



County Health Rankings

Mobilizing Action Toward Community Health

2010

West Virginia



Robert Wood Johnson Foundation



UNIVERSITY OF WISCONSIN

Population Health Institute

Translating Research into Policy and Practice

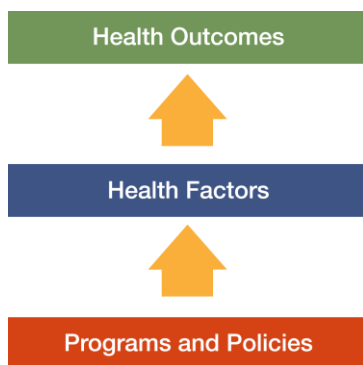
Introduction

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.

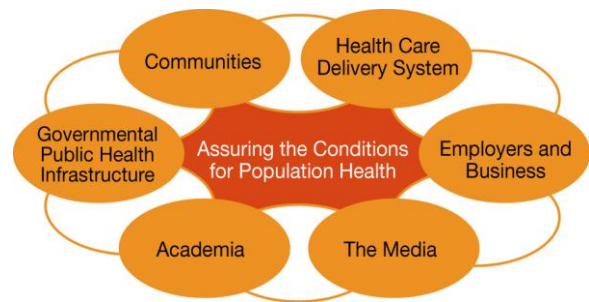
The problem is that there are big differences in health across communities, with some places being much healthier than others. And up to now, it has been hard to get a standard way to measure how healthy a county is and see where they can improve.

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.



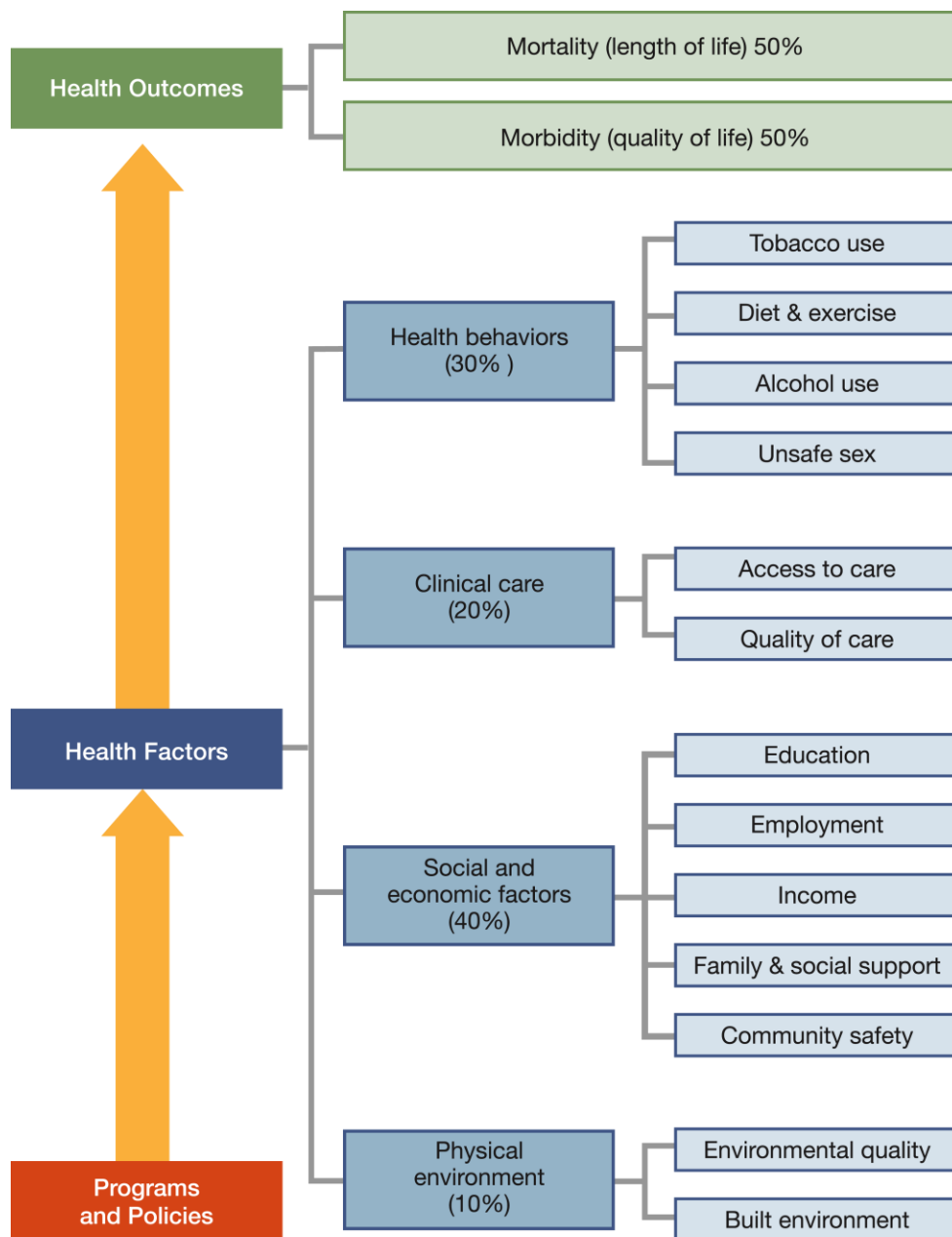
Institute of Medicine, 2002

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 West Virginia 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.

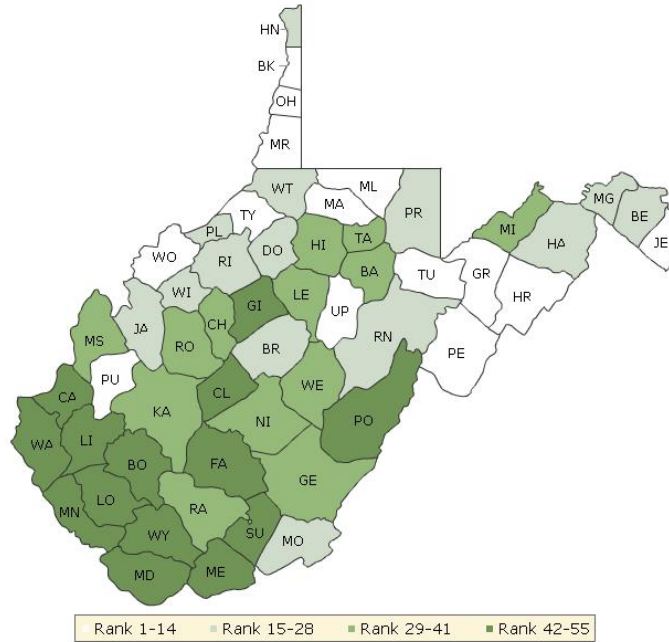


County Health Rankings model ©2010 UWPHI

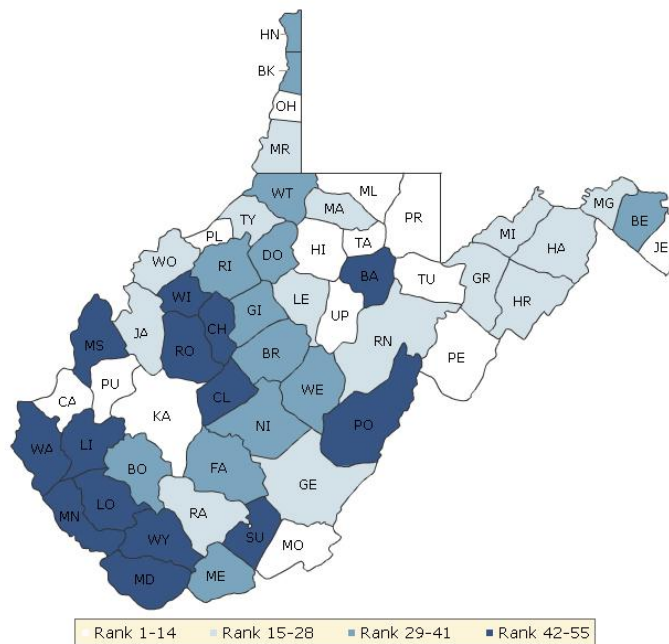
The maps on this page display West Virginia's counties divided into groups by health rank. The lighter colors indicate better performance in the respective summary rankings. The green map shows the distribution of summary health outcomes. The blue displays the distribution of the summary rank for health 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	Pendleton	1	Monongalia
2	Jefferson	2	Putnam
3	Grant	3	Jefferson
4	Monongalia	4	Taylor
5	Tucker	5	Pendleton
6	Marshall	6	Monroe
7	Putnam	7	Ohio
8	Hardy	8	Tucker
9	Marion	9	Pleasants
10	Wood	10	Kanawha
11	Brooke	11	Preston
12	Upshur	12	Upshur
13	Ohio	13	Cabell
14	Tyler	14	Harrison
15	Berkeley	15	Mineral
16	Hampshire	16	Morgan
17	Hancock	17	Marion
18	Wirt	18	Raleigh
19	Pleasants	19	Wood
20	Doddridge	20	Greenbrier
21	Preston	21	Hardy
22	Jackson	22	Tyler
23	Morgan	23	Randolph
24	Ritchie	24	Grant
25	Monroe	25	Hampshire
26	Wetzel	26	Lewis
27	Randolph	27	Marshall
28	Braxton	28	Jackson
29	Webster	29	Berkeley
30	Harrison	30	Doddridge
31	Mineral	31	Brooke
32	Taylor	32	Mercer
33	Roane	33	Gilmer
34	Calhoun	34	Nicholas
35	Lewis	35	Hancock
36	Greenbrier	36	Webster
37	Kanawha	37	Boone
38	Mason	38	Fayette
39	Nicholas	39	Ritchie
40	Barbour	40	Braxton

Rank	Health Outcomes	Rank	Health Factors
41	Raleigh	41	Wetzel
42	Cabell	42	Barbour
43	Fayette	43	Wirt
44	Clay	44	Wayne
45	Pocahontas	45	Summers
46	Summers	46	Calhoun
47	Gilmer	47	Pocahontas
48	Mercer	48	Roane
49	Wayne	49	Mason
50	Lincoln	50	Clay
51	Boone	51	Lincoln
52	Logan	52	Wyoming
53	Wyoming	53	Logan
54	Mingo	54	Mingo
55	McDowell	55	McDowell

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	Grant	Tucker
2	Monongalia	Pendleton
3	Pendleton	Jefferson
4	Jefferson	Hampshire
5	Putnam	Grant
6	Hardy	Marshall
7	Marshall	Monongalia
8	Wood	Hancock
9	Doddridge	Berkeley
10	Tyler	Putnam
11	Marion	Roane
12	Brooke	Morgan
13	Jackson	Upshur
14	Ohio	Marion
15	Monroe	Braxton
16	Preston	Wirt
17	Upshur	Hardy
18	Tucker	Brooke
19	Wetzel	Pleasants
20	Wirt	Ohio
21	Pleasants	Ritchie
22	Randolph	Pocahontas
23	Taylor	Wood
24	Ritchie	Lewis
25	Webster	Calhoun
26	Berkeley	Preston
27	Harrison	Mineral
28	Morgan	Harrison
29	Nicholas	Tyler
30	Mineral	Greenbrier
31	Hancock	Kanawha
32	Braxton	Wetzel
33	Hampshire	Webster
34	Calhoun	Randolph
35	Lewis	Jackson
36	Mason	Monroe
37	Kanawha	Clay
38	Raleigh	Doddridge
39	Greenbrier	Taylor
40	Fayette	Mason

Rank	Mortality	Morbidity
41	Wayne	Barbour
42	Summers	Gilmer
43	Cabell	Cabell
44	Barbour	Raleigh
45	Roane	Fayette
46	Mercer	Nicholas
47	Clay	Summers
48	Lincoln	Lincoln
49	Gilmer	Mercer
50	Pocahontas	Boone
51	Boone	Logan
52	Wyoming	Wayne
53	Logan	Wyoming
54	Mingo	Mingo
55	McDowell	McDowell

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	Monongalia	1	Cabell	1	Monongalia	1	Lincoln
2	Monroe	2	Kanawha	2	Putnam	2	Pleasants
3	Pendleton	3	Ohio	3	Jefferson	3	Barbour
4	Taylor	4	Monongalia	4	Gilmer	4	Tucker
5	Grant	5	Harrison	5	Marion	5	Boone
6	Tucker	6	Wayne	6	Ohio	6	Tyler
7	Lewis	7	Putnam	7	Berkeley	7	Hardy
8	Greenbrier	8	Berkeley	8	Morgan	7	Mineral
9	Upshur	9	Wood	9	Pendleton	7	Webster
10	Putnam	10	Barbour	10	Preston	10	Fayette
11	Randolph	11	Randolph	11	Hardy	11	Morgan
12	Pleasants	12	Brooke	12	Hancock	12	Doddridge
13	Preston	13	Roane	13	Brooke	13	Braxton
14	Wood	14	Tucker	14	Harrison	13	Taylor
15	Mercer	15	Jefferson	15	Marshall	13	Upshur
16	Raleigh	16	Taylor	16	Mineral	16	Calhoun
17	Mineral	17	Raleigh	17	Jackson	17	Wirt
18	Tyler	18	Mercer	18	Kanawha	18	Greenbrier
19	Marion	19	Preston	19	Boone	19	Nicholas
20	Marshall	20	Boone	20	Pleasants	20	Roane
21	Hampshire	21	Lincoln	21	Wood	21	Randolph
22	Webster	22	Upshur	22	Hampshire	22	Grant
23	Jefferson	23	Nicholas	23	Monroe	23	Monroe
24	Kanawha	24	Pleasants	24	Upshur	24	Wyoming
25	Jackson	25	Tyler	25	Taylor	25	Putnam
26	Ritchie	26	Greenbrier	26	Raleigh	26	Ritchie
27	Cabell	27	Morgan	27	Cabell	27	Jefferson
28	Brooke	28	Summers	28	Doddridge	28	Raleigh
29	Ohio	29	Mason	29	Nicholas	29	Logan
30	Doddridge	30	Clay	30	Tucker	30	Clay
31	Pocahontas	31	Wetzel	31	Tyler	31	Hampshire
32	Hardy	32	Mineral	32	Grant	32	Mason
33	Braxton	33	Fayette	33	Lewis	33	Harrison
34	Harrison	34	Wyoming	34	Greenbrier	34	McDowell
35	Morgan	35	Hardy	35	Fayette	35	Summers
36	Wetzel	36	Doddridge	36	Wayne	36	Preston
37	Fayette	37	Calhoun	37	Ritchie	37	Berkeley
38	Wirt	38	Jackson	38	Randolph	38	Pocahontas
39	Hancock	39	Pendleton	39	Braxton	39	Lewis
40	Nicholas	40	Marshall	40	Wetzel	40	Mercer

Rank	Health Behaviors	Rank	Clinical Care	Rank	Social & Economic Factors	Rank	Physical Environment
41	Gilmer	41	Hampshire	41	Mercer	41	Jackson
42	Calhoun	42	Monroe	42	Webster	42	Wetzel
43	Summers	43	Logan	43	Barbour	43	Marshall
44	Roane	44	Webster	44	Wirt	44	Mingo
45	Mason	45	Lewis	45	Pocahontas	45	Monongalia
46	Clay	46	Marion	46	Logan	46	Wayne
47	Barbour	47	Hancock	47	Wyoming	47	Pendleton
48	Berkeley	48	Wirt	48	Mingo	48	Marion
49	Boone	49	Braxton	49	Lincoln	49	Hancock
50	McDowell	50	Ritchie	50	Summers	50	Kanawha
51	Wayne	51	Grant	51	Calhoun	51	Wood
52	Wyoming	52	McDowell	52	Mason	52	Gilmer
53	Logan	53	Gilmer	53	Clay	53	Cabell
54	Lincoln	54	Mingo	54	Roane	54	Ohio
55	Mingo	55	Pocahontas	55	McDowell	55	Brooke

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 Quality⁴	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*.



County Health Rankings

Mobilizing Action Toward Community Health

countyhealthrankings.org

