Getting enough sleep? They aren't in West Virginia

AP – Graphic shows percentage of people in each state that reported not getting enough sleep during a 30 day …

By MIKE STOBBE, AP Medical Writer Mike Stobbe, Ap Medical Writer – 2 hrs 34 mins ago

ATLANTA – Sleepless in Seattle? Hardly. West Virginia is where people are really staying awake, according to the first government study to monitor state-by-state differences in sleeplessness.

West Virginians' lack of sleep was about double the national rate, perhaps a side effect of health problems such as obesity, experts said.

Nearly 1 in 5 West Virginians said they did not get a single good night's sleep in the previous month. The national average was about 1 in 10, according to a federal health survey conducted last year and released Thursday.

Tennessee, Kentucky and Oklahoma also were notably above average in their reported lack of sleep. In contrast, North Dakota had fewer problems sleeping, with only 1 in 13 reporting that degree of sleeplessness.

Health officials do not know the exact reasons for the differences.

"We didn't ask 'Why didn't you get enough rest or sleep?'" said Lela McKnight-Eily, an epidemiologist for the Centers for Disease Control and Prevention who led the study.

But experts noted several possible explanations: West Virginia ranks at or near the bottom of the nation in several important measurements of health, including obesity, smoking, heart disease and the proportion of adults with disabilities. Studies have increasingly found sleeping problems in people with certain health problems, including obesity.

"You would expect to see poorer sleep within a chronically diseased population," noted Darrel Drobnich of the National Sleep Foundation, a nonprofit advocacy and research organization.

Some experts believe sleep-deprived people are more inclined to eat fatty foods during the day.

"There's growing evidence sleep deprivation promotes obesity," said Dr. Ronald Chervin, a University of Michigan sleep disorders expert.

Financial stress and odd-hour work shifts can play roles in sleeplessness, too, Chervin added. He suggested those may be contributing factors in West Virginia, an economically depressed state with tens of thousands of people working in coal mining.

Thursday's report was based on results of an annual telephone survey of more than 400,000 Americans, including at least 3,900 in each state. The survey did not include people who use only cell phones.

The results mirrored earlier studies that found women are more likely to have sleeping problems than men, and blacks are more likely than white or Hispanics to get less sleep.

The survey did not ask people how many hours of sleep they got, and different respondents may have had different views of what counted for a good night's sleep. Sleep experts recommend seven to nine hours of sleep each night.

If you're wondering about Seattle — scene of the Tom Hanks-Meg Ryan film "Sleepless in Seattle" — the report did not provide information on cities. But the state of Washington had slightly fewer sleep-deprived people than the average state as reflected by the percent of residents reporting a solid month of sleeplessness.

New York and California — two states with large, stressed-out cities — were also a little better than average.

The survey also asked people the opposite question: Did you get enough sleep every single night for the last month? Hawaii racked up the most zzz's, with nearly 36 percent saying they were fully rested every day. The national average was about 31 percent.

In every state, most people reported a mix of nights when they got enough sleep and nights they did not.

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On the Net:

CDC report: http://tinyurl.com/sleep-states

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Perceived Insufficient Rest or Sleep Among Adults -- United States, 2008

The importance of chronic sleep insufficiency is under-recognized as a public health problem, despite being associated with numerous physical and mental health problems, injury, loss of productivity, and mortality (*1*,*2*). Approximately 29% of U.S. adults report sleeping <7 hours per night (*3*) and 50--70 million have chronic sleep and wakefulness disorders (*1*). A CDC analysis of 2006 data from the Behavioral Risk Factor Surveillance System (BRFSS) in four states showed that an estimated 10.1% of adults reported receiving insufficient rest or sleep on all days during the preceding 30 days (*4*). To examine the prevalence of insufficient rest or sleep in all states, CDC analyzed BRFSS data for all 50 states, the District of Columbia (DC), and three U.S. territories (Guam, Puerto Rico, and U.S. Virgin Islands) in 2008. This report summarizes the results, which showed that among 403,981 respondents, 30.7% reported no days of insufficient rest or sleep and 11.1% reported insufficient rest or sleep every day during the preceding 30 days. Females (12.4%) were more likely than males (9.9%) and non-Hispanic blacks (13.3%) were more likely than other racial/ethnic groups to report insufficient rest or sleep. State estimates of 30 days of insufficient rest or sleep ranged from 7.4% in North Dakota to 19.3% in West Virginia. Health-care providers should consider adding an assessment of chronic rest or sleep insufficiency to routine office visits so they can make needed interventions or referrals to sleep specialists.

BRFSS* is a state-based, random-digit--dialed telephone survey of the noninstitutionalized U.S. civilian population aged ≥18 years, which is conducted by state health departments in collaboration with CDC (*5*). In 2008, response rates† among all 50 states, DC, and territories ranged from 35.8% to 65.9% (median: 53.3%), based on Council of American Survey and Research Organizations (CASRO) guidelines. Cooperation rates§ ranged from 59.3% to 87.8% (median: 75.0%).

The 2008 survey included the question, "During the past 30 days, for about how many days have you felt you did not get enough rest or sleep?" Data from all sites were aggregated, and the numbers of days of perceived insufficient rest or sleep were categorized as zero days, 1--13 days, 14--29 days, and 30 days. Analyses were stratified by age group, race/ethnicity, sex, employment status, education level, marital status, and geographic area. Age-adjusted prevalence estimates were obtained and standardized to the projected U.S. 2000 population and 95% confidence intervals were calculated using statistical software to account for the complex sampling design. Age-adjusted estimates account for variations within state populations and permit comparisons between states and the 2006 report (*4*) examining data from four states. Statistical significance was determined by using t-tests. Unless otherwise indicated, all comparisons mentioned in this report were significant at the $p<0.001$ level.

Among the 403,981 adult respondents, an estimated 30.7% reported no days of insufficient rest or sleep in the preceding 30 days, 41.3% reported 1--13 days, 16.8% reported 14--29 days, and 11.1% reported 30 days (Table 1). The prevalence of adults reporting no days of insufficient rest or sleep in the preceding 30 days increased with age; persons aged ≥45 years were more likely to report no days than adults aged <45 years. Hispanic (38.8%) and other non-Hispanic racial/ethnic groups (35.4%) were more likely to report no days in comparison with non-Hispanic whites (27.9%) and non-Hispanic blacks (30.4%). Men (33.6%) were more likely to report no days than women (28.1%). Retired persons (43.8%) were most likely to report no days of insufficient rest or sleep in comparison with adults reporting other types of employment status ($p=0.003$). Those with less than a high school diploma or general education development certificate (GED) (37.9%) also were more likely to report no days of insufficient rest or sleep in comparison with those with a high school diploma or GED (33.8%) or with some college or college degree (28.0%). Finally, reports of no days of insufficient rest or sleep were similar among adults of varying marital status, although never married adults

(31.6%) were more likely to report no days than members of an unmarried couple (28.4%; p=0.005).

The percentage of adults reporting insufficient rest or sleep every day during the preceding 30 days generally declined with age (Table 1). The percentage was highest among persons aged 25--34 years (13.8%) and lowest among persons aged ≥65 years (7.4%). Non-Hispanic blacks (13.3%) were significantly more likely than non-Hispanic whites (11.2%) to report 30 days of insufficient rest or sleep. Females were more likely to report 30 days of insufficient rest or sleep than males (12.4% versus 9.9%, respectively). Persons who reported being unable to work (25.8%) and unemployed respondents (13.9%) were significantly more likely to report 30 days of insufficient rest or sleep than respondents who were employed (9.9%), retired (9.5%; p=0.011), or a student or homemaker (11.1%). In comparison with persons with some college education or a college degree (9.6%), insufficient rest or sleep was significantly more likely to be reported by persons with less than a high school education (14.3%) and among those with a high school diploma or GED (13.2%). Compared with married respondents (11.1%), those who were divorced, widowed, or separated were more likely to report insufficient sleep (16.0%). Percentages for never married persons (10.6%) and members of an unmarried couple (12.1%) were similar to those for married adults (11.1%; p=0.139).

The distribution of reported days of insufficient rest or sleep varied among states and territories (Table 2). The lowest age-standardized prevalences of 30 days of insufficient rest or sleep in the preceding 30 days were observed in North Dakota (7.4%), California (8.0%), DC (8.5%), Wisconsin (8.6%), and Oregon (8.8%); the highest were observed in Puerto Rico (14.0%), Oklahoma (14.3%), Kentucky (14.4%), Tennessee (14.8%), and West Virginia (19.3%) (Figure).

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Editorial Note:

This is the first published report to present state-based estimates of perceived insufficient sleep or rest by adults for the 50 states, DC, and three U.S. territories. The insufficient rest or sleep question was included on the 2008 BRFSS core questionnaire in response to an Institute of Medicine recommendation that CDC expand surveillance of population sleep patterns (*1*). The analysis presented in this report found that an estimated 11.1% of respondents reported experiencing insufficient rest or sleep every day for the preceding 30 days and 30.7% of respondents reported no days of insufficient sleep or rest, similar to the 10.1% and 29.6%, respectively, reported by adults from four states in 2006 (*4*). Racial/ethnic and sex differences observed in this 2008 study were not seen in the 2006 data and likely are the result of increased geographic representation in the sample population and a much larger sample size in 2008. However, the 2008 findings are consistent with previous research indicating a higher prevalence of self-reported frequent insufficient rest or sleep by women in comparison with men (*6*) and disparities in sleep duration reported by non-Hispanic blacks in comparison with whites (*7,8*).

The high prevalence of insufficient rest or sleep was concentrated in the southeastern United States. The causes of the geographic variations found cannot be determined by this study. However, geographic variations in occupational factors (e.g., shift work opportunities and extended work schedules) and lifestyle choices (e.g., use of technology), and the distribution of related common chronic diseases (e.g., obesity [9], depression, hypertension, heart disease, and stroke), many of which also are concentrated in the Southeast, might play a role and should be examined further (*10*).

The major causes of sleep loss are overlapping and include lifestyle and occupational factors that reflect broad societal factors (e.g., work hours and access to technology), and specific sleep disorders (*1*). Further studies are needed to explain the sex and racial/ethnic differences apparent in these results. Women are

underrepresented in studies of sleep and sleep disorders (*7*). Further research also is needed to examine the relationship between sleep during pregnancy and postpartum and sleep-related diseases, such as depression, which are more prevalent in women (*7*). Racial and ethnic minorities disproportionately report sleep durations that are associated with increased mortality and might contribute to health disparities, and they are overrepresented in low socioeconomic environments that might compromise sleep quality (*7*). In this analysis, persons unable to work expressed the greatest prevalence of perceived rest or sleep insufficiency, which might be the result of mental distress or medical problems, disabilities, or other conditions that prevent them from being employed.

The findings in this report are subject to at least three limitations. First, the definitions of "enough (sufficient)" sleep and "rest" and responses to the survey question were subjective and were not accompanied by reports of hours of sleep per night; therefore, this analysis cannot be compared directly with studies of sleep duration. Because the survey question also did not distinguish between "rest" and "sleep," respondents might vary in their interpretation of the questions and the terms. Finally, institutionalized persons and persons residing in households without landline telephones are not included in the survey. Therefore, the findings of this report are not generalizable to those populations.

According to the National Sleep Foundation, adults need 7--9 hours of sleep each night. Health-care professionals should evaluate patients who report chronic insufficient rest or sleep and advise them of effective behavioral strategies including keeping a regular sleep schedule; avoiding stimulating activities within 2 hours of bedtime; avoiding caffeine, nicotine, and alcohol in the evening; sleeping in a dark, quiet, well-ventilated space; and avoiding going to bed hungry.¶ Pharmacologic intervention also might be warranted. Although few formal clinical practice guidelines are available for assessing and treating sleep insufficiency and sleeping disorders, a multidisciplinary team, including a sleep specialist, might be required for proper treatment (*1*).

Acknowledgment

The findings in this report are based, in part, on data provided by BRFSS state coordinators from the 50 United States, DC, Guam, Puerto Rico, and U.S. Virgin Islands.

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* Information regarding BRFSS data and methods is available at http://www.cdc.gov/brfss/technical_infodata/surveydata/2005.htm.

† The percentage of persons who completed interviews among all eligible persons, including those who were not successfully contacted.

§ The percentage of persons who completed interviews among all eligible persons who were contacted.

¶ Additional guidance on good sleep practices from the National Sleep Foundation is available at http://www.sleepfoundation.org/article/ask-the-expert/sleep-hygiene.

What is already known on this topic?

A 2008 MMWR report of perceived insufficient rest or sleep by adults from four states using 2006 Behavioral Risk Factor Surveillance System (BRFSS) data found that 1 in 10 adults reported insufficient rest or sleep every day in the preceding 30 days and 29.6% reported no days of insufficient rest or sleep.

What is added by this report?

Insufficient rest or sleep prevalence estimates from adults in the 50 United States, the District of Columbia, and three U.S. territories (Guam, Puerto Rico, and U.S. Virgin Islands) from the 2008 BRFSS substantiate previous findings, add support for sex and race/ethnicity differences, and characterize geographic variations in the state-based reports of rest or sleep insufficiency.

What are the implications for public health practice?

Health-care providers should consider adding an assessment of chronic rest or sleep insufficiency to routine office visits so they can make needed interventions or referrals to sleep specialists.

TABLE 1. Age-adjusted* percentage of adults who reported insufficient rest or sleep† during the preceding 30 days, by number of days and selected characteristics --- Behavioral Risk Factor Surveillance System, United States,§ 2008.

Characteristic	No.¶	0 days		1--13 days		14--29 days		30 days	
		%	(95% CI**)	%	(95% CI)	%	(95% CI)	%	(95% CI)
Total	**403,981**	**30.7**	**(30.4--31.0)**	**41.3**	**(41.0--41.6)**	**16.8**	**(16.6--17.1)**	**11.1**	**(10.9--11.4)**
Age group (yrs)									
18--24	13,881	23.2	(21.9--24.5)	45.5	(44.1--47.0)	19.7	(18.5--20.8)	11.6	(10.7--12.5)
25--34	38,978	21.8	(21.0--22.6)	44.1	(43.2--45.0)	20.4	(19.7--21.1)	13.8	(13.2--14.3)
35--44	61,350	22.8	(22.2--23.4)	45.2	(44.5--45.9)	20.1	(19.5--20.6)	12.0	(11.5--12.4)

45--64	169,906	30.5	(30.0--30.9)	42.4	(41.9--42.8)	16.3	(16.0--16.6)	10.9	(10.6--11.1)
≥65	119,866	56.7	(56.2--57.2)	28.3	(27.8--28.8)	7.6	(7.3--7.9)	7.4	(7.2--7.7)
Race/Ethnicity									
White, non-Hispanic	318,694	27.9	(27.6--28.2)	42.7	(42.4--43.1)	18.2	(17.9--18.5)	11.2	(10.9--11.4)
Black, non-Hispanic	31,513	30.4	(29.4--31.3)	40.4	(39.3--41.5)	16.0	(15.1--16.8)	13.3	(12.6--14.0)
Hispanic	28,045	38.8	(37.7--39.9)	37.7	(36.6--38.8)	13.0	(12.3--13.8)	10.5	(9.9--11.2)
Other, non-Hispanic[††]	22,108	35.4	(34.0--36.7)	37.2	(35.8--38.6)	15.8	(14.8--16.8)	11.6	(10.8--12.5)
Sex									
Male	152,513	33.6	(33.1--34.1)	40.9	(40.4--41.5)	15.6	(15.2--16.0)	9.9	(9.6--10.2)
Female	251,468	28.1	(27.7--28.5)	41.5	(41.1--41.9)	18.0	(17.6--18.3)	12.4	(12.1--12.7)
Employment status									
Employed	215,127	28.7	(28.3--29.2)	44.2	(43.7--44.6)	17.1	(16.8--17.5)	9.9	(9.7--10.2)
Unemployed	16,797	32.5	(31.0--34.0)	36.7	(35.2--38.2)	16.9	(15.8--18.0)	13.9	(12.9--14.9)
Retired	106,325	43.8	(36.4--51.3)	33.2	(25.7--40.7)	13.4	(9.7--17.2)	9.5	(6.2--12.8)
Unable to work	25,956	24.3	(22.6--25.9)	28.4	(26.5--30.2)	21.6	(20.2--23.0)	25.8	(24.3--27.3)
Other[§§]	38,395	31.3	(30.5--32.2)	41.7	(40.8--42.6)	15.9	(15.3--16.5)	11.1	(10.5--11.7)
Education									
<High school diploma or GED[¶¶]	39,395	37.9	(36.7--39.0)	33.6	(32.5--34.8)	14.2	(13.5--15.0)	14.3	(13.5--15.0)
High school diploma or GED	121,346	33.8	(33.2--34.4)	37.3	(36.7--37.9)	15.7	(15.3--16.2)	13.2	(12.7--13.6)
Some college or college graduate	242,194	28.0	(27.7--28.4)	44.5	(44.0--44.9)	17.9	(17.5--18.2)	9.6	(9.4--9.9)
Marital status									
Married	226,418	30.9	(30.3--31.5)	42.1	(41.4--42.7)	15.9	(15.5--16.3)	11.1	(10.7--11.6)
Divorced, widowed, separated	119,372	30.4	(29.1--31.7)	35.1	(33.7--36.4)	18.6	(17.5--19.6)	16.0	(14.9--17.1)
Member of unmarried couple	8,945	28.4	(26.3--30.5)	42.8	(40.5--45.0)	16.7	(15.2--18.2)	12.1	(10.9--13.3)
Never married	48,016	31.6	(30.8--	41.0	(40.2--	16.7	(16.1--	10.6	(10.1--

			32.4)		41.9)		17.4)		11.1)

* Age adjusted to 2000 projected U.S. population.

† Determined by response to the question, "During the past 30 days, for about how many days have you felt you did not get enough rest or sleep?"

§ Includes the 50 states, District of Columbia, Guam, Puerto Rico, and U.S. Virgin Islands.

¶ Unweighted sample. Categories might not sum to survey total because of missing responses.

** Confidence interval.

†† Asian, Hawaiian or other Pacific Islander, American Indian/Alaska Native, or multiracial.

§§ Homemaker or student.

¶¶ General Educational Development certificate.

TABLE 2. Age-adjusted* percentage of adults who reported insufficient rest or sleep† during the preceding 30 days, by number of days and state or area --- Behavioral Risk Factor Surveillance System, United States,§ 2008

		0 days		1--13 days		14--29 days		30 days	
State/Area	**No.**	**%**	**(95% CI¶)**	**%**	**(95% CI)**	**%**	**(95% CI)**	**%**	**(95% CI)**
Alabama	6,282	30.1	(28.4--31.9)	39.3	(37.3--41.2)	17.4	(15.7--19.0)	13.2	(11.9--14.5)
Alaska	2,557	32.2	(29.7--34.6)	41.1	(38.1--44.1)	17.3	(15.0--19.7)	9.4	(7.4--11.4)
Arizona	5,999	32.9	(30.2--35.7)	41.3	(38.4--44.2)	14.3	(12.2--16.3)	11.5	(9.3--13.6)
Arkansas	5,494	29.1	(27.4--30.7)	40.8	(38.8--42.7)	17.8	(16.3--19.3)	12.3	(10.9--13.8)
California	11,545	32.9	(31.8--34.1)	42.6	(41.3--43.8)	16.5	(15.6--17.4)	8.0	(7.3--8.7)
Colorado	11,465	31.2	(30.1--32.4)	43.0	(41.7--44.2)	16.6	(15.6--17.5)	9.2	(8.5--10.0)
Connecticut	5,957	28.5	(26.7--30.2)	45.4	(43.4--47.5)	15.7	(14.1--17.3)	10.4	(9.2--11.6)
Delaware	3,951	28.7	(26.8--30.6)	41.6	(39.2--44.0)	17.8	(15.9--19.7)	11.9	(10.4--13.5)
District of Columbia	4,095	31.4	(29.3--33.5)	44.3	(42.1--46.5)	15.8	(14.3--17.4)	8.5	(7.3-- 9.6)
Florida	10,542	33.5	(31.6--35.5)	38.0	(36.0--40.1)	14.9	(13.3--16.5)	13.5	(12.1--14.9)
Georgia	5,576	28.9	(27.2--30.5)	41.3	(39.3--43.2)	16.4	(14.9--18.0)	13.4	(11.9--14.9)
Hawaii	6,343	35.6	(34.0--	40.0	(38.3--	14.5	(13.2--	9.8	(8.8--

			37.2)		41.8)		15.8)		10.9)
Idaho	4,975	29.5	(27.9--31.1)	43.3	(41.3--45.3)	18.3	(16.7--19.9)	8.9	(7.9--9.9)
Illinois	5,106	26.7	(25.2--28.3)	45.1	(43.2--46.9)	18.4	(16.9--19.9)	9.8	(8.6--10.9)
Indiana	4,731	28.9	(27.0--30.7)	41.7	(39.5--43.8)	18.0	(16.4--19.7)	11.4	(10.0--12.8)
Iowa	5,846	30.2	(28.8--31.6)	41.8	(40.1--43.6)	16.9	(15.5--18.3)	11.1	(9.9--12.2)
Kansas	8,414	30.4	(29.2--31.7)	41.5	(40.0--42.9)	17.3	(16.1--18.5)	10.8	(9.9--11.7)
Kentucky	7,947	26.0	(24.6--27.5)	38.2	(36.4--40.1)	21.3	(19.6--23.0)	14.4	(13.1--15.7)
Louisiana	5,991	35.0	(33.4--36.7)	37.3	(35.6--38.9)	14.7	(13.4--15.9)	13.0	(11.9--14.1)
Maine	6,653	29.3	(27.9--30.6)	42.4	(40.7--44.1)	17.3	(15.9--18.6)	11.1	(10.0--12.3)
Maryland	9,299	28.6	(27.2--30.0)	42.8	(41.2--44.3)	18.5	(17.2--19.7)	10.1	(9.2--11.0)
Massachusetts	19,940	30.2	(29.2--31.2)	41.1	(39.9--42.3)	17.0	(16.1--17.9)	11.8	(11.0--12.6)
Michigan	9,198	28.6	(27.3--29.8)	43.3	(41.8--44.7)	17.4	(16.2--18.5)	10.8	(9.9--11.7)
Minnesota	4,271	29.4	(27.7--31.1)	44.7	(42.7--46.7)	15.9	(14.4--17.5)	10.0	(8.8--11.3)
Mississippi	7,715	32.4	(30.9--33.9)	37.2	(35.6--38.8)	17.3	(16.0--18.6)	13.1	(12.0--14.2)
Missouri	5,060	27.6	(25.9--29.3)	42.2	(40.1--44.3)	16.7	(15.2--18.3)	13.4	(12.0--14.9)
Montana	6,675	28.4	(26.8--30.0)	42.3	(40.4--44.2)	19.4	(17.8--20.9)	9.9	(8.7--11.1)
Nebraska	15,879	29.2	(27.8--30.5)	45.5	(43.9--47.2)	16.3	(15.2--17.5)	9.0	(7.9--10.0)
Nevada	4,670	30.8	(28.7--33.0)	40.5	(38.2--42.8)	17.5	(15.7--19.4)	11.1	(9.6--12.6)
New Hampshire	6,729	27.6	(26.2--29.0)	44.8	(43.1--46.6)	17.7	(16.3--19.2)	9.9	(8.8--10.9)
New Jersey	11,333	32.2	(30.9--33.6)	39.8	(38.4--41.3)	15.1	(14.0--16.2)	12.8	(11.8--13.8)
New Mexico	6,139	33.2	(31.4--34.9)	40.5	(38.6--42.4)	15.7	(14.3--17.2)	10.6	(9.5--11.7)
New York	7,614	28.7	(27.2--30.1)	42.8	(41.2--44.4)	17.8	(16.6--19.1)	10.8	(9.8--11.7)
North Carolina	15,426	31.9	(30.8--33.0)	39.0	(37.8--40.3)	16.0	(15.1--16.9)	13.0	(12.2--13.9)

North Dakota	4,879	29.4	(27.9--31.0)	47.1	(45.3--49.0)	16.0	(14.7--17.4)	7.4	(6.5--8.4)
Ohio	12,651	27.1	(25.9--28.2)	42.7	(41.3--44.1)	18.7	(17.6--19.9)	11.4	(10.5--12.4)
Oklahoma	7,658	30.8	(29.4--32.2)	37.5	(35.9--39.0)	17.4	(16.3--18.6)	14.3	(13.2--15.3)
Oregon	4,691	28.4	(26.7--30.1)	48.7	(46.7--50.8)	14.1	(12.6--15.5)	8.8	(7.6--9.9)
Pennsylvania	12,770	29.8	(28.4--31.1)	40.3	(38.7--41.8)	18.6	(17.3--19.9)	11.3	(10.4--12.3)
Rhode Island	4,676	29.6	(27.9--31.3)	42.7	(40.7--44.8)	16.8	(15.2--18.3)	10.9	(9.7--12.1)
South Carolina	9,799	32.7	(31.0--34.3)	40.8	(39.0--42.6)	14.5	(13.3--15.8)	12.0	(10.8--13.2)
South Dakota	6,796	32.2	(30.7--33.8)	41.8	(40.0--43.6)	14.5	(13.3--15.8)	11.5	(10.2--12.7)
Tennessee	4,882	32.0	(29.7--34.2)	36.8	(34.4--39.2)	16.4	(14.6--18.3)	14.8	(13.2--16.3)
Texas	10,432	32.7	(31.2--34.1)	39.8	(38.2--41.4)	15.8	(14.6--17.0)	11.8	(10.7--12.8)
Utah	5,187	25.6	(24.2--27.0)	46.7	(44.9--48.5)	18.5	(17.2--19.9)	9.2	(8.1--10.2)
Vermont	6,586	27.3	(26.1--28.6)	45.2	(43.6--46.8)	17.8	(16.4--19.1)	9.7	(8.7--10.7)
Virginia	5,150	29.5	(27.0--32.0)	41.9	(39.4--44.5)	18.7	(16.5--20.9)	9.9	(8.7--11.0)
Washington	22,096	29.0	(28.1--29.9)	42.9	(42.0--43.9)	18.2	(17.4--19.0)	9.9	(9.2--10.5)
West Virginia	4,073	27.6	(25.9--29.3)	33.8	(31.9--35.8)	19.3	(17.7--20.8)	19.3	(17.6--21.0)
Wisconsin	6,989	28.0	(26.3--29.6)	44.5	(42.4--46.5)	18.9	(17.2--20.7)	8.6	(7.5--9.7)
Wyoming	7,814	28.6	(27.4--29.7)	44.1	(42.6--45.5)	17.3	(16.2--18.4)	10.1	(9.2--11.0)
Guam	766	46.1	(42.1--50.1)	34.8	(31.0--38.5)	7.7	(5.9--9.6)	11.4	(8.8--14.0)
Puerto Rico	4,353	50.7	(48.8--52.7)	24.9	(23.2--26.6)	10.3	(9.1--11.5)	14.0	(12.7--15.4)
U.S. Virgin Islands	2,316	35.5	(33.1--37.9)	41.8	(39.2--44.4)	13.1	(11.3--14.9)	9.6	(8.0--11.2)
Total	**403,981**	**30.7**	**(30.4--31.0)**	**41.3**	**(41.0--41.6)**	**16.8**	**(16.6--17.1)**	**11.1**	**(10.9--11.4)**

* Age adjusted to 2000 projected U.S. population.

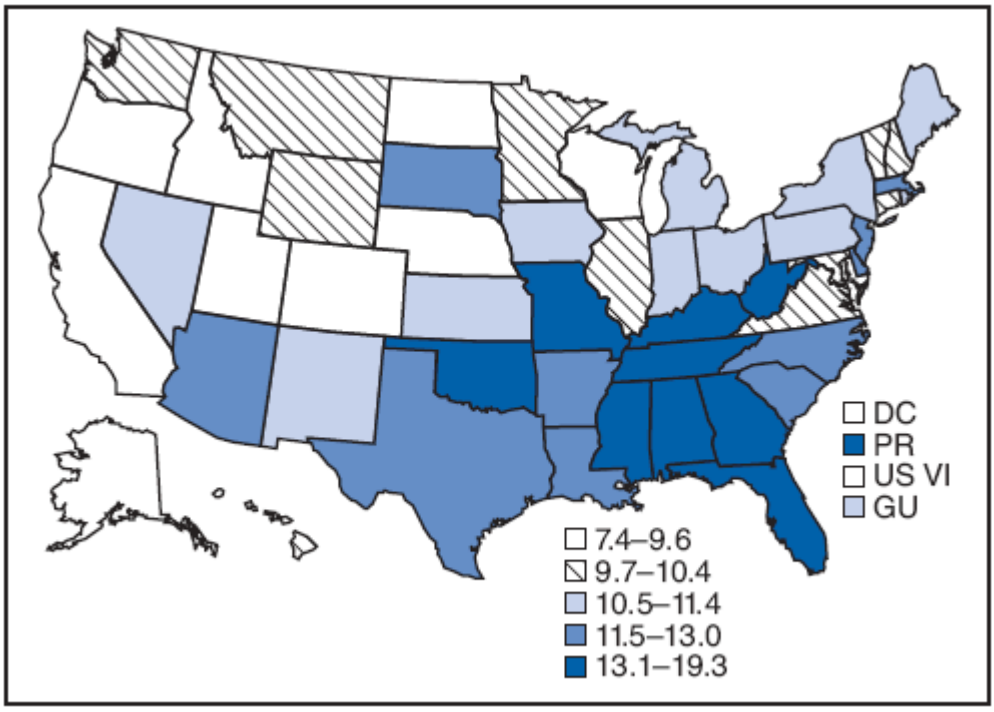
† Determined by response to the question, "During the past 30 days, for about how many days have you felt you did

not get enough rest or sleep?"

[§] Includes the 50 states, District of Columbia, Guam, Puerto Rico, and U.S. Virgin Islands.

[¶] Confidence interval.

FIGURE. Age-adjusted* percentage of adults who reported 30 days of insufficient rest or sleep[†] during the preceding 30 days --- Behavioral Risk Factor Surveillance System, United States,[§] 2008.



* Age adjusted to 2000 projected U.S. population.

[†] Determined by response to the question, "During the past 30 days, for about how many days have you felt you did not get enough rest or sleep?"

[§] Includes the 50 states, District of Columbia, Guam, Puerto Rico, and U.S. Virgin Islands.

Alternative Text: The figure above shows the age-adjusted percentage of adults who reported 30 days of insufficient rest or sleep during the preceding 30 days in the United States in 2008. The lowest age-standardized prevalences of 30 days of insufficient rest or sleep in the preceding 30 days were observed in North Dakota (7.4%), California (8.0%), District of Columbia (8.5%), Wisconsin (8.6%), and Oregon (8.8%); the highest were observed in Puerto Rico (14.0%), Oklahoma (14.3%), Kentucky (14.4%), Tennessee (14.8%), and West Virginia (19.3%).

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