



Central Michigan District Health Department

A Healthy Community
Together We Can!

County Health Rankings Information for the
Central Michigan Health District Counties:
Arenac, Clare, Gladwin, Isabella,
Osceola and Roscommon

June 2010



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1. Overview

This document presents information from the *Community Health Rankings 2010* released by the University of Wisconsin Population Health Institute for the six counties in the central Michigan health district: Arenac, Clare, Gladwin, Isabella, Osceola, and Roscommon. The county health rankings are based upon health outcome and health factor statistics compiled for each county within each US state. Health outcome data includes mortality (as indicated by premature death) and morbidity, which is the incidence of ill health. Health factor data include more than 20 indicators in four areas: health behaviors, clinical care, socioeconomic factors, and physical environment.

The Central Michigan District Health Department (CMDHD) assembled this document for reference by the public and those collaborating with CMDHD to improve the overall health of the public within the six counties of the central Michigan health district. The following sections provide:

- The country ranking table for each of the six counties with the central Michigan health district
- A summary table listing the health outcome and health factor statistics for all six counties
- A summary table listing of the percent deviation from the target for each of the various categories
- A summary table listing the percent deviation from the overall Michigan value for each of the various categories
- A glossary of definitions and data sources for each health outcome and health factor category in alphabetical order by category
- An illustration of the model used for the *Country Health Rankings 2010* and the weight applied to each health outcome and health factor category to determine the overall rank for each county within a state
- The basis of the target values
- Measures, data sources, and years of data for each health outcome and health factor category

The primary source of information for the information in the following sections is the *County Health Rankings 2010* produced by the University of Wisconsin Population Health Institute. Additional information is at www.countyhealthrankings.org/michigan.

For those collaborating with CMDHD to develop action plans to improve overall health within the counties of the central Michigan health district, it is important to note the size of



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the population with those counties. The total population of the central Michigan health district is 187,343¹ distributed across the six counties as follows.

	Arenac County	Clare County	Gladwin County	Isabella County	Osceola County	Roscommon County
Population	16,361	30,312	25,920	66,778	22,930	25,042
Percent of the total population within the central Michigan health district	9%	16%	14%	36%	12%	13%

¹ Michigan Department of Community Health www.michigan.gov/mdch



2. Central Michigan Health District County Health Rankings

This section presents the health ranking statistics for each county within the central Michigan Health District. Each county table includes:

- The county's value for each health outcome and health factor category
- A target value for each category
- The overall Michigan value for each category
- The percent deviation from the target value for each category with a negative percent indicating that the county value is better than the target
- The percent deviation from the overall Michigan value for each category with a negative percent indicating that the county value is better than the overall Michigan value
- The county ranking as compared to the other 81 Michigan counties for the various summary categories

The county tables are presented in alphabetical order by county.



2.1 Arenac County Health Rankings

Health Ranking Category	Arenac County Value	Target Value	Overall Michigan Value	Percent Variation from Target Value	Percent Variation from overall Michigan Value	Rank out of the 82 Michigan Counties
Health Outcomes						72
Mortality						74
Premature Death	9,347	5,497	7,390	70%	26%	
Morbidity						54
Poor or Fair Health	N/A	11%	14%	N/A	N/A	
Poor Physical Health Days	3.9	2.9	3.6	34%	8%	
Poor Mental Health Days	3.8	2.8	3.7	36%	3%	
Low Birthweight	7%	6%	8%	17%	-13%	
Health Factors						66
Health Behaviors						25
Adult Smoking	21%	18%	23%	17%	-9%	
Adult Obesity	30%	28%	28%	7%	7%	
Binge Drinking	13%	12%	18%	8%	-28%	
Motor Vehicle Crash Death Rate	21	12	13	75%	62%	
Chlamydia	71	50	370	42%	-81%	
Teen Birth Rate	35	21	36	67%	-3%	
Clinical Care						78
Uninsured Adults	14%	10%	12%	40%	17%	
Primary Care Provider Rate	29	152	113	81%	74%	
Preventable Hospital Stays	106	50	76	112%	39%	
Diabetic Screening	87%	88%	82%	1%	-6%	
Hospice Use	31%	45%	38%	31%	18%	
Social & Economic Factors						69



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Health Ranking Category	Arenac County Value	Target Value	Overall Michigan Value	Percent Variation from Target Value	Percent Variation from overall Michigan Value	Rank out of the 82 Michigan Counties
High School Graduation	77%	88%	72%	13%	-7%	
College Degrees	11%	30%	24%	63%	54%	
Unemployment	11%	7%	8%	57%	38%	
Children in Poverty	28%	11%	19%	155%	47%	
Income Inequality	44	39	45	13%	-2%	
Inadequate Social Support		12%	19%	N/A	N/A	
Single Parent Households	9%	7%	10%	29%	-10%	
Violent Crime Rate	244	128	550	91%	-56%	
Physical Environment						49
Air Pollution-Particulate Matter Days	3	0	3	300%	0%	
Air Pollution-Ozone Days	1	0	4	100%	-75%	
Access to Healthy Foods	43%	71%	51%	39%	16%	
Liquor Store Density	1.2	0	1.1	120%	9%	



2.2 Clare County Health Rankings

Health Ranking Category	Clare County Value	Target Value	Overall Michigan Value	Percent Variation from Target Value	Percent Variation from overall Michigan Value	Rank out of the 82 Michigan Counties
Health Outcomes						82
Mortality						80
Premature Death	10,738	5,497	7,390	95%	45%	
Morbidity						80
Poor or Fair Health	20%	11%	14%	82%	43%	
Poor Physical Health Days	4.6	2.9	3.6	59%	28%	
Poor Mental Health Days	5.4	2.8	3.7	93%	46%	
Low Birthweight	8%	6%	8%	33%	0%	
Health Factors						76
Health Behaviors						66
Adult Smoking	32%	18%	23%	78%	39%	
Adult Obesity	29%	28%	28%	4%	4%	
Binge Drinking	16%	12%	18%	33%	-11%	
Motor Vehicle Crash Death Rate	22	12	13	83%	69%	
Chlamydia	74	50	370	48%	-80%	
Teen Birth Rate	47	21	36	124%	31%	
Clinical Care						55
Uninsured Adults	10%	10%	12%	0%	-17%	
Primary Care Provider Rate	57	152	113	63%	50%	
Preventable Hospital Stays	107	50	76	114%	41%	
Diabetic Screening	85%	88%	82%	3%	-4%	
Hospice Use	46%	45%	38%	-2%	-21%	



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Health Ranking Category	Clare County Value	Target Value	Overall Michigan Value	Percent Variation from Target Value	Percent Variation from overall Michigan Value	Rank out of the 82 Michigan Counties
Social & Economic Factors						79
High School Graduation	69%	88%	72%	22%	4%	
College Degrees	9%	30%	24%	70%	63%	
Unemployment	12%	7%	8%	71%	50%	
Children in Poverty	33%	11%	19%	200%	74%	
Income Inequality	42	39	45	8%	-7%	
Inadequate Social Support	26%	12%	19%	117%	37%	
Single Parent Households	9%	7%	10%	29%	-10%	
Violent Crime Rate	278	128	550	117%	-49%	
Physical Environment						6
Air Pollution-Particulate Matter Days	1	0	3	100%	-67%	
Air Pollution-Ozone Days	2	0	4	200%	-50%	
Access to Healthy Foods	80%	71%	51%	-13%	-57%	
Liquor Store Density	0.6	0	1.1	60%	-45%	



2.3 Gladwin County Health Rankings

Health Ranking Category	Gladwin County Value	Target Value	Overall Michigan Value	Percent Variation from Target Value	Percent Variation from overall Michigan Value	Rank out of the 82 Michigan Counties
Health Outcomes						77
Mortality						72
Premature Death	8,981	5,497	7,390	63%	22%	
Morbidity						81
Poor or Fair Health	27%	11%	14%	145%	93%	
Poor Physical Health Days	5.4	2.9	3.6	86%	50%	
Poor Mental Health Days	4.1	2.8	3.7	46%	11%	
Low Birthweight	7%	6%	8%	17%	-13%	
Health Factors						78
Health Behaviors						72
Adult Smoking	36%	18%	23%	100%	57%	
Adult Obesity	29%	28%	28%	4%	4%	
Binge Drinking	17%	12%	18%	42%	-6%	
Motor Vehicle Crash Death Rate	19	12	13	58%	46%	
Chlamydia	119	50	370	138%	-68%	
Teen Birth Rate	41	21	36	95%	14%	
Clinical Care						80
Uninsured Adults	13%	10%	12%	30%	8%	
Primary Care Provider Rate	48	152	113	68%	58%	
Preventable Hospital Stays	111	50	76	122%	46%	
Diabetic Screening	82%	88%	82%	7%	0%	
Hospice Use	35%	45%	38%	22%	8%	



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Health Ranking Category	Gladwin County Value	Target Value	Overall Michigan Value	Percent Variation from Target Value	Percent Variation from overall Michigan Value	Rank out of the 82 Michigan Counties
Social & Economic Factors						73
High School Graduation	73%	88%	72%	17%	-1%	
College Degrees	10%	30%	24%	67%	58%	
Unemployment	11%	7%	8%	57%	38%	
Children in Poverty	27%	11%	19%	145%	42%	
Income Inequality	41	39	45	5%	-9%	
Inadequate Social Support	26%	12%	19%	117%	37%	
Single Parent Households	9%	7%	10%	29%	-10%	
Violent Crime Rate	224	128	550	75%	-59%	
Physical Environment						3
Air Pollution-Particulate Matter Days	1	0	3	100%	-67%	
Air Pollution-Ozone Days	0	0	4	0%	-100%	
Access to Healthy Foods	100%	71%	51%	-41%	-96%	
Liquor Store Density	0.7	0	1.1	70%	-36%	



2.4 Isabella County Health Rankings

Health Ranking Category	Isabella County Value	Target Value	Overall Michigan Value	Percent Variation from Target Value	Percent Variation from overall Michigan Value	Rank out of the 82 Michigan Counties
Health Outcomes						42
Mortality						53
Premature Death	7,439	5,497	7,390	35%	1%	
Morbidity						39
Poor or Fair Health	12%	11%	14%	9%	-14%	
Poor Physical Health Days	3.8	2.9	3.6	31%	6%	
Poor Mental Health Days	2.7	2.8	3.7	-4%	-27%	
Low Birthweight	8%	6%	8%	33%	0%	
Health Factors						22
Health Behaviors						22
Adult Smoking	22%	18%	23%	22%	-4%	
Adult Obesity	29%	28%	28%	4%	4%	
Binge Drinking	20%	12%	18%	67%	11%	
Motor Vehicle Crash Death Rate	15	12	13	25%	15%	
Chlamydia	319	50	370	538%	-14%	
Teen Birth Rate	14	21	36	-33%	-61%	
Clinical Care						77
Uninsured Adults	17%	10%	12%	70%	42%	
Primary Care Provider Rate	46	152	113	70%	59%	
Preventable Hospital Stays	79	50	76	58%	4%	
Diabetic Screening	84%	88%	82%	5%	-2%	
Hospice Use	35%	45%	38%	22%	8%	



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Health Ranking Category	Isabella County Value	Target Value	Overall Michigan Value	Percent Variation from Target Value	Percent Variation from overall Michigan Value	Rank out of the 82 Michigan Counties
Social & Economic Factors						13
High School Graduation	80%	88%	72%	9%	-11%	
College Degrees	28%	30%	24%	7%	-17%	
Unemployment	6%	7%	8%	-14%	-25%	
Children in Poverty	17%	11%	19%	55%	-11%	
Income Inequality	46	39	45	18%	2%	
Inadequate Social Support	15%	12%	19%	25%	-21%	
Single Parent Households	9%	7%	10%	29%	-10%	
Violent Crime Rate	216	128	550	69%	-61%	
Physical Environment						52
Air Pollution-Particulate Matter Days	4	0	3	400%	33%	
Air Pollution-Ozone Days	2	0	4	200%	-50%	
Access to Healthy Foods	50%	71%	51%	30%	2%	
Liquor Store Density	1.2	0	1.1	120%	9%	



2.5 Osceola County Health Rankings

Health Ranking Category	Osceola County Value	Target Value	Overall Michigan Value	Percent Variation from Target Value	Percent Variation from overall Michigan Value	Rank out of the 82 Michigan Counties
Health Outcomes						45
Mortality						57
Premature Death	7,563	5,497	7,390	38%	2%	
Morbidity						34
Poor or Fair Health	15%	11%	14%	36%	7%	
Poor Physical Health Days	2.9	2.9	3.6	0%	-19%	
Poor Mental Health Days	5	2.8	3.7	79%	35%	
Low Birthweight	6%	6%	8%	0%	-25%	
Health Factors						40
Health Behaviors						30
Adult Smoking		18%	23%	NA	NA	
Adult Obesity	29%	28%	28%	4%	4%	
Binge Drinking	11%	12%	18%	-8%	-39%	
Motor Vehicle Crash Death Rate	20	12	13	67%	54%	
Chlamydia	187	50	370	274%	-49%	
Teen Birth Rate	40	21	36	90%	11%	
Clinical Care						37
Uninsured Adults	11%	10%	12%	10%	-8%	
Primary Care Provider Rate	34	152	113	78%	70%	
Preventable Hospital Stays	70	50	76	40%	-8%	
Diabetic Screening	86%	88%	82%	2%	-5%	
Hospice Use	38%	45%	38%	16%	0%	



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Health Ranking Category	Osceola County Value	Target Value	Overall Michigan Value	Percent Variation from Target Value	Percent Variation from overall Michigan Value	Rank out of the 82 Michigan Counties
Social & Economic Factors						59
High School Graduation	74%	88%	72%	16%	-3%	
College Degrees	12%	30%	24%	60%	50%	
Unemployment	10%	7%	8%	43%	25%	
Children in Poverty	25%	11%	19%	127%	32%	
Income Inequality	40	39	45	3%	-11%	
Inadequate Social Support	16%	12%	19%	33%	-16%	
Single Parent Households	9%	7%	10%	29%	-10%	
Violent Crime Rate	275	128	550	115%	-50%	
Physical Environment						7
Air Pollution-Particulate Matter Days	1	0	3	100%	-67%	
Air Pollution-Ozone Days	2	0	4	200%	-50%	
Access to Healthy Foods	71%	71%	51%	0%	-39%	
Liquor Store Density	0.4	0	1.1	40%	-64%	



2.6 Roscommon County Health Rankings

Health Ranking Category	Roscommon County Value	Target Value	Overall Michigan Value	Percent Variation from Target Value	Percent Variation from overall Michigan Value	Rank out of the 82 Michigan Counties
Health Outcomes						70
Mortality						75
Premature Death	9,356	5,497	7,390	70%	27%	
Morbidity						45
Poor or Fair Health	19%	11%	14%	73%	36%	
Poor Physical Health Days	4	2.9	3.6	38%	11%	
Poor Mental Health Days	4.6	2.8	3.7	64%	24%	
Low Birthweight	6%	6%	8%	0%	-25%	
Health Factors						69
Health Behaviors						64
Adult Smoking	25%	18%	23%	39%	9%	
Adult Obesity	31%	28%	28%	11%	11%	
Binge Drinking	21%	12%	18%	75%	17%	
Motor Vehicle Crash Death Rate	17	12	13	42%	31%	
Chlamydia	50	50	370	0%	-86%	
Teen Birth Rate	37	21	36	76%	3%	
Clinical Care						36
Uninsured Adults	12%	10%	12%	20%	0%	
Primary Care Provider Rate	58	152	113	62%	49%	
Preventable Hospital Stays	71	50	76	42%	-7%	
Diabetic Screening	87%	88%	82%	1%	-6%	
Hospice Use	38%	45%	38%	16%	0%	



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Health Ranking Category	Roscommon County Value	Target Value	Overall Michigan Value	Percent Variation from Target Value	Percent Variation from overall Michigan Value	Rank out of the 82 Michigan Counties
Social & Economic Factors						75
High School Graduation	69%	88%	72%	22%	4%	
College Degrees	12%	30%	24%	60%	50%	
Unemployment	11%	7%	8%	57%	38%	
Children in Poverty	34%	11%	19%	209%	79%	
Income Inequality	43	39	45	10%	-4%	
Inadequate Social Support	13%	12%	19%	8%	-32%	
Single Parent Households	7%	7%	10%	0%	-30%	
Violent Crime Rate	268	128	550	109%	-51%	
Physical Environment						22
Air Pollution-Particulate Matter Days	1	0	3	100%	-67%	
Air Pollution-Ozone Days	0	0	4	0%	-100%	
Access to Healthy Foods	50%	71%	51%	30%	2%	
Liquor Store Density	0.8	0	1.1	80%	-27%	



3. Central Michigan Health District Counties Rankings Summaries

3.1 Central Michigan Health District County Health Rankings by County

The following table provides the county ranking values for each of the six counties within the central Michigan health district for use when comparing the counties within the district.

Health Ranking Category	Arenac County	Clare County	Gladwin County	Isabella County	Osceola County	Roscommon County
Health Outcomes						
Mortality						
Premature Death	9,347	10,738	8,981	7,439	7,563	9,356
Morbidity						
Poor or Fair Health	N/A	20%	27%	12%	15%	19%
Poor Physical Health Days	3.9	4.6	5.4	3.8	2.9	4
Poor Mental Health Days	3.8	5.4	4.1	2.7	5	4.6
Low Birthweight	7%	8%	7%	8%	6%	6%
Health Factors						
Health Behaviors						
Adult Smoking	21%	32%	36%	22%	NA	25%
Adult Obesity	30%	29%	29%	29%	29%	31%
Binge Drinking	13%	16%	17%	20%	11%	21%
Motor Vehicle Crash Death Rate	21	22	19	15	20	17
Chlamydia	71	74	119	319	187	50
Teen Birth Rate	35	47	41	14	40	37
Clinical Care						
Uninsured Adults	14%	10%	13%	17%	11%	12%
Primary Care Provider Rate	29	57	48	46	34	58
Preventable Hospital Stays	106	107	111	79	70	71
Diabetic Screening	87%	85%	82%	84%	86%	87%
Hospice Use	31%	46%	35%	35%	38%	38%
Social & Economic Factors						
High School Graduation	77%	69%	73%	80%	74%	69%



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Health Ranking Category	Arenac County	Clare County	Gladwin County	Isabella County	Osceola County	Roscommon County
College Degrees	11%	9%	10%	28%	12%	12%
Unemployment	11%	12%	11%	6%	10%	11%
Children in Poverty	28%	33%	27%	17%	25%	34%
Income Inequality	44	42	41	46	40	43
Inadequate Social Support	N/A	26%	26%	15%	16%	13%
Single Parent Households	9%	9%	9%	9%	9%	7%
Violent Crime Rate	244	278	224	216	275	268
Physical Environment						
Air Pollution-Particulate Matter Days	3	1	1	4	1	1
Air Pollution-Ozone Days	1	2	0	2	2	0
Access to Healthy Foods	43%	80%	100%	50%	71%	50%
Liquor Store Density	1.2	0.6	0.7	1.2	0.4	0.8



3.2 Central Michigan District County Health Rankings: Deviations from Target Values

The following table provides the percent deviation from target values for the various health outcome and health factor categories for each of the six counties within the central Michigan health district. For each value, the higher the percent deviation is, the greater the variation from the target. A negative percent for any value indicates that that value is “better” than the target and therefore may be of less concern.

Health Ranking Category	Arenac County's Percent Deviation Target	Clare County's Percent Deviation Target	Gladwin County's Percent Deviation Target	Isabella County's Percent Deviation Target	Osceola County's Percent Deviation Target	Roscommon County's Percent Deviation from Target	Central Michigan Health District Counties Average Percent Deviation from Target
Health Outcomes							
Mortality							
Premature Death	70%	95%	63%	35%	38%	70%	62%
Morbidity							
Poor or Fair Health	N/A	82%	145%	9%	36%	73%	69%
Poor Physical Health Days	34%	59%	86%	31%	0%	38%	41%
Poor Mental Health Days	36%	93%	46%	-4%	79%	64%	52%
Low Birthweight	17%	33%	17%	33%	0%	0%	17%
Health Factors							
Health Behaviors							
Adult Smoking	17%	78%	100%	22%	NA	39%	51%
Adult Obesity	7%	4%	4%	4%	4%	11%	6%
Binge Drinking	8%	33%	42%	67%	-8%	75%	36%
Motor Vehicle Crash Death Rate	75%	83%	58%	25%	67%	42%	58%
Chlamydia	42%	48%	138%	538%	274%	0%	173%



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Health Ranking Category	Arenac County's Percent Deviation Target	Clare County's Percent Deviation Target	Gladwin County's Percent Deviation Target	Isabella County's Percent Deviation Target	Osceola County's Percent Deviation Target	Roscommon County's Percent Deviation from Target	Central Michigan Health District Counties Average Percent Deviation from Target
Teen Birth Rate	67%	124%	95%	-33%	90%	76%	70%
Clinical Care							
Uninsured Adults	40%	0%	30%	70%	10%	20%	28%
Primary Care Provider Rate	81%	63%	68%	70%	78%	62%	70%
Preventable Hospital Stays	112%	114%	122%	58%	40%	42%	81%
Diabetic Screening	1%	3%	7%	5%	2%	1%	3%
Hospice Use	31%	-2%	22%	22%	16%	16%	18%
Social & Economic Factors							
High School Graduation	13%	22%	17%	9%	16%	22%	17%
College Degrees	63%	70%	67%	7%	60%	60%	55%
Unemployment	57%	71%	57%	-14%	43%	57%	45%
Children in Poverty	155%	200%	145%	55%	127%	209%	149%
Income Inequality	13%	8%	5%	18%	3%	10%	10%
Inadequate Social Support	N/A	117%	117%	25%	33%	8%	60%
Single Parent Households	29%	29%	29%	29%	29%	0%	24%
Violent Crime Rate	91%	117%	75%	69%	115%	109%	96%
Physical Environment							
Air Pollution-Particulate Matter Days	300%	100%	100%	400%	100%	100%	183%
Air Pollution-Ozone Days	100%	200%	0%	200%	200%	0%	117%
Access to Healthy Foods	39%	-13%	-41%	30%	0%	30%	8%
Liquor Store Density	120%	60%	70%	120%	40%	80%	82%



3.3 Central Michigan District County Health Rankings: Deviations from Overall Michigan Values

The following table provides the percent deviation from overall Michigan values for the various health outcome and health factor categories for each of the six counties within the central Michigan health district. For each value, the higher the percent deviation is, the greater the variation from the overall Michigan value. A negative percent indicates that that value is “better” than the overall Michigan value and therefore may be of less concern.

Health Ranking Category	Arenac County's Percent Deviation from Overall Michigan Value	Clare County's Percent Deviation from Overall Michigan Value	Gladwin County's Percent Deviation from Overall Michigan Value	Isabella County's Percent Deviation from Overall Michigan Value	Osceola County's Percent Deviation from Overall Michigan Value	Roscommon County's Percent Deviation from Overall Michigan Value	Average Percent Deviation from Overall Michigan Value
Health Outcomes							
Mortality							
Premature Death	26%	45%	22%	1%	2%	27%	21%
Morbidity							
Poor or Fair Health	N/A	43%	93%	-14%	7%	36%	33%
Poor Physical Health Days	8%	28%	50%	6%	-19%	11%	14%
Poor Mental Health Days	3%	46%	11%	-27%	35%	24%	15%
Low Birthweight	-13%	0%	-13%	0%	-25%	-25%	-13%
Health Factors							
Health Behaviors							
Adult Smoking	-9%	39%	57%	-4%	NA	9%	18%
Adult Obesity	7%	4%	4%	4%	4%	11%	6%
Binge Drinking	-28%	-11%	-6%	11%	-39%	17%	-9%
Motor Vehicle Crash Death Rate	62%	69%	46%	15%	54%	31%	46%
Chlamydia	-81%	-80%	-68%	-14%	-49%	-86%	-63%
Teen Birth Rate	-3%	31%	14%	-61%	11%	3%	-1%



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Health Ranking Category	Arenac County's Percent Deviation from Overall Michigan Value	Clare County's Percent Deviation from Overall Michigan Value	Gladwin County's Percent Deviation from Overall Michigan Value	Isabella County's Percent Deviation from Overall Michigan Value	Osceola County's Percent Deviation from Overall Michigan Value	Roscommon County's Percent Deviation from Overall Michigan Value	Average Percent Deviation from Overall Michigan Value
Clinical Care							
Uninsured Adults	17%	-17%	8%	42%	-8%	0%	7%
Primary Care Provider Rate	74%	50%	58%	59%	70%	49%	60%
Preventable Hospital Stays	39%	41%	46%	4%	-8%	-7%	19%
Diabetic Screening	-6%	-4%	0%	-2%	-5%	-6%	-4%
Hospice Use	18%	-21%	8%	8%	0%	0%	2%
Social & Economic Factors							
High School Graduation	-7%	4%	-1%	-11%	-3%	4%	-2%
College Degrees	54%	63%	58%	-17%	50%	50%	43%
Unemployment	38%	50%	38%	-25%	25%	38%	27%
Children in Poverty	47%	74%	42%	-11%	32%	79%	44%
Income Inequality	-2%	-7%	-9%	2%	-11%	-4%	-5%
Inadequate Social Support	N/A	37%	37%	-21%	-16%	-32%	1%
Single Parent Households	-10%	-10%	-10%	-10%	-10%	-30%	-13%
Violent Crime Rate	-56%	-49%	-59%	-61%	-50%	-51%	-54%
Physical Environment							
Air Pollution-Particulate Matter Days	0%	-67%	-67%	33%	-67%	-67%	-39%
Air Pollution-Ozone Days	-75%	-50%	-100%	-50%	-50%	-100%	-71%
Access to Healthy Foods	16%	-57%	-96%	2%	-39%	2%	-29%
Liquor Store Density	9%	-45%	-36%	9%	-64%	-27%	-26%



Appendix A. County Health Rankings Categories Glossary

The following provides the definition, source, and reason for inclusion for each category in *County Health Rankings 2010*. The information is alphabetical by category.

Access to Healthy Foods

Definition: Access to healthy foods is measured as the percent of zip codes in a county with a healthy food outlet, defined as a grocery store or produce stand/farmers' market.

Source: The measure is based on data from the US Census Bureau's Zip Code Business Patterns (2006). Healthy food outlets include grocery stores with more than four employees and produce/farmers' markets, as defined by their North American Industrial Classification System (NAICS) codes.

Reason for Ranking: Studies have linked the food environment to consumption of healthy food and overall health outcomes.

Adult Obesity

Definition: The adult obesity measure represents the percent of the adult population (age 20 and older) that has a body mass index (BMI) greater than or equal to 30 kg/m².

Source: Estimates of obesity prevalence by county were calculated by the CDC's National Center for Chronic Disease Prevention and Health Promotion, Division of Diabetes Translation, using 2006–2008 Behavioral Risk Factor Surveillance System (BRFSS) data. BRFSS data are representative of the total non-institutionalized U.S. population over 18 years of age living in households with a land-line telephone.

Reason for Ranking: Obesity is often the end result of an overall energy imbalance due to poor diet and limited physical activity. Obesity increases the risk for health conditions such as coronary heart disease, type 2 diabetes, cancer, hypertension, dyslipidemia, stroke, liver and gallbladder disease, sleep apnea and respiratory problems, and osteoarthritis.

Adult Smoking

Definition: Adult smoking prevalence is the estimated percent of the adult population that currently smokes every day or "most days" and has smoked at least 100 cigarettes in their lifetime.

Source: This measure was obtained from the Centers for Disease Control and Prevention's Behavioral Risk Factor Surveillance System (BRFSS), a random-digit dial survey. BRFSS data are representative of the total non-institutionalized U.S. population over 18 years of



age living in households with a land-line telephone. The estimates are based on seven years of data from 2002–2008.

Reason for Ranking: Each year approximately 443,000 premature deaths occur primarily due to smoking. Cigarette smoking is identified as a cause in multiple diseases including various cancers, cardiovascular disease, respiratory conditions, low birthweight, and other adverse health outcomes. Measuring the prevalence of tobacco use in the population can alert communities to potential adverse health outcomes and can be valuable for assessing the need for cessation programs or the effectiveness of existing programs.

Air Pollution-Ozone Days

Definition: The air pollution—ozone measure represents the annual number of days that air quality was unhealthy for sensitive populations due to ozone levels.

Source: The Public Health Air Surveillance Evaluation (PHASE) project, a collaborative effort between the Centers for Disease Control and Prevention (CDC) and the EPA, used Community Multi-Scale Air Quality Model (CMAQ) output and air quality monitor data to create a spatial-temporal model that estimated daily ozone concentrations throughout the year. The PHASE estimates were used to calculate the number of days per year that air quality in a county was unhealthy for sensitive population due to ozone. The state and national values are an average of county values weighted by population size.

Reason for Ranking: The relationship between elevated air pollution—particularly fine particulate matter and ozone—and compromised health has been well documented. The negative consequences of ambient air pollution include decreased lung function, chronic bronchitis, asthma, and other adverse pulmonary effects.

Air Pollution-Particulate Matter Days

Definition: The air pollution—particulate matter measure represents the annual number of days that air quality was unhealthy for sensitive populations due to fine particulate matter (FPM, < 2.5 μm in diameter).

Source: The Public Health Air Surveillance Evaluation (PHASE) project, a collaborative effort between the Centers for Disease Control and Prevention (CDC) and the EPA, used Community Multi-Scale Air Quality Model (CMAQ) output and air quality monitor data to create a spatial-temporal model that estimated fine particulate matter concentrations throughout the year. The PHASE estimates were used to calculate the number of days per year that air quality in a county was unhealthy for sensitive population due to FPM. The state and national values are an average of county values weighted by population size.

Reason for Ranking: The relationship between elevated air pollution—particularly fine particulate matter and ozone—and compromised health has been well documented. The



negative consequences of ambient air pollution include decreased lung function, chronic bronchitis, asthma, and other adverse pulmonary effects.

Binge Drinking

Definition: The binge drinking measure reflects the percent of the adult population that reports consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days. The definition of binge drinking for women changed from 5 drinks on an occasion to 4 drinks in 2006.

Source: This measure was obtained from the Centers for Disease Control and Prevention's Behavioral Risk Factor Surveillance System (BRFSS), a random-digit dial survey. BRFSS data are representative of the total non-institutionalized U.S. population over 18 years of age living in households with a land-line telephone. The estimates are based on seven years of data from 2002–2008.

Reason for Ranking: Binge drinking is a risk factor for a number of adverse health outcomes such as alcohol poisoning, hypertension, acute myocardial infarction, sexually transmitted infections, unintended pregnancy, fetal alcohol syndrome, sudden infant death syndrome, suicide, interpersonal violence, and motor vehicle crashes.

Children in Poverty

Definition: Children in poverty is the percent of children under age 18 living below the Federal Poverty Line (FPL).

Source: Children in poverty estimates are provided by the Small Area Income and Poverty Estimates (SAIPE) program through the U.S. Census. The data reported in the 2010 County Health Rankings are from 2007.

Reason for Ranking: Poverty can result in negative health consequences, such as increased risk of mortality, increased prevalence of medical conditions and disease incidence, depression, intimate partner violence, and poor health behaviors. While negative health effects resulting from poverty are present at all ages, children in poverty greater morbidity and mortality due to an increased risk of accidental injury and lack of health care access. Children's risk of poor health and premature mortality may also be increased due to the poor educational achievement associated with poverty. The child in poverty measure is highly correlated with overall poverty rates.

Chlamydia

Definition: Chlamydia incidence (the number of new cases reported) is reported as a rate per 100,000 population.



Source: Data for 2006 were obtained from the CDC’s National Center for Hepatitis, HIV, STD, and TB Prevention.

Reason for Ranking: Chlamydia is the most common bacterial STI in North America and is one of the major causes of tubal infertility, ectopic pregnancy, pelvic inflammatory disease, and chronic pelvic pain. STIs in general are associated with a significantly increased risk of morbidity and mortality, including increased risk of cervical cancer, involuntary infertility, and premature death. However, increases in reported chlamydia infections may reflect the expansion of chlamydia screening, use of increasingly sensitive diagnostic tests, an increased emphasis on case reporting from providers and laboratories, improvements in the information systems for reporting, as well as true increases in disease.

College Degrees

Definition: College degrees represent the percent of the population age 25 and older with a four-year college degree or higher.

Source: Estimates of the population age 25+ with a college degree or higher were calculated using data from the 2000 U.S. Census and the 2005–2007 American Community Survey (ACS). Data for sparsely population states come exclusively from the 2000 Census; data for remaining states are based on ACS data.

Reason for Ranking: The relationship between higher education and improved health outcomes is well known, with years of formal education correlating strongly with improved work and economic opportunities, reduced psychosocial stress, and healthier lifestyles.

Diabetic Screening

Definition: Diabetic screening is calculated as the percent of diabetic Medicare patients whose blood sugar control was screened in the past year using a test of their glycosylated hemoglobin (HbA1c) levels.

Source: Estimates of diabetic screening were calculated for the County Health Rankings by the authors of the Dartmouth Atlas of Health Care using Medicare claims data for the years 2003–2006.

Reason for Ranking: Regular HbA1c screening among diabetic patients is considered the standard of care. It helps assess the management of diabetes over the long term by providing an estimate of how well a patient has managed his or her diabetes over the past two to three months. When hyperglycemia is addressed and controlled, complications from diabetes can be delayed or prevented.



High School Graduation

Definition: High school graduation, commonly referred to as the averaged freshman graduation rate, is reported as the percent of a county’s ninth-grade cohort in public schools that graduates from high school in four years.

Source: Estimates of high school graduation were calculated using two data sets from the National Center for Education Statistics (NCES): (1) the Common Core of Data, Local Education Agency Universe Survey Dropout and Completion, Restricted Use Data File and (2) the Public Elementary/Secondary School Universe Survey Data File, both for 2005–06. For states that did not have completion data reported in NCES data files—Kentucky, New Hampshire, North Carolina, Pennsylvania, South Carolina, and Utah—we used state data sources to estimate high school graduation. For these states, data were from the 2007–08 school year.

Reason for Ranking: The relationship between more education and improved health outcomes is well known, with years of formal education correlating strongly with improved work and economic opportunities, reduced psychosocial stress, and healthier lifestyles.

Hospice Use

Definition: The hospice use measure represents the percent of chronically ill Medicare patients who enrolled in hospice care in the last six months of life.

Source: Estimates of hospice use were calculated for the County Health Rankings by the authors of the Dartmouth Atlas of Health Care using Medicare claims data for the years 2001–2005.

Reason for Ranking: There is wide consensus that hospice services provide superior comprehensive end-of-life care for individuals than care in an institution.

Inadequate Social Support

Definition: The social and emotional support measure is based on responses to the question: “How often do you get the social and emotional support you need?” The County Health Rankings reports the percent of the adult population that responds that they “never,” “rarely,” or “sometimes” get the support they need.

Source: This measure was obtained from the Centers for Disease Control and Prevention’s Behavioral Risk Factor Surveillance System (BRFSS), a random-digit dial survey. BRFSS data are representative of the total non-institutionalized U.S. population over 18 years of age living in households with a land-line telephone. The estimates are based on four years of data from 2005–2008.



Reason for Ranking: Poor family support, minimal contact with others, and limited involvement in community life are associated with increased morbidity and early mortality. Furthermore social support networks have been identified as powerful predictors of health behaviors, suggesting that individuals without a strong social network are less likely to participate in healthy lifestyle choices.

Income Inequality

Definition: The Gini coefficient of income inequality represents the inequitable distribution of income in a community by household, and can range from 0 to 1. In the County Health Rankings, we multiplied the Gini coefficient by 100, so that the values can range between 0 and 100. A value of 100 indicates that all income in a county is concentrated in one household, while a coefficient of 0 indicates a completely equal distribution of income among households.

Source: Estimates of income inequality for sparsely populated states were calculated by Mark L. Burkey, Assistant Professor of Economics at NCA& T State University, Greensboro, NC, and are available online here. 2005–2007 American Community Survey estimates of income inequality were used for the remaining states.

Reason for Ranking: Researchers have looked at income inequality at the national, state, county, and metropolitan levels and identified at least modest relationships between income inequality and health at all levels.

Liquor Store Density

Definition: Liquor stores are represented as the number of stores per 10,000 population.

Source: The measure is based on data from the US Census Bureau’s County Business Patterns (2006), using North American Industrial Classification System (NAICS) codes to identify liquor stores by county. Population estimates come from the U.S. Census Bureau’s Population Estimates program for 2006.

Reason for Ranking: Researchers have documented a variety of problems associated with the physical availability of alcohol including assaultive violence, motor vehicle accidents, drinking and driving, riding with a drinking driver, high mortality rates due to liver cirrhosis, and binge drinking. Furthermore, liquor stores sell larger quantities of alcohol that is available for immediate consumption than do taverns and restaurants serving alcohol.

Low Birthweight

Definition: Low birthweight is the percent of live births for which the infant weighed less than 2,500 grams (approximately 5 lbs., 8 oz.).



Source: Data on births, including weight at birth, are based on birth certificates and are routinely reported to the National Vital Statistics System (NVSS) at the National Center for Health Statistics, part at the Centers for Disease Control and Prevention (CDC). For the 2009 County Health Rankings, we present the percent of live births with low birthweight for the years 2000–2006. We use seven-year averages to create more robust estimates, particularly for counties with smaller populations.

Reason for Ranking: Low birthweight represents two factors: maternal exposure to health risks and an infant’s current and future morbidity, as well as premature mortality risk. The health consequences of low birthweight are numerous.

Motor Vehicle Crash Death Rate

Definition: Motor vehicle crash deaths are measured as the crude mortality rate per 100,000 population due to on- or off-road accidents involving a motor vehicle. Deaths due to boating accidents and airline crashes are not included in this measure.

Source: These data were calculated for the County Health Rankings by National Center for Health Statistics (NCHS), part of the Centers for Disease Control and Prevention (CDC), based on data reported to the National Vital Statistics System (NVSS). NCHS used data from 2000–2006 to create more robust estimates of cause-specific mortality, particularly for counties with smaller populations.

Reason for Ranking: A strong association has also been demonstrated between excessive drinking and alcohol-impaired driving, with approximately 17,000 Americans killed annually in alcohol-related motor vehicle crashes.

Poor Mental Health Days

Definition: The poor mental health days measure is a companion measure to the poor physical health days reported in the County Health Rankings. The estimates are based on responses to the question: “Thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?” We present the average number of days a county’s adult respondents report that their mental health was not good. The measure is age-adjusted to the 2000 U.S. population.

Source: This measure was obtained from the Centers for Disease Control and Prevention’s Behavioral Risk Factor Surveillance System (BRFSS), a random-digit dial survey. BRFSS data are representative of the total non-institutionalized U.S. population over 18 years of age living in households with a land-line telephone. Seven years of data, 2002–2008, are used to generate more stable estimates of poor mental health days.

Reason for Ranking: Overall health depends on both physical and mental well-being. Measuring the number of days when people report that their mental health was not good,



i.e., poor mental health days, represent an important facet of health-related quality of life. The County Health Rankings considers health-related quality of life to be an important health outcome.

Poor or Fair Health

Definition: Self-reported health status is a general measure of health-related quality of life in a population. This measure is based on survey responses to the question: “In general, would you say that your health is excellent, very good, good, fair, or poor?” The value reported in the County Health Rankings is the percent of adult respondents who rate their health “fair” or “poor.” The measure is age-adjusted to the 2000 U.S. population.

Source: This measure was obtained from the Centers for Disease Control and Prevention’s Behavioral Risk Factor Surveillance System (BRFSS), a random-digit dial survey. BRFSS data are representative of the total non-institutionalized U.S. population over 18 years of age living in households with a land-line telephone. Seven years of data, 2002–2008, are used to generate more stable estimates of self-reported health status.

Reason for Ranking: Self-reported health status is a widely used measure of people’s health-related quality of life. In addition to measuring how long people live, it is important to also include measures of how healthy people are while alive – self-reported health status has been shown to be a very reliable measure of current health.

Poor Physical Health Days

Definition: The poor physical health days measure represents one of four measures of morbidity used in the County Health Rankings, and is based on responses to the question: “Thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?” We present the average number of days a county’s adult respondents report that their physical health was not good. The measure is age-adjusted to the 2000 U.S. population.

Source: This measure was obtained from the Centers for Disease Control and Prevention’s Behavioral Risk Factor Surveillance System (BRFSS), a random-digit dial survey. BRFSS data are representative of the total non-institutionalized U.S. population over 18 years of age living in households with a land-line telephone. Seven years of data, 2002–2008, are used to generate more stable estimates of poor physical health days.

Reason for Ranking: In addition to measuring how long people live, it is also important to include measures of how healthy people are while alive – people’s reports of days when their physical health was not good are a reliable estimate of their recent health.



Premature Death

Definition: Premature death is represented by the years of potential life lost before age 75 (YPLL-75). Every death occurring before the age of 75 contributes to the total number of years of potential life lost. For example, a person dying at age 25 contributes 50 years of life lost, whereas a person who dies at age 65 contributes 10 years of life lost to a county's YPLL. The YPLL measure is presented as a rate per 100,000 population and is age-adjusted to the 2000 U.S. population.

Source: Data on deaths, including age at death, are based on death certificates and are routinely reported to the National Vital Statistics System (NVSS) at the National Center for Health Statistics, part of the Centers for Disease Control and Prevention (CDC). For the 2009 County Health Rankings, NVSS calculated age-adjusted YPLL rates for the years 2004–2006. We use three-year averages to create more robust estimates of mortality, particularly for counties with smaller populations.

Reason for Ranking: Age-adjusted YPLL-75 rates are commonly used to represent the frequency and distribution of premature deaths. Measuring YPLL allows communities to target resources to high-risk areas and further investigate the causes of death.

Preventable Hospital Stays

Definition: Preventable hospital stays are measured as the hospital discharge rate for ambulatory care-sensitive conditions per 1,000 Medicare enrollees.

Source: Estimates of preventable hospital stays were calculated for the County Health Rankings by the authors of the Dartmouth Atlas of Health Care using Medicare claims data for the years 2005–2006.

Reason for Ranking: Hospitalization for diagnoses amenable to outpatient services suggests that the quality of care provided in the outpatient setting was less than ideal. The measure may also represent the population's tendency to overuse the hospital as a main source of care.

Primary Care Provider Rate

Definition: Primary care providers include practicing physicians specializing in general practice medicine, family medicine, internal medicine, pediatrics, and obstetrics/gynecology. The measure is presented as a rate per 100,000 population.

Source: The data on primary care providers were obtained from the Health Resources and Services Administration's Area Resource File (ARF) for 2007. The ARF data on practicing physicians come from the AMA Master File (2006), and the population estimates are from the U.S. Census Bureau's 2006 population estimates.



Reason for Ranking: Having access to care requires not only having financial coverage but also access to providers. While high rates of specialist providers has been shown to be associated with higher, and perhaps unnecessary, utilization, having sufficient availability of primary care providers is essential so that people can get preventive and primary care, and when needed, referrals to appropriate specialty care.

Single Parent Households

Definition: Single-parent households is the percent of all households run by a single parent (male or female householder with no spouse present) with one or more of their own children (< age 18) living at home.

Source: Estimates of the percent of households run by single parents were calculated using data from the 2000 U.S. Census and the 2005–2007 American Community Survey (ACS). Data for sparsely population states come exclusively from the 2000 Census; data for remaining states are based on ACS data.

Reason for Ranking: Adults and children in single-parent households are both at risk for adverse health outcomes such as mental health problems (including substance abuse, depression, and suicide) and unhealthy behaviors such as smoking and excessive alcohol use.

Teen Birth Rate

Definition: Teen births are reported as the number of births per 1,000 female population, ages 15-19.

Source: Data for 2000–2006 were obtained from the National Vital Statistics System (NVSS) at the National Center for Health Statistics, part of the Centers for Disease Control and Prevention (CDC).

Reason for Ranking: Teen pregnancy is associated with poor prenatal care and pre-term delivery. Pregnant teens are more likely than older women to receive late or no prenatal care, have gestational hypertension and anemia, and achieve poor maternal weight gain. They are also more likely to have a pre-term delivery and low birth weight, increasing the risk of child developmental delay, illness, and mortality.

Unemployment

Definition: Unemployment is measured as the percent of the civilian labor force, age 16 and older, that is unemployed but seeking work.



Source: Data on unemployment is obtained from the Bureau of Labor Statistics (BLS), Local Area Unemployment Statistics (LAUS). The County Health Rankings uses the 2008 annual estimate for unemployment.

Reason for Ranking: Unemployment may lead to physical health responses ranging from self-reported physical illness to mortality, especially suicide. It has also been shown to lead to an increase in unhealthy behaviors related to alcohol and tobacco consumption, diet, exercise, and other health-related behaviors, which in turn can lead to increased risk for disease or mortality. Because employer-sponsored health insurance is the most common source of health insurance coverage, unemployment can also limit access to health care.

Uninsured Adults

Definition: The uninsured adults measure represents the estimated percent of the adult population under age 65 that has no health insurance coverage.

Source: The Small Area Health Insurance Estimates from the U.S. Census Bureau provide annual estimates of the population without health insurance coverage for all U.S. states and their counties. The estimates we use are for the year 2005, the most recent year for which reliable county-level estimates are available. (More current estimates are likely to be higher so caution is advised against reporting this specific measure for a particular county.)

Reason for Ranking: Lack of health insurance coverage is a significant barrier to accessing needed health care.

Violent Crime Rate

Definition: Violent crime is represented as an annual rate per 100,000 population. Violent crimes are defined as offenses that involve face-to-face confrontation between the victim and the perpetrator, including homicide, forcible rape, robbery, and aggravated assault.

Source: Violent crime data at the county level are reliable for only a subset of U.S. states (AL, CA, DE, FL, HI, IL, ME, MD, MA, MI, MO, NV, NJ, NY, OK, OR, PA, RI, SC, TN, TX, VT, VA, WA, WI, and WY). These states use Uniform Crime Reporting program data on county-level offenses, for the years 2005–2007. The data were accessed through the Interuniversity Consortium for Political and Social Research (ICPSR) National Archive of Criminal Justice Data. The exception is for violent crime estimates in Illinois, which come from Illinois State Police Uniform Crime Reporting data. State and national estimates were accessed directly via the FBI's Uniform Crime Reports Web site.

Reason for Ranking: High levels of violent crime compromise physical safety and psychological well-being. Crime rates can also deter residents from pursuing healthy behaviors such as exercising out-of-doors. Additionally, some evidence indicates that increased stress levels may contribute to obesity prevalence, even after controlling for diet and physical activity levels.



Appendix B. Structure of the *County Health Rankings* Model

The figure on the following page depicts the structure of the *County Health Rankings* model that programs and policies affect health factors, which in turn affect health outcomes.

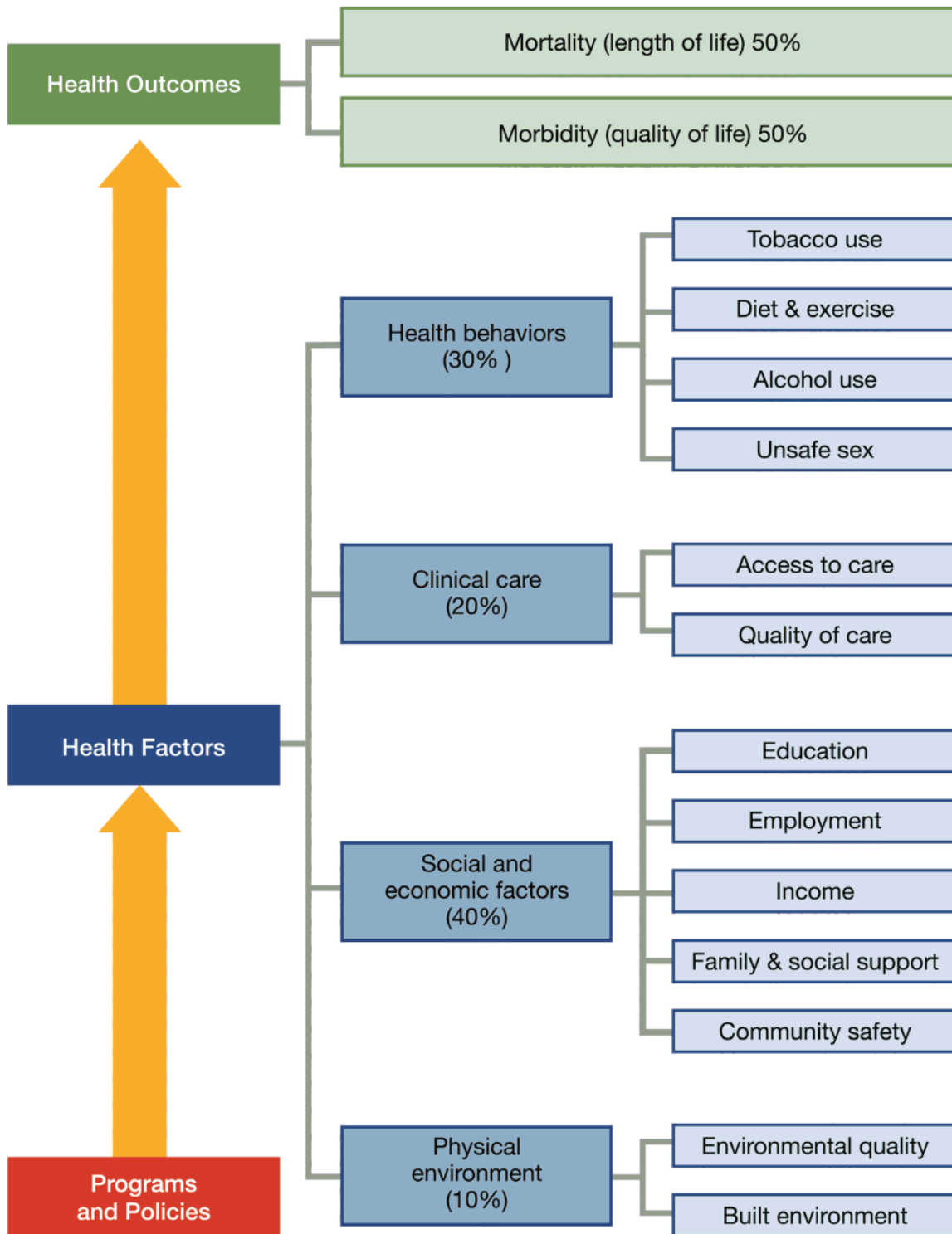
The **health outcomes** rankings are based upon an equal weighing of mortality and morbidity measures.

The **health factors** are based on weighted scores of four types of factors: behavioral, clinical, social and economic, and environmental. The weights for the health factors are shown in parentheses in the figure.

The weights are based upon a review of the literature and expert input. They represent just one way of combining these factors



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Appendix C. Basis of Target Values

The target value for each category is the value that is equivalent to the “top” 10% of Michigan counties. Each value is either in the lowest 10% of Michigan counties or the highest 10% of Michigan counties depending upon whether a low value or a high value is preferable. For the majority of the categories, a lower value is preferable.

This is excepted by the summary categories. The percent variation for those categories is the percent which that ranking varies from being number 1 of 82. The summary categories include health outcomes, mortality, morbidity, health factors, health behaviors, clinical care, social and economic factors, and physical environment.

Example of desired low value: In the category of Teen Birth Rate, a lower value is more desirable. The Michigan target value represents the value that is in the lowest 10% of all Michigan counties. The Michigan target value of 36 (per 1,000 female population, ages 15-19) for Teen Birth Rate means that only 10% of Michigan counties have a value that 36 or less.

Example of desired high value: In the category of Diabetic Screening, a higher value is more desirable. The Michigan target value represents the value that is in the highest 90% of all Michigan counties. The Michigan target value of 82% for Diabetic Screening means that only 10% of Michigan counties have a value that 82% or higher.



Appendix D. *County Health Rankings 2010: Measures, Data Sources and Years of Data*

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	2006
	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.