

	Male veterans (n = 1762)		Male non veterans (n = 4842)	
	n	% (95% CI)	n	% (95% CI)
Sociodemographics				
Age				
20–39	159	12.6 (10.5–14.6)	2016	46.4 * (44.2–48.5)
40–59	401	32.5 (29.3–35.8)	1747	41.8 * (39.9–43.6)
60+	1202	54.9 (51.6–58.3)	1079	11.8 * (10.5–13.2)
Race/Hispanic Ethnicity [a]				
Non-Hispanic White	1194	83.0 (79.5–86.5)	2219	68.8 * (64.9–72.6)
Non-Hispanic Black	353	9.5 (7.2–11.7)	941	9.9 (8.4–11.4)
Mexican-American	112	2.7 (1.6–3.8)	1044	10.5 * (8.0–13.0)
Marital status				
Currently married	1264	75.5 (73.3–77.6)	3204	67.4 * (65.1–69.7)
Not currently married [b]	498	24.5 (22.4–26.7)	1638	32.6 * (30.3–34.9)
Education				
No high school diploma	311	13.4 (10.7–16.1)	1577	20.2 * (18.1–22.3)
High school/GED diploma	489	27.4 (24.3–30.5)	1142	24.4 (22.4–26.3)
Some college/associate's degree	569	35.0 (31.7–38.4)	1138	27.4 * (25.8–29.0)
4-year degree or more	393	24.2 (20.2–28.1)	985	28.1 * (25.3–30.9)
PIR				
<100% FPG (poverty)	152	5.5 (4.1–6.8)	1012	13.1 * (11.7–14.6)
100–199% FPG	444	19.3 (16.6–21.9)	1251	18.4 (16.8–20.0)
200–399% FPG	601	35.8 (32.8–38.8)	1292	28.9 * (26.8–30.9)
400%+ FPG	565	39.5 (35.4–43.5)	1287	39.6 (37.2–42.0)
Working status				
Working/with a business	669	50.3 (47.0–53.7)	3468	80.8 * (79.0–82.5)
Not working: retired	863	37.8 (35.0–40.6)	573	6.5 * (5.6–7.4)
Not working: disabled/unable to work due to health	166	8.1 (6.4–9.8)	418	5.5 * (4.5–6.6)
Not working: looking for work/student/ taking care of family	64	3.8 (2.9–4.8)	383	7.2 * (6.2–8.3)
Health risk behaviors				
Alcohol consumption (lifetime)				
Abstain	104	5.1 (3.7–6.6)	355	6.3 (5.3–7.4)
Former	481	22.5 (19.7–25.3)	881	14.2 * 12.6–15.8
Current	1177	72.4 (69.4–75.4)	3606	79.5 * (77.6–81.3)
Smoking (lifetime)				
Abstain	575	33.2 (29.8–36.7)	2306	50.5 * (48.2–52.9)

	Male veterans (n = 1762)		Male non veterans (n = 4842)	
	n	% (95% CI)	n	% (95% CI)
Former	836	45.7 (42.7–48.7)	1243	23.8 * (22.0–25.6)
Current	351	21.1 (17.7–24.5)	1293	25.7 * (23.8–27.5)
Healthcare utilization/health insurance				
Times received healthcare (past year)				
0–1	411	27.0 (24.4–29.7)	2283	47.4 * (45.3–49.5)
2–3	476	26.1 (23.2–29.0)	1182	25.7 (24.1–27.3)
4–9	552	31.1 (28.1–34.1)	883	18.0 * (16.7–19.3)
10+	323	15.7 (13.8–17.6)	494	8.9 * (7.6–10.1)
Health insurance status				
No insurance	145	8.4 (6.7–10.2)	1482	24.7 * (22.6–26.9)
Have insurance	1617	91.6 (89.8–93.3)	3360	75.3 * (73.1–77.4)

Exam weights utilized to adjust for differential probabilities of selection and the complex sampling design

*Statistically significant difference ($p < 0.05$) between veterans and non-veterans males

[a]Estimates for persons from other races are not provided separately

[b]Includes divorced/separated, widowed, never married

Table 2

Logistic regression models for visiting a mental health professional on sociodemographic characteristics, health risk behaviors, healthcare utilization, and health insurance status, NHANES: 2005–2010

	Model 1		Model 2		Model 3		Model 4	
	Adjusted odds ratios (SE)	95% confidence intervals	Adjusted odds ratios (SE)	95% confidence intervals	Adjusted odds Ratios (SE)	95% confidence intervals	Adjusted odds Ratios (SE)	95% confidence Intervals
Socio demographic characteristics								
Veteran status								
Non-veteran [ref]								
Veterans	1.36* (0.17)	1.06–1.75	1.82** (0.29)	1.31–2.52	1.77** (0.29)	1.27–2.48	1.72** (0.28)	1.23–2.39
Age								
20–39 [ref]								
40–59			1.01 (0.18)	0.71–1.44	0.97 (0.18)	0.67–1.40	0.85 (0.16)	0.59–1.24
60+			0.34** (0.12)	0.17–0.70	0.33** (0.12)	0.16–0.67	0.27** (0.10)	0.13–0.55
Race/hispanic ethnicity[a]								
Non-hispanic white [ref]								
Non-hispanic black			0.60** (0.11)	0.43–0.86	0.63* (0.11)	0.44–0.89	0.64* (0.12)	0.45–0.92
Mexican-American			0.47*** (0.09)	0.33–0.68	0.49*** (0.09)	0.35–0.70	0.58** (0.11)	0.40–0.84
Marital status[b]								
Currently married/cohabiting [ref]								
Not currently married/ cohabiting~			0.62** (0.09)	0.47–0.82	0.62** (0.09)	0.47–0.83	0.60** (0.08)	0.46–0.79
Education								
No. H.S. diploma [ref]								
H.S. diploma			1.14 (0.21)	0.79–1.65	1.18 (0.22)	0.82–1.72	1.16 (0.22)	0.79–1.71

	Model 1		Model 2		Model 3		Model 4	
	Adjusted odds ratios (SE)	**95% confidence intervals**	**Adjusted odds ratios (SE)**	**95% confidence intervals**	**Adjusted odds Ratios (SE)**	**95% confidence intervals**	**Adjusted odds Ratios (SE)**	**95% confidence Intervals**
Some college/assoc. deg.			1.56* (0.28)	1.08–2.24	1.68** (0.31)	1.9–2.44	1.59* (0.31)	1.08–2.36
4 year degree or more			1.81** (0.35)	1.23–2.66	2.02*** (0.38)	1.38–2.96	1.83** (0.37)	1.22–2.74
PIR								
<100% FPG (poverty) [ref]								
100–199% FPG			0.82 (0.13)	0.60–1.13	0.80 (0.13)	0.57–1.11	0.81 (0.13)	0.58–1.13
200–399% FPG			0.65* (0.12)	0.45–0.96	0.66* (0.13)	0.45–0.98	0.64 (0.12)	0.44–0.93
400%+ FPG			0.92 (0.17)	0.63–1.34	0.95 (0.19)	0.64–1.41	0.87 (0.16)	0.60–1.26
Working status								
Working/with a business [ref]								
Not working: retired			1.23 (0.51)	0.54–2.81	1.22 (0.50)	0.54–2.76	0.99 (0.39)	0.44–2.21
Not working: disabled/ unable to work due to health			6.60*** (1.61)	4.04–10.76	6.12*** (1.53)	3.70–10.11	3.98*** (0.99)	2.41–6.58
Health risk behaviors								
Alcohol use								
Abstain [ref]								
Former					1.37 (0.50)	0.66–2.86	1.28 (0.48)	0.60–2.71
Current					0.94 (0.28)	0.51–1.73	0.93 (0.28)	0.51–1.73
Smoking								
Never [ref]								
Former					1.10 (0.23)	0.72–1.67	1.06 (0.22)	0.70–1.61
Current					1.28 (0.23)	0.89–1.83	1.34 (0.23)	0.94–1.90
Healthcare utilization/health insurance								

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	Model 1		Model 2		Model 3		Model 4	
	Adjusted odds ratios (SE)	**95% confidence intervals**	**Adjusted odds ratios (SE)**	**95% confidence intervals**	**Adjusted odds Ratios (SE)**	**95% confidence intervals**	**Adjusted odds Ratios (SE)**	**95% confidence Intervals**
Times received healthcare (past year)								
0–1 [ref]								
2–3							2.13** (0.51)	1.31–3.46
4–9							3.23*** (0.82)	1.94–5.38
10+							3.44*** (0.70)	2.28–5.19
Health insurance status								
No insurance [ref]								
Have insurance							1.10 (0.19)	0.78–1.56
Constant	0.06*** (0.004)		0.07*** (0.01)	0.03–0.26	0.06*** (0.02)	0.03–0.10	0.04*** (0.01)	0.02–0.08
Pseudo R2	0.001		0.10		0.11		0.13	
Log likelihood	−1471.66		−1323.98		1318.57		−1282.00	

Exam weights utilized to adjust for differential probabilities of selection and the complex sampling design (n = 6604)

*<0.05

**<0.01

***<0.001

[a]Although not shown separately, other races are included in the regression analysis

[b]Includes divorced/separated, widowed, never married

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