County Health Rankings

Mobilizing Action Toward Community Health

2010

Wisconsin

Robert Wood Johnson Foundation

UNIVERSITY OF WISCONSIN

Population Health Institute

Translating Research into Policy and Practice

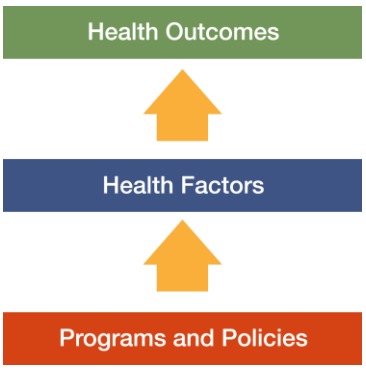
Introduction

Where we live matters to our health. The health of a community depends on many different factors, including quality of health care, individual behavior, education and jobs, and the environment. We can improve a community's health through programs and policies. For example, people who live in communities with ample park and recreation space are more likely to exercise, which reduces heart disease risk. People who live in communities with smoke-free laws are less likely to smoke or to be exposed to second-hand smoke, which reduces lung cancer risk.

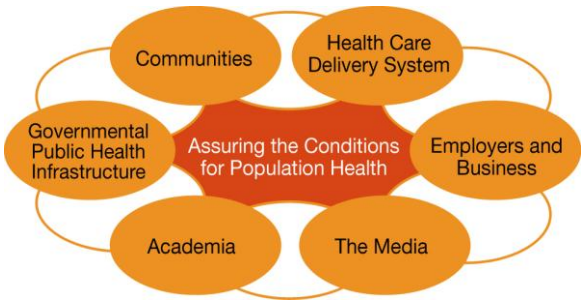
The problem is that there are big differences in health across communities, with some places being much healthier than others. And up to now, it has been hard to get a standard way to measure how healthy a county is and see where they can improve.

The Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute are pleased to present the 2010 *County Health Rankings*, a collection of 50 reports that reflect the overall health of counties in every state across the country. For the first time, counties can get a snapshot of how healthy their residents are by comparing their overall health and the factors that influence their health, with other counties in their state. This will allow them to see county-to-county where they are doing well and where they need to improve. Everyone has a stake in community health. We all need to work together to find solutions. The *County Health Rankings* serve as both a call to action and a needed tool in this effort.

All of the *County Health Rankings* are based upon this model of population health improvement:



In this model, health outcomes are measures that describe the current health status of a county. These health outcomes are influenced by a set of health factors. These health factors and their outcomes may also be affected by community-based programs and policies designed to alter their distribution in the community. Counties can improve health outcomes by addressing all health factors with effective, evidence-based programs and policies.



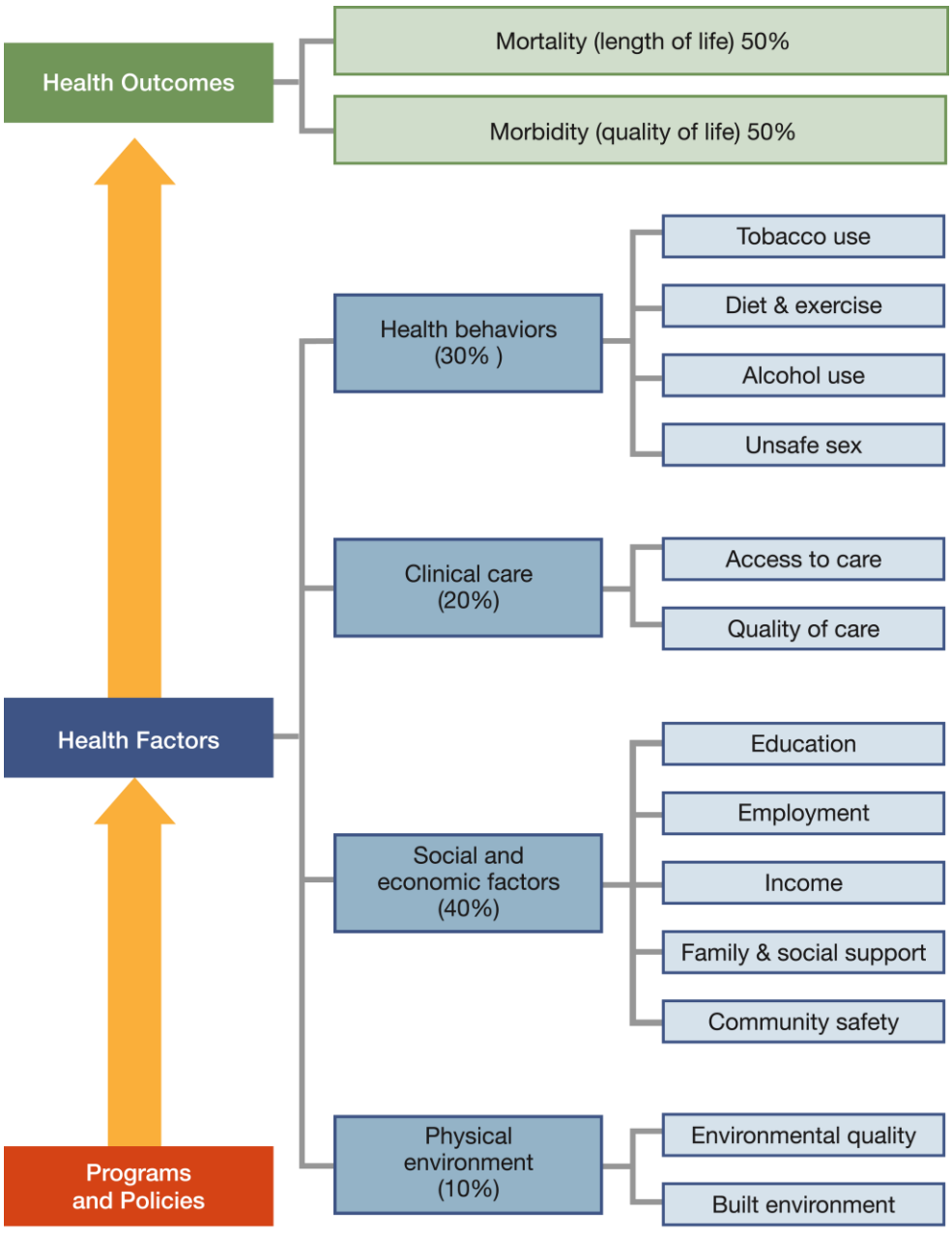
Institute of Medicine, 2002

To compile the *Rankings*, we built on our prior work in Wisconsin, worked closely with staff from the Centers for Disease Control and Prevention and Dartmouth College, and obtained input from a team of expert advisors. Together we selected a number of population health measures based on scientific relevance, importance, and availability of data at the county level. For a more detailed explanation of the choice of measures, see www.countyhealthrankings.org.

The Rankings

This report ranks Wisconsin counties according to their summary measures of **health outcomes** and **health factors**, as well as the components used to create each summary measure. The figure below depicts the structure of the *Rankings* model. Counties receive a rank for each population health component; those having high ranks (e.g., 1 or 2) are estimated to be the "healthiest."

Our summary **health outcomes** rankings are based on an equal weighting of mortality and morbidity measures. The summary **health factors** rankings are based on weighted scores of four types of factors: behavioral, clinical, social and economic, and environmental. The weights for the factors (shown in parentheses in the figure) are based upon a review of the literature and expert input but represent just one way of combining these factors.

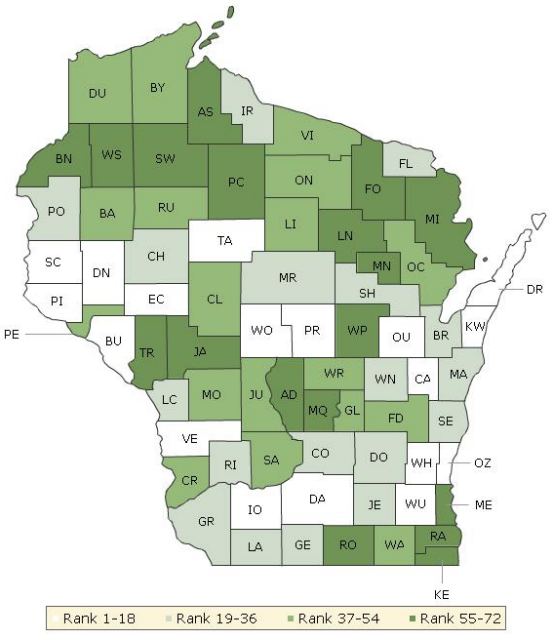


County Health Rankings model ©2010 UWPHI

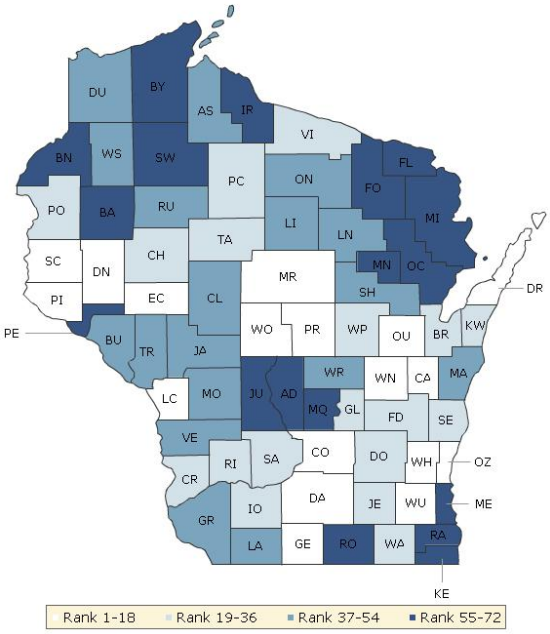
The maps on this page display Wisconsin's counties divided into groups by health rank. The lighter colors indicate better performance in the respective summary rankings. The green map shows the distribution of summary health outcomes. The blue displays the distribution of the summary rank for health factors.

Maps help locate the healthiest and least healthy counties in the state. The health factors map appears similar to the health outcomes map, showing how health factors and health outcomes are closely related.

HEALTH OUTCOMES



HEALTH FACTORS



Summary Health Outcomes & Health Factors Rankings

Counties receive two summary ranks:

- Health Outcomes
- Health Factors

Each of these ranks represents a weighted summary of a number of measures.

Health outcomes represent how healthy a county is while health factors are what influences the health of the county.

Rank	Health Outcomes	Rank	Health Factors
1	Ozaukee	1	Ozaukee
2	St. Croix	2	Dane
3	Washington	3	Waukesha
4	Waukesha	4	Eau Claire
5	Portage	5	Washington
6	Calumet	6	La Crosse
7	Pierce	7	Outagamie
8	Buffalo	8	St. Croix
9	Taylor	9	Calumet
10	Dane	10	Green
11	Vernon	11	Winnebago
12	Outagamie	12	Marathon
13	Eau Claire	13	Portage
14	Dunn	14	Pierce
15	Kewaunee	15	Wood
16	Door	16	Door
17	Iowa	17	Dunn
18	Wood	18	Columbia
19	Sheboygan	19	Polk
20	Marathon	20	Kewaunee
21	Shawano	21	Walworth
22	La Crosse	22	Sheboygan
23	Grant	23	Jefferson
24	Richland	24	Crawford
25	Columbia	25	Iowa
26	Polk	26	Richland
27	Iron	27	Brown
28	Manitowoc	28	Fond du Lac
29	Jefferson	29	Vilas
30	Green	30	Chippewa
31	Brown	31	Price
32	Chippewa	32	Taylor
33	Florence	33	Sauk
34	Lafayette	34	Green Lake
35	Dodge	35	Dodge
36	Winnebago	36	Waupaca
37	Oconto	37	Trempealeau
38	Pepin	38	Ashland
39	Lincoln	39	Grant
40	Sauk	40	Jackson

Rank	Health Outcomes	Rank	Health Factors
41	Green Lake	41	Vernon
42	Walworth	42	Oneida
43	Fond du Lac	43	Washburn
44	Waushara	44	Buffalo
45	Rusk	45	Rusk
46	Crawford	46	Shawano
47	Clark	47	Lincoln
48	Bayfield	48	Waushara
49	Vilas	49	Clark
50	Monroe	50	Manitowoc
51	Barron	51	Monroe
52	Juneau	52	Douglas
53	Douglas	53	Lafayette
54	Oneida	54	Langlade
55	Waupaca	55	Florence
56	Trempealeau	56	Bayfield
57	Burnett	57	Pepin
58	Ashland	58	Barron
59	Price	59	Iron
60	Kenosha	60	Burnett
61	Racine	61	Oconto
62	Rock	62	Rock
63	Marinette	63	Kenosha
64	Langlade	64	Racine
65	Forest	65	Marinette
66	Sawyer	66	Juneau
67	Washburn	67	Sawyer
68	Adams	68	Marquette
69	Jackson	69	Adams
70	Marquette	70	Forest
71	Milwaukee	71	Milwaukee
72	Menominee	72	Menominee

Health Outcomes Rankings

The summary health outcomes ranking is based on measures of mortality and morbidity. Each county's ranks for mortality and morbidity are displayed here. The mortality rank, representing length of life, is based on a measure of premature death: the years of potential life lost prior to age 75.

The morbidity rank is based on measures that represent health-related quality of life and birth outcomes. We combine four morbidity measures: self-reported fair or poor health, poor physical health days, poor mental health days, and the percent of births with low birthweight.

Rank	Mortality	Morbidity
1	Ozaukee	Vernon
2	Waukesha	Taylor
3	St. Croix	Grant
4	Calumet	Kewaunee
5	Washington	Sheboygan
6	Dane	Lafayette
7	Portage	Iowa
8	Pierce	Portage
9	Outagamie	Washington
10	Eau Claire	Iron
11	Buffalo	St. Croix
12	Wood	Ozaukee
13	Door	Buffalo
14	La Crosse	Waukesha
15	Marathon	Pierce
16	Dunn	Dunn
17	Brown	Rusk
18	Shawano	Calumet
19	Manitowoc	Florence
20	Richland	Chippewa
21	Pepin	Eau Claire
22	Polk	Outagamie
23	Winnebago	Columbia
24	Jefferson	Sawyer
25	Columbia	Door
26	Taylor	Shawano
27	Oconto	Green
28	Lincoln	Clark
29	Kewaunee	Vilas
30	Green	Polk
31	Iowa	Dane
32	Dodge	Richland
33	Walworth	Marathon
34	Fond du Lac	Jefferson
35	Green Lake	Wood
36	Sheboygan	Sauk
37	Crawford	Waushara
38	Langlade	Bayfield
39	Chippewa	La Crosse
40	Florence	Manitowoc

Rank	Mortality	Morbidity
41	Sauk	Dodge
42	Iron	Douglas
43	Vernon	Oconto
44	Barron	Green Lake
45	Waushara	Monroe
46	Grant	Juneau
47	Bayfield	Lincoln
48	Monroe	Brown
49	Rock	Trempealeau
50	Oneida	Winnebago
51	Waupaca	Marinette
52	Lafayette	Walworth
53	Juneau	Ashland
54	Clark	Pepin
55	Burnett	Burnett
56	Kenosha	Fond du Lac
57	Trempealeau	Crawford
58	Vilas	Waupaca
59	Rusk	Oneida
60	Price	Barron
61	Racine	Price
62	Douglas	Forest
63	Ashland	Racine
64	Forest	Kenosha
65	Adams	Menominee
66	Marinette	Rock
67	Washburn	Jackson
68	Milwaukee	Washburn
69	Sawyer	Marquette
70	Marquette	Langlade
71	Jackson	Adams
72	Menominee	Milwaukee

Health Factors Rankings

The summary health factors ranking is based on four factors: health behaviors, clinical care, social and economic, and physical environment factors. In turn, each of these factors is based on several measures. Health behaviors include measures of smoking, diet and exercise, alcohol use, and risky sex behavior. Clinical care includes measures of access to care and quality of care. Social and economic factors include measures of education, employment, income, family and social support, and community safety. The physical environment includes measures of environmental quality and the built environment.

Rank	Health Behaviors	Clinical Care	Social & Economic Factors	Physical Environment
1	Ozaukee	La Crosse	Ozaukee	Eau Claire
2	Dane	Ozaukee	Waukesha	Burnett
3	Iron	Wood	St. Croix	La Crosse
4	Waukesha	Waukesha	Dane	Price
5	Green	Dane	Pierce	Chippewa
6	Door	Eau Claire	Washington	Waushara
7	Washington	Outagamie	Calumet	Trempealeau
8	Winnebago	Fond du Lac	Outagamie	Juneau
9	Eau Claire	Winnebago	Iowa	Marathon
10	Vilas	Sheboygan	Dunn	Rusk
11	Polk	Marathon	Portage	Taylor
12	Walworth	Washington	Eau Claire	Washburn
13	Ashland	Brown	La Crosse	Kewaunee
14	Pierce	Rock	Door	Polk
15	St. Croix	Oneida	Kewaunee	Portage
16	Richland	Portage	Lafayette	Lafayette
17	Bayfield	Langlade	Sheboygan	Green
18	Marathon	Milwaukee	Jefferson	Clark
19	Crawford	Calumet	Columbia	Adams
20	Outagamie	Ashland	Marathon	Lincoln
21	La Crosse	Sauk	Green	Jackson
22	Columbia	Crawford	Wood	Marinette
23	Calumet	Green	Winnebago	Vernon
24	Dunn	Jefferson	Trempealeau	Vilas
25	Taylor	Dodge	Walworth	Monroe
26	Rusk	Racine	Dodge	Jefferson
27	Portage	Rusk	Grant	Green Lake
28	Waushara	Kewaunee	Buffalo	Marquette
29	Price	Green Lake	Manitowoc	Richland
30	Burnett	Lincoln	Sauk	Sauk
31	Wood	Manitowoc	Fond du Lac	Wood
32	Pepin	Monroe	Waupaca	Crawford
33	Brown	Marinette	Polk	Langlade
34	Washburn	Jackson	Brown	Oconto
35	Buffalo	Chippewa	Chippewa	Ashland
36	Iowa	Columbia	Pepin	Shawano
37	Sheboygan	Waupaca	Green Lake	Waupaca
38	Florence	Vernon	Richland	St. Croix
39	Shawano	Taylor	Vernon	Sawyer
40	Kewaunee	Barron	Lincoln	Iowa

Rank	Health Behaviors	Clinical Care	Social & Economic Factors	Physical Environment
41	Jackson	Shawano	Clark	Dunn
42	Fond du Lac	Washburn	Kenosha	Rock
43	Green Lake	Douglas	Price	Pierce
44	Jefferson	Door	Crawford	Douglas
45	Grant	Dunn	Monroe	Winnebago
46	Clark	Price	Barron	Barron
47	Dodge	Florence	Oneida	Outagamie
48	Chippewa	Menominee	Taylor	Pepin
49	Douglas	Richland	Vilas	Columbia
50	Waupaca	Polk	Douglas	Bayfield
51	Sauk	Walworth	Jackson	Oneida
52	Forest	Oconto	Waushara	Grant
53	Vernon	Kenosha	Florence	Menominee
54	Oneida	Vilas	Shawano	Calumet
55	Trempealeau	St. Croix	Langlade	Walworth
56	Oconto	Trempealeau	Washburn	Washington
57	Lafayette	Grant	Marinette	Forest
58	Langlade	Juneau	Oconto	Iron
59	Kenosha	Sawyer	Marquette	Door
60	Manitowoc	Iowa	Bayfield	Ozaukee
61	Lincoln	Pierce	Racine	Dane
62	Juneau	Buffalo	Rock	Racine
63	Racine	Clark	Juneau	Dodge
64	Barron	Marquette	Burnett	Brown
65	Rock	Waushara	Ashland	Florence
66	Monroe	Burnett	Rusk	Buffalo
67	Sawyer	Bayfield	Sawyer	Fond du Lac
68	Adams	Adams	Iron	Sheboygan
69	Marinette	Forest	Adams	Waukesha
70	Marquette	Iron	Forest	Manitowoc
71	Menominee	Lafayette	Milwaukee	Kenosha
72	Milwaukee	Pepin	Menominee	Milwaukee

2010 County Health Rankings: Measures, Data Sources, and Years of Data

	Measure	Data Source	Years of Data
HEALTH OUTCOMES			
Mortality	Premature death	National Center for Health Statistics	2004-2006
Morbidity	Poor or fair health	Behavioral Risk Factor Surveillance System	2002-2008
	Poor physical health days	Behavioral Risk Factor Surveillance System	2002-2008
	Poor mental health days	Behavioral Risk Factor Surveillance System	2002-2008
	Low birthweight	National Center for Health Statistics	2000-2006
HEALTH FACTORS			
HEALTH BEHAVIORS			
Tobacco	Adult smoking	Behavioral Risk Factor Surveillance System	2002-2008
Diet and Exercise	Adult obesity	National Center for Chronic Disease Prevention and Health Promotion	2006-2008
Alcohol Use	Binge drinking	Behavioral Risk Factor Surveillance System	2002-2008
	Motor vehicle crash death rate	National Center for Health Statistics	2000-2006
High Risk Sexual Behavior	Chlamydia rate	National Center for Health Statistics	2007
	Teen birth rate	National Center for Health Statistics	2000-2006
CLINICAL CARE			
Access to Care	Uninsured adults	Small Area Health Insurance Estimates, U.S. Census	2005
	Primary care provider rate	Health Resources & Services Administration	2006
Quality of Care	Preventable hospital stays	Medicare/Dartmouth Institute	2005-2006
	Diabetic screening	Medicare/Dartmouth Institute	2003-2006
	Hospice use	Medicare/Dartmouth Institute	2001-2005
SOCIOECONOMIC FACTORS			
Education	High school graduation	National Center for Education Statistics[1]	2005-2006
	College degrees	U.S. Census/American Community Survey	2000/2005-2007
Employment	Unemployment	Bureau of Labor Statistics	2008
Income	Children in poverty	Small Area Income and Poverty Estimates, U.S. Census	2007
	Income inequality	U.S. Census/American Community Survey[2]	2000/2005-2007
Family and Social Support	Inadequate social support	Behavioral Risk Factor Surveillance System	2005-2008
	Single-parent households	U.S. Census/American Community Survey	2000/2005-2007
Community Safety	Violent crime[3]	Uniform Crime Reporting, Federal Bureau of Investigation	2005-2007
PHYSICAL ENVIRONMENT			
Air Quality[4]	Air pollution-particulate matter days	U.S. Environmental Protection Agency / Centers for Disease Control and Prevention	2005
	Air pollution-ozone days	U.S. Environmental Protection Agency / Centers for Disease Control and Prevention	2005
Built Environment	Access to healthy foods	Census Zip Code Business Patterns	2006
	Liquor store density	Census County Business Patterns	2006

[1] State data sources for KY, NH, NC, PA, SC, and UT (2007-2008).

[2] Income inequality estimates for 2000 were calculated by Mark L. Burkey, North Carolina Agricultural & Technical State University, www.ncat.edu/~burkeym/Gini.htm.

[3] Homicide rate (2000-2006) from National Center for Health Statistics for AK, AZ, AR, CO, CT, GA, ID, IN, IA, KS, KY, LA, MN, MS, MT, NE, NH, NM, NC, ND, OH, SD, UT, and WV. State data source for IL.

[4] Not available for AK and HI.

CREDITS

Report Editors
University of Wisconsin-Madison
School of Medicine and Public Health
Population Health Institute
Bridget Booske, PhD, MHSA
Jessica Athens, MS
Patrick Remington, MD, MPH

This publication would not have been possible without the following contributions:

Conceptual Development
David Kindig, MD, PhD
Paul Peppard, PhD
Patrick Remington, MD, MPH

Technical Advisors
Amy Bernstein, ScD, Centers for Disease Control and Prevention
Michele Bohm, MPH, Centers for Disease Control and Prevention
Vickie Boothe, MPH, Centers for Disease Control and Prevention
Ethan Burke, MD, MPH, Dartmouth Institute for Health Policy and Clinical Practice

Research Assistance
Clare O'Connor
Karen Odegaard
Hyojun Park
Matthew Rodock

Production and Editing
Chuck Alexander
Alex Field
Joan Fischer
Irene Golembiewski
Jennifer Robinson

Design
Forum One, Alexandria, VA
Media Solutions, UW School of Medicine and Public Health

Metrics Advisory Group
Yukiko Asada, PhD, Associate Professor, Community Health and Epidemiology, Dalhousie University, Halifax, Nova Scotia
Tom Eckstein, MBA, Principal, Arundel Street Consulting Inc, St. Paul, MN
Elliott Fisher, MD, MPH, Director, Center for Population Health, Dartmouth Institute for Health Policy and Clinical Practice, and Professor of Medicine and Community and Family Medicine, Dartmouth Medical School, Lebanon, NH
Howard Frumkin, MD, MPH, Dr. PH, Director of the National Center for Environmental Health, ATSDR, CDC, Atlanta, GA
Thomas Kottke, MD, MSPH, Medical Director for Evidence-Based Health, HealthPartners, Minneapolis, MN
Ali Mokdad, PhD, Professor of Global Health, Institute for Health Metrics and Evaluation, University of Washington, Seattle, WA
Roy Gibson Parrish, MD, Consultant in Population Health Information Systems, Peacham, VT
Robert M. (Bobby) Pestronk, MPH, Executive Director, National Association of County and City Health Officials (NACCHO), Washington, DC
Tom Ricketts, PhD, Professor of Health Policy and Administration, University of North Carolina
Steven Teutsch, MD, MPH, Chief Science Officer, Los Angeles County Public Health, Los Angeles, CA
Julie Willems Van Dijk, PhD, RN, former Marathon County, WI Health Officer

Suggested citation: University of Wisconsin Population Health Institute. *County Health Rankings 2010.*

countyhealthrankings.org

University of Wisconsin Population Health Institute
610 Walnut St, #524, Madison, WI 53726
(608) 265-6370 / info@countyhealthrankings.org