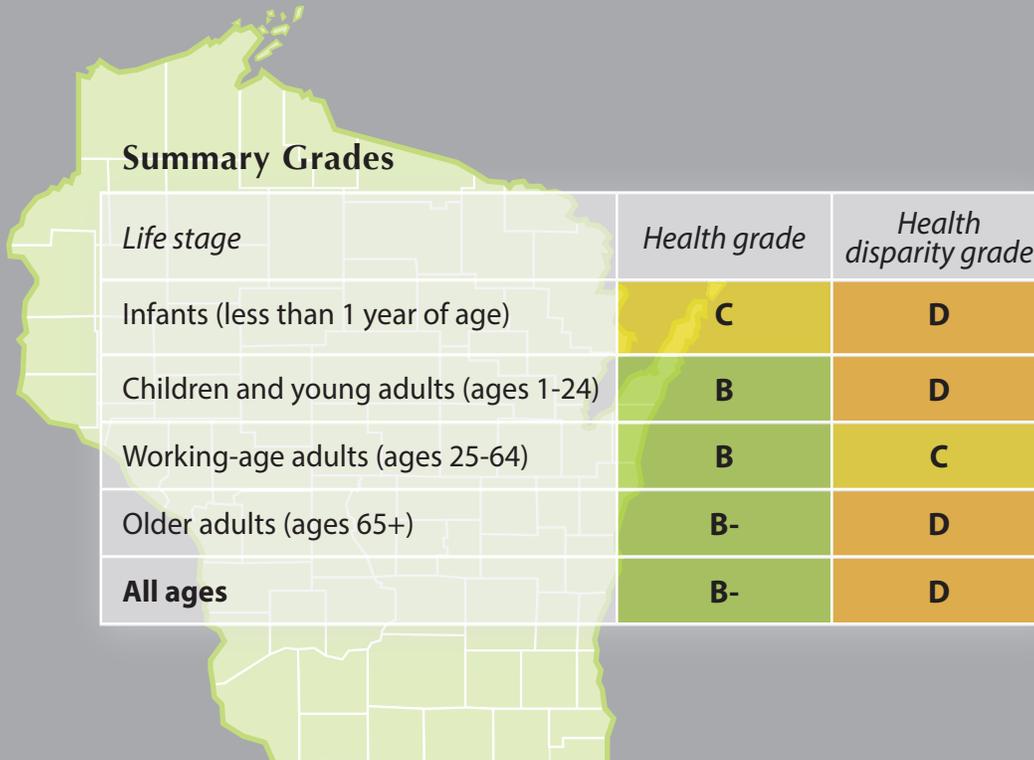


HEALTH OF WISCONSIN



REPORT CARD 2016



University of Wisconsin
Population Health Institute
SCHOOL OF MEDICINE AND PUBLIC HEALTH

University of Wisconsin Population Health Institute
Department of Population Health Sciences

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Executive Summary

December 2016

The *Health of Wisconsin Report Card* measures the state's progress towards meeting two overarching goals of the Healthiest Wisconsin 2020 State Health Plan: (1) to improve health for all and (2) to eliminate health disparities.

As part of its mission to translate research for policy and practice, the University of Wisconsin Population Health Institute has prepared the *Health of Wisconsin Report Card*, providing all Wisconsinites with a useful assessment of the state's health. The first *Health of Wisconsin Report Card* was released in 2007; updated versions were prepared in 2010 and 2013.

Wisconsin's grade for overall health has remained the same since 2007 – a B-. The health disparities grade has changed, however, from a C- in 2010, to a D in 2013 and 2016. This change indicates that Wisconsin needs to do more to reduce health disparities. As with the previous versions, the *Health of Wisconsin Report Card 2016* draws attention to weaknesses in efforts across Wisconsin to promote the health of all residents.

With the exception of working-age adults, Wisconsin's death rates have fallen for every age group examined in the report. However, death rates in other states also continue to improve. Thus, Wisconsin's improvement did not result in a higher grade, as our progress has not outpaced other states.

Since 2013, progress in many areas may lead to reduced disparities in the future, including improvements in:

- Death rates among children living in rural counties
- Death rates for working-age and older adults with a level of education equal to high school or less
- Death rates for female older adults
- The number of unhealthy days for working-age adults with lower levels of educational attainment (equivalent to some college or technical school or less) and those of Asian or Hispanic/Latino race/ethnicity
- The number of unhealthy days for all older adults

Despite these improvements in death rates and quality of life measures for Wisconsin, substantial gaps remain between the healthiest and least healthy subgroups in the state's population. These gaps result in an overall health disparity grade of D. Engaging Wisconsin communities, leaders and partners across sectors statewide will be necessary to reach the State Health Plan goals of improved health for all and the elimination of health disparities.

Report Card Overview

The Wisconsin Partnership Program at the University of Wisconsin School of Medicine and Public Health strives to improve the overall health, health equity, and well-being of Wisconsin communities, supporting Wisconsin in becoming the healthiest state in the nation where all can live longer and better. To increase our understanding of the health of Wisconsin and, in particular, differences in health among subpopulations, we developed the *Health of Wisconsin Report Card* and continue to update it in order to draw attention to how Wisconsin's health compares to the nation as a whole. We examine current health outcomes and give grades assessing Wisconsin's overall health and health disparities.

The image on the front cover gives two overall grades for the Health of Wisconsin: a B- for overall health and a D for health disparities. What do these grades represent and how were they determined?

Grading Health

We grade *health* in two ways:

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

We measure length of life by examining 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).

Researchers have found that asking people how healthy they feel provides valuable information about their quality of life, captures how healthy they feel right now and provides a good indication of their future well-being. National surveys collect information from people across the country regarding how many days in the past month they have felt physically or mentally unhealthy. Researchers then calculate the average number of unhealthy days per month for the overall population and subgroups of interest. We looked at unhealthy days to the two adult age groups (working-age adults and older adults). [Data is not available for infants or children and young adults.]

When we grade the *health* (length and quality of life) of Wisconsin's population in comparison to the health of populations of other states, Wisconsin gets a B-. The overall health grade for Wisconsin represents the average of the health of the entire state population. It is important to note that because this grade is an average, the health of the majority of the population dominates the grade and may mask the failing health of several population subgroups.

Grading Health Disparities

In addition, we developed a *health disparity* grade based on the health of different groups of people compared to their peers of the same age in Wisconsin or in other states. 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

Data on health by gender and geography are readily available, but data combining health and socioeconomic status, such as income, or health and race or 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. For each life stage, we graded the health of each Wisconsin subgroup in comparison to the health of the 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 D for *health disparity*.

Summary Grades

To give Wisconsin its two overall grades of B- and D, we averaged the health and health disparity grades for each of the four life stages (see table below). Detailed report cards for each of the four life stages appear on pages 4-11. We provide information on our data sources and methods on pages 12-13 and on our website: <http://uwphi.pophealth.wisc.edu>

Life Stage	Health Grade	Health Disparity Grade
Infants (less than 1 year of age)	C	D
Children and young adults (ages 1-24)	B	D
Working-age adults (ages 25-64)	B	C
Older adults (ages 65+)	B-	D
All Ages	B-	D

Improving These Grades

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. Three other resources are also available on our website: <http://uwphi.pophealth.wisc.edu/programs/match/healthiest-state/index.htm>

- *Opportunities to Make Wisconsin the Healthiest State* - highlights the factors that determine our health:
 - Health Behaviors
 - Clinical Care
 - Social and Economic Factors
 - Physical Environment
- *Wisconsin Health Trends: Progress Report* – presents statewide data on 10-year trends for leading health outcomes and factors in Wisconsin.
- *What Works: Policies and Programs to Improve Wisconsin’s Health*, provides evidence ratings, literature reviews and implementation resources for nearly 400 policies and programs. This resource can help policy makers, and other leaders in the public and private sectors find ideas that can work locally. This online database is available at: www.whatworksforhealth.wisc.edu

Wisconsin's Report Card for Infant Health



<i>Death Rate</i>		Percent of Population	Death Rate (Per 1000)	<i>Grades</i>			
<i>Infants (< 1 year)</i>		100%	5.9			C	
Gender	Male	51%	6.1			C	
	Female	49%	5.6			C	
Education of mother	High school or less	37%	7.5				D
	Some college/technical school	31%	5.8			C	
	College graduate	33%	3.7	A			
Type of county	Large Urban Metro (Milwaukee County)	23%	8.6				F
	Large Suburban Metro	15%	4.6		B		
	Smaller Metro	37%	5.3		B		
	Rural	26%	5.2		B		
Race/ethnicity	African American	10%	13.8				F
	Asian	2%	6.5			C	
	Hispanic/Latino	10%	4.8		B		
	American Indian	1%	8.1				F
	White non-Hispanic	76%	4.8		B		

Health Grade

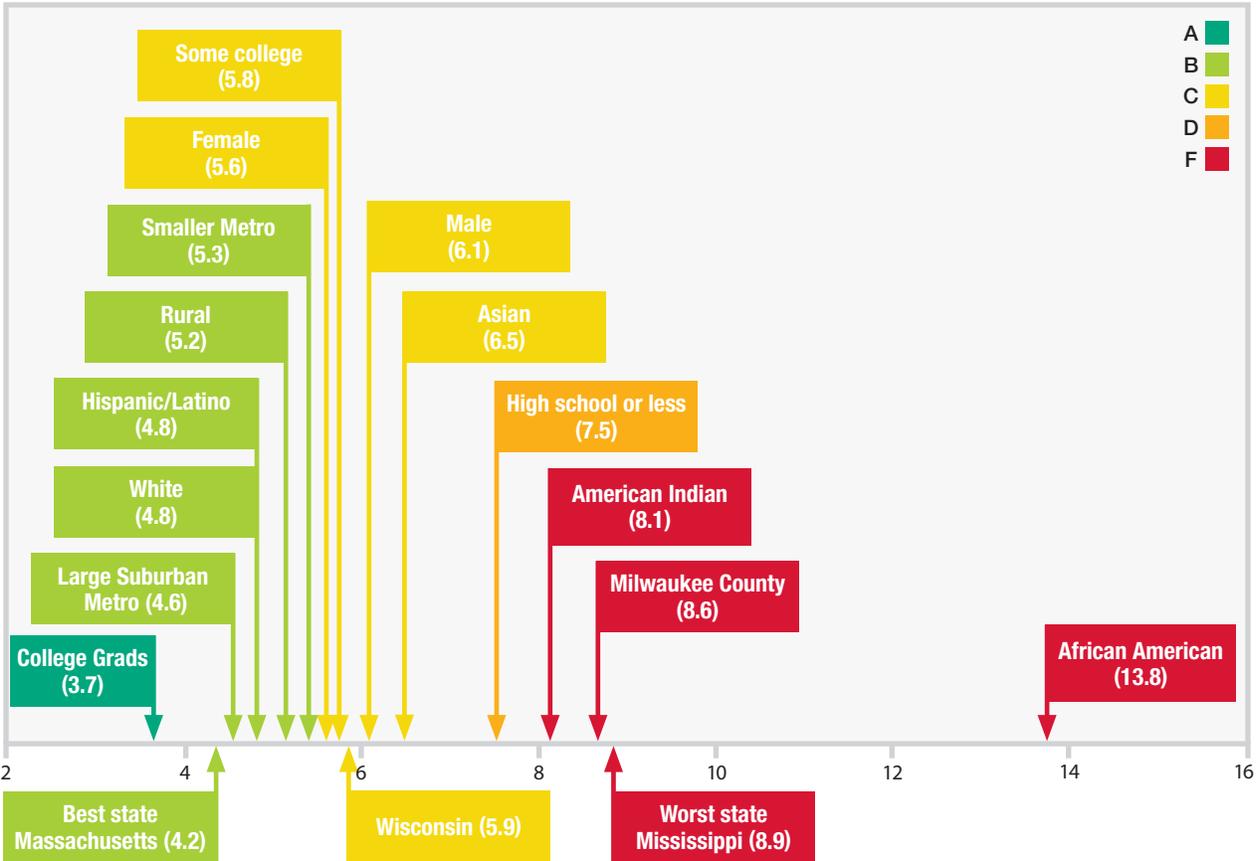
C

Health Disparity Grade

D

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 26th nationally for its infant death rate.
- Wisconsin continues to fail in its efforts to promote health for infants who live in Milwaukee County and infants who are African American or American Indian.
- Wisconsin receives a barely passing grade of D for its efforts to promote the health of infants whose mothers have no education beyond high school.

Wisconsin's Report Card for Child and Young Adult Health



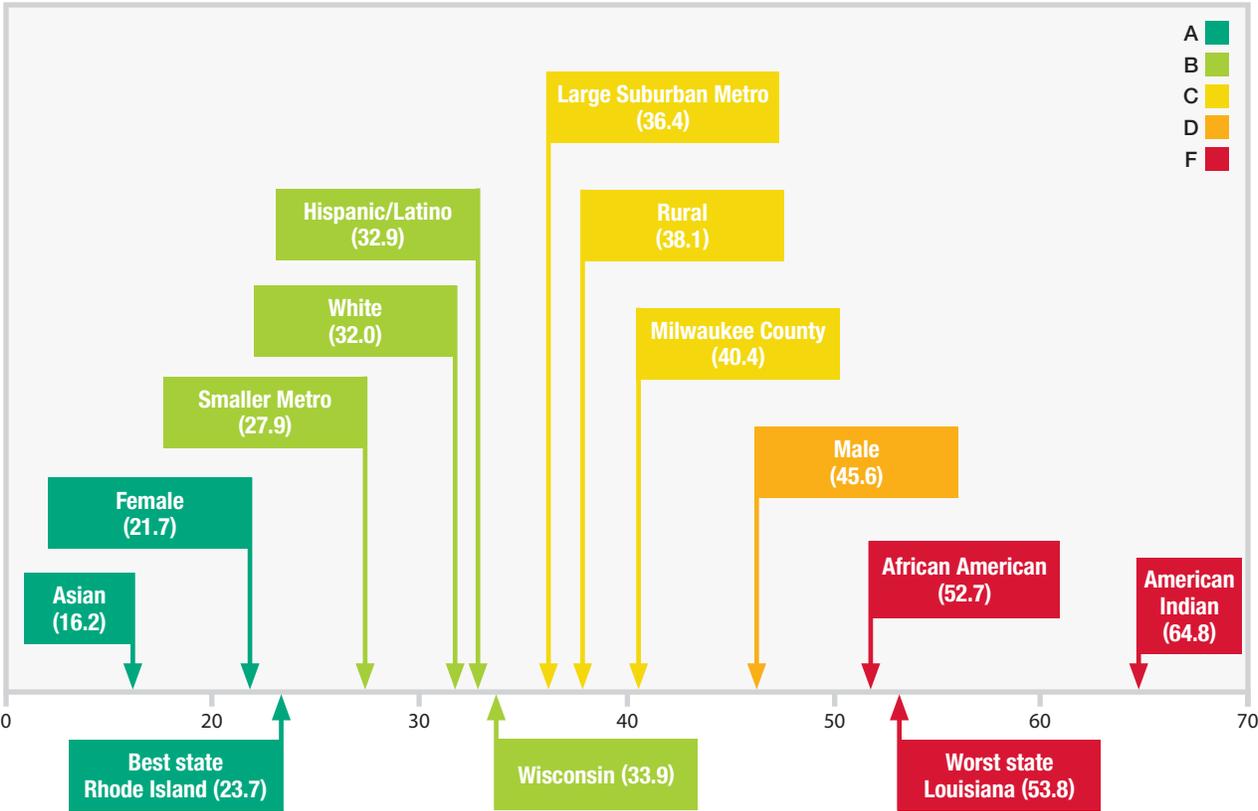
<i>Death Rate</i>		Percent of Population	Death Rate (Per 100000)	<i>Grades</i>			
<i>Children and Young Adults (1-24)</i>		100%	33.9		B		
Gender	Male	51%	45.6				D
	Female	49%	21.7	A			
Type of county	Large Urban Metro (Milwaukee County)	18%	40.4			C	
	Large Suburban Metro	15%	36.4			C	
	Smaller Metro	42%	27.9		B		
	Rural	25%	38.1			C	
Race/ethnicity	African American	1%	52.7				F
	Asian	4%	16.2	A			
	Hispanic/Latino	10%	32.9		B		
	American Indian	10%	64.8				F
	White non-Hispanic	75%	32.0		B		

Health Grade **B**

Health Disparity Grade **D**

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 15th nationally for its death rate.
- Wisconsin is failing in its efforts to promote health for children and young adults who are African American or American Indian.
- Wisconsin receives a barely passing grade of D for its efforts to promote health for male young adults.

Wisconsin's Report Card for Working-Age Adult Health

<i>Death Rate</i>		Percent of Population	Death Rate (Per 100000)	<i>Grades</i>			
<i>Working-Age Adults (25-64)</i>		100%	289		B		
Gender	Male	50%	358			C	
	Female	50%	219	A			
Education	High school or less	37%	470				F
	Some college/technical school	34%	276		B		
	College graduate	30%	206	A			
Type of county	Large Urban Metro (Milwaukee County)	17%	398				D
	Large Suburban Metro	16%	233	A			
	Smaller Metro	42%	267		B		
	Rural	26%	296		B		
Race/ethnicity	African American	6%	591				F
	Asian	2%	179	A			
	Hispanic/Latino	5%	193	A			
	American Indian	1%	604				F
	White non-Hispanic	85%	275		B		
<i>Unhealthy Days</i>		Percent of Population	Unhealthy Days per Month	<i>Grades</i>			
<i>Working-Age Adults (25-64)</i>		100%	6.4		B		
Gender	Male	50%	5.8	A			
	Female	50%	6.9		B		
Education	High school or less	37%	7.9			C	
	Some college/technical school	34%	6.6		B		
	College graduate	30%	4.0	A			
Type of county	Large Urban Metro (Milwaukee County)	17%	8.3				D
	Large Suburban Metro	16%	5.8	A			
	Smaller Metro	42%	6.1		B		
	Rural	26%	6.0		B		
Race/ethnicity	African American	6%	10.0				F
	Asian	2%	4.1	A			
	Hispanic/Latino	5%	8.6				D
	American Indian	1%	8.6				D
	White non-Hispanic	85%	5.9		B		

Health Grade

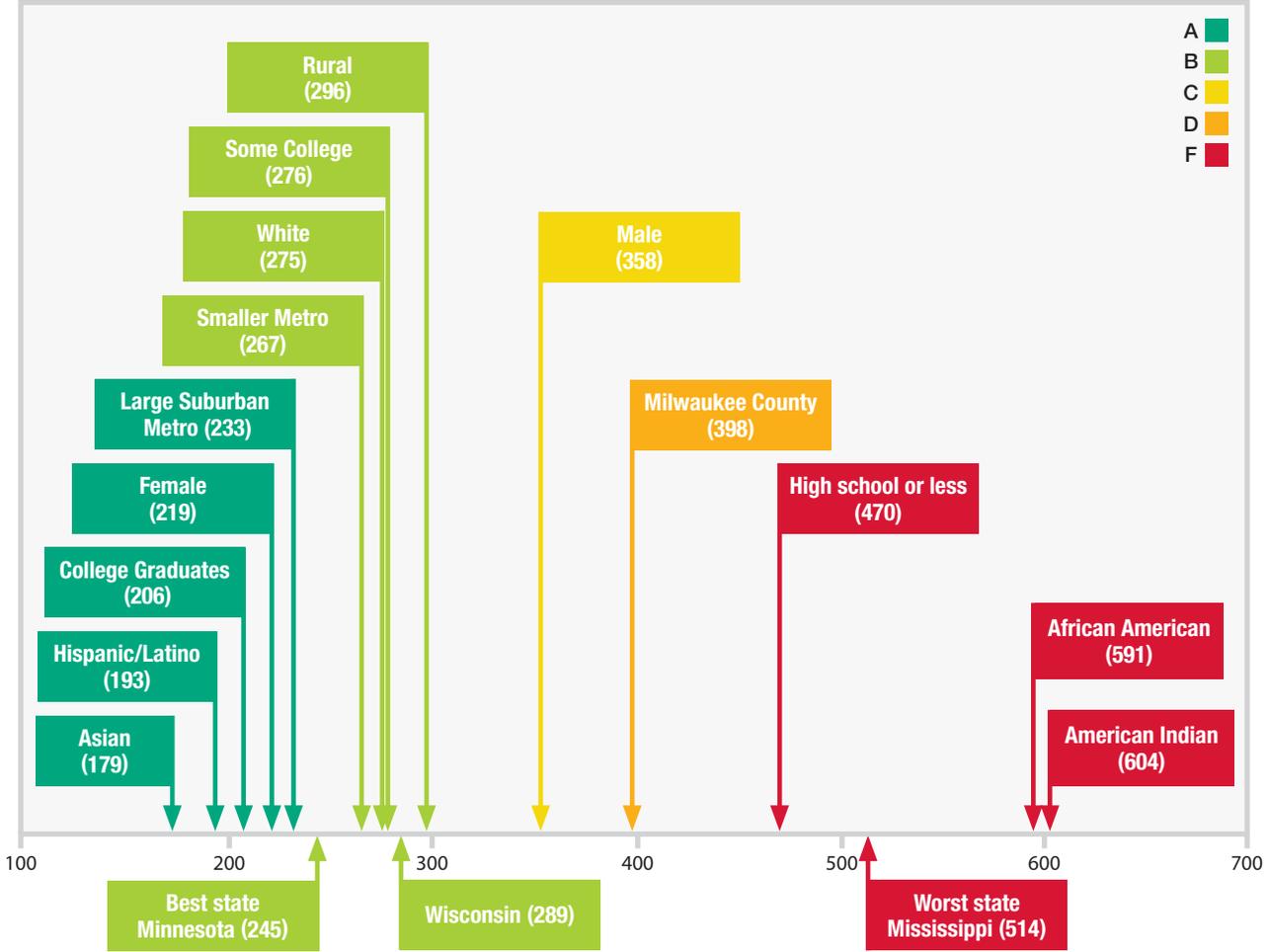
B

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 13th nationally for its death rate and 22nd 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 have high school level education or less, who are African American, or American Indian. Wisconsin is also failing in its efforts to improve health-related quality of life for working-age adults who are African American.
- Wisconsin receives a barely passing grade of D for its efforts to reduce death among working-age adults who live in Milwaukee County. Wisconsin also receives a barely passing grade of D for its efforts to improve health-related quality of life for working-age adults who live in Milwaukee County and for working-age adults who are Hispanic/Latino or American Indian.

Wisconsin's Report Card for Older Adult Health

<i>Death Rate</i>		Percent of Population	Death Rate (Per 100000)	<i>Grades</i>			
Older Adults (65+)		100%	4301			C	
Gender	Male	44%	4969				F
	Female	56%	3817		B		
Education	High school or less	57%	4502			C	
	Some college/technical school	22%	4087		B		
	College graduate	21%	4823				D
Type of county	Large Urban Metro (Milwaukee County)	13%	4561				D
	Large Suburban Metro	16%	4144			C	
	Smaller Metro	39%	4250			C	
	Rural	32%	4342			C	
Race/ethnicity	African American	3%	5040				F
	Asian	1%	3108	A			
	Hispanic/Latino	1%	2646	A			
	American Indian	1%	6140				F
	White non-Hispanic	94%	4296			C	
<i>Unhealthy Days</i>		Percent of Population	Unhealthy Days per Month	<i>Grades</i>			
Older Adults (65+)		100%	6.1		B		
Gender	Male	44%	5.4	A			
	Female	56%	6.7		B		
Education	High school or less	57%	6.9			C	
	Some college/technical school	22%	6.0		B		
	College graduate	21%	4.3	A			
Type of county	Large Urban Metro (Milwaukee County)	13%	6.8		B		
	Large Suburban Metro	16%	6.2		B		
	Smaller Metro	39%	6.2		B		
	Rural	32%	5.7	A			
Race/ethnicity	African American	3%	8.0				D
	Asian	1%	8.6				D
	Hispanic/Latino	1%	7.5			C	
	American Indian	1%	7.6			C	
	White non-Hispanic	94%	6.0		B		

Health Grade

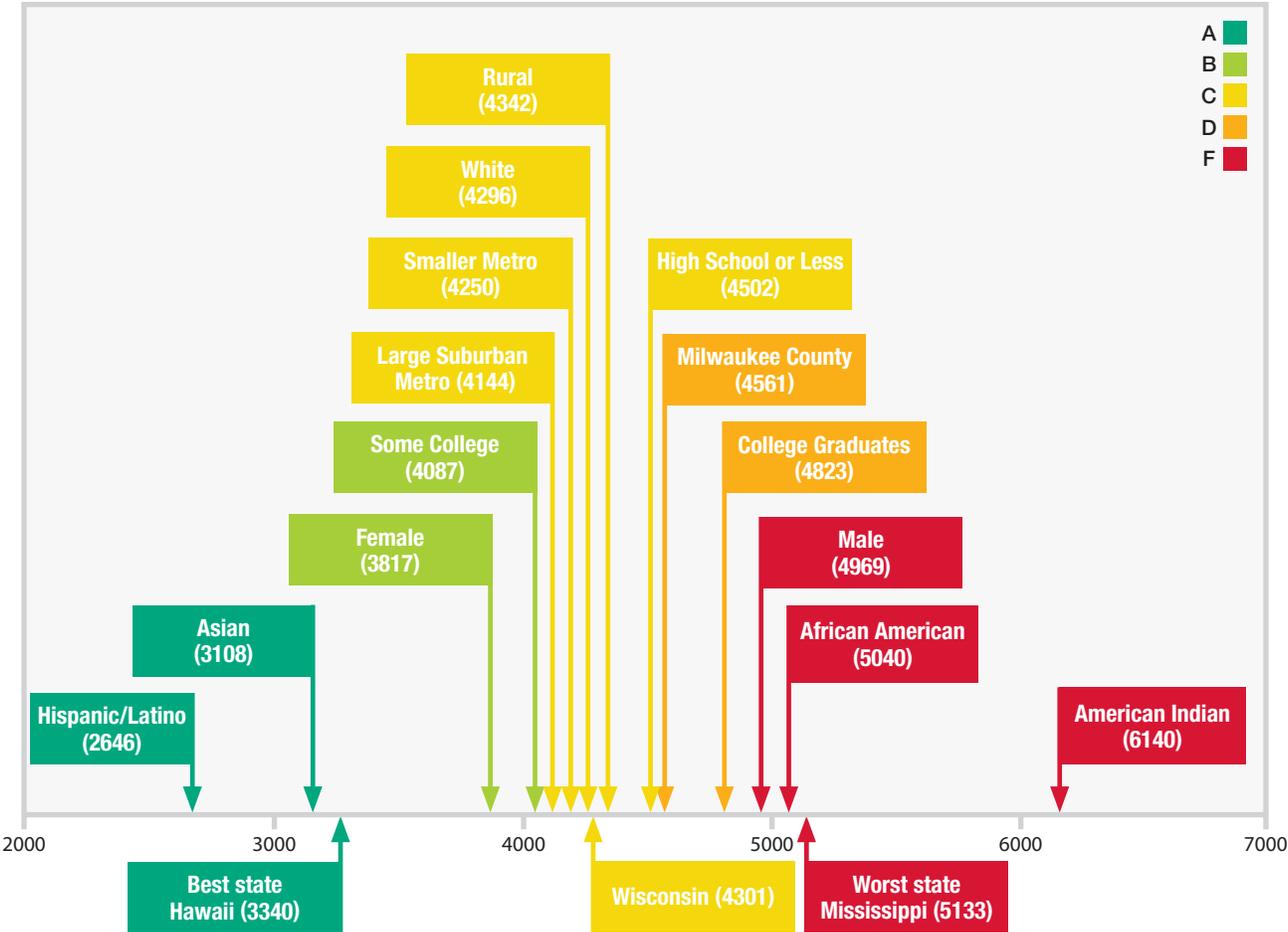
B-

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 B- for the health of older adults. Wisconsin ranks 24th nationally for older adult death rates and 17th 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 older adults who are male, American Indian or African American.
- Wisconsin receives a barely passing grade of D for its efforts to reduce death for older adults who are college graduates or living in Milwaukee County. Additionally, Wisconsin receives a barely passing grade of D for its efforts to promote health-related quality of life for older adults who are African American or Asian.

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: 2012-2014. The death rates are adjusted for age (except the rates for infants and older adults by education).

What are unhealthy days?

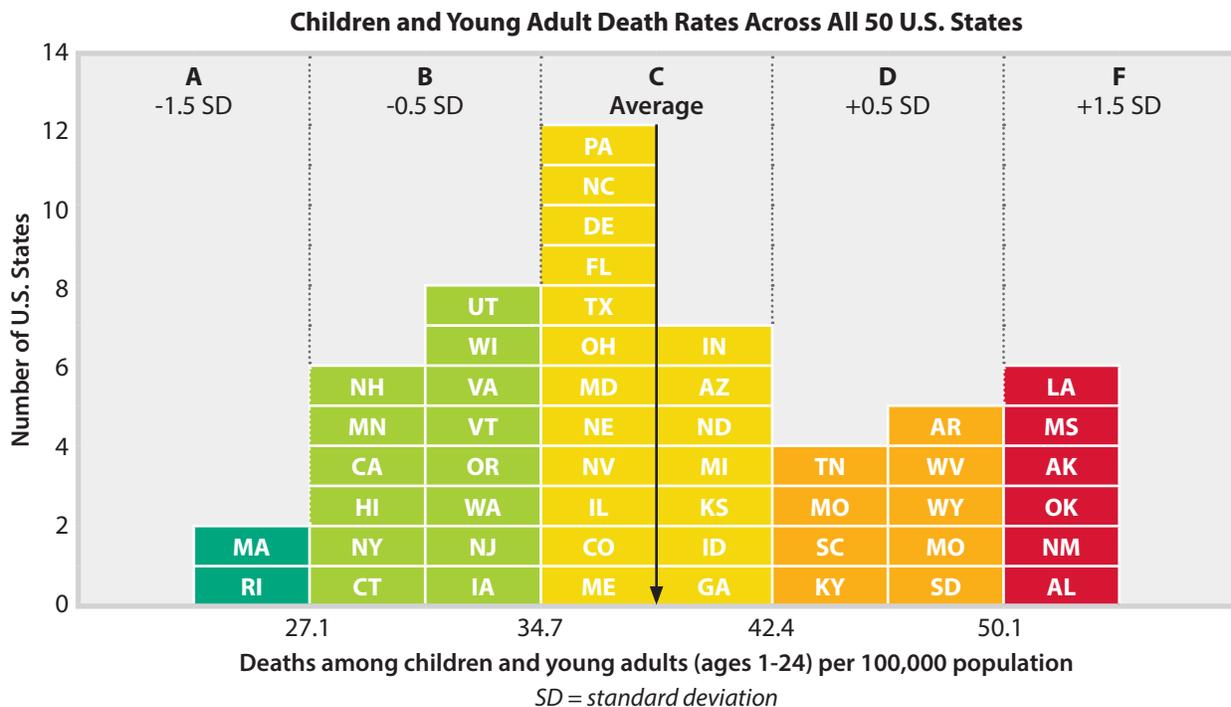
Unhealthy days are a measure of health-related quality of life. We report the mean (average) number of unhealthy days reported per month. Numbers are based on adult (age 25+) respondents' answers to two questions about their health in the past month:

- 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: 2012-2014. The mean number of unhealthy days per month is adjusted for age.

Grading methods

In order to give Wisconsin communities and population groups a snapshot of their health (death rates and unhealthy days) relative to their peers, 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 rates and unhealthy days) and life stage and assigned grades for each population subgroup. The exact cutoff points for grades for each outcome/life stage combination are provided on the next page.

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

Age Group	2014 Wisconsin Population (%)	Outcome	A	B	C	D	F
Infants	66,637 (1.2%)	Death	<4.4	4.4-5.5	5.5-6.7	6.7-7.8	>7.8
Children/Young Adults	1,793,757 (31.2%)	Death	<27.1	27.1-34.7	34.7-42.4	42.4-50.1	>50.1
Working-Age Adults	3,013,149 (52.4%)	Death	<238	238-309	309-380	380-450	>450
		Unhealthy Days	<5.9	5.9-7.0	7.0-8.2	8.2-9.3	>9.3
Older Adults	874,415 (15.2%)	Death	<3738	3738-4143	4143-4548	4548-4952	>4952
		Unhealthy Days	<5.9	5.9-6.8	6.8-7.8	7.8-8.8	>8.8

To determine the health grade for the oldest two life stages, we averaged the outcome grades (death and unhealthy days), giving each outcome equal weight.

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 percentages. 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 (infants and children and young adults), the disparity score is based solely on available death rates for subgroups. The disparity score for the two older life stages is based on an average of the scores for death rates and unhealthy days. We assigned grades to these scores as follows:

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

To determine Wisconsin’s health grade, we averaged the four life stage health grades to calculate an overall GPA. We converted the overall GPA back to a grade using the following conversion: < 0.5 (F), 0.75-1.25 (D), 1.25-1.75 (C-), 1.75-2.25 (C), 2.25-2.75 (B-), 2.75-3.25 (B), 3.25-3.75 (A-), 3.75-4.0 (A). Wisconsin’s health disparity grade was calculated in the same way, using the four life stage health disparity grades.

Changes in overall grades since 2013

The overall health grade for the state of Wisconsin has remained a B- and the health disparity grade has remained a D indicating that Wisconsin needs to be doing more to reduce health disparities within the state.

Data sources and references

Indicator	Data Source	Years
Death by Educational Level	National Center for Health Statistics	2012-2014
Death for all Other Factors	CDC WONDER	2012-2014
Population Counts and Proportions	Wisconsin Interactive Statistics on Health	2014
Wisconsin Infants (<1) Subgroup Death	Wisconsin Interactive Statistics on Health	2012-2014
Working and Older Adult Unhealthy Days	Behavioral Risk Factor Surveillance System	2012-2014



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