



County Health Rankings

Mobilizing Action Toward Community Health

2011

South Dakota



Robert Wood Johnson Foundation



UNIVERSITY OF WISCONSIN

Population Health Institute

Translating Research into Policy and Practice

Introduction

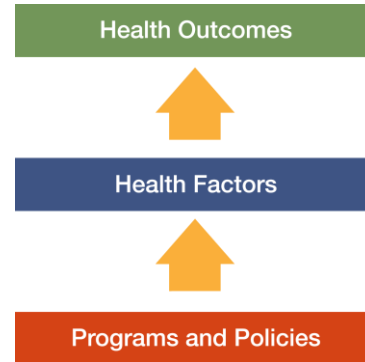
Where we live matters to our health. The health of a community depends on many different factors, including quality of health care, individual behavior, education and jobs, and the environment. We can improve a community's health through programs and policies. For example, people who live in communities 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 2011 *County Health Rankings*, a collection of 50 reports that reflect the overall health of counties in every state across the country. For the second year in a row, 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 allows communities 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.

To compile the *Rankings*, we built on our prior work in Wisconsin, obtained input from a team of expert advisors, and worked closely with staff from the National Center for Health Statistics. Together we selected a number of population health measures based on scientific relevance, importance, and availability of data at the county level.

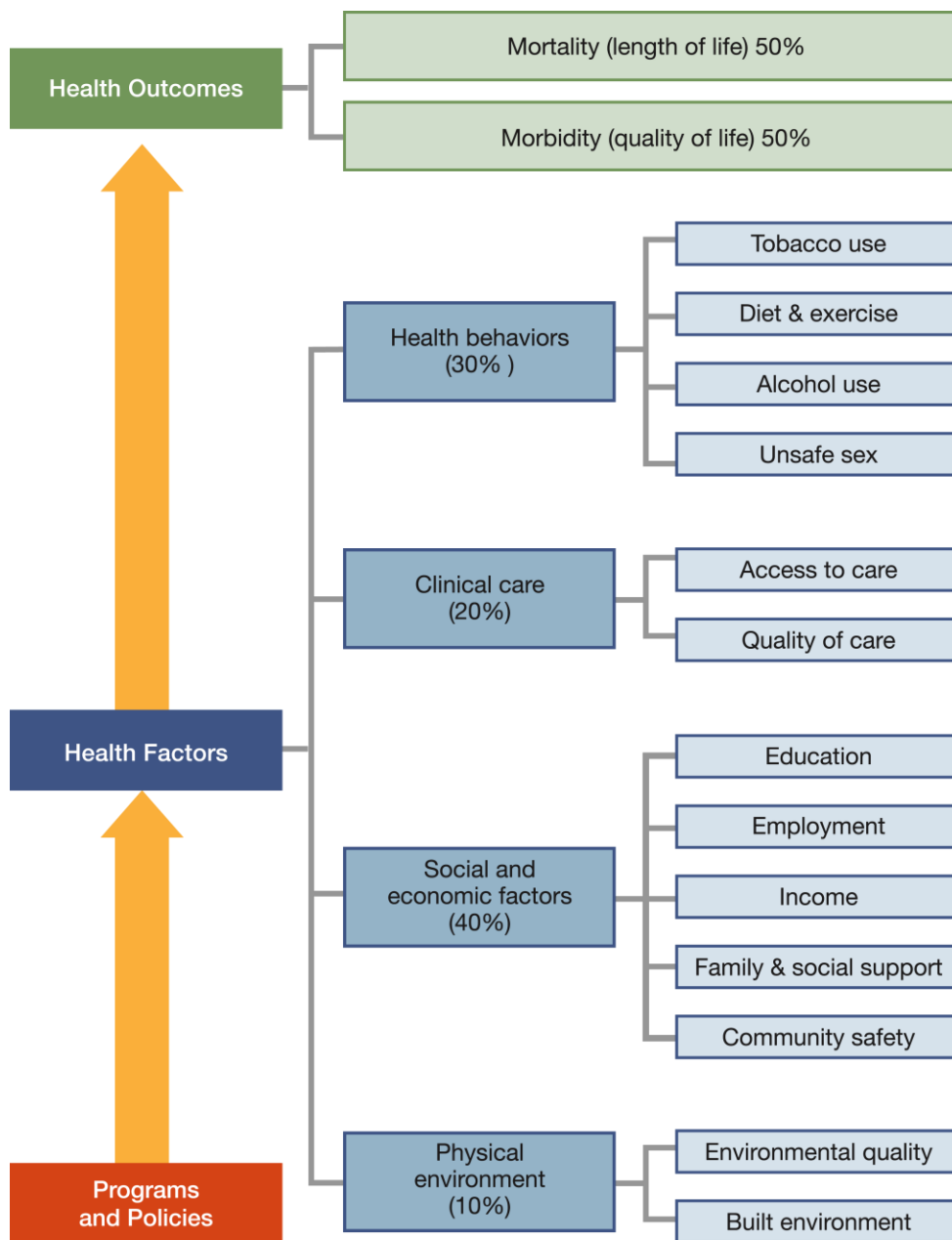
For a more detailed explanation of our approach, the methods used to compile the *Rankings*, information on the action steps communities can take to improve their health, and examples of communities in action, see www.countyhealthrankings.org



The Rankings

This report ranks South Dakota 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.

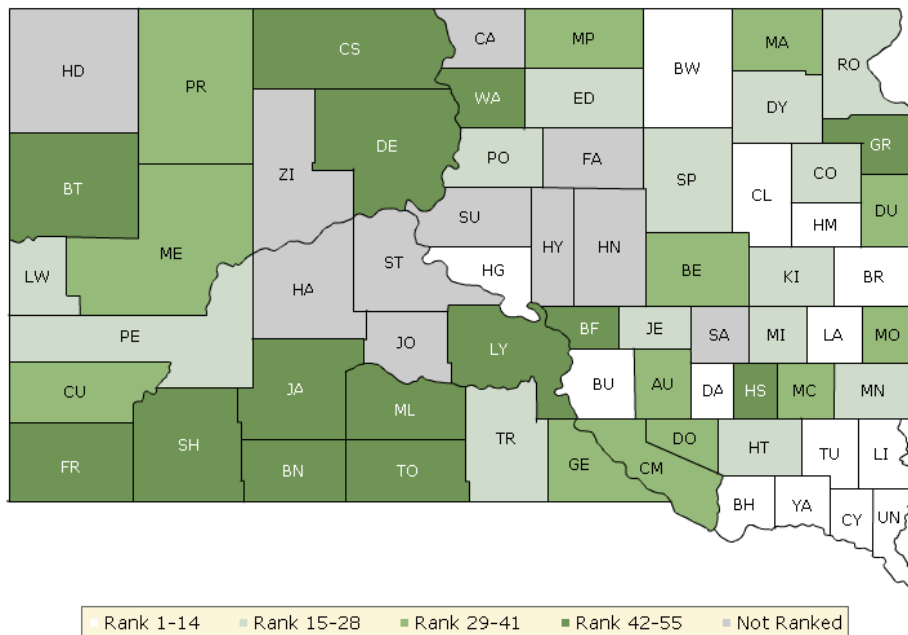


County Health Rankings model ©2010 UWPHI

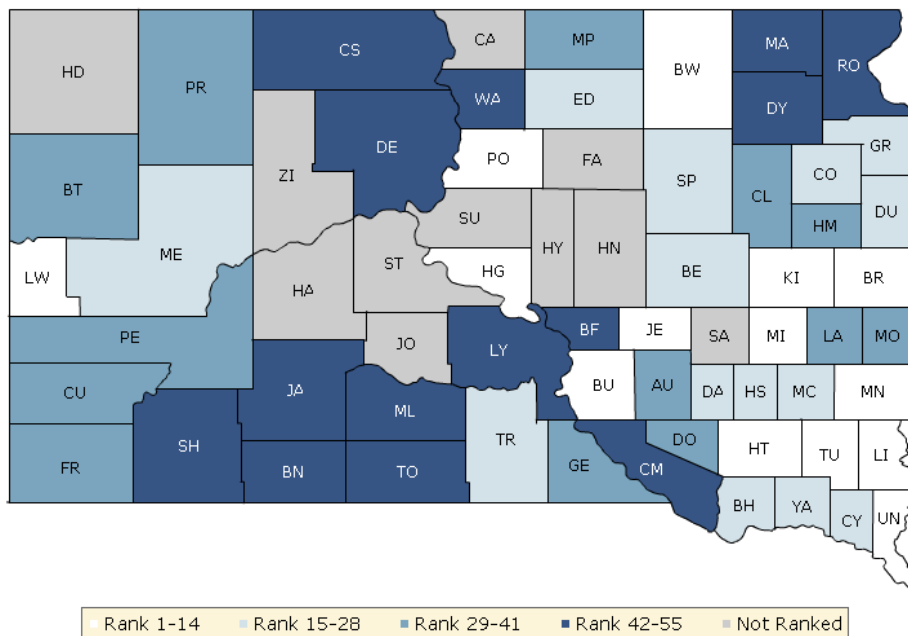
The maps on this page display South Dakota's counties divided into groups by health rank. The lighter colors indicate better performance in the respective summary rankings. The green map shows the distribution of summary health outcomes. The blue displays the distribution of the summary rank for health 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	Brookings	1	Lincoln
2	Lincoln	2	Hughes
3	Bon Homme	3	Hutchinson
4	Hamlin	4	Brule
5	Clay	5	Miner
6	Turner	6	Brookings
7	Union	7	Lawrence
8	Hughes	8	Jerauld
9	Brown	9	Brown
10	Davison	10	Minnehaha
11	Lake	11	Turner
12	Brule	12	Potter
13	Clark	13	Kingsbury
14	Yankton	14	Union
15	Hutchinson	15	McCook
16	Minnehaha	16	Grant
17	Spink	17	Clay
18	Codington	18	Edmunds
19	Tripp	19	Davison
20	Potter	20	Beadle
21	Roberts	21	Yankton
22	Kingsbury	22	Meade
23	Edmunds	23	Codington
24	Jerauld	24	Deuel
25	Pennington	25	Spink
26	Lawrence	26	Tripp
27	Day	27	Hanson
28	Miner	28	Bon Homme
29	Aurora	29	Lake
30	Deuel	30	Aurora
31	Moody	31	McPherson
32	Gregory	32	Custer
33	McCook	33	Douglas
34	Perkins	34	Pennington
35	Charles Mix	35	Gregory
36	Meade	36	Clark
37	Beadle	37	Hamlin
38	McPherson	38	Fall River
39	Douglas	39	Perkins
40	Marshall	40	Butte

Rank	Health Outcomes	Rank	Health Factors
41	Custer	41	Moody
42	Hanson	42	Marshall
43	Grant	43	Walworth
44	Lyman	44	Day
45	Fall River	45	Roberts
46	Butte	46	Charles Mix
47	Walworth	47	Lyman
48	Bennett	48	Jackson
49	Mellette	49	Bennett
50	Jackson	50	Mellette
51	Dewey	51	Corson
52	Buffalo	52	Todd
53	Corson	53	Dewey
54	Todd	54	Shannon
55	Shannon	55	Buffalo

Not Ranked: Campbell, Faulk, Haakon, Hand, Harding, Hyde, Jones, Sanborn, Stanley, Sully, Ziebach

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	Rank	Morbidity
1	Lake	1	Brookings
2	Union	2	Lincoln
3	Davison	3	Bon Homme
4	Brookings	4	Clay
5	Turner	5	Hamlin
6	Brown	6	Clark
7	Lincoln	7	Turner
8	Grant	8	Hutchinson
9	Bon Homme	9	Hughes
10	Lawrence	10	Brule
11	Yankton	11	Union
12	Tripp	12	Day
13	Pennington	13	Potter
14	Hamlin	14	Kingsbury
15	Clay	15	Edmunds
16	Minnehaha	16	Jerauld
17	Spink	17	Brown
18	Beadle	18	Roberts
19	Codington	19	Davison
20	Hughes	20	Miner
21	McCook	21	Yankton
22	Moody	22	Aurora
23	Deuel	23	Minnehaha
24	Custer	24	Codington
25	Brule	25	Spink
26	Roberts	26	Gregory
27	Meade	27	Perkins
28	Charles Mix	28	Lake
29	Butte	29	Fall River
30	Aurora	30	Tripp
30	Clark	31	Charles Mix
30	Douglas	32	Meade
30	Edmunds	33	Jackson
30	Gregory	34	McPherson
30	Hanson	35	Douglas
30	Hutchinson	36	Lyman
30	Jerauld	37	Marshall
30	Kingsbury	38	Pennington
30	Marshall	39	Deuel
30	McPherson	40	Lawrence

Rank	Mortality	Rank	Morbidity
30	Miner	41	Moody
30	Perkins	42	Hanson
30	Potter	43	McCook
44	Day	44	Beadle
45	Walworth	45	Custer
46	Lyman	46	Walworth
47	Bennett	47	Bennett
48	Fall River	48	Mellette
49	Mellette	49	Butte
50	Corson	50	Dewey
51	Buffalo	51	Grant
52	Jackson	52	Todd
53	Dewey	53	Buffalo
54	Todd	54	Shannon
55	Shannon	55	Corson

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	Rank	Clinical Care	Rank	Social & Economic Factors	Rank	Physical Environment
1	Lincoln	1	Lincoln	1	Brookings	1	Brule
2	Jerauld	2	Minnehaha	2	Lincoln	2	Potter
3	Lawrence	3	Brown	3	Clay	3	Tripp
4	Hutchinson	4	Jerauld	4	Hughes	4	Miner
5	Aurora	5	Union	5	Turner	5	McCook
6	McPherson	6	Brule	6	Brown	6	Kingsbury
7	Kingsbury	7	Codington	7	Potter	7	Minnehaha
8	Brule	8	Grant	8	Hutchinson	8	Edmunds
9	Meade	9	Yankton	9	Lawrence	9	Walworth
10	Brookings	10	Hughes	10	Hanson	10	Lincoln
11	Perkins	11	Lake	11	Edmunds	11	Aurora
12	McCook	12	Pennington	12	Union	11	Hutchinson
13	Miner	13	Miner	13	Deuel	11	Lyman
14	Gregory	14	Hutchinson	14	McCook	11	McPherson
15	Potter	15	Beadle	15	Miner	11	Mellette
16	Deuel	16	Tripp	16	Douglas	11	Todd
17	Hughes	17	Spink	17	Kingsbury	17	Hughes
18	Davison	18	Lawrence	18	Minnehaha	18	Fall River
19	Yankton	19	Fall River	19	Davison	19	Beadle
20	Bon Homme	20	Davison	20	Beadle	20	Bon Homme
21	Custer	21	Turner	21	Codington	20	Charles Mix
22	Grant	22	Custer	22	Meade	20	Jackson
23	Spink	23	Edmunds	23	Spink	23	Roberts
24	Pennington	24	Hanson	24	Grant	24	Brown
25	Union	25	Kingsbury	25	Lake	25	Meade
26	Day	26	Bon Homme	26	Hamlin	26	Hamlin
27	Turner	27	Clark	27	Custer	26	Jerauld
28	Clay	28	Brookings	28	Aurora	26	Marshall
29	Douglas	29	Deuel	29	Bon Homme	26	Turner
30	Beadle	30	Clay	30	Brule	30	Codington
31	Minnehaha	31	Meade	31	Jerauld	31	Davison
32	Fall River	32	Jackson	32	Perkins	32	Grant
33	Lake	33	McCook	33	Yankton	33	Gregory
34	Tripp	34	McPherson	34	Gregory	34	Dewey
35	Marshall	35	Butte	35	Clark	34	Douglas
36	Butte	36	Mellette	36	McPherson	34	Shannon
37	Hanson	37	Walworth	37	Tripp	37	Yankton
38	Edmunds	38	Bennett	38	Pennington	38	Bennett
39	Brown	39	Potter	39	Marshall	38	Deuel
40	Moody	40	Douglas	40	Butte	38	Hanson

Rank	Health Behaviors	Rank	Clinical Care	Rank	Social & Economic Factors	Rank	Physical Environment
41	Clark	41	Hamlin	41	Moody	41	Spink
42	Codington	42	Moody	42	Walworth	42	Union
43	Hamlin	43	Perkins	43	Day	43	Clark
44	Walworth	44	Gregory	44	Fall River	43	Day
45	Charles Mix	45	Roberts	45	Charles Mix	45	Butte
46	Roberts	46	Day	46	Roberts	45	Lawrence
47	Jackson	47	Aurora	47	Lyman	47	Brookings
48	Mellette	48	Corson	48	Bennett	48	Moody
49	Bennett	49	Marshall	49	Jackson	49	Pennington
50	Lyman	50	Lyman	50	Mellette	50	Lake
51	Todd	51	Charles Mix	51	Corson	51	Corson
52	Corson	52	Dewey	52	Todd	52	Custer
53	Dewey	53	Shannon	53	Dewey	53	Buffalo
54	Buffalo	54	Buffalo	54	Shannon	54	Clay
55	Shannon	55	Todd	55	Buffalo	55	Perkins

2011 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	2005-2007
Morbidity	Poor or fair health	Behavioral Risk Factor Surveillance System	2003-2009
	Poor physical health days	Behavioral Risk Factor Surveillance System	2003-2009
	Poor mental health days	Behavioral Risk Factor Surveillance System	2003-2009
	Low birthweight	National Center for Health Statistics	2001-2007
HEALTH FACTORS			
HEALTH BEHAVIORS			
Tobacco	Adult smoking	Behavioral Risk Factor Surveillance System	2003-2009
Diet and Exercise	Adult obesity	National Center for Chronic Disease Prevention and Health Promotion	2008
Alcohol Use	Excessive drinking	Behavioral Risk Factor Surveillance System	2003-2009
	Motor vehicle crash death rate	National Center for Health Statistics	2001-2007
High Risk Sexual Behavior	Sexually transmitted infections	National Center for Hepatitis, HIV, STD and TB Prevention	2008
	Teen birth rate	National Center for Health Statistics	2001-2007
CLINICAL CARE			
Access to Care	Uninsured adults	Small Area Health Insurance Estimates, U.S. Census	2007
	Primary care providers	Health Resources & Services Administration	2008
Quality of Care	Preventable hospital stays	Medicare/Dartmouth Institute	2006-2007
	Diabetic screening	Medicare/Dartmouth Institute	2006-2007
	Mammography screening	Medicare/Dartmouth Institute	2006-2007
SOCIOECONOMIC FACTORS			
Education	High school graduation	National Center for Education Statistics ¹	2006-2007
	Some college	American Community Survey	2005-2009
Employment	Unemployment	Bureau of Labor Statistics	2009
Income	Children in poverty	Small Area Income and Poverty Estimates, U.S. Census	2008
Family and Social Support	Inadequate social support	Behavioral Risk Factor Surveillance System	2005-2009
	Single-parent households	American Community Survey	2005-2009
Community Safety	Violent crime ²	Uniform Crime Reporting, Federal Bureau of Investigation	2006-2008
PHYSICAL ENVIRONMENT			
Air Quality ³	Air pollution-particulate matter days	U.S. Environmental Protection Agency / Centers for Disease Control and Prevention	2006
	Air pollution-ozone days	U.S. Environmental Protection Agency / Centers for Disease Control and Prevention	2006
Built Environment	Access to healthy foods	Census Zip Code Business Patterns	2008
	Access to recreational facilities	Census County Business Patterns	2008

¹ State data sources for KY, NH, NC, PA, SC, and UT (2008-2009).

² Homicide rate (2001-2007) 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.

³ Not available for AK and HI.

CREDITS

Report Authors

University of Wisconsin-Madison
School of Medicine and Public Health
Department of Population Health Sciences
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:

Technical Advisors

Amy Bernstein, ScD, Centers for Disease Control and Prevention
Michele Bohm, MPH, Centers for Disease Control and Prevention

Research Assistance

Jennifer Buechner
Hyojun Park, MA
Seth Prins, MPH
Jennifer Robinson
Matthew Rodock
Anne Roubal

Communications and Outreach

Burness Communications
Ivan Cherniack
Nathan Jones, PhD
Kate Konkle, MPH
Angela Russell
Julie Willems Van Dijk, PhD, RN

Design

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

Robert Wood Johnson Foundation

Brenda L. Henry, PhD, MPH – Program Officer
Michelle Larkin, JD, MS, RN – Team Director and Senior Program Officer
James S. Marks, MD, MPH – Senior Vice President and Group Director, Health Group
Joe Marx – Senior Communications Officer

Suggested citation: University of Wisconsin Population Health Institute. *County Health Rankings 2011*.



County Health Rankings

Mobilizing Action Toward Community Health

countyhealthrankings.org



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