County Health Rankings

Mobilizing Action Toward Community Health

2011
Michigan

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 Michigan 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.
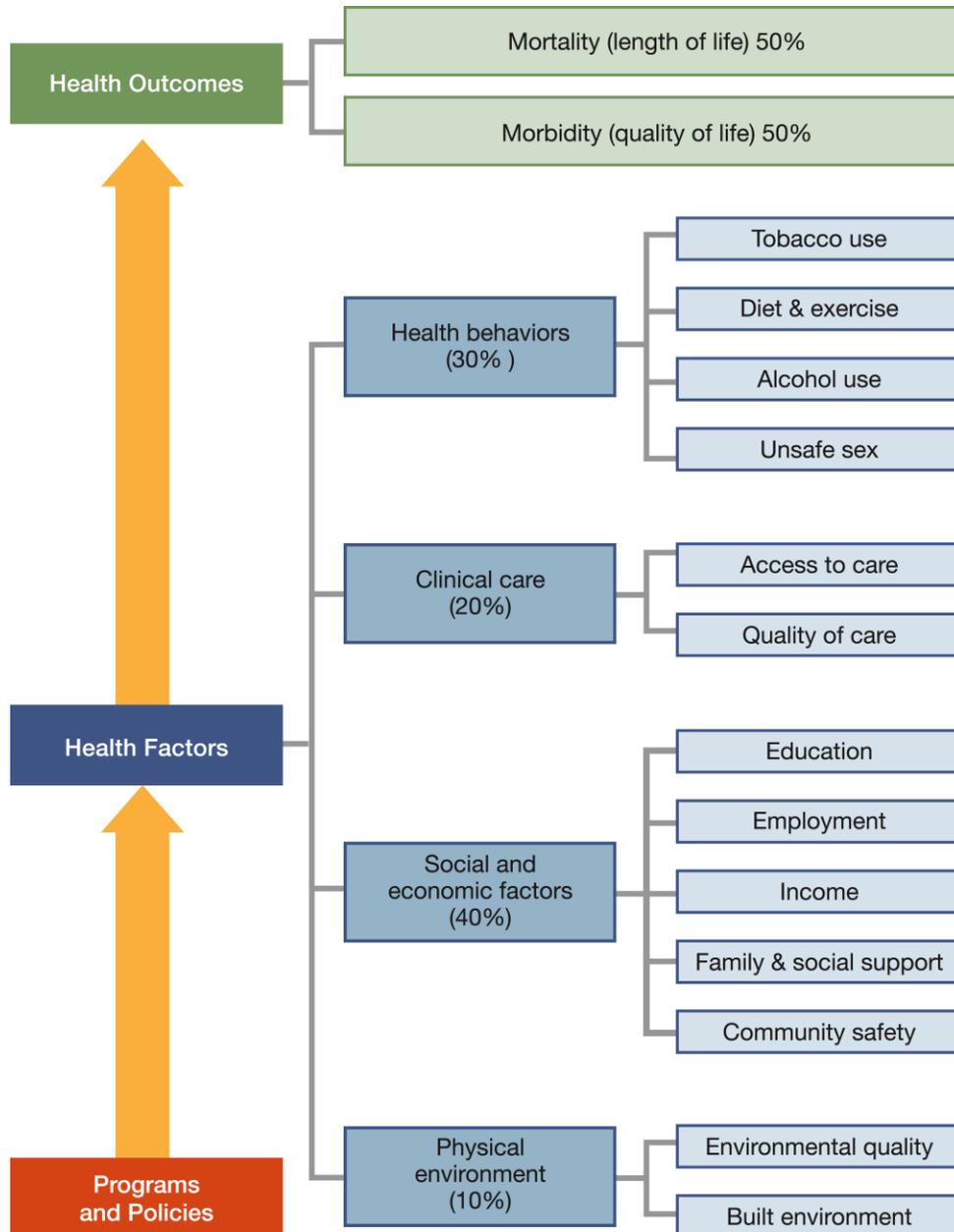

County Health Rankings model ©2010 UWPHI

The maps on this page display Michigan'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 1-20   Rank 21-41   Rank 42-62   Rank 63-82   Not Ranked

HEALTH FACTORS

Rank 1-20   Rank 21-41   Rank 42-62   Rank 63-82   Not Ranked
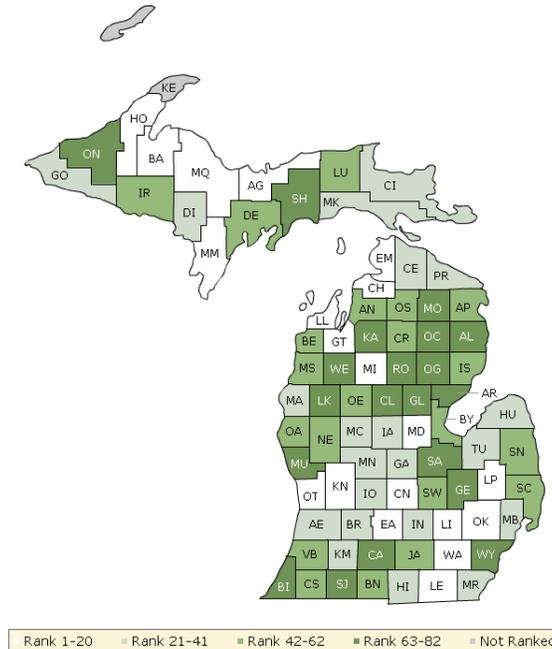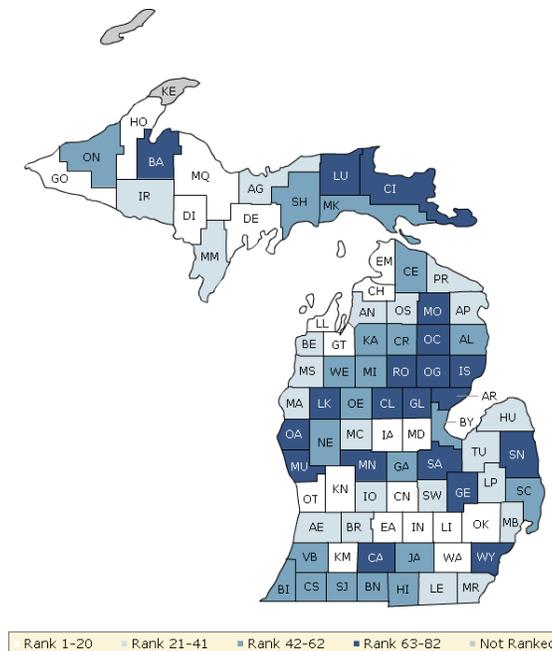
Summary Health Outcomes & Health Factors Rankings

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	Ottawa	1	Washtenaw
2	Leelanau	2	Livingston
3	Livingston	3	Oakland
4	Washtenaw	4	Ottawa
5	Alger	5	Grand Traverse
6	Clinton	6	Clinton
7	Grand Traverse	7	Leelanau
8	Houghton	8	Midland
9	Emmet	9	Marquette
10	Marquette	10	Dickinson
11	Eaton	11	Houghton
12	Missaukee	12	Charlevoix
13	Lapeer	13	Kalamazoo
14	Baraga	14	Delta
15	Lenawee	15	Eaton
16	Kent	16	Gogebic
17	Oakland	17	Kent
18	Charlevoix	18	Emmet
19	Menominee	19	Isabella
20	Midland	20	Ingham
21	Allegan	21	Iron
22	Ionia	22	Lenawee
23	Chippewa	23	Manistee
24	Dickinson	24	Huron
25	Barry	25	Allegan
26	Mackinac	26	Macomb
27	Mecosta	27	Benzie
28	Gogebic	28	Shiawassee
29	Gratiot	29	Alger
30	Ingham	30	Otsego
31	Hillsdale	31	Presque Isle
32	Tuscola	32	Barry
33	Isabella	33	Alpena
34	Presque Isle	34	Mason
35	Kalamazoo	35	Monroe
36	Mason	36	Menominee
37	Montcalm	37	Tuscola
38	Macomb	38	Antrim
39	Monroe	39	Lapeer
40	Cheboygan	40	Mecosta

Rank	Health Outcomes	Rank	Health Factors
41	Huron	41	Ionia
42	Branch	42	Missaukee
43	Delta	43	Van Buren
44	Iron	44	Wexford
45	Oceana	45	Gratiot
46	Bay	46	Osceola
47	Osceola	47	Kalkaska
48	Antrim	48	Newaygo
49	Newaygo	49	Bay
50	St. Clair	50	Cass
51	Van Buren	51	Hillsdale
52	Benzie	52	Berrien
53	Alpena	53	Ontonagon
54	Iosco	54	St. Joseph
55	Sanilac	55	Jackson
56	Shiawassee	56	Crawford
57	Otsego	57	Alcona
58	Luce	58	Mackinac
59	Cass	59	St. Clair
60	Manistee	60	Branch
61	Crawford	61	Schoolcraft
62	Jackson	62	Cheboygan
63	Arenac	63	Montmorency
64	Muskegon	64	Ogemaw
65	Berrien	65	Arenac
66	Ogemaw	66	Roscommon
67	Wexford	67	Calhoun
68	Montmorency	68	Montcalm
69	St. Joseph	69	Chippewa
70	Schoolcraft	70	Iosco
71	Kalkaska	71	Oceana
72	Oscoda	72	Oscoda
73	Calhoun	73	Luce
74	Saginaw	74	Muskegon
75	Roscommon	75	Sanilac
76	Gladwin	76	Clare
77	Genesee	77	Saginaw
78	Alcona	78	Genesee
79	Ontonagon	79	Baraga
80	Lake	80	Gladwin
81	Wayne	81	Lake
82	Clare	82	Wayne

Not Ranked: Keeweenaw

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	Leelanau	Houghton
2	Ottawa	Livingston
3	Clinton	Mackinac
4	Emmet	Ottawa
5	Washtenaw	Missaukee
6	Livingston	Marquette
7	Alger	Iron
8	Grand Traverse	Alger
9	Eaton	Washtenaw
10	Oakland	Grand Traverse
11	Marquette	Lapeer
12	Baraga	Charlevoix
13	Kent	Lenawee
14	Menominee	Gogebic
15	Missaukee	Chippewa
16	Lapeer	Allegan
17	Midland	Dickinson
18	Kalamazoo	Clinton
19	Lenawee	Eaton
20	Ionia	Benzie
21	Mecosta	Otsego
22	Delta	Baraga
23	Ingham	Leelanau
24	Barry	Tuscola
25	Charlevoix	Kent
26	Mason	Midland
27	Hillsdale	Barry
28	Allegan	Menominee
29	Manistee	Emmet
30	Macomb	Ionia
31	Gratiot	Ogemaw
32	Presque Isle	Isabella
33	Dickinson	Iosco
34	St. Clair	Oakland
35	Oceana	Gratiot
36	Cheboygan	Montcalm
37	Chippewa	Newaygo
38	Antrim	Mecosta
39	Monroe	Van Buren
40	Branch	Osceola

Rank	Mortality	Morbidity
41	Houghton	Crawford
42	Huron	Presque Isle
43	Isabella	Lake
44	Shiawassee	Huron
45	Montcalm	Luce
46	Alpena	Monroe
47	Gogebic	Bay
48	Bay	Hillsdale
49	Tuscola	Roscommon
50	Muskegon	Branch
51	Sanilac	Cheboygan
52	Osceola	Ingham
53	Cass	Arenac
54	Jackson	Macomb
55	Newaygo	Mason
56	Mackinac	Wexford
57	Van Buren	Montmorency
58	Berrien	Schoolcraft
59	Kalkaska	Sanilac
60	Luce	St. Joseph
61	Arenac	Oceana
62	Iosco	Antrim
63	Iron	Oscoda
64	Crawford	Kalamazoo
65	Wexford	Berrien
66	Benzie	St. Clair
67	Montmorency	Alpena
68	St. Joseph	Delta
69	Gladwin	Cass
70	Otsego	Jackson
71	Calhoun	Shiawassee
72	Saginaw	Calhoun
73	Ogemaw	Saginaw
74	Genesee	Muskegon
75	Schoolcraft	Alcona
76	Oscoda	Gladwin
77	Ontonagon	Kalkaska
78	Alcona	Manistee
79	Roscommon	Genesee
80	Wayne	Clare
81	Clare	Ontonagon
82	Lake	Wayne

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	Washtenaw	Marquette	Clinton	Roscommon
2	Oakland	Wexford	Livingston	Iron
3	Ottawa	Grand Traverse	Washtenaw	Emmet
4	Livingston	Muskegon	Leelanau	Charlevoix
5	Leelanau	Gogebic	Marquette	Midland
6	Houghton	Midland	Ottawa	Clare
7	Benzie	Washtenaw	Midland	St. Joseph
8	Grand Traverse	Dickinson	Grand Traverse	Eaton
9	Clinton	Alpena	Oakland	Presque Isle
10	Huron	Oakland	Eaton	Alpena
11	Tuscola	Saginaw	Dickinson	Kalamazoo
12	Gogebic	Delta	Houghton	Oscoda
13	Presque Isle	Kent	Isabella	Gogebic
14	Ingham	Charlevoix	Barry	Leelanau
15	Macomb	Alger	Delta	Grand Traverse
16	Isabella	Kalamazoo	Emmet	Arenac
17	Manistee	Schoolcraft	Kalamazoo	Livingston
18	Kent	Emmet	Allegan	Montmorency
19	Midland	Livingston	Charlevoix	Oakland
20	Charlevoix	Shiawassee	Menominee	Dickinson
21	Kalamazoo	Roscommon	Kent	Lapeer
22	Allegan	Mason	Huron	Cheboygan
23	Montmorency	Manistee	Otsego	Genesee
24	Marquette	Calhoun	Macomb	Mecosta
25	Lenawee	Clinton	Gratiot	Gladwin
26	Iron	Newaygo	Monroe	Shiawassee
27	Alcona	Ottawa	Lapeer	Otsego
28	Alger	Genesee	Lenawee	Ontonagon
29	Antrim	Jackson	Benzie	Newaygo
30	Delta	Alcona	Cass	Hillsdale
31	Arenac	Otsego	Bay	Oceana
32	Ogemaw	Berrien	Shiawassee	Montcalm
33	Kalkaska	Iosco	Ingham	Jackson
34	Osceola	Lenawee	Iron	Osceola
35	Crawford	Mecosta	Ontonagon	Wexford
36	Dickinson	Chippewa	Manistee	Ingham
37	Ionia	Crawford	Missaukee	Missaukee
38	Hillsdale	Leelanau	Ionia	Antrim
39	Missaukee	Ingham	Mason	Calhoun
40	Ontonagon	Gratiot	Alger	Isabella

Rank	Health Behaviors	Clinical Care	Social & Economic Factors	Physical Environment
41	Mackinac	Menominee	Van Buren	Delta
42	Berrien	Eaton	Tuscola	Barry
43	Branch	Cheboygan	Antrim	Saginaw
44	Eaton	Van Buren	Branch	Berrien
45	Mecosta	Osceola	Mackinac	Ionia
46	Mason	Presque Isle	Chippewa	Monroe
47	Van Buren	Lake	St. Clair	Kalkaska
48	Schoolcraft	St. Clair	Jackson	Luce
49	Shiawassee	Allegan	Gogebic	Mason
50	Oscoda	Montmorency	Cheboygan	Cass
51	Alpena	Iron	Mecosta	Ogemaw
52	Cass	Hillsdale	St. Joseph	Crawford
53	Monroe	Oscoda	Kalkaska	Van Buren
54	St. Clair	Kalkaska	Alpena	Iosco
55	Emmet	Houghton	Newaygo	Branch
56	Oceana	Huron	Presque Isle	Gratiot
57	St. Joseph	Barry	Osceola	Lake
58	Baraga	Ionia	Sanilac	Lenawee
59	Newaygo	Monroe	Wexford	Washtenaw
60	Lapeer	Macomb	Hillsdale	Houghton
61	Luce	St. Joseph	Montcalm	Bay
62	Bay	Lapeer	Ogemaw	Marquette
63	Otsego	Bay	Schoolcraft	Alcona
64	Menominee	Antrim	Berrien	Manistee
65	Wexford	Missaukee	Crawford	Clinton
66	Montcalm	Mackinac	Calhoun	Tuscola
67	Clare	Montcalm	Arenac	Macomb
68	Roscommon	Oceana	Luce	Menominee
69	Iosco	Benzie	Oceana	Ottawa
70	Barry	Tuscola	Muskegon	Chippewa
71	Lake	Luce	Iosco	Benzie
72	Gratiot	Clare	Alcona	Baraga
73	Jackson	Sanilac	Gladwin	Kent
74	Cheboygan	Wayne	Genesee	Wayne
75	Sanilac	Ogemaw	Baraga	Alger
76	Calhoun	Cass	Roscommon	Sanilac
77	Gladwin	Arenac	Saginaw	Mackinac
78	Muskegon	Isabella	Clare	Huron
79	Wayne	Gladwin	Montmorency	Allegan
80	Saginaw	Branch	Oscoda	Muskegon
81	Chippewa	Baraga	Lake	Schoolcraft
82	Genesee	Ontonagon	Wayne	St. Clair

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.

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Media Solutions, UW School of Medicine and Public Health

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

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