# County Health Rankings
## Mobilizing Action Toward Community Health

## 2010
## Montana

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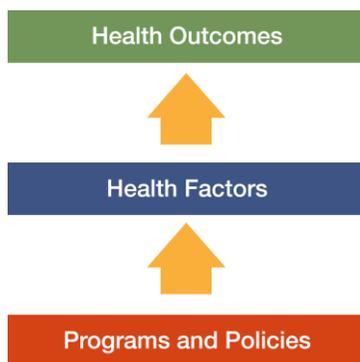
In this model, health outcomes are measures that describe the current health status of a county. These health outcomes are influenced by a set of health factors. These health factors and their outcomes may also be affected by community-based programs and policies designed to alter their distribution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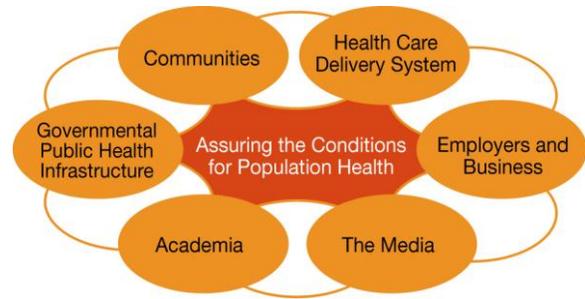


Institute of Medicine, 2002

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 Montana 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.

| Health Outcomes | |
|---|---|
| | Mortality (length of life) 50% |
| | Morbidity (quality of life) 50% |

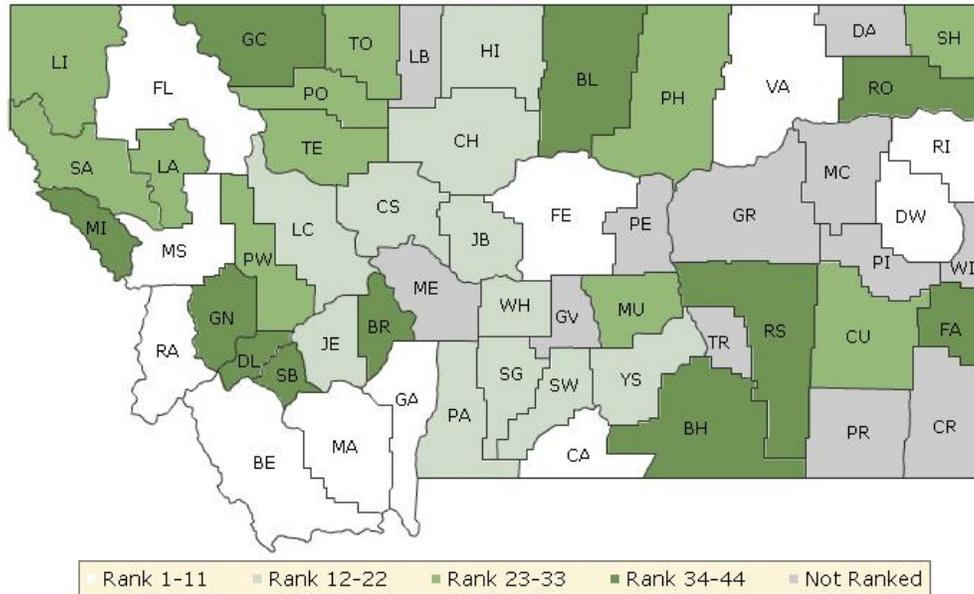| Health Factors | | |
|---|---|---|
| Health behaviors (30%) | | Tobacco use |
| | | Diet & exercise |
| | | Alcohol use |
| | | Unsafe sex |
| Clinical care (20%) | | Access to care |
| | | Quality of care |
| Social and economic factors (40%) | | Education |
| | | Employment |
| | | Income |
| | |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

Programs and Policies

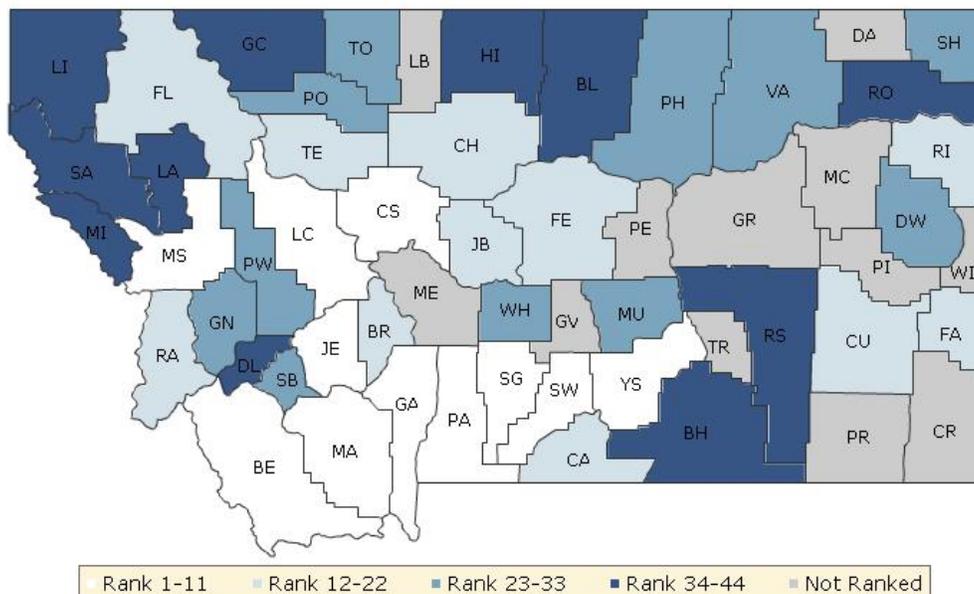*County Health Rankings* model ©2010 UWPHI

The maps on this page display Montana'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 1-11    Rank 12-22    Rank 23-33    Rank 34-44    Not Ranked

## HEALTH FACTORS



Rank 1-11    Rank 12-22    Rank 23-33    Rank 34-44    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 | Gallatin | 1 | Gallatin |
| 2 | Carbon | 2 | Lewis and Clark |
| 3 | Ravalli | 3 | Jefferson |
| 4 | Missoula | 4 | Park |
| 5 | Richland | 5 | Missoula |
| 6 | Fergus | 6 | Sweet Grass |
| 7 | Madison | 7 | Madison |
| 8 | Valley | 8 | Beaverhead |
| 9 | Beaverhead | 9 | Stillwater |
| 10 | Flathead | 10 | Yellowstone |
| 11 | Dawson | 11 | Cascade |
| 12 | Wheatland | 12 | Carbon |
| 13 | Jefferson | 13 | Judith Basin |
| 14 | Sweet Grass | 14 | Broadwater |
| 15 | Yellowstone | 15 | Fallon |
| 16 | Park | 16 | Teton |
| 17 | Cascade | 17 | Flathead |
| 18 | Lewis and Clark | 18 | Chouteau |
| 19 | Hill | 19 | Fergus |
| 20 | Stillwater | 20 | Richland |
| 21 | Chouteau | 21 | Custer |
| 22 | Judith Basin | 22 | Ravalli |
| 23 | Pondera | 23 | Dawson |
| 24 | Lincoln | 24 | Sheridan |
| 25 | Teton | 25 | Silver Bow |
| 26 | Sheridan | 26 | Wheatland |
| 27 | Toole | 27 | Phillips |
| 28 | Custer | 28 | Pondera |
| 29 | Musselshell | 29 | Granite |
| 30 | Sanders | 30 | Valley |
| 31 | Powell | 31 | Musselshell |
| 32 | Phillips | 32 | Powell |
| 33 | Lake | 33 | Toole |
| 34 | Fallon | 34 | Sanders |
| 35 | Granite | 35 | Deer Lodge |
| 36 | Silver Bow | 36 | Mineral |
| 37 | Broadwater | 37 | Lake |
| 38 | Blaine | 38 | Hill |
| 39 | Rosebud | 39 | Lincoln |
| 40 | Mineral | 40 | Rosebud |
| 41 | Big Horn | 41 | Blaine |
| 42 | Deer Lodge | 42 | Big Horn |
| 43 | Glacier | 43 | Roosevelt |
| 44 | Roosevelt | 44 | Glacier |

**Not Ranked:** Carter, Daniels, Garfield, Golden Valley, Liberty, McCone, Meagher, Petroleum, Powder River, Prairie, Treasure, Wibaux

# 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 | Gallatin | 1 | Gallatin |
| 2 | Beaverhead | 2 | Pondera |
| 3 | Missoula | 3 | Valley |
| 4 | Ravalli | 4 | Richland |
| 5 | Fergus | 5 | Carbon |
| 6 | Carbon | 6 | Wheatland |
| 7 | Dawson | 7 | Madison |
| 8 | Lewis and Clark | 8 | Sweet Grass |
| 9 | Yellowstone | 9 | Ravalli |
| 10 | Richland | 10 | Fergus |
| 11 | Cascade | 11 | Flathead |
| 12 | Lincoln | 12 | Missoula |
| 13 | Madison | 13 | Jefferson |
| 14 | Flathead | 14 | Chouteau |
| 15 | Jefferson | 15 | Judith Basin |
| 16 | Park | 16 | Teton |
| 17 | Stillwater | 17 | Sheridan |
| 18 | Hill | 18 | Park |
| 19 | Powell | 19 | Toole |
| 20 | Valley | 20 | Sanders |
| 21 | Broadwater | 21 | Hill |
| 21 | Chouteau | 22 | Custer |
| 21 | Fallon | 23 | Stillwater |
| 21 | Granite | 24 | Dawson |
| 21 | Judith Basin | 25 | Yellowstone |
| 21 | Phillips | 26 | Rosebud |
| 21 | Sheridan | 27 | Musselshell |
| 21 | Sweet Grass | 28 | Cascade |
| 21 | Teton | 29 | Big Horn |
| 21 | Toole | 30 | Lincoln |
| 21 | Wheatland | 31 | Blaine |
| 32 | Musselshell | 32 | Lewis and Clark |
| 33 | Custer | 33 | Roosevelt |
| 34 | Lake | 34 | Silver Bow |
| 35 | Sanders | 35 | Beaverhead |
| 36 | Deer Lodge | 36 | Lake |
| 37 | Silver Bow | 37 | Phillips |
| 38 | Mineral | 38 | Powell |
| 39 | Pondera | 39 | Fallon |
| 40 | Blaine | 40 | Granite |
| 41 | Rosebud | 41 | Glacier |
| 42 | Big Horn | 42 | Broadwater |
| 43 | Glacier | 43 | Mineral |
| 44 | Roosevelt | 44 | Deer Lodge |

# 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 | Gallatin | 1 | Yellowstone | 1 | Gallatin | 1 | Wheatland |
| 2 | Musselshell | 2 | Lewis and Clark | 2 | Sweet Grass | 2 | Sanders |
| 3 | Park | 3 | Cascade | 3 | Jefferson | 3 | Chouteau |
| 4 | Sweet Grass | 4 | Park | 4 | Lewis and Clark | 4 | Fallon |
| 5 | Ravalli | 5 | Wheatland | 5 | Carbon | 4 | Mineral |
| 6 | Beaverhead | 6 | Missoula | 6 | Fallon | 4 | Roosevelt |
| 7 | Broadwater | 7 | Silver Bow | 7 | Richland | 4 | Teton |
| 8 | Madison | 8 | Custer | 8 | Teton | 8 | Big Horn |
| 9 | Phillips | 9 | Powell | 9 | Madison | 9 | Rosebud |
| 10 | Fergus | 10 | Jefferson | 10 | Judith Basin | 10 | Glacier |
| 11 | Stillwater | 11 | Deer Lodge | 11 | Toole | 11 | Gallatin |
| 12 | Jefferson | 12 | Flathead | 12 | Missoula | 12 | Jefferson |
| 13 | Missoula | 13 | Gallatin | 13 | Yellowstone | 13 | Granite |
| 14 | Granite | 14 | Fergus | 14 | Stillwater | 14 | Broadwater |
| 15 | Chouteau | 15 | Beaverhead | 15 | Sheridan | 14 | Musselshell |
| 16 | Lewis and Clark | 16 | Ravalli | 16 | Dawson | 14 | Sweet Grass |
| 17 | Flathead | 17 | Lake | 17 | Beaverhead | 17 | Lake |
| 18 | Judith Basin | 18 | Pondera | 18 | Park | 18 | Richland |
| 19 | Sanders | 19 | Carbon | 19 | Cascade | 19 | Deer Lodge |
| 20 | Teton | 20 | Lincoln | 20 | Chouteau | 20 | Judith Basin |
| 21 | Cascade | 21 | Stillwater | 21 | Custer | 20 | Sheridan |
| 22 | Silver Bow | 22 | Dawson | 22 | Valley | 22 | Cascade |
| 23 | Carbon | 23 | Madison | 23 | Broadwater | 23 | Pondera |
| 24 | Yellowstone | 24 | Broadwater | 24 | Phillips | 24 | Flathead |
| 25 | Sheridan | 25 | Fallon | 25 | Silver Bow | 25 | Custer |
| 26 | Dawson | 26 | Richland | 26 | Flathead | 26 | Stillwater |
| 27 | Custer | 27 | Sanders | 27 | Hill | 27 | Dawson |
| 28 | Valley | 28 | Rosebud | 28 | Fergus | 28 | Park |
| 29 | Lincoln | 29 | Valley | 29 | Wheatland | 29 | Hill |
| 30 | Fallon | 30 | Sheridan | 30 | Pondera | 30 | Yellowstone |
| 31 | Mineral | 31 | Granite | 31 | Ravalli | 31 | Missoula |
| 32 | Pondera | 32 | Judith Basin | 32 | Musselshell | 32 | Blaine |
| 33 | Powell | 33 | Chouteau | 33 | Powell | 33 | Madison |
| 34 | Richland | 34 | Big Horn | 34 | Rosebud | 34 | Phillips |
| 35 | Deer Lodge | 35 | Toole | 35 | Granite | 35 | Fergus |
| 36 | Wheatland | 36 | Hill | 36 | Mineral | 36 | Powell |
| 37 | Lake | 37 | Blaine | 37 | Deer Lodge | 37 | Lewis and Clark |
| 38 | Toole | 38 | Teton | 38 | Blaine | 38 | Ravalli |
| 39 | Hill | 39 | Mineral | 39 | Lake | 39 | Carbon |
| 40 | Rosebud | 40 | Roosevelt | 40 | Sanders | 40 | Beaverhead |
| 41 | Roosevelt | 41 | Sweet Grass | 41 | Lincoln | 41 | Lincoln |
| 42 | Blaine | 42 | Glacier | 42 | Big Horn | 42 | Silver Bow |
| 43 | Big Horn | 43 | Phillips | 43 | Glacier | 43 | Valley |
| 44 | Glacier | 44 | Musselshell | 44 | Roosevelt | 44 | Toole |

## 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 |

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[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.

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