



**County Health Rankings**  
Mobilizing Action Toward Community Health

**This report and all  
information in it  
is strictly  
Embargoed for Release  
until  
Wednesday, February 17, 2010  
at 12:01 a.m. EST.**



# County Health Rankings

Mobilizing Action Toward Community Health

2010

**New Hampshire**



Robert Wood Johnson Foundation



UNIVERSITY OF WISCONSIN

**Population Health Institute**

*Translating Research into Policy and Practice*

INSIDE FRONT COVER – INTENTIONALLY BLANK

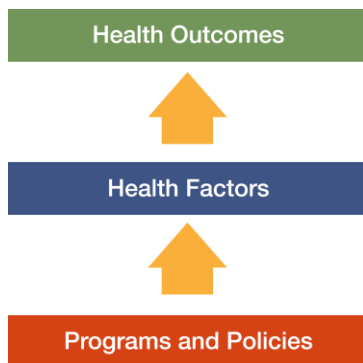
## Introduction

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.

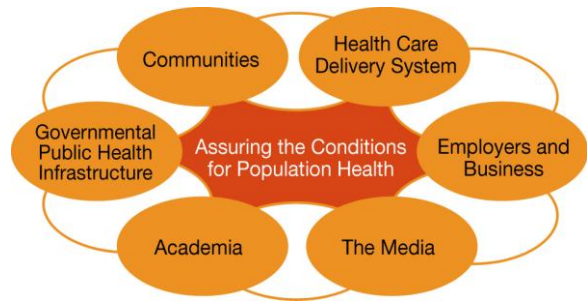
The problem is that there are big differences in health across communities, with some places being much healthier than others. And up to now, it has been hard to get a standard way to measure how healthy a county is and see where they can improve.

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.



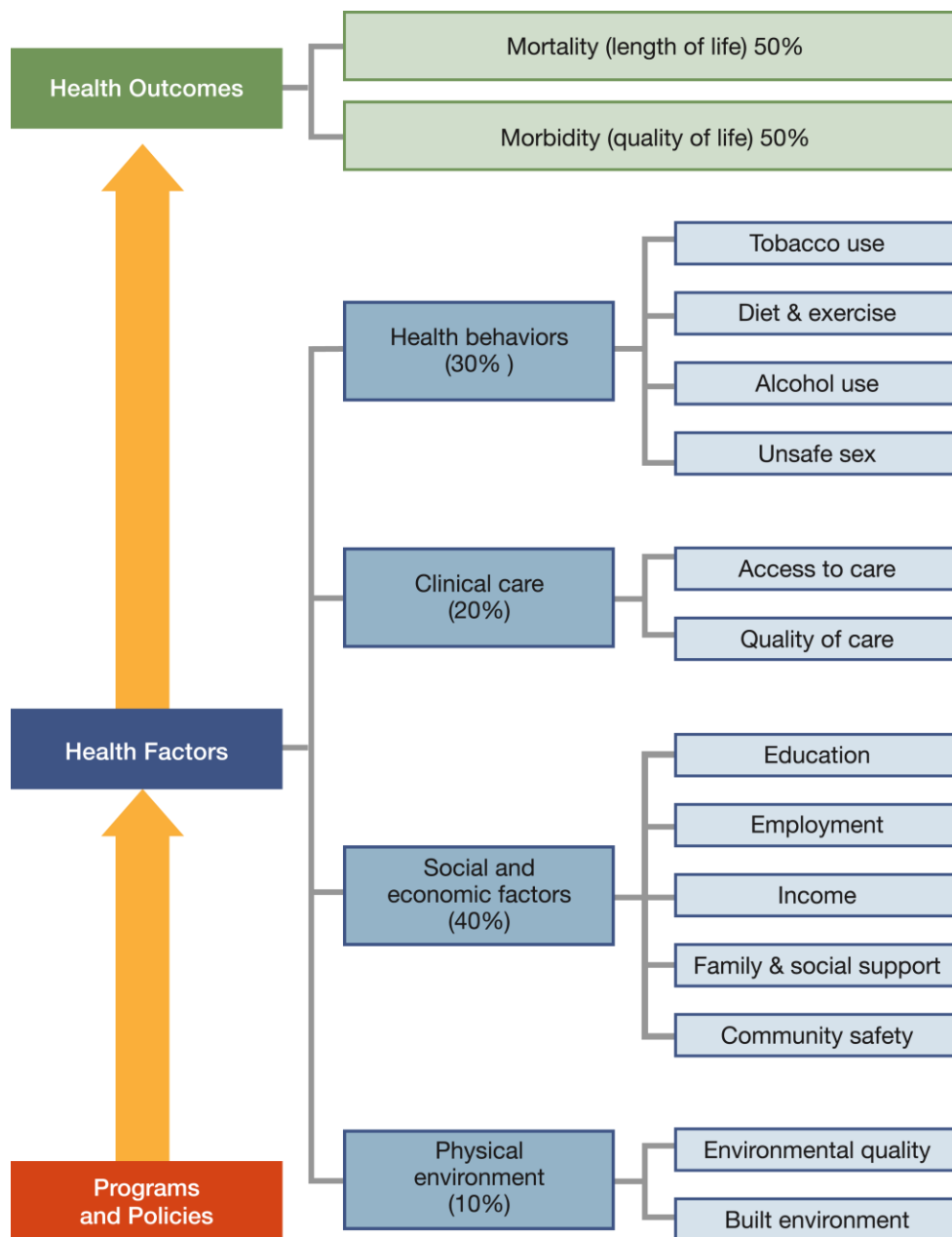
Institute of Medicine, 2002

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](http://www.countyhealthrankings.org).

## The Rankings

This report ranks New Hampshire 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.

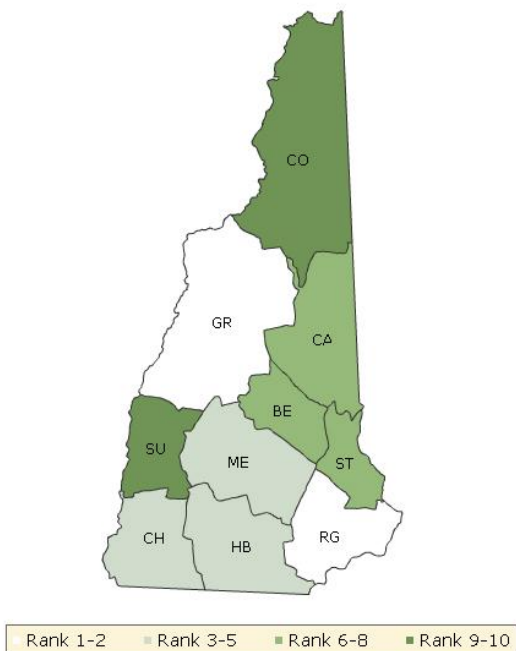


County Health Rankings model ©2010 UWPHI

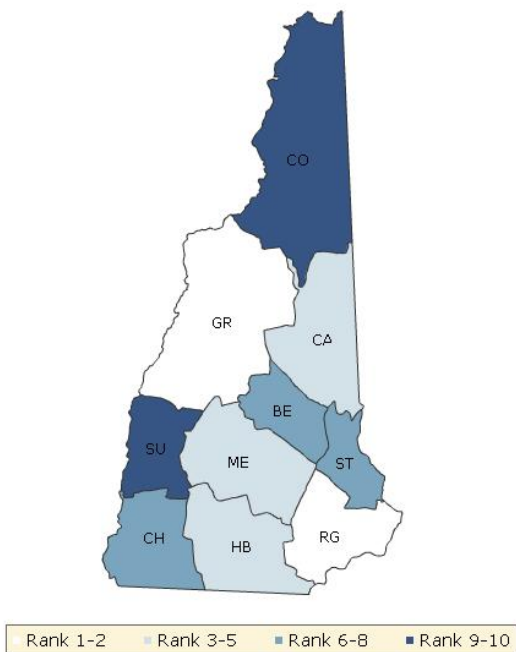
The maps on this page display New Hampshire's counties divided into groups by health rank. The lighter colors indicate better performance in the respective summary rankings. The green map shows the distribution of summary health outcomes. The blue displays the distribution of the summary rank for health 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	Grafton	1	Grafton
2	Rockingham	2	Rockingham
3	Merrimack	3	Merrimack
4	Cheshire	4	Hillsborough
5	Hillsborough	5	Carroll
6	Belknap	6	Cheshire
7	Strafford	7	Strafford
8	Carroll	8	Belknap
9	Sullivan	9	Sullivan
10	Coos	10	Coos

## 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	Rockingham	Merrimack
2	Grafton	Grafton
3	Hillsborough	Cheshire
4	Cheshire	Carroll
5	Merrimack	Hillsborough
6	Strafford	Rockingham
7	Belknap	Belknap
8	Sullivan	Strafford
9	Carroll	Sullivan
10	Coos	Coos



## 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	Grafton	Grafton	Grafton	Carroll
2	Carroll	Merrimack	Rockingham	Strafford
3	Merrimack	Rockingham	Hillsborough	Belknap
4	Rockingham	Sullivan	Merrimack	Merrimack
5	Hillsborough	Hillsborough	Cheshire	Grafton
6	Belknap	Strafford	Strafford	Hillsborough
7	Cheshire	Belknap	Belknap	Cheshire
8	Strafford	Cheshire	Carroll	Rockingham
9	Sullivan	Coos	Sullivan	Sullivan
10	Coos	Carroll	Coos	Coos

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

Measure	Data Source	Years of Data
<b>HEALTH OUTCOMES</b>		
<b>Mortality</b>	Premature death (Years of Potential Life Lost)	National Center for Health Statistics 2004-2006
<b>Morbidity</b>	Self-reported health status	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
<b>HEALTH FACTORS</b>		
<b>HEALTH BEHAVIORS</b>		
<b>Tobacco</b>	Adult smoking	Behavioral Risk Factor Surveillance System 2002-2008
<b>Diet and Exercise</b>	Adult obesity	National Center for Chronic Disease Prevention and Health Promotion 2006-2008
<b>Alcohol Use</b>	Binge drinking	Behavioral Risk Factor Surveillance System 2002-2008
	Motor vehicle death rate	National Center for Health Statistics 2000-2006
<b>High Risk Sexual Behavior</b>	Teen births	National Center for Health Statistics 2000-2006
	Chlamydia rate	National Center for Health Statistics 2006
<b>CLINICAL CARE</b>		
<b>Access to Care</b>	Uninsured adults	Small Area Health Insurance Estimates, U.S. Census 2005
	Primary care providers	Health Resources & Services Administration 2006
<b>Quality of Care</b>	Preventable hospital stays	Medicare/Dartmouth Institute 2005-2006
	Diabetic screening	Medicare/Dartmouth Institute 2003-2006
	Hospice use	Medicare/Dartmouth Institute 2001-2005
<b>SOCIOECONOMIC FACTORS</b>		
<b>Education</b>	High school graduation	National Center for Education Statistics <sup>1</sup> 2005-2006
	College graduates	U.S. Census/American Community Survey 2000/2005-2007
<b>Employment</b>	Unemployment rate	Bureau of Labor Statistics 2008
<b>Income</b>	Children in poverty	Small Area Income and Poverty Estimates, U.S. Census 2007
	Income inequality	U.S. Census/American Community Survey <sup>2</sup> 2000/2005-2007
<b>Family and Social Support</b>	Social/emotional support	Behavioral Risk Factor Surveillance System 2005-2008
	Single-parent households	U.S. Census/American Community Survey 2000/2005-2007
<b>Community Safety</b>	Violent crime <sup>3</sup>	Uniform Crime Reporting, Federal Bureau of Investigation 2005-2007
<b>PHYSICAL ENVIRONMENT</b>		
<b>Air Quality<sup>4</sup></b>	Unhealthy air due to ozone	U.S. Environmental Protection Agency / Centers for Disease Control and Prevention 2005
	Unhealthy air due to particulate matter	U.S. Environmental Protection Agency / Centers for Disease Control and Prevention 2005
<b>Built Environment</b>	Access to healthy foods	Census Zip Code Business Patterns 2006
	Liquor stores	Census County Business Patterns 2006

<sup>1</sup> State data sources for KY, NH, NC, PA, SC, and UT (2007-2008).

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

<sup>3</sup> 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.

<sup>4</sup> 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, Minneapolis, 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*.

INSIDE BACK COVER – INTENTIONALLY BLANK



# County Health Rankings

Mobilizing Action Toward Community Health

[countyhealthrankings.org](http://countyhealthrankings.org)

