

Appendix 1. Table of variables with descriptions

NHANES variable	Source	Description
Seqn		Respondent sequence number
Sdmvpsu		Masked Variance Unit Pseudo-PSU variable for variance estimation
Sdmvstra		Masked Variance Unit Pseudo-Stratum variable for variance estimation
Wtint2yr		Full Sample 2 Year Interview Weight
Wtmec2yr		Full Sample 2 Year MEC Exam Weight
cLBP (Arq010 arq024d arq024e arq022ad arq022ae)	HHQ	Arq010 arq024d arq024e arq022ad arq022ae
Ridageyr	HHQ	Best age in years of the sample person at time of HH screening. Recoded as categorical by decade
Riagendr	HHQ	Gender of the sample person
Ridreth1	HHQ	Recoded for race and ethnicity information
Dmdmartl	HHQ	Marital Status
Dmdeduc2	HHQ	What is the highest grade or level of school {you have/SP has} completed or the highest degree {you have/s/he has} received?
Ocd150	HHQ	Type of work done last week
Indhhi2	HHQ	Total household income (reported as a range value in dollars)
Inq060	HHQ	Did {you/you or any family members living here} receive any disability pension [other than Social Security or Railroad Retirement] in {LAST CALENDAR YEAR}?
Bmxbmi	MEC	Body Mass Index (kg/m <sup>2</sup> ). Recoded as categorical according to definitions of normal weight, overweight, obesity
Smoking status (smq020, smq040)	HHQ	Derived from Smq020 (Smoked at least 100 cigarettes in life) and smq040 (Do you now smoke cigarettes)
Alq101	MEC	Had at least 12 alcohol drinks/1 yr?
Modified AUDIT-C (alq120, alq130, alq140)	MEC	Calculated from alq120 (How often drink alcohol over past 12 mos), alq130 (Avg # alcoholic drinks/day -past 12 mos), alq140 (#days have 5 or more drinks/past 12 mos)
Slq050	HHQ	{Have you/Has SP} ever told a doctor or other health professional that {you have/s/he has} trouble sleeping?
PHQ9 score	MEC	Calculated as a sum of answers to the DPQ questionnaire
Number of medical comorbidities	HHQ	Sum of comorbidities listed in the Medical Comorbidity Questionnaire (mcq035,mcq053 mcq070 mcq082 mcq160a mcq191 mcq160n mcq160b mcq160f, mcq160g, mcq160k mcq160l, mcq160m, mcq220; mcq160c or mcq160d or mcq160e), diabetes questionnaire (diq010), kidney disease questionnaire (kiq026, kiq022)
Hiq011	HHQ	{Are you/Is SP} covered by health insurance or some other kind of health care plan? [Include health insurance obtained through employment or purchased directly as well as government programs like Medicare and Medicaid that provide medical care or help pay medical bills.]
Health insurance type	HHQ	Covered by private insurance/ Covered by Medicare/ Covered by

(hiq031a-i)		Medi-Gap/ Covered by Medicaid/ Covered by SCHIP*/ Covered by military health care*/ Covered by Indian Health Service*/ Covered by state-sponsored health plan/ Covered by other government insurance. *Recoded as "Other government insurance"
Huq050	HHQ	{During the past 12 months, how/How} many times {have you/has SP} seen a doctor or other health care professional about {your/his/her} health at a doctor's office, a clinic, hospital emergency room, at home or some other place? Do not include times {you were/s/he was} hospitalized overnight.
Huq071	HHQ	{During the past 12 months, were you/{Was/was} SP} a patient in a hospital overnight? Do not include an overnight stay in the emergency room.

Legend: HHQ – household questionnaire MEC – mobile examination center. SP – sample person.

Appendix 2. Factors associated with  $\geq 10$  healthcare visits in the past year in US adults with chronic low back pain (N = 700), full version.

	$\geq 10$ visits/year % N = 172	$< 10$ visits/year % N = 528	Chi-Sq P-value	Adjusted OR	AOR P-value
<b>Age</b>					
20-29	10.2 (3.4)	16.7 (1.3)	0.070	1 (Ref.)	0.0062
30-39	12.5 (3.3)	20.1 (3.1)		0.97 (0.31-3.00)	
40-49	26.7 (4.5)	17.0 (2.0)		2.09 (0.92-4.74)	
50-59	28.8 (5.1)	26.8 (2.9)		1.11 (0.44-2.83)	
60-69	21.7 (3.2)	19.5 (1.4)		0.97 (0.41-2.27)	
<b>Female gender</b>	60.8 (6.0)	54.4 (2.8)	0.341	1.15 (0.66-2.00)	0.612
<b>Race</b>					
African American	9.9 (1.8)	10.0 (1.5)	0.015	1 (Ref.)	0.0076
Caucasian	80.2 (4.1)	73.3 (3.9)		1.21 (0.77-1.90)	
Hispanic	9.1 (3.4)	12.9 (3.2)		0.93 (0.41-2.14)	
Other	0.8 (0.5)	3.9 (0.9)		0.26 (0.10-0.66)	
<b>Education</b>					
College and higher	20.3 (4.1)	18.1 (2.8)	0.816	1 (Ref.)	0.235
GED/AA degree	60.9 (4.4)	61.0 (2.3)		0.78 (0.49-1.25)	
Less than High school	18.8 (3.1)	21.0 (2.1)		0.59 (0.32-1.09)	
<b>Marital status</b>					
Married/living w partner	59.3 (5.2)	64.1 (2.3)	0.352	1 (Ref.)	0.416
Separated	25.8 (5.6)	18.9 (1.9)		1.33 (0.82-2.14)	
Never married	15.0 (3.8)	17.0 (2.5)		1.24 (0.66-2.31)	
<b>Employment status</b>					
Working	37.3 (5.9)	62.3 (2.1)	0.0004	1 (Ref.)	0.0013
Not working	59.7 (5.6)	34.7 (2.2)		3.00 (1.64-5.46)	
Looking for work	3.0 (1.8)	3.1 (0.8)		1.82 (0.37-8.96)	
<b>Annual HH income \$</b>					
>100 000	12.4 (3.8)	19.0 (1.9)	0.477	1 (Ref.)	0.119
65-99 000	18.9 (4.5)	16.1 (2.0)		1.81 (0.68-4.81)	
45-64 000	15.4 (4.8)	16.5 (2.2)		1.79 (0.64-5.01)	
20-44 000	28.1 (3.8)	29.3 (1.8)		1.64 (0.74-3.66)	
<20 000	25.3 (6.1)	19.1 (2.2)		2.09 (1.11-3.95)	
<b>Income from disability</b>	24.9 (6.6)	8.9 (1.6)	0.0006	2.58 (1.41-4.73)	0.0021
<b>BMI</b>					
<25	16.3 (3.9)	27.7 (2.5)	0.031	1 (Ref.)	0.255
25-30	31.8 (4.3)	30.5 (2.5)		1.81 (0.87-3.74)	
>30	52.0 (3.4)	41.9 (3.1)		1.57 (0.86-2.86)	
<b>Smoking status</b>					
Never	35.7 (4.1)	44.7 (2.7)	0.037	1 (Ref.)	0.075

Former	34.1 (3.4)	24.9 (1.9)		1.62 (1.03-2.52)	
Current	30.3 (3.6)	30.4 (2.7)		1.12 (0.61-2.06)	
<b>Alcohol use, past year</b>	74.4 (5.5)	74.5 (2.7)	0.939	0.93 (0.40-2.19)	0.873
<b>Modified AUDIT-C ≥4</b>	14.1 (4.4)	22.2 (1.5)	0.141	0.62 (0.34-1.16)	0.135
<b>PHQ9 score (depression)</b>					
1-4 (none)	38.3 (5.3)	62.4 (3.1)	<0.0001	1 (Ref.)	<0.0001
5-9 (mild)	20.0 (3.1)	21.7 (2.8)		1.74 (0.82-3.65)	
10-14 (moderate)	14.9 (3.7)	8.6 (0.9)		2.63 (1.19-5.86)	
15-19 (mod-sev)	18.9 (6.0)	5.5 (0.9)		5.09 (2.58-10.03)	
20-27 (severe)	7.9 (3.3)	1.7 (0.4)		5.55 (1.27-24.18)	
<b>Sleep disturbances</b>	72.0 (4.7)	46.6 (2.7)	<0.0001	2.29 (1.57-3.33)	<0.0001
<b>Medical comorbidities</b>					
0-1	39.7 (6.0)	63.6 (2.9)	<0.0001	1 (Ref.)	<0.0001
2-3	30.8 (4.8)	26.4 (1.9)		1.84 (0.95-3.56)	
>3	29.5 (4.7)	10.0 (1.8)		5.00 (2.44-10.26)	

Legend: Unadjusted estimates given with standard error, adjusted odds ratios – with 95% confidence intervals; Chi-Sq – Chi-Square. AOR – adjusted odds ratio, adjusted for age, race, gender, education, number of medical comorbidities. GED – general educational development. AA – associate’s. HH – household. BMI – body mass index. PHQ9 – patient health questionnaire 9. Reference category not displayed for binary variables.