County Health Rankings

Mobilizing Action Toward Community Health

2011
North 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.
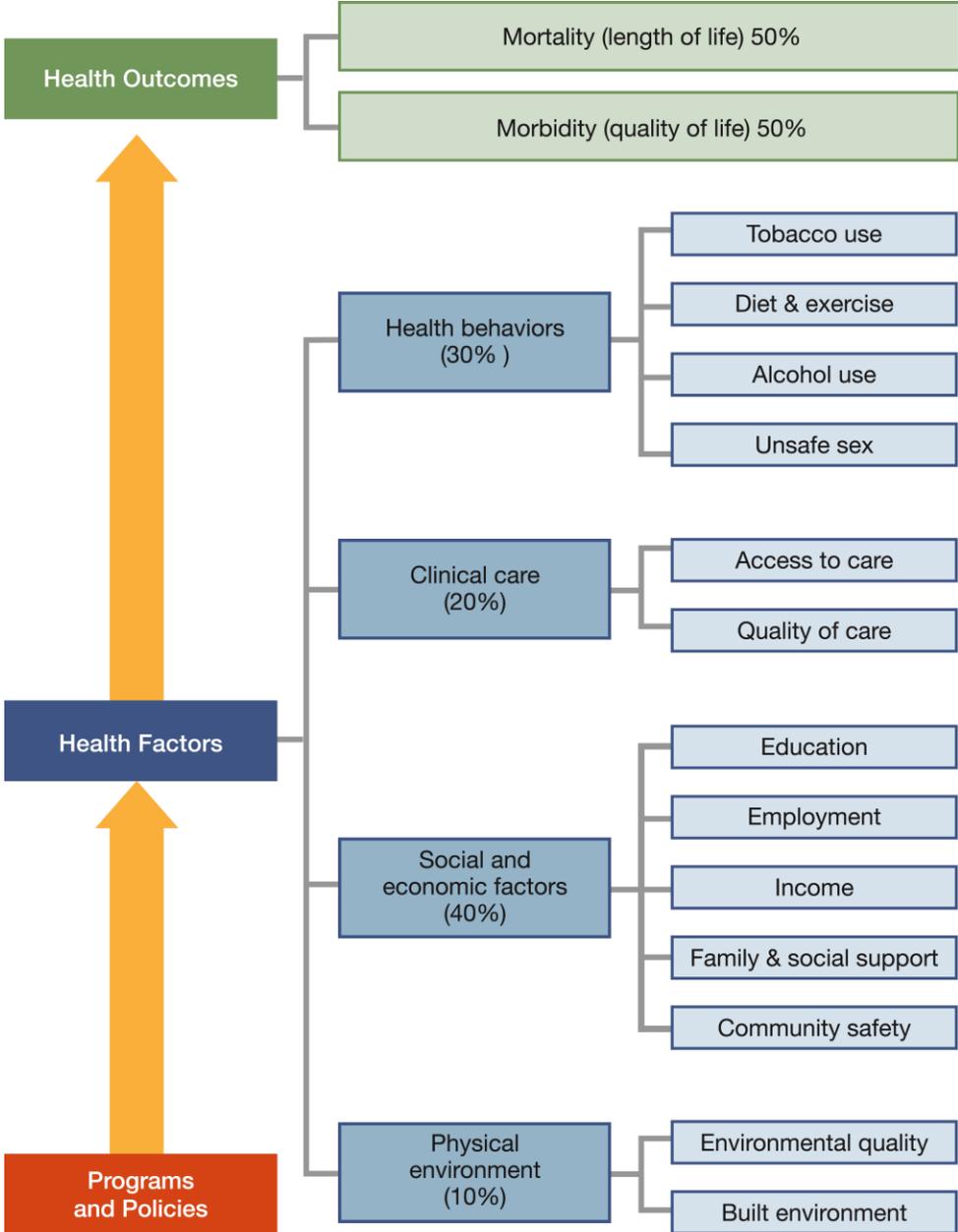
For a more detailed explanation of our approach, the methods used to compile the *Rankings,* information on the action steps communities can take to improve their health, and examples of communities in action, see www.countyhealthrankings.org

The Rankings

This report ranks North 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.
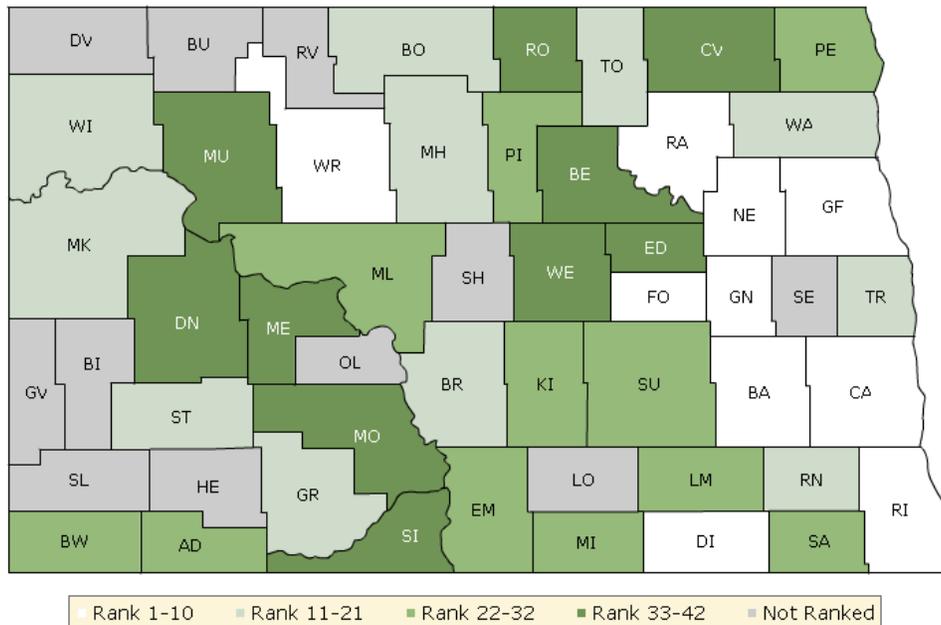
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Health Outcomes ─┬─ Mortality (length of life) 50%
                 └─ Morbidity (quality of life) 50%

Health Factors ──┬─ Health behaviors (30%) ─┬─ Tobacco use
                 │                           ├─ Diet & exercise
                 │                           ├─ Alcohol use
                 │                           └─ Unsafe sex
                 │
                 ├─ Clinical care (20%) ─────┬─ Access to care
                 │                           └─ Quality of care
                 │
                 ├─ Social and economic ─────┬─ Education
                 │   factors (40%)           ├─ Employment
                 │                           ├─ Income
                 │                           ├─ Family & social support
                 │                           └─ Community safety
                 │
                 └─ Physical environment ────┬─ Environmental quality
                     (10%)                   └─ Built environment

Programs and Policies
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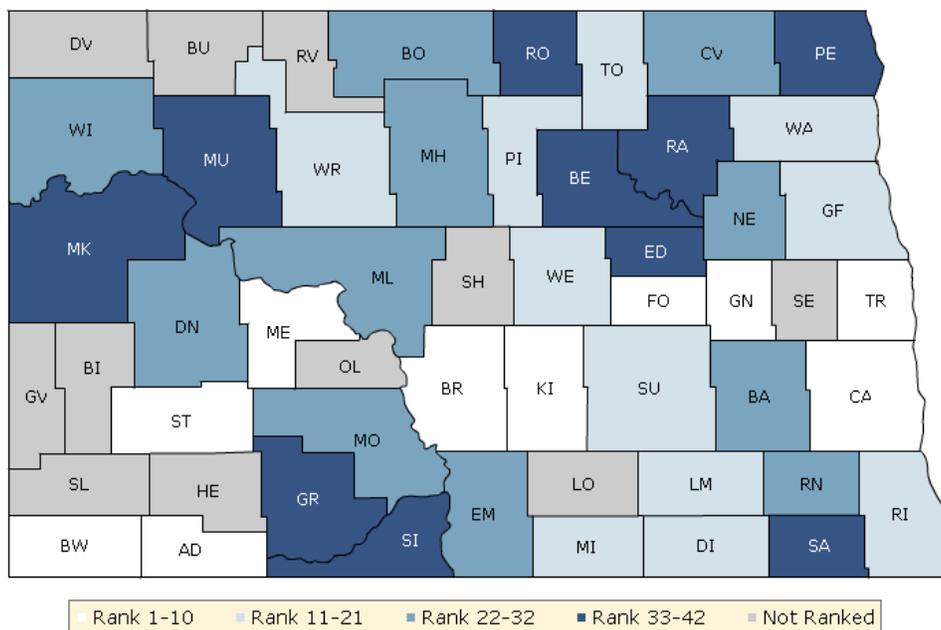
County Health Rankings model ©2010 UWPHI

The maps on this page display North 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

Rank 1-10   Rank 11-21   Rank 22-32   Rank 33-42   Not Ranked

HEALTH FACTORS

Rank 1-10   Rank 11-21   Rank 22-32   Rank 33-42   Not Ranked

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	Griggs	1	Burleigh
2	Barnes	2	Mercer
3	Cass	3	Cass
4	Grand Forks	4	Traill
5	Ward	5	Foster
6	Dickey	6	Bowman
7	Richland	7	Stark
8	Nelson	8	Adams
9	Ramsey	9	Griggs
10	Foster	10	Kidder
11	Bottineau	11	Stutsman
12	Burleigh	12	Grand Forks
13	Stark	13	Towner
14	Williams	14	Ward
15	Grant	15	Pierce
16	Traill	16	Richland
17	Towner	17	Dickey
18	McHenry	18	Wells
19	McKenzie	19	LaMoure
20	Ransom	20	Walsh
21	Walsh	21	McIntosh
22	Stutsman	22	Morton
23	McIntosh	23	Barnes
24	LaMoure	24	Dunn
25	Pembina	25	Cavalier
26	McLean	26	McLean
27	Sargent	27	Williams
28	Emmons	28	Bottineau
29	Adams	29	Nelson
30	Kidder	30	Emmons
31	Pierce	31	Ransom
32	Bowman	32	McHenry
33	Morton	33	Eddy
34	Dunn	34	Pembina
35	Wells	35	Sargent
36	Mercer	36	Ramsey
37	Cavalier	37	Grant
38	Eddy	38	McKenzie
39	Mountrail	39	Mountrail
40	Rolette	40	Benson
41	Benson	41	Sioux
42	Sioux	42	Rolette

Not Ranked: Billings, Burke, Divide, Golden Valley, Hettinger, Logan, Oliver, Renville, Sheridan, Slope, Steele

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	Cass	1	Griggs
2	Burleigh	2	Barnes
3	Grand Forks	3	Dickey
4	Ransom	4	Nelson
5	Stark	5	Foster
6	Richland	6	Bottineau
7	Barnes	7	McKenzie
8	Ward	8	Grant
9	Ramsey	9	Traill
10	Stutsman	10	Towner
11	McHenry	11	Grand Forks
12	Williams	12	Cass
13	Mercer	13	McIntosh
14	Morton	14	LaMoure
15	Walsh	15	Ward
16	Pembina	16	Williams
17	McLean	17	Sargent
18	Adams	18	Emmons
18	Bottineau	19	Ramsey
18	Bowman	20	Richland
18	Cavalier	21	Walsh
18	Dickey	22	Adams
18	Dunn	23	Kidder
18	Eddy	24	Pembina
18	Emmons	25	McLean
18	Foster	26	McHenry
18	Grant	27	Stark
18	Griggs	28	Pierce
18	Kidder	29	Bowman
18	LaMoure	30	Stutsman
18	McIntosh	31	Ransom
18	Nelson	32	Burleigh
18	Pierce	33	Dunn
18	Sargent	34	Wells
18	Towner	35	Morton
18	Traill	36	Cavalier
18	Wells	37	Mountrail
38	McKenzie	38	Eddy
39	Mountrail	39	Mercer
40	Rolette	40	Benson
41	Benson	41	Rolette
42	Sioux	42	Sioux

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	Burleigh	1	Cass	1	Mercer	1	Mercer
2	Wells	2	Burleigh	2	Traill	2	Kidder
3	Adams	3	Mercer	3	Cass	3	Emmons
4	Bowman	4	Stutsman	4	Burleigh	4	Dickey
5	Kidder	5	Grand Forks	5	Bowman	5	Rolette
6	Towner	6	Richland	6	Stark	6	Cavalier
7	Emmons	7	Ward	7	Griggs	7	Walsh
8	McIntosh	8	Ramsey	8	LaMoure	8	Williams
9	Traill	9	Pierce	9	Foster	9	Ransom
10	Dickey	10	Morton	10	Grand Forks	10	McIntosh
11	Pierce	11	Walsh	11	Richland	11	Foster
12	Foster	12	Adams	12	Bottineau	12	Barnes
13	LaMoure	13	Barnes	13	Williams	13	Morton
14	Grant	14	Foster	14	Ward	14	Griggs
15	Walsh	15	Traill	15	Towner	15	Richland
16	Cass	16	Kidder	16	Stutsman	16	Stutsman
17	Stark	17	Stark	17	Morton	17	Bottineau
18	Griggs	18	Sargent	18	McLean	18	Wells
19	Mercer	19	Wells	19	Adams	19	Pembina
20	Dunn	20	Williams	20	Cavalier	20	Eddy
21	Ransom	21	McHenry	21	Pierce	20	Nelson
22	Eddy	22	Dunn	22	McIntosh	20	Sargent
23	Nelson	23	Griggs	23	Dickey	23	Burleigh
24	Stutsman	24	Eddy	24	Barnes	24	Ramsey
25	Bottineau	25	Towner	25	Dunn	25	Cass
26	Cavalier	26	Dickey	26	Nelson	26	Mountrail
27	Ward	27	Nelson	27	Kidder	27	McLean
28	Grand Forks	28	Pembina	28	McKenzie	28	Dunn
29	Sargent	29	McLean	29	Walsh	29	Benson
30	Pembina	30	Sioux	30	McHenry	30	Grand Forks
31	McLean	31	Ransom	31	Ramsey	31	Ward
32	McHenry	32	Emmons	32	Pembina	32	Pierce
33	Barnes	33	Bowman	33	Ransom	33	Bowman
34	Richland	34	McIntosh	34	Eddy	34	Stark
35	Morton	35	Cavalier	35	Wells	35	LaMoure
36	Ramsey	36	Grant	36	Sargent	35	McHenry
37	Williams	37	LaMoure	37	Mountrail	35	Sioux
38	McKenzie	38	Mountrail	38	Emmons	38	Traill
39	Benson	39	Benson	39	Grant	39	Towner
40	Mountrail	40	McKenzie	40	Benson	40	McKenzie
41	Sioux	41	Bottineau	41	Rolette	41	Adams
42	Rolette	42	Rolette	42	Sioux	42	Grant

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

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[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

County Health Rankings
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countyhealthrankings.org

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