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# Health of Wisconsin



## Summary Grades

<i>Life stage</i>	<i>Health grade</i>	<i>Health disparity grade</i>
Infants (less than 1 year of age)	<b>C</b>	<b>C</b>
Children and young adults (ages 1-24)	<b>B</b>	<b>D</b>
Working-age adults (ages 25-64)	<b>B</b>	<b>C</b>
Older adults (ages 65+)	<b>C</b>	<b>D</b>
<b>All ages</b>	<b>B-</b>	<b>C-</b>

## REPORT CARD 2010

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School of Medicine  
and Public Health

UNIVERSITY OF WISCONSIN-MADISON

University of Wisconsin Population Health Institute  
Department of Population Health Sciences

# Table of Contents

Foreword _____	1
Overview of the Report Card _____	2
Wisconsin’s Report Card for Infant Health _____	4
Wisconsin’s Report Card for Child and Young Adult Health _____	6
High School Age Unhealthy Days _____	6
Wisconsin’s Report Card for Working-Age Adult Health _____	8
Wisconsin’s Report Card for Older Adult Health _____	10
Data Sources and Methods _____	12

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## Foreword

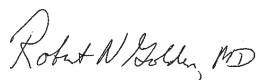
December 2010

As part of its mission to translate research into policy and practice, the UW Population Health Institute has updated its assessment of the state's health with the *Health of Wisconsin Report Card 2010*. This report card measures our progress towards meeting two overarching goals of Wisconsin's state health plans—the improvement of health and the elimination of health disparities.

Wisconsin's grade for overall health is good compared to the other states in the nation—a B-. However, the grade for health disparities is only a very disappointing C-. This *Health of Wisconsin Report Card 2010* demonstrates that the good health outcomes realized by the state overall are not shared by those with less education, minorities, and persons living in rural and urban communities. And we must not settle for “good”. The people of Wisconsin deserve nothing less than the very best possible health for all.

Many factors play a role in determining health status; consequently, achieving a healthy population requires active engagement from a wide variety of organizations and leaders in the state. The Population Health Institute, the University of Wisconsin School of Medicine and Public Health, and researchers across the state continue to work towards identifying the most effective ways to improve the collective health of Wisconsin.

In the future, Wisconsin needs to focus on creating healthy environments that set a default of “healthy” instead of “unhealthy” for our people. This work cannot be done solely by governmental public health and health care organizations. Other sectors, such as business, education, municipal planning, transportation, and agriculture, have the ability to make significant contributions towards the improvement in the health of our people. Individuals, communities, government entities, and corporate sectors should come together in a united effort to improve Wisconsin's health and eliminate our health disparities.



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## Overview of the Report Card

A major goal of the Wisconsin Partnership Program at the University of Wisconsin School of Medicine and Public Health is to help Wisconsin become the healthiest state with less disparity. To increase our understanding of the health of Wisconsin and, in particular, differences in health among subpopulations, we have developed the *Health of Wisconsin Report Card* and continue to update it in order to draw attention to how Wisconsin's health compares relative to the nation as a whole. We examine our health outcomes and give Wisconsin grades on our health and health disparity.

The image on the front cover gives two overall grades for the *Health of Wisconsin*: a B- for overall health and a C- for *health disparities*. What do these grades represent and how did we determine them?

### Grading Health

Our grade for *health* is based on two ways of measuring health:

- 1) length of life and
- 2) quality of life.

We measure length of life by examining the death rate. We examined death rates for four distinct age groups: infants (less than 1 year old), children and young adults (ages 1-24), working-age adults (ages 25-64), and older adults (ages 65 and over).

Measuring health-related quality of life is clearly more difficult than simply counting how many people die. Researchers have found that asking people how healthy they feel provides valuable information. Not only can you learn how healthy they feel right now but it also provides a good indication of their future health. Across the country, people are surveyed and asked how many days in the past month they have felt physically or mentally unhealthy. When their responses are combined, researchers can calculate the average number of unhealthy days per month for the subgroups of interest. We looked at unhealthy days among the two adult age groups (working-age adults and older adults).

When we grade the *health* (length and quality of life) of Wisconsin's population in comparison to the health of the population of other states, Wisconsin gets a B-. This average grade is dominated by the health of the majority population. Reporting just an average grade for the state ignores the fact that the state is failing in terms of the health of several of its subgroups.

### Grading Health Disparities

In addition, we developed a *health disparity* grade based on the health of different groups of people. To do this, we examined the health of subgroups of the population within each life stage based on four characteristics:

Gender	Geography	Socioeconomic Status	Race/Ethnicity
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Data on health by gender and geography are readily available but data on socioeconomic status, such as income, race and ethnicity are not always available or reliable. We chose education as our measure of socioeconomic status and reported on health for as many racial and ethnic subgroups as possible where the data were sufficiently reliable. Racial/ethnic subgroups where data were not reliable were given an "Incomplete" (I) grade. For each life stage, we graded the health of each Wisconsin subgroup in comparison to the health of the total population in that age group in other states.

To measure the disparity among subgroups within each life stage, we compared the health grade of each Wisconsin subgroup to the grade of the healthiest subgroup of the same age in Wisconsin. We used these comparisons to calculate disparity scores and grades for death and health-related quality of life. Taking account of the differences in health between subgroups, Wisconsin gets a C- for *health disparity*.

### Summary Grades

We compile these grades for health and *health disparity* for each life stage and display them in a summary table below. To give Wisconsin its two overall grades of B- and C-, we averaged the health and health disparities grades for each of the four life stages. Detailed report cards for each of the four life stages appear on pages 4-10 and more detailed information on our data sources and methods is provided on pages 12-13 and on our website (<http://uwphi.pophealth.wisc.edu>).

<i>Life stage</i>	<i>Health grade</i>	<i>Health disparity grade</i>
Infants (less than 1 year of age)	C	C
Children and young adults (ages 1-24)	B	D
Working-age adults (ages 25-64)	B	C
Older adults (ages 65+)	C	D
<b>All ages</b>	<b>B-</b>	<b>C-</b>

### Improving These Grades

Wisconsin needs to use these grades as a guide to improvement. The goal of the *Health of Wisconsin Report Card* is to stimulate discussion about how the state can become healthier and reduce disparities across age groups. The *Report Card* is part of a series of reports published as part of the “Making Wisconsin The Healthiest State” project. Two other reports and an online database are also available:

- *Opportunities to Make Wisconsin the Healthiest State* – highlights the factors that determine our health:
  - The way we act
  - Our social and physical environment
  - Our health care and public health system
- *What Works: Policies and Programs to Improve Wisconsin’s Health* and [www.whatworksforhealth.wisc.edu](http://www.whatworksforhealth.wisc.edu) – help public and private policy makers find policies and programs that have been proven to work.

# Wisconsin's Report Card for Infant Health



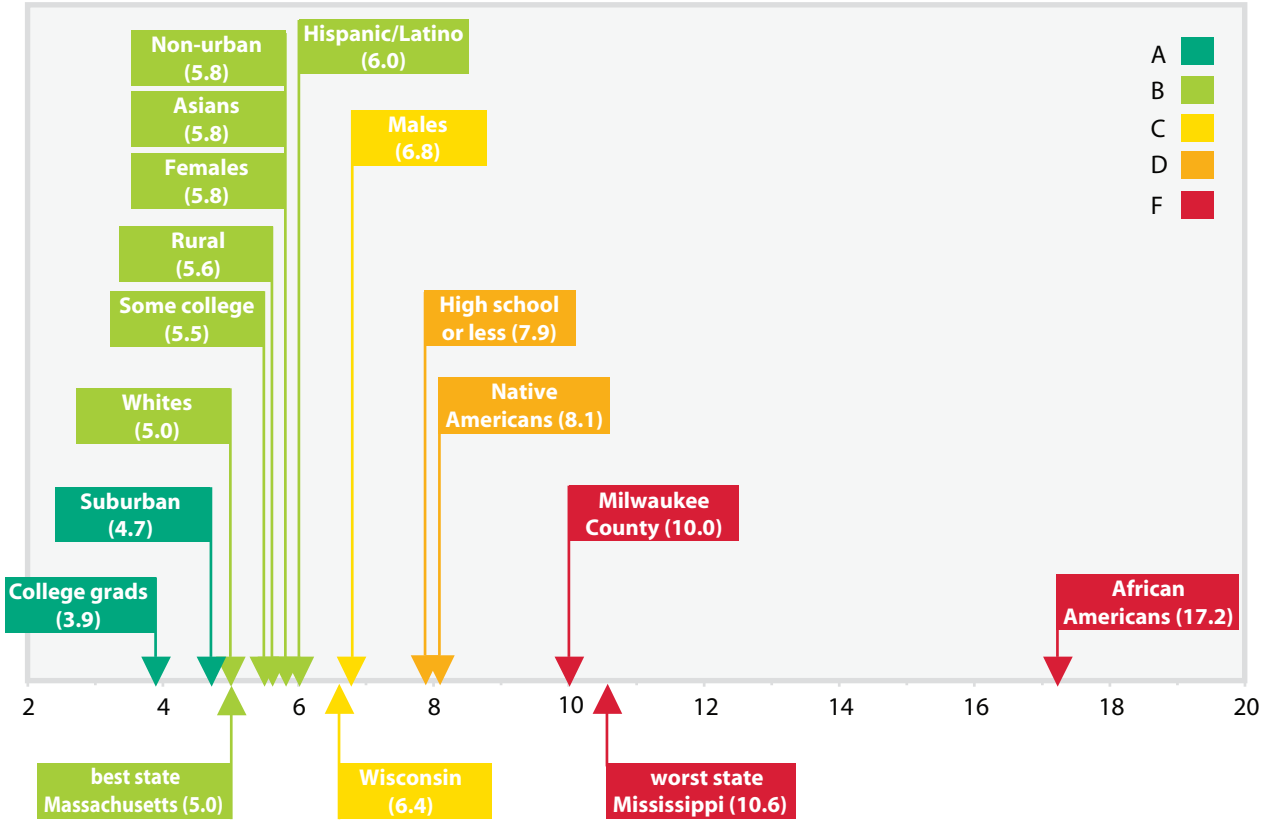
		Percent of Population	Death Rate (Per 1000)	Grades			
<i>Infants (&lt; 1 year)</i>		100%	6.4			C	
Gender	Male	51%	6.8			C	
	Female	49%	5.8		B		
Education of mother	High school or less	43%	7.9				D
	Some college/technical school	26%	5.5		B		
	College graduate	31%	3.9	A			
Type of county	Large urban (Milwaukee County)	21%	10.0				F
	Suburban/urban	31%	4.7	A			
	Non-urban	36%	5.8		B		
	Rural	12%	5.6		B		
Race/ethnicity	African American/Black	10%	17.2				F
	Asian	3%	5.8		B		
	Hispanic/Latino	10%	6.0		B		
	Native American	1%	8.1				D
	White non-Hispanic	76%	5.0		B		

Health Grade **C**

Health Disparity Grade **C**

## Infant Health (Less than 1 year of age)

Wisconsin Infant Death Rates  
(Ages <1, rates per 1,000 population)



- Overall, Wisconsin receives a grade of C for infant health and ranks 22<sup>nd</sup> nationally for its infant death rate.
- Wisconsin continues to fail in its efforts to promote health for infants who live in Milwaukee County and African American infants.
- Wisconsin receives a barely passing grade of D for its efforts to promote the health of Native American infants and infants whose mothers have no education beyond high school.

# Wisconsin's Report Card for Child and Young Adult Health



		Percent of Population	Death Rate (Per 100000)	Grades			
<b>Children and Young Adults (1-24)</b>		100%	39		<b>B</b>		
Gender	Male	51%	54				<b>D</b>
	Female	49%	24	<b>A</b>			
Type of county	Large urban (Milwaukee County)	17%	45			<b>C</b>	
	Suburban/urban	32%	34		<b>B</b>		
	Non-urban	38%	36		<b>B</b>		
	Rural	13%	56				<b>D</b>
Race/ethnicity	African American/Black	9%	68				<b>F</b>
	Asian	3%	35		<b>B</b>		
	Hispanic/Latino	7%	36		<b>B</b>		
	Native American	1%	82				<b>F</b>
	White non-Hispanic	80%	36		<b>B</b>		

Health Grade **B**

Health Disparity Grade **D**

## High School Age Unhealthy Days

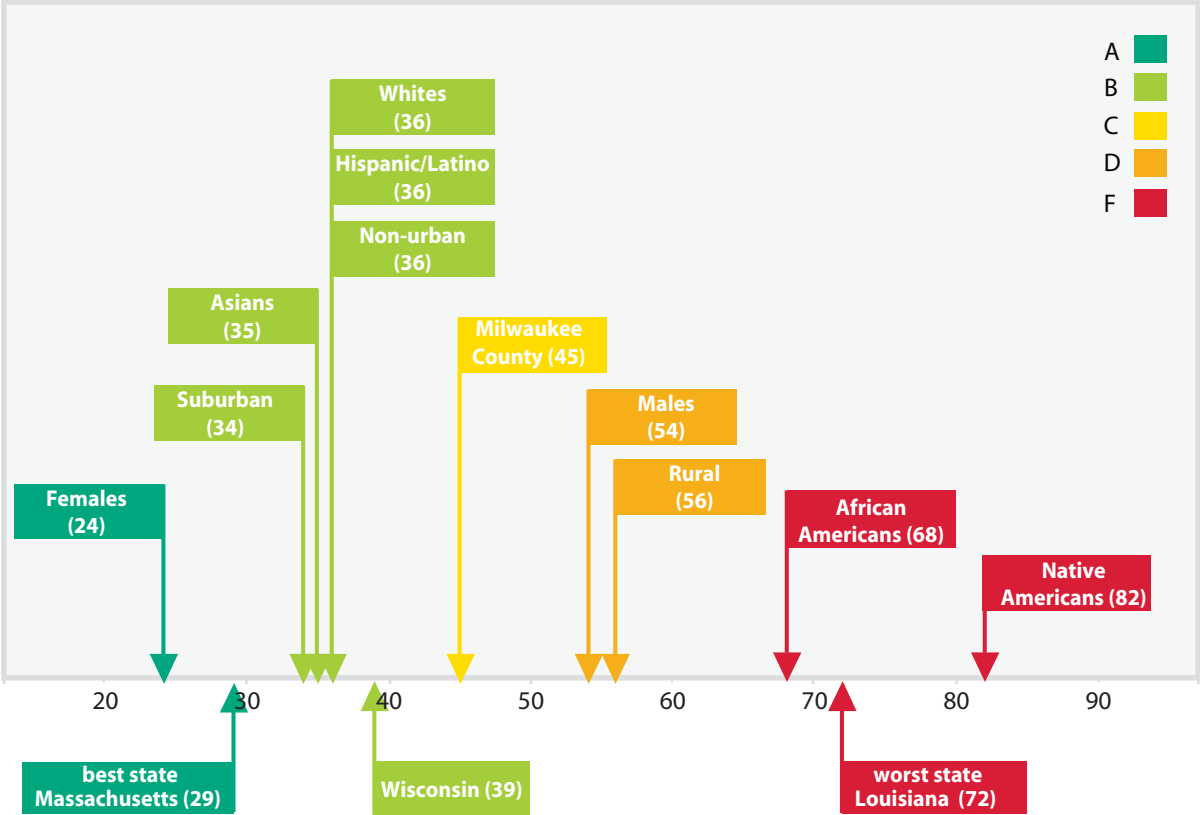
<i>9<sup>th</sup>-12<sup>th</sup> graders</i>	Average Number of Mentally Unhealthy Days per Month	Average Number of Physically Unhealthy Days per Month
Overall	4.3	3.0
Male	3.2	2.6
Female	5.4	3.3
African American/Black	4.3	2.7
Hispanic/Latino	5.0	4.3
White non-Hispanic	4.1	2.9

These data were collected as part of the 2009 Youth Risk Behavioral Survey which measures the quality of life in a sample of Wisconsin High School students. The information is supplemental and was not used to determine grades. However, the data provides a picture of health for high school age individuals and is useful in understanding that differences in health occur throughout all life stages. Even at this young age, the number of mentally and physically unhealthy days per month varies by subgroup.



## Child and Young Adult Health (Ages 1 through 24)

Wisconsin Child and Young Adult Death Rates  
(Ages 1-24, rates per 100,000 population)



- Overall, Wisconsin receives a grade of B for child and young adult health and ranks 14<sup>th</sup> nationally for its death rate.
- Wisconsin is failing in its efforts to promote health for children and young adults who are African American or Native American.
- Wisconsin receives a barely passing grade of D for its efforts to promote health for male children and young adults and rural children and young adults.

## Wisconsin's Report Card for Working-Age Adult Health

Death Rate		Percent of Population	Death Rate (Per 100000)	Grades			
<b>Working-Age Adults (25-64)</b>		100%	289		B		
Gender	Men	51%	357			C	
	Women	49%	220	A			
Education	High school or less	44%	437				D
	Some college/technical school	31%	209	A			
	College graduate	25%	180	A			
Type of county	Large urban (Milwaukee County)	16%	396				D
	Suburban/urban	32%	237	A			
	Non-urban	38%	276		B		
	Rural	14%	313		B		
Race/ethnicity	African American/Black	5%	652				F
	Asian	2%	163	A			
	Hispanic/Latino	5%	192	A			
	Native American	1%	656				F
	White non-Hispanic	87%	272		B		

Unhealthy Days		Percent of Population	Unhealthy Days per Month	Grades			
<b>Working-Age Adults (25-64)</b>		100%	5.4		B		
Gender	Men	51%	4.5	A			
	Women	49%	6.3				D
Education	High school or less	44%	6.5				D
	Some college/technical school	31%	5.9			C	
	College graduate	25%	4.0	A			
Type of county	Large urban (Milwaukee County)	16%	6.9				D
	Suburban/urban	32%	5.0		B		
	Non-urban	38%	5.2		B		
	Rural	14%	5.0		B		
Race/ethnicity	African American/Black	5%	8.3				F
	Asian	2%	I				
	Hispanic/Latino	5%	8.8				F
	Native American	1%	I				
	White non-Hispanic	87%	5.1		B		

Health Grade

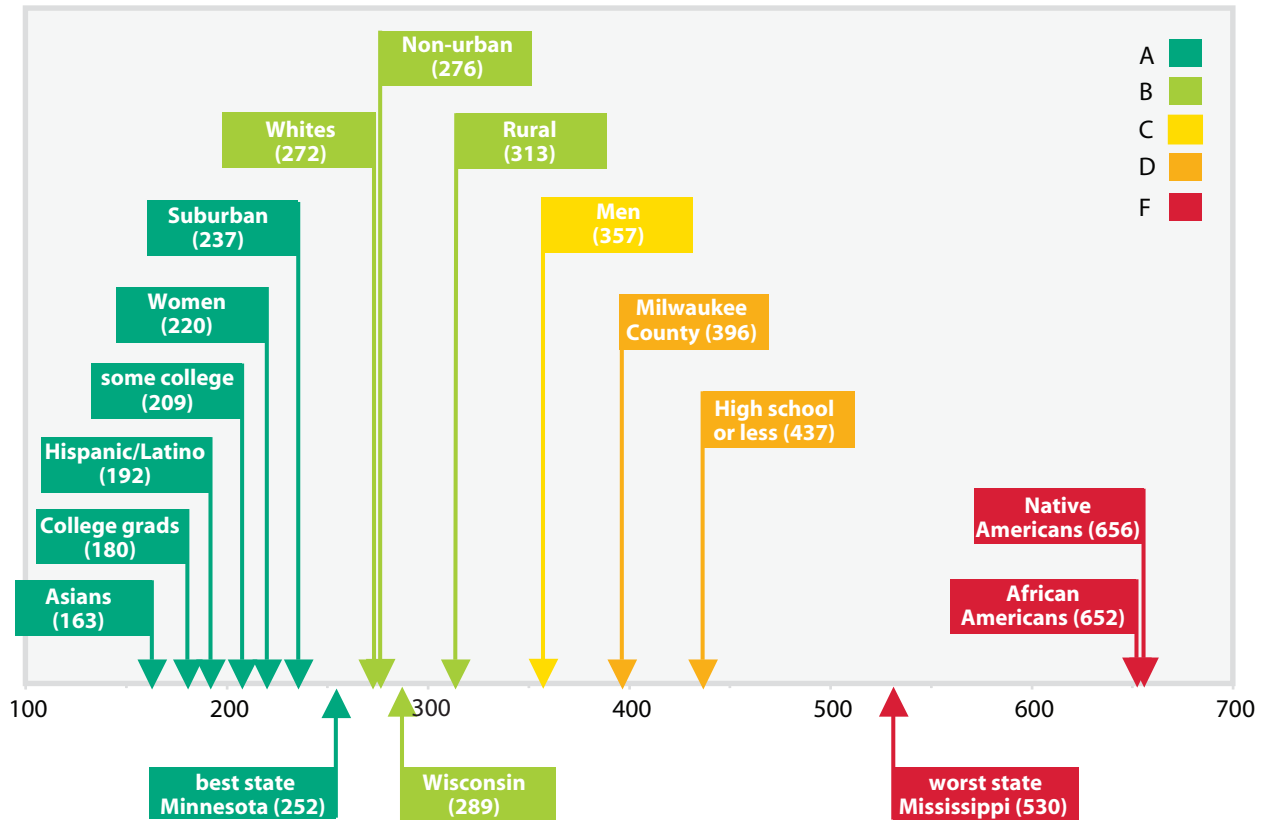
**B**

Health Disparity Grade

**C**

## Working-Age Adult Health (Ages 25 through 64)

Wisconsin Working-Age Adult Death Rates  
(Ages 25-64, rates per 100,000 population)



- Overall, Wisconsin receives a grade of B for the health of working-age adults. Wisconsin ranks 9<sup>th</sup> nationally for its death rate and 11<sup>th</sup> for unhealthy days.
- Wisconsin receives a grade of C for health disparities among working-age adults.
- Wisconsin is failing in its efforts to reduce death among working-age adults who are African American or Native American. Wisconsin is also failing in its efforts to improve health-related quality of life for African American and Hispanic/Latino working-age adults.
- Wisconsin receives a barely passing grade of D for its efforts to reduce death and unhealthy days among working-age adults who live in Milwaukee County or those who have a high school diploma or less.
- Wisconsin received a grade of D for unhealthy days for working-age adults who live in Milwaukee County and those who have a high school diploma or less.

## Wisconsin's Report Card for Older Adult Health

Death Rate		Percent of Population	Death Rate (Per 100000)	Grades			
<b>Older Adults (65+)</b>		100%	4611			C	
Gender	Men	43%	5490				F
	Women	57%	4016	A			
Education	High school or less	71%	5308				F
	Some college/technical school	16%	3786	A			
	College graduate	13%	4128	A			
Type of county	Large urban (Milwaukee County)	15%	4953				D
	Suburban/urban	28%	4523			C	
	Non-urban	38%	4560			C	
	Rural	19%	4571			C	
Race/ethnicity	African American/Black	3%	5484				F
	Asian	1%	2941	A			
	Hispanic/Latino	1%	2091	A			
	Native American	<1%	5819				F
	White non-Hispanic	95%	4613			C	

Unhealthy Days		Percent of Population	Unhealthy Days per Month	Grades			
<b>Older Adults (65+)</b>		100%	6.5			C	
Gender	Men	43%	6.3			C	
	Women	57%	6.6			C	
Education	High school or less	71%	7.1				D
	Some college/technical school	16%	6.4			C	
	College graduate	13%	5.4	A			
Type of county	Large urban (Milwaukee County)	15%	7.6				D
	Suburban/urban	28%	6.5			C	
	Non-urban	38%	6.5			C	
	Rural	19%	6.2		B		
Race/ethnicity	African American/Black	3%	9.9				F
	Asian	1%	I				
	Hispanic/Latino	1%	I				
	Native American	<1%	I				
	White non-Hispanic	95%	6.3			C	

Health Grade

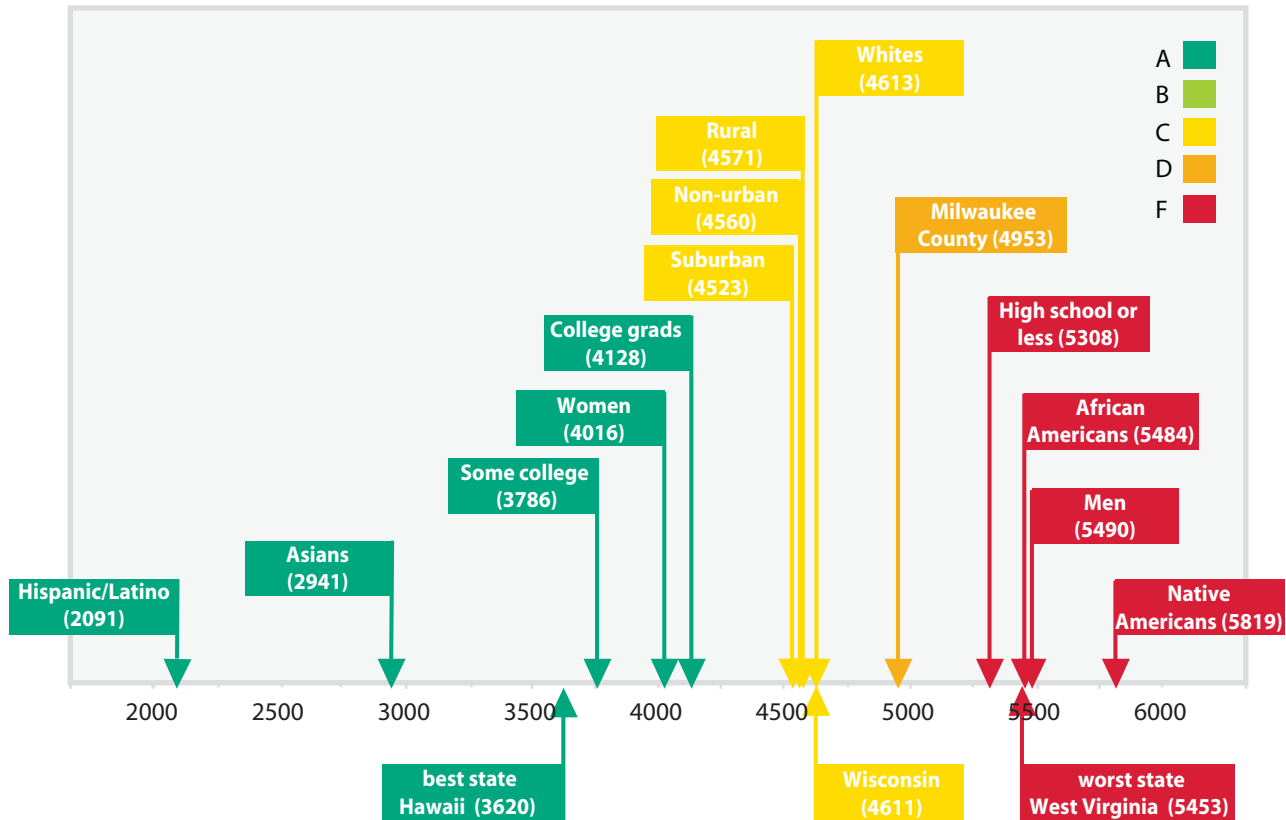
C

Health Disparity Grade

D

## Older Adult Health (Ages 65+)

Wisconsin Older Adult Death Rates  
(Ages 65+, rates per 100,000 population)



- Overall, Wisconsin receives a grade of C for the health of older adults. Wisconsin ranks 22<sup>nd</sup> nationally for older adult death rates and 27<sup>th</sup> for unhealthy days.
- Wisconsin receives a grade of D for health disparities among older adults.
- Wisconsin is failing in its efforts to reduce death for male older adults, older adults with a high school diploma or less, Native American older adults and African American older adults. The state is also failing to promote health-related quality of life for older adults who are African American.
- Wisconsin receives a barely passing grade of D for its efforts to reduce death for older adults who live in Milwaukee County. Wisconsin also receives a D for its efforts to promote health-related quality of life for older adults with a high school diploma or less and for residents of Milwaukee County.

## Data Sources and Methods

### What are death rates?

Death rates are based on counts of the number of deaths occurring in a population group divided by the total number of people in that group. These numbers are then converted to reflect rates of death per 100,000 people (per 1,000 births for infants).

We report rates based on the most recent 3-year period for which data are available nationally: 2004-2006. The death rates are adjusted for age (except the rates for infants and older adults by education).

### What are unhealthy days?

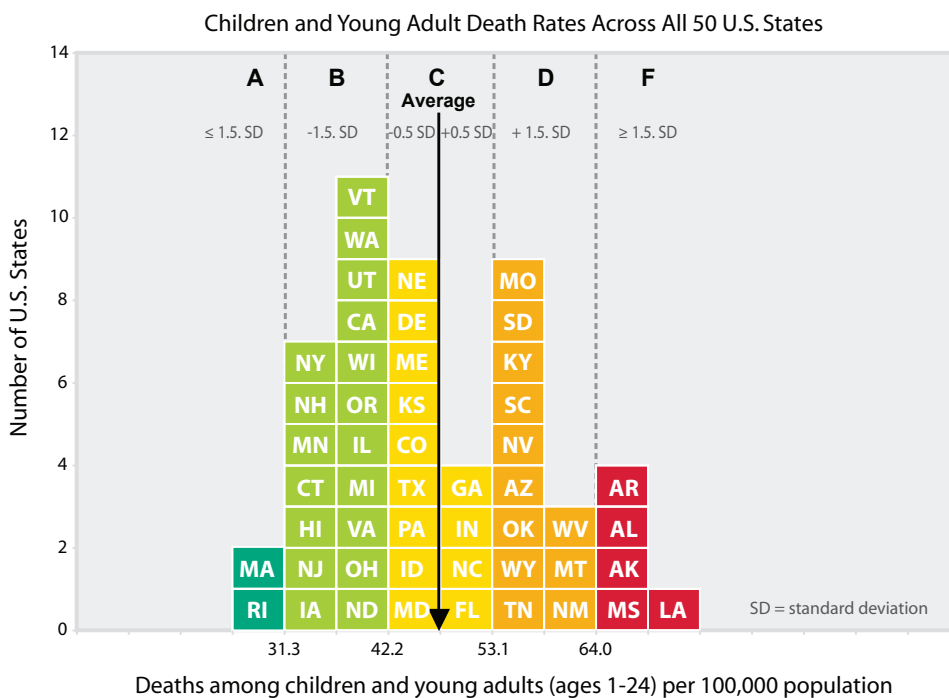
Unhealthy days are a measure of health-related quality of life. We report the mean (average) number of unhealthy days reported per month. The numbers are based on adult (age 25+) respondents' answers to two questions about their health in the past month:

- 1) how many days was your physical health poor?
- 2) how many days was your mental health poor?

We report data for the most recent 3-year period for which data on unhealthy days are available nationally: 2006-2008. The mean number of unhealthy days per month is adjusted for age.

### Grading methods

In order to give Wisconsin and its residents grades for the health outcomes of death and unhealthy days, we created grading scales. We looked at the distribution of health within each life stage for each of the 50 states to see how spread out each state's rate was from the average for the life stage (see figure below for an example for child and young adult death). We then assigned cutoff points for grades based on distance from the average (i.e., based on standard deviations from the mean).



We determined a grading scale using this approach for each combination of outcome (death and unhealthy days) and life stage. The exact cutoff points for grades for each outcome/life stage combination are provided on the next page. We used these outcome/life stage cutoff points to assign grades for each population subgroup.

## Life Stage Population Sizes and Outcome-specific Cutoff Points for Grades

Age group	2008 WI Population (%)	Outcome	A	B	C	D	F
Infants	72,548 (1.3%)	Death	<4.8	4.8-6.3	6.4-7.8	7.9-9.5	>9.5
Children/ Young Adults	1,811,110 (31.9%)	Death	<31.3	31.3-42.2	42.3-53.1	53.2-64.0	>64.0
Working-Age Adults	3,032,183 (53.5%)	Death	<246	246-319	320-393	394-467	>467
		Unhealthy Days	<4.76	4.76-5.48	5.49-6.21	6.22-6.93	>6.93
Older Adults	756,456 (13.3%)	Death	<4137	4137-4511	4512-4885	4886-5259	>5259
		Unhealthy Days	<5.44	5.44-6.19	6.20-6.94	6.95-7.69	>7.69

Within the oldest two life stages, we averaged the outcome grades (death and unhealthy days) to determine the life stage health grade, giving each outcome equal weighting.

The life stage health disparity grades are based on a weighted proportion of subgroup grades. Score values are assigned by comparing each subgroup grade to the best subgroup grade and are then converted to percents. The resulting disparity score can range from a value of zero percent disparity when all subgroups have the same grade to 100% disparity where one subgroup grade is an A and all other subgroup grades are Fs. (For the two younger life stages, the disparity score was based solely on available death rates for subgroups, whereas the disparity score for the two older life stages was based on an average of the scores for death and unhealthy days.) We assigned grades to these scores as follows:

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>F</b>
(0-15%)	(15-30%)	(30-45%)	(45-60%)	(> 60%)
Very Good	Good	Fair	Poor	Failing

### Changes in overall grades since 2007

The overall health grade for the state of Wisconsin has remained a B-. The health disparity grade has improved slightly from a D to a C-. However, this change reflects updated data that allows for the inclusion of death grades for the Hispanic/Latino subgroup in all four life stages. On average, death rates are lower for this subgroup than the state as a whole. This results in an apparent increase in the disparity grade. For a detailed comparison of each subgroup's health over time, see <http://uwphi.pophealth.wisc.edu>.

### Data Sources

Indicator	Data Source	Years
High School Age Unhealthy Days	Wisconsin Youth Risk Behavior Surveillance System	2009
Death by Educational Level	National Center for Health Statistics	2004-2006
Death for all Other Factors	CDC WONDER	2004-2006
Population Counts and Proportions	Census	2000
Wisconsin Infants (<1) Subgroup Death	Wisconsin Interactive Statistics on Health	2004-2006
Working and Older Adult Unhealthy Days	Behavioral Risk Factor Surveillance System	2006-2008



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