Sanford Health Network

Community Health Needs Assessment

2012-2013

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SANFORD HEALTH

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Purpose

Sanford Aberdeen Medical Center is part of Sanford Health, an integrated health system headquartered in the Dakotas and the largest rural not-for-profit health care system in the nation with locations in 126 communities in eight states.

Sanford Aberdeen Medical Center has undertaken a community health needs assessment as required by the Patient Protection and Affordable Care Act and as part of the IRS 990 requirement for a not-for-profit health system to address issues that have been assessed as unmet needs in the community.

PPACA requires that each hospital must have: (1) conducted a community health needs assessment in the applicable taxable year; (2) adopted an implementation strategy for meeting the community health needs identified in the assessment; and (3) created transparency by making the information widely available. For tax exempt hospital organizations that own and operate more than one hospital facility, as within Sanford Health, the new tax exemption requirements will apply to each individual hospital. The first required needs assessment falls within the fiscal year July 1, 2012 through June 30, 2013.

The purpose of a community health needs assessment is to develop a global view of the population's health and the prevalence of disease and health issues within our community. Findings from the assessment serve as a catalyst to align expertise and develop a Community Investment/Community Benefit plan of action. There is great intrinsic value in a community health needs assessment when it serves to validate, justify and defend not-for-profit status and create opportunity to identify and address public health issues from a broad perspective.

A community health needs assessment is critical to a vital Community Investment/Community Benefit Program that builds on community assets, promotes collaboration, improves community health, and promotes innovation and research. A community health needs assessment also serves to validate progress made toward organizational strategies and provides further evidence for retaining not-for-profit status.

Acknowledgements

Sanford Health would like to acknowledge and thank the Steering Committees and the Sanford Aberdeen Community Health Needs Assessment Team for their expertise while performing the assessment and analysis of the community health data. The assessment provides support for the future directions of our work as the region's leading health care system.

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We express our gratitude to the following individuals and groups for their participation in this study.
We extend special thanks to the city mayors, city council/commission members, physicians, nurses, school superintendents and school board members, parish nurses, representatives from the Native American community, Faith Community Leaders, as well as legal services, mentally and physically disabled, social services, non-profit organizations, and financial services for their participation in this work. Together we are reaching our vision "to improve the human condition through exceptional care, innovation and discovery."

Our Guiding Principles:

- All health care is a community asset
- Care should be delivered as close to home as possible
- Access to health care must be provided regionally
- Integrated care delivers the best quality and efficiency
- Community involvement and support is essential to success
- Sanford Health is invited into the communities we serve

The following key community stakeholders participated in this assessment work:

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Executive Summary

Purpose

The purpose of a community health needs assessment is to develop a global view of the population's health and the prevalence of disease and health issues within the community. Findings from the assessment serve as a catalyst to align expertise and develop a Community Investment/Community Benefit plan of action. There is great intrinsic value in a community health needs assessment when it serves to validate, justify and defend not-for-profit status and create opportunity to identify and address public health issues from a broad perspective. A community health needs assessment is critical to a vital Community Investment/Community Benefit Program that builds on community assets, promotes collaboration, improves community health, and promotes innovation and research. A community health needs assessment also serves to validate progress made toward organizational strategies and provides further evidence for retaining our not-for-profit status.

Study Design and Methodology

The following qualitative data set was studied:

- Community Health Needs Assessment of Community Leaders

The following quantitative data sets were studied:

- 2011 County Health Profiles for Brown County
- Aging Profiles for Brown County
- Diversity Profiles for Brown County

Asset mapping was conducted by reviewing the data and identifying the unmet needs from the various surveys and data sets. The process implemented in this work was based on the McKnight Foundation model - Mapping Community Capacity by John L. McKnight and John P. Kretzmann, Institute for Policy Research at Northwestern University.

Each unmet need was researched to determine what resources were available in the community to address the needs. The steering group performed the asset mapping and reviewed the findings. The group conducted an informal gap analysis to determine what needs remained after resources were thoroughly researched. Once gaps were determined, the group proceeded to the prioritization process. The multi-voting methodology was implemented to determine what top priorities would be further developed into implementation strategies.

Key Findings – Primary Research

Community Health Needs Assessment of Community Leaders

The Internal Revenue Code 501 (r) statute requires that a broad base of key community stakeholders have input into the needs of the community. Those community members specified in the statute include: persons who represent the broad interests of the community served by the hospital facility including those with special expertise in public health; Federal, tribal, regional, state and or local health or other departments or agencies with information relevant to the health needs of the community served; leaders, representatives, or members of medically underserved, low-income, and minority populations.

Sanford extended a good faith effort to engage all of the aforementioned community representatives in the survey process. The list of individuals who agreed to take the survey and also submit their names are included in the acknowledgement section of this report. In some cases there were surveys that were submitted without names or without a specified area of expertise or affiliation. We worked closely with public health experts throughout the assessment process.

Public comments and response to the community health needs assessment and the implementations strategies are welcome on the Sanford website under "About Sanford" in the Community Health Needs Assessment section.

The Best Things about the Community

Overall, respondents indicated that the top five community assets or best things about the community include: friendliness of people, higher education opportunities, good place to raise kids, the safety of the community, and the convenience of getting to work or activities. The respondents seem to feel that higher education, school system quality, and health care quality are stronger assets to the community. There was less agreement in the overall effectiveness of the community's transportation system.

There is strong agreement regarding the positive quality of life in this community, with lower agreement coming as it relates to cultural richness. There is good agreement with the qualities of convenient access to work/activities and the general cleanliness of the region. There is strong agreement that many recreational activities are available in the community and good agreement that activities/events are available for families, youth, and seniors.

Leading Concerns about the Community

The five leading concerns about the community include: cost of healthcare, wages, housing, cost of living, and cost of elderly care.

The leading concerns among respondents regarding services and resources were related to the costs of care for the elderly and children. There was concern about the resources to care for an aging population, availability of family services, and quality/cost of education. There was less concern about the access to groceries in the community.

There was fairly high agreement that road conditions and availability of public transportation were also concerns of the respondents. Not surprisingly, traffic congestion was much less of a concern. Compared to responses for other community concerns, the level of concern with environmental pollution is only moderate. There is strong concern with substance abuse, child abuse, and domestic violence in the community. Violent crimes and prostitution are less concerning with the respondents.

There was high agreement that road conditions and availability of public transportation were concerns of the respondents. Not surprisingly, traffic congestion was much less of a concern. Compared to responses for other community concerns, the level of concern with environmental pollution is only moderate. There is strong overall

concern regarding the entire scope of youth concerns that included bullying, teen pregnancy, marriage issues, crime, and school dropout rates.

Health and Wellness Concerns

The leading health and wellness concerns from the respondents included: the cost of health insurance, the cost of healthcare, the adequacy of health insurance, the cost of medicine, and obesity. There is fairly strong concern shown by the respondents for drug and alcohol abuse and the presence of drug dealers in the community. There is strong concern in the community regarding obesity, eating habits, lack of exercise and the cost of exercise options. Overall, there is fairly strong concern with the mental health variables in the survey. There is concern over the issues of stress and depression and accessing qualified mental health programs/providers to address the mental health issues. Although less so for communicable disease, there is strong concern in the community regarding illness associated with cancer and chronic disease.

Health Care Delivery in the Community

Overall, topics related to emergency services, heart disease, cancer, transportation, health care staffing, and diabetes were better addressed than those relating to obesity, cost of care, coordination of care, preventive care, or mental health issues.

Key Findings – Secondary Research

Health Outcomes - Mortality and Morbidity

While the state of South Dakota has more premature deaths than the national benchmark, Brown County has a lower rate than the national benchmark and South Dakota as a whole. The Morbidity health outcomes indicate that Brown County citizens report more days of poor health (self-reported) than the national or South Dakota benchmark. They also report more physically unhealthy days than the state or national data.

South Dakota and Brown County report more mentally unhealthy days (self-reported) than the national benchmark. Brown County reports slightly fewer mentally unhealthy days than the state.

Brown County has the same percentage of low birth weight as the national benchmark, and also reports a lower percentage of low birth weight than the state.

Health Behaviors

The Health Behavior outcomes indicate that South Dakota and Brown County have higher percentages of adult smokers (equal to or greater than 100 cigarettes) than the national benchmark. Adult obesity (greater than or equal to 30 BMI) is also higher in South Dakota and Brown County. South Dakota and Brown County have a higher percentage of physical inactivity than the national benchmark.

South Dakota (19%) and Brown County (20%) have much higher percentages of binge drinking reports (more than four drinks on one occasion for women and more than five for men) than the national benchmark (8%).

Motor vehicle crash death rates are slightly lower than the national benchmark in Brown County; however, the state of South Dakota is much higher than the national benchmark.

Sexually transmitted infections rank substantially higher than the national benchmark in South Dakota. Brown County is lower than the state benchmark but also is much higher than the national benchmark for sexually transmitted infections.

The teen birth rate is higher in South Dakota and Brown County than the national benchmark. Brown County's teen birth rate is lower than the state's teen birth rate.

Clinical Care

The Clinical Care outcomes indicate that South Dakota and Brown County have a higher percentage of uninsured adults than the national benchmark. The percentage of uninsured youth in Brown County and the national benchmark are lower than South Dakota as a whole.

There are more patients per physician in South Dakota and Brown County than the national benchmark.

The ratio of population to mental health providers is less positive in South Dakota and Brown County than the national benchmark.

The number of professionally active dentists per 100,000 of population is lower than the national benchmark for South Dakota and Brown County.

Preventable hospital stays are slightly better than the national benchmark in Brown County but the state's rate is higher than the national benchmark.

Diabetes screening in South Dakota is lower than the national benchmark. The rate of diabetes screening is higher in Brown County than the national benchmark.

Brown County and South Dakota rank lower than the national benchmark for mammography screenings.

Social and Economic Factors

The Social and Economic Factors outcomes indicate that South Dakota and Brown County have a lower high school graduation rate than the national benchmark. South Dakota has a lower percentage of post-secondary education than the national benchmark while Brown County has a higher percentage of adults with some post-secondary education than South Dakota or the national benchmark.

The unemployment rate was lower in South Dakota than the national benchmark during 2009. Brown County's unemployment rate was lower than South Dakota or the national benchmark.

The percentage of child poverty is higher in South Dakota and Brown County than the national benchmark. Brown County has a lower percentage than the South Dakota.

Inadequate social support is higher in South Dakota than the national benchmark; however, it is the same as the national benchmark in Brown County.

The percentage of children in single parent households is higher than the national benchmark for South Dakota and Brown County.

The number of homicide deaths per 100,000 people in South Dakota is higher than the national benchmark. There was no data for homicide deaths in Brown County.

Physical Environment

The Physical Environment outcomes indicate that there is no air pollution or ozone pollution in this area. Because of the rural geography, access to healthy food is ranked far below the national benchmark in South

Dakota and Brown County. Access to recreational facilities ranks lower than the national benchmark for South Dakota and Brown County.

Demographics

Youth account for 22% of the population in Brown County, which is slightly lower than the national benchmark of 24%. Elderly account for 17% of the population in Brown County, which is higher than the national and South Dakota benchmarks.

Thirty percent (30%) of Brown County is rural compared to 48% of South Dakota and 21% as the national benchmark.

Only 2% of South Dakotans and 2% of Brown County's population is not proficient in English compared to the national benchmark, which is 9%.

South Dakota and Brown County at 7% each have a low illiteracy rate compared to the national benchmark of 15%.

Population by Age

The population in Brown County has a higher percentage over the ages of 65 and 85 than South Dakota or the national benchmarks.

The gender distribution is slightly higher for women than men in South Dakota and Brown County. The state of South Dakota is 50 % male and 50% female.

Housing

Brown County has slightly higher home ownership and slightly lower renter-occupied housing than the national benchmark. South Dakota has higher home ownership and lower renter-occupied housing than the national benchmark.

Economic Security

The percentage of those in South Dakota who are living at less than 100% of the Federal poverty level is lower in Brown County than the state or the national benchmark. Brown County also has a smaller percentage of the population with income less than 200% of the Federal poverty level than the state of South Dakota or the national benchmark. The median household annual income is $46,369 in South Dakota, which is lower than the national benchmark. Brown County's median income of $45,615 is lower than South Dakota or the national benchmarks. A smaller percentage of people spend 30% of their income towards housing costs in Brown County than the state of South Dakota or the national percentages.

Diversity Profile

The population distribution by race demonstrates that South Dakota is predominantly white, followed by American Indian, Hispanic, Asian and Black.

Health Needs Identified

Two identified needs for the area are behavioral health and obesity.

Implementation Strategy

The following needs were identified through a formal community health needs assessment, resource mapping and prioritization process:

- Mental Health Services
- Obesity

Implementation Strategy: Mental Health Services

- Establish adolescent and adult mental health telemedicine services from Sanford Aberdeen to Sanford Medical Center in Sioux Falls

Implementation Strategy: Bariatric Services

- Establish a Sanford Aberdeen-based Bariatric Services accredited program

Sanford Aberdeen Medical Center
Community Health Needs Assessment
2012-2013

Sanford Health, long been dedicated to excellence in patient care, is on a journey of growth and momentum with vast geography, cutting edge medicine, sophisticated research, advanced education and a health plan. Through relationships built on trust, successful performance, and a vision to improve the human condition, Sanford seeks to make a significant impact on health and healing. We are proud to be from the Midwest and to impact the world. The name Sanford Health honors the legacy of Denny Sanford's transformational gifts and vision.

Our Mission: *Dedicated to the Work of Health and Healing*
We provide the best care possible for patients at every stage of life, and support healing and wholeness in body, mind and spirit.

Our Vision: *To improve the Human Condition through Exceptional Care, Innovation and Discovery*
We strive to provide exceptional care that exceeds our patients' expectations. We encourage diversity in thought and ideas that lead to better care, service and advanced expertise.

Our Values:

- **Courage**: *Strength to persevere, to use our voice and take action*
- **Passion:** *Enthusiasm for patients and work, commitment to the organization*
- **Resolve:** *Adherence to systems that align actions to achieve excellence, efficiency and purpose*
- **Advancement:** *Pursuit of individual and organizational growth and development*
- **Family:** *Connection and commitment to each other*

Our Promise: *Deliver a flawless experience that inspires*
We promise that every individual's experience at Sanford—whether patient, visitor or referring physician—will result in a positive impact, and for every person to benefit from a flawless experience that inspires.

Guiding Principles:

- *All health care is a community asset*
- *Care should be delivered as close to home as possible*
- *Access to health care must be provided regionally*
- *Integrated care delivers the best quality and efficiency*
- *Community involvement and support is essential to success*
- *Sanford Health is invited into the communities we serve*

Description of Sanford Aberdeen Medical Center

Sanford Health in Aberdeen, SD is comprised of Sanford Health Clinic Aberdeen and Sanford Aberdeen Medical Center. Sanford Aberdeen Medical Center is a new medical center consisting of 48 total inpatient beds. The Medical Center opened for services on July 16, 2012. The Medical Center has 8 beds in its Critical Care Unit, 8 beds in the Women's Center, and 32 beds in a Medical/Surgical and Pediatric unit. The Emergency Department consists of 2 trauma rooms and 7 examination rooms. In addition, inpatient and outpatient services are supported by Therapies Departments, Sanford Laboratory and Imaging Departments. Procedural areas consist of 4 operating rooms, a procedure room, and a Cardiac Catheterization Laboratory.

Sanford Clinic Aberdeen is a multispecialty clinic consisting of Family Practice, Pediatrics, Internal Medicine, General Surgery, Cardiology and OB/GYN practices. Clinics in Ipswich, South Dakota and Ellendale, North Dakota are also integrated with Sanford Clinic Aberdeen. The 3 clinic locations are currently staffed by 38 physicians and Advanced Practice Providers.

Description of the Community Served

Aberdeen is a city in and the county seat of Brown County, South Dakota, about 125 miles northeast of Pierre. The city population was 26,091 at the 2010 census, making it the third largest city in the state. Aberdeen is the principal city of the Aberdeen Micropolitan Statistical Area, which includes all of Brown and Edmunds counties and had a population of 40,602 in 2010.

Named for Aberdeen, Scotland, the hometown of Milwaukee Railroad President Alexander Mitchell, this new city incorporated in 1881 quickly became known as the Hub City of the Dakotas, and the Brown County seat. By 1886, a city map was published that showed nine different rail lines converging in Aberdeen from all directions, much like the spokes of a wheel converging at its hub. The combination of multidirectional railways and fertile farmland caused Aberdeen to develop into a distribution hub for wholesale goods. The city grew rapidly and in 1890, 230 businesses called Aberdeen home. Today Aberdeen's economy has diversified and the number of businesses has grown to more than 1,500.

Brown County's 10 Largest Establishments
(private ownership as of January 2011)

3M Company	Midstates, Inc. Print & Media Solutions
Avera St. Luke's	Molded Fiber Glass South Dakota
Bethesda Home	WalMart Super Center
Hub City, Inc.	Wells Fargo Bank
Kessler's Inc.	Wyndham Hotel Group, LLC

2010 Employment by Industry for Civilian Population (Age 16+)	Aberdeen, SD	South Dakota	United States
Agriculture, Forestry, Fishing and Hunting, and Mining	1.95%	6.08%	1.49%
Construction	6.07%	6.45%	6.97%
Manufacturing	9.59%	9.54%	11.93%

2010 Employment by Industry for Civilian Population (Age 16+)	Aberdeen, SD	South Dakota	United States
Wholesale Trade	2.54%	2.88%	3.05%
Retail Trade	12.23%	10.34%	10.02%
Transportation and Warehousing, and Utilities	3.42%	5.08%	5.58%
Information	1.98%	2.07%	2.94%
Finance, Insurance, Real Estate, and Rental and Leasing	5.34%	7.98%	6.91%
Professional, Scientific, Management, Administrative, etc.	8.59%	5.69%	10.43%
Educational, Health and Social Services	25.54%	24.84%	22.14%
Arts, Entertainment, Accommodation and Food Services, etc.	11.12%	8.83%	8.46%
Other Services	5.71%	5.45%	5.15%
Public Administration	5.93%	4.77%	4.92%

Study Design and Methodology

Health Needs Assessment of Key Stakeholders and Community Leaders

In May 2011 Sanford Health convened key health care leaders and other not-for-profit leaders in the Fargo Moorhead community to establish a Fargo Moorhead Community Health Needs Assessment Collaborative. A primary goal of this collaborative is to craft standardized tools, indicators and methodology that can be used by all group members when conducting assessments and also be used by all of the Sanford medical centers across the enterprise. After much discussion it was determined that the Robert Wood Johnson Framework for county profiles would be our secondary data model.

The Internal Revenue Code 501 (r) statute requires that a broad base of key community stakeholders have input into the needs of the community. Those community members specified in the statute include: persons who represent the broad interests of the community served by the hospital facility including those with special expertise in public health; Federal, tribal, regional, state and or local health or other departments or agencies with information relevant to the health needs of the community served; leaders, representatives, or members of medically underserved, low-income, and minority populations.

Sanford extended a good faith effort to engage all of the aforementioned community representatives in the survey process. The list of individuals who agreed to take the survey and also submit their names are included in the acknowledgement section of this report. In some cases there were surveys that were submitted without names or without a specified area of expertise or affiliation. We worked closely with public health experts throughout the assessment process.

Public comments and response to the community health needs assessment and the implementations strategies are welcome on the Sanford website under "About Sanford" in the Community Health Needs Assessment section.

A sub group of this collaborative met with researchers from the North Dakota State University Center for Social Research to develop a survey tool for our key stakeholder groups. The survey tool incorporated the University of North Dakota's Center for Rural Health community health needs assessment tool and the Fletcher Allen community health needs assessment tool. North Dakota State University and the University of North Dakota Center for Rural Health worked together to develop additional questions and to ensure that scientific methodology was incorporated in the design.

Finally, it was the desire of the collaborative that the data would be shared broadly with others and that if possible it would be hosted on a web site where there could be access for a broad base of community, state and regional individuals and groups.

This community health needs assessment was conducted during FY 2012 and FY 2013. The main model for our work is the Association for Community Health Improvement's (ACHI) Community Health Needs Assessment Toolkit.

The following qualitative data sets were studied:

- Survey of Key Stakeholders

The following quantitative data sets were studied:

- 2011 County Health Profile for Brown County
- Aging Profiles for Brown County
- Diversity Profiles for Brown County

Asset mapping was conducted by reviewing the data and identifying the unmet needs from the various surveys and data sets. The process implemented in this work was based on the McKnight Foundation model - Mapping Community Capacity by John L. McKnight and John P. Kretzmann, Institute for Policy Research at Northwestern University.

Each unmet need was researched to determine what resources were available in the community to address the needs. The Sanford Health Steering Committee performed the asset mapping and reviewed the findings. The group conducted an informal gap analysis to determine what needs remained after resources were thoroughly researched. Once gaps were determined the group proceeded to the prioritization process. The multi-voting methodology was implemented to determine what top priorities would be further developed into implementation strategies.

2011 County Health Profiles

The County Health Profiles are based largely on the County Health Rankings from the Mobilizing Action Toward Community Health (MATCH), collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute. State and national benchmarking required additional data sources including the U.S. Census Bureau, Small Area Health Insurance Estimates, and the Centers for Disease Control and Prevention's National Center for Health Statistics – the Health Indicators Warehouse

Aging Profiles

The Aging Profiles are based on data from the U.S. Census Bureau, 2010 Census Summary File 1, and 2006-2010 American Community Survey Five-Year Estimates (sample data). The estimates presented are meant to give

perspective on characteristics across age categories; however, because they are based on sample data, one should use caution when interpreting small numbers. Blank values reflect data that is missing or not available.

Diversity Profiles
The Diversity Profiles are based on data from the U.S. Census Bureau, 2010 Census Summary File 1, and 2006-2010 American Community Survey Five-Year Estimates (sample data). The estimates presented are meant to give perspective on characteristics across race and ethnic categories; however, because they are based on sample data, one should use caution when interpreting small numbers. Blank values reflect data that is missing or not available. Racial categories not represented include Native Hawaiian and Other Pacific Islander alone, Some Other Race alone, and Two or More races.

Limitations
The Sanford Health Community Health Needs Assessment Steering Group attempted to survey key community leaders and stakeholders for the purpose of determining the needs of the community. While over 300 surveys were returned, there were still many key stakeholders who did not complete the survey.

The survey asked for individual perceptions of community health issues and is subjective to individual experiences which may or may not be the current status of the community.

Primary Research – Summary of the Survey Results

Community Assets/Best Things about the Community

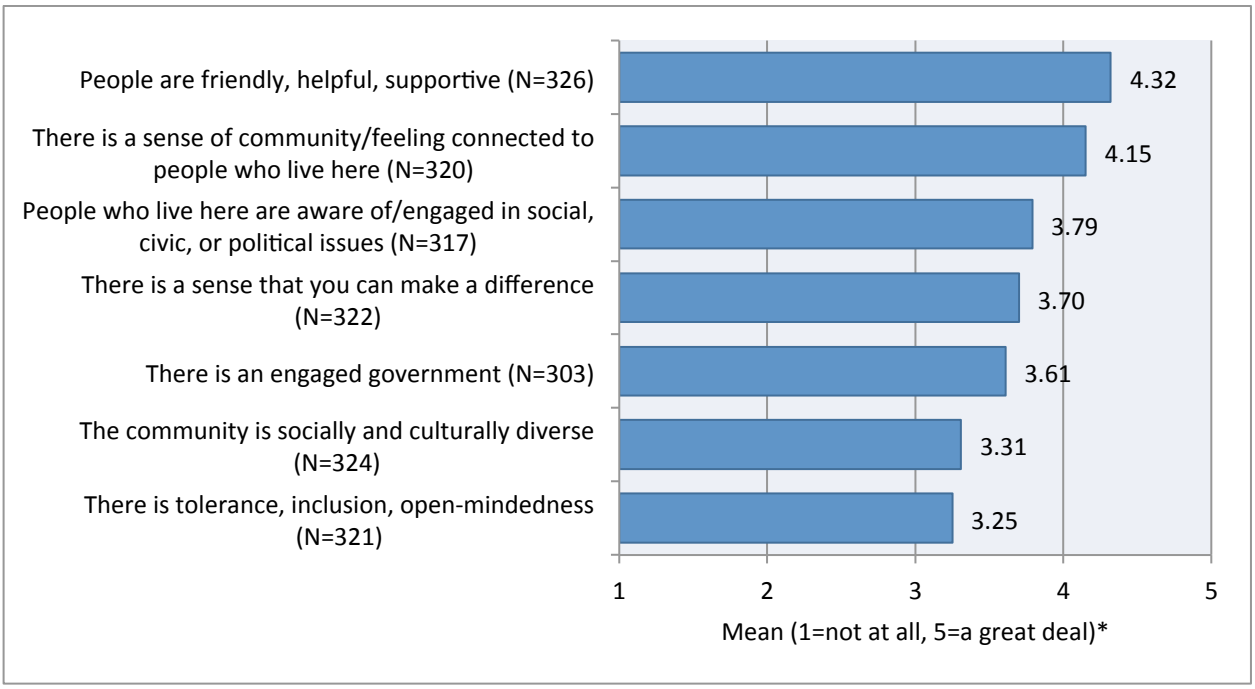
Using a 1 to 5 scale, with one being "not at all" and 5 being "a great deal", respondents were asked to rate their level of agreement with various statements regarding PEOPLE, SERVICES AND RESOURCES, QUALITY OF LIFE, GEOGRAPHIC SETTING, and ACTIVITIES in their community.

Overall, respondents indicated that the top five community assets or best things about the community include: friendliness of people (4.32), higher education opportunities (4.39), good place to raise kids (4.49), the safety of the community (4.32), and the convenience of getting to work or activities (4.47).

People

In general, respondents felt that people in this community are friendly, with a sense of connection and community engagement. There is less agreement that the community is culturally diverse, tolerant, inclusive or open-minded.

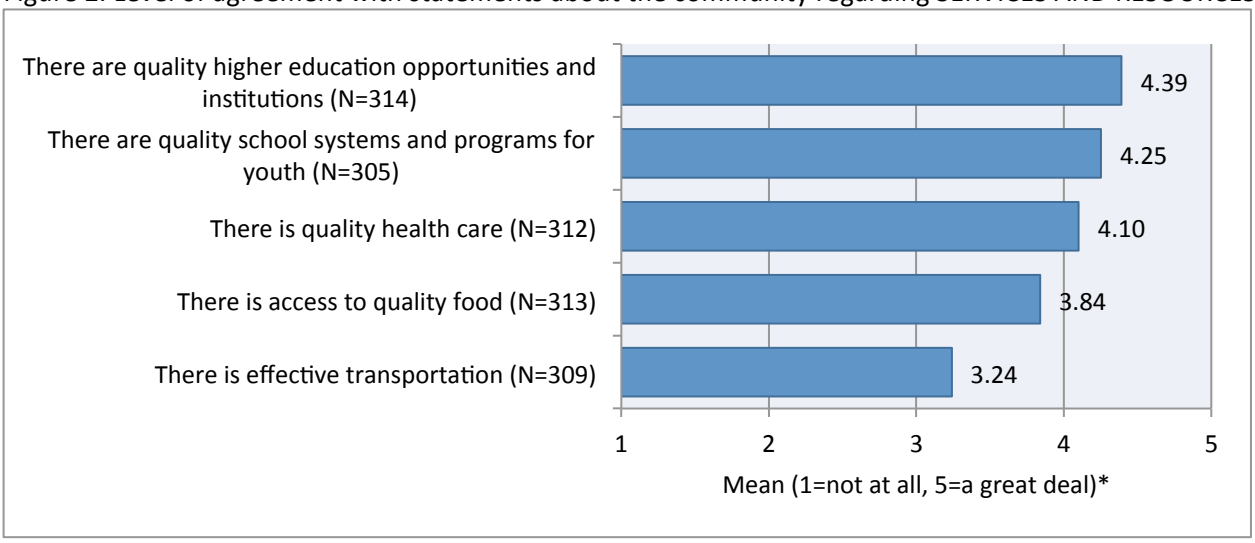
Figure 1. Level of agreement with statements about the community regarding PEOPLE



Services and Resources

The respondents seem to feel that higher education, school system quality, and health care quality are stronger assets to the community. There was less agreement in the overall effectiveness of the community's transportation system.

Figure 2. Level of agreement with statements about the community regarding SERVICES AND RESOURCES

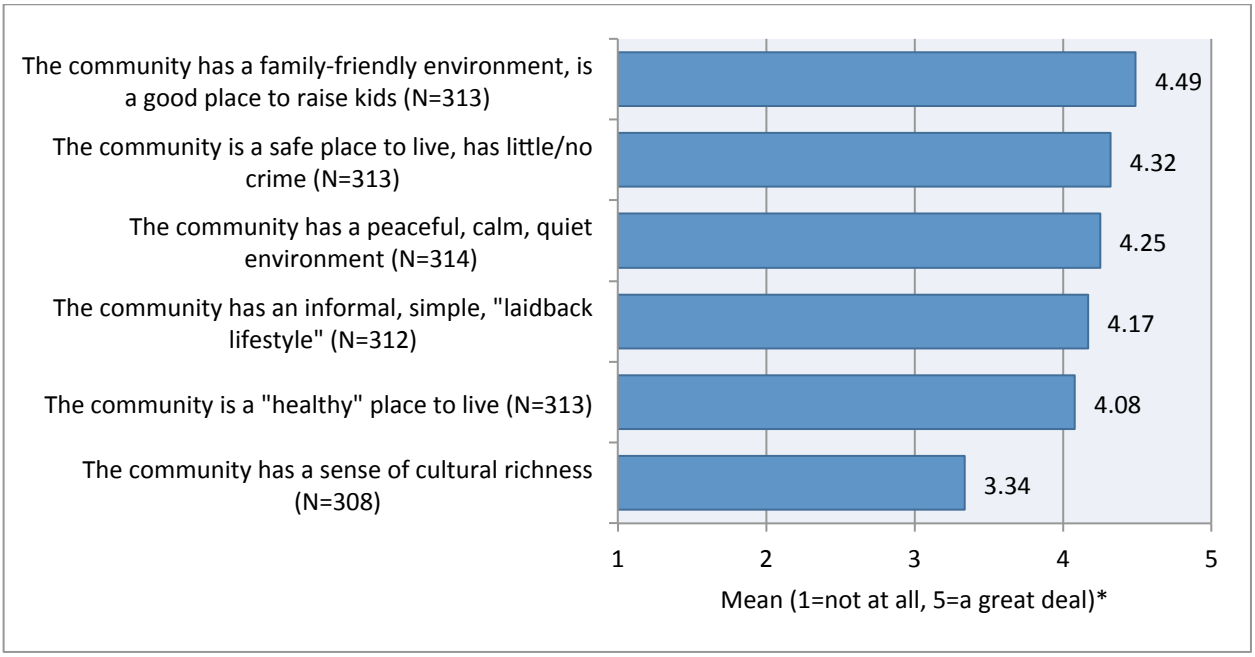


*Means exclude "do not know" responses.

Quality of Life

Overall, there is strong agreement regarding the positive quality of life in this community, with lower agreement coming as it relates to cultural richness.

Figure 3. Level of agreement with statements about the community regarding QUALITY OF LIFE

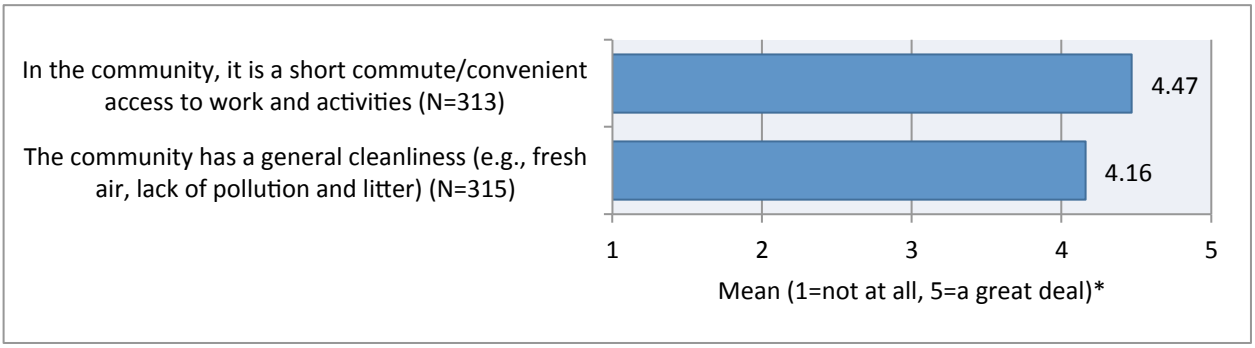


*Means exclude "do not know" responses.

Geographic Setting

There is good agreement with the qualities of convenient access to work/activities and the general cleanliness of the region.

Figure 4. Level of agreement with statements about the community regarding the GEOGRAPHIC SETTING

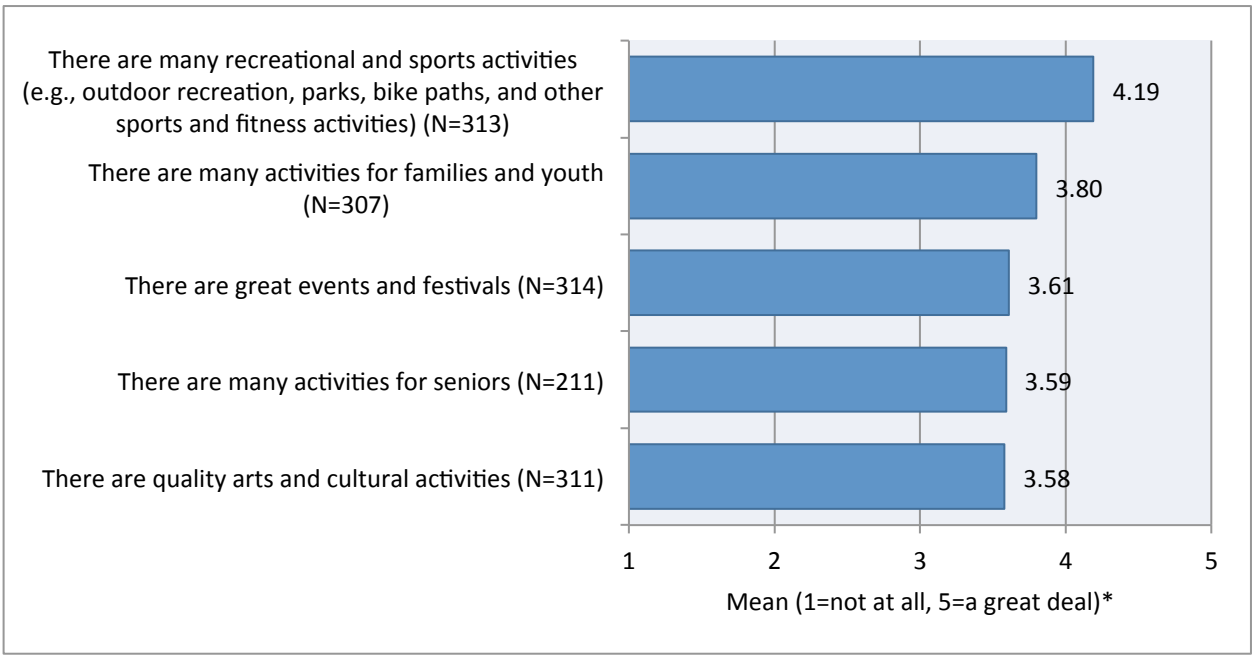


*Means exclude "do not know" responses.

Activities

There is strong agreement that many recreational activities are available in the community and good agreement that activities/events are available for families, youth, and seniors.

Figure 5. Level of agreement with statements about the community regarding ACTIVITIES



*Means exclude "do not know" responses.

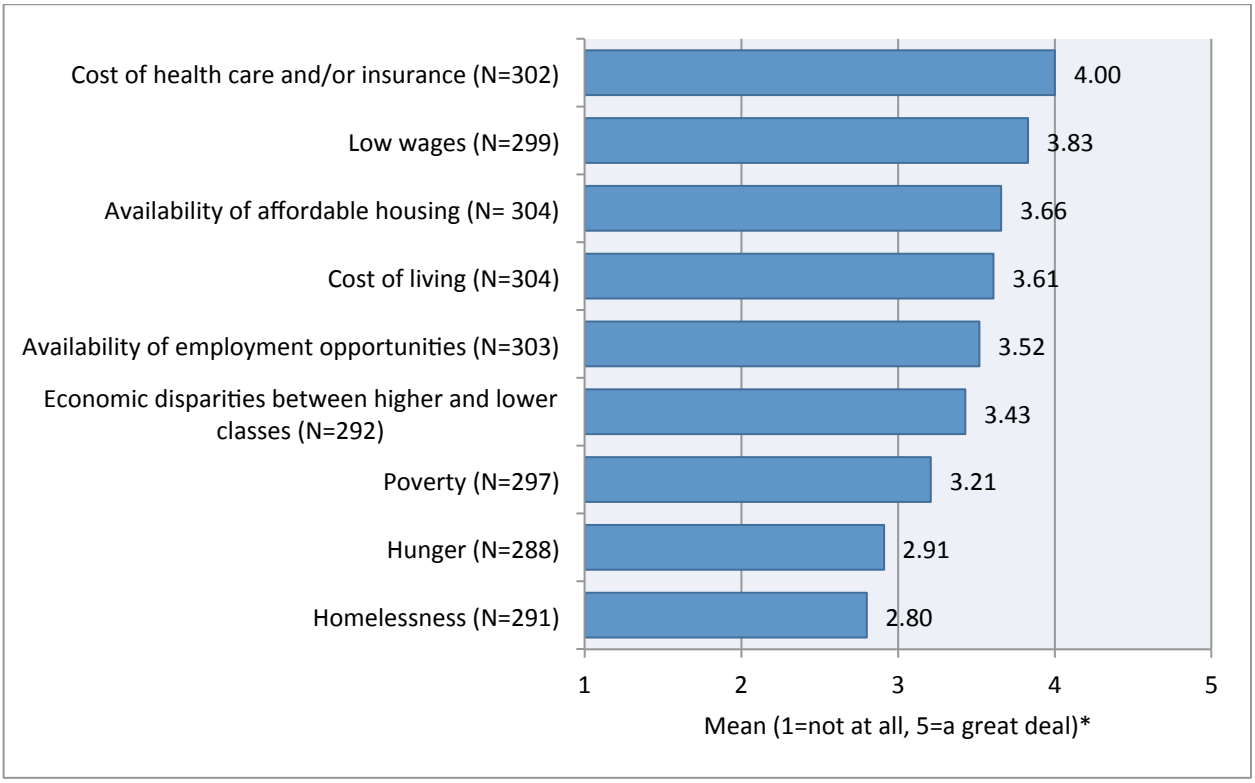
General Concerns about the Community

The five leading concerns about the community include: cost of healthcare (4.0), wages (3.83), housing (3.66), cost of living (3.61), and cost of elderly care (3.54).

Economic Issues

The leading community concern as reported by the respondents is the cost of health care, along with the economic implications of low wages, affordable housing, the high cost of living, and availability of employment opportunities. There was lower concern regarding homelessness, hunger, or poverty.

Figure 6. Level of concern with statements about the community regarding ECONOMIC ISSUES

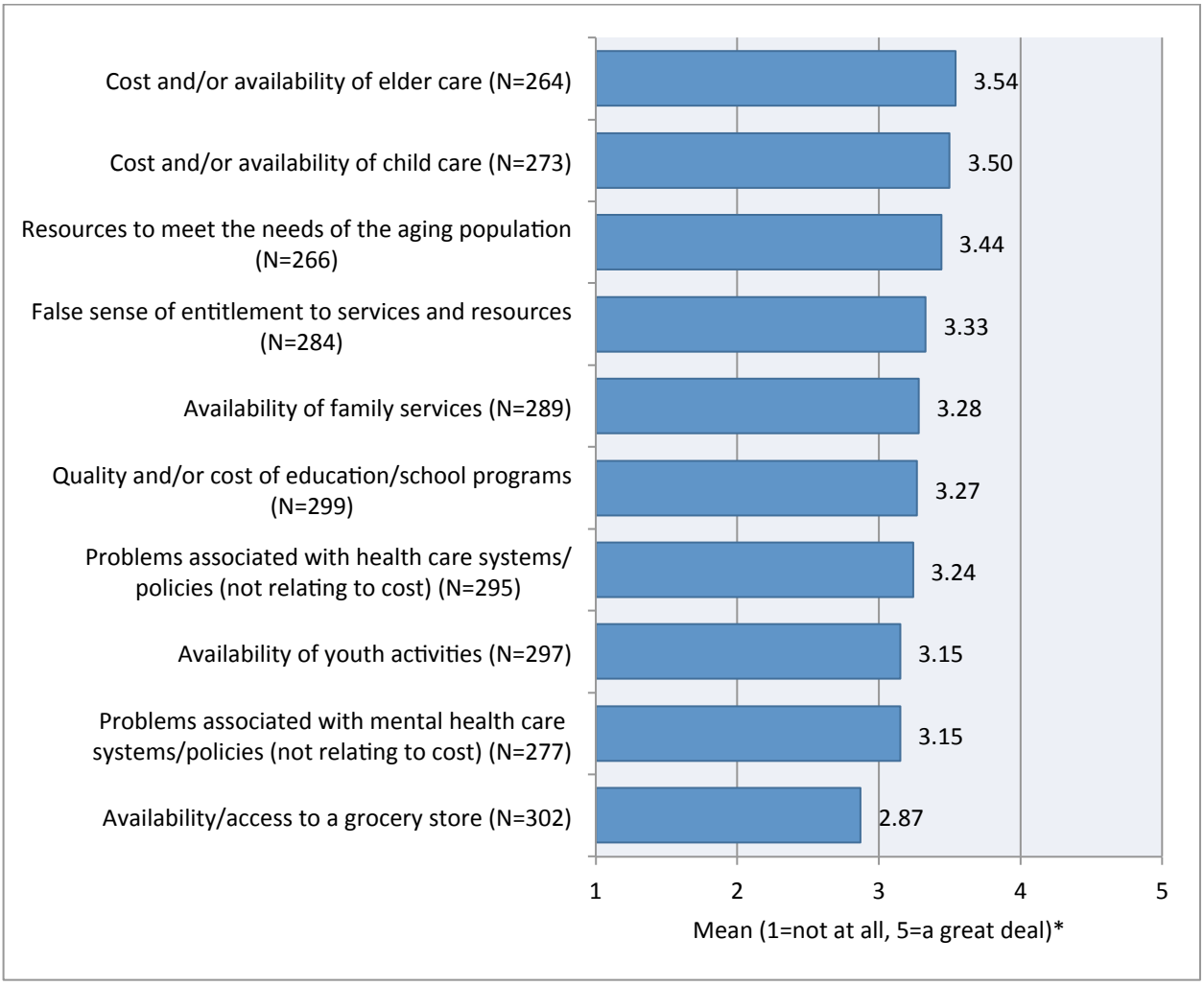


*Means exclude "do not know" responses.

Services and Resources

The leading concerns among respondents regarding services and resources were related to the costs of care for the elderly and children. There was concern about the resources to care for an aging population, availability of family services, and quality/cost of education. There was less concern about the access to groceries in the community.

Figure 7. Level of concern with statements about the community regarding SERVICES AND RESOURCES

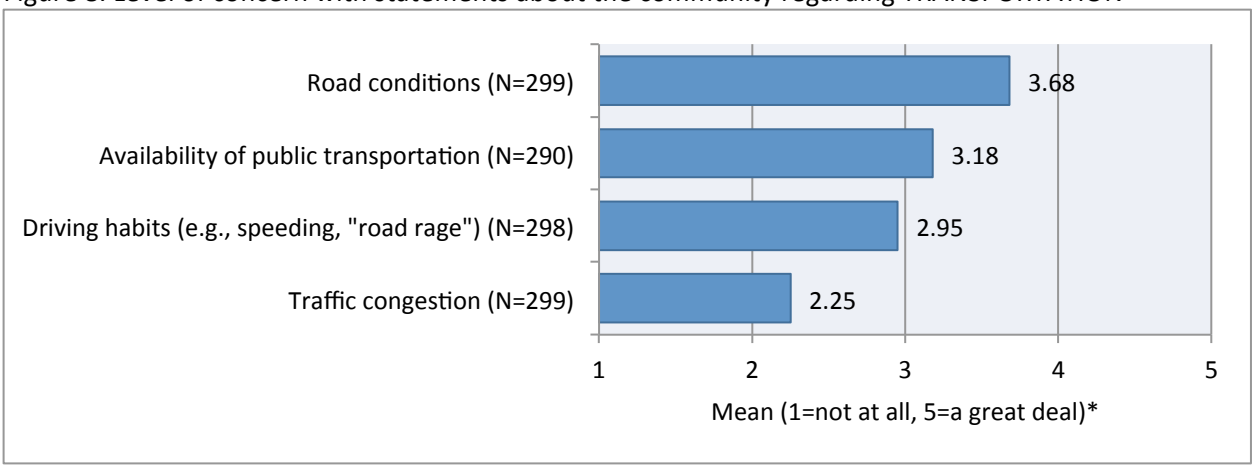


*Means exclude "do not know" responses.

Transportation

There was fairly high agreement that road conditions and availability of public transportation were concerns of the respondents. Not surprisingly, traffic congestion was much less of a concern.

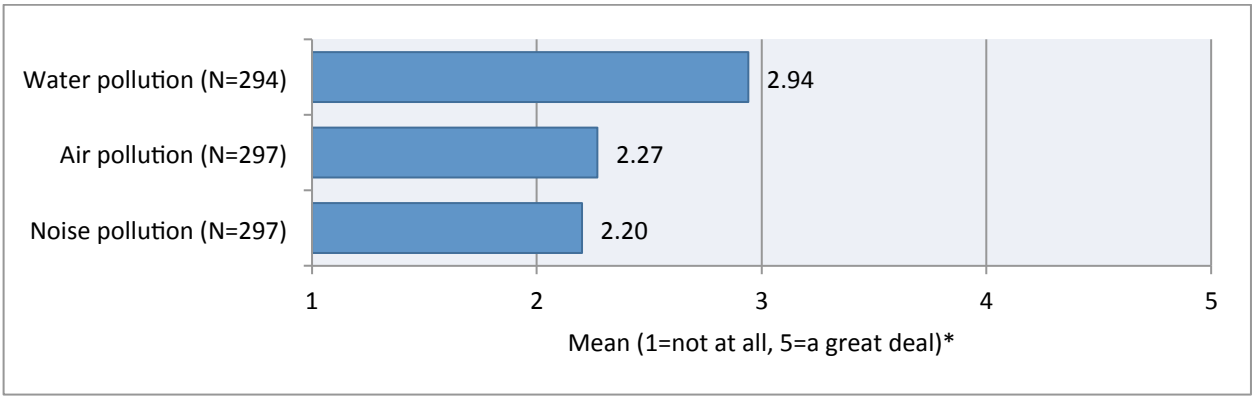
Figure 8. Level of concern with statements about the community regarding TRANSPORTATION



Environmental Pollution

Compared to responses for other community concerns, the level of concern with environmental pollution is only moderate.

Figure 9. Level of concern with statements about the community regarding ENVIRONMENTAL POLLUTION

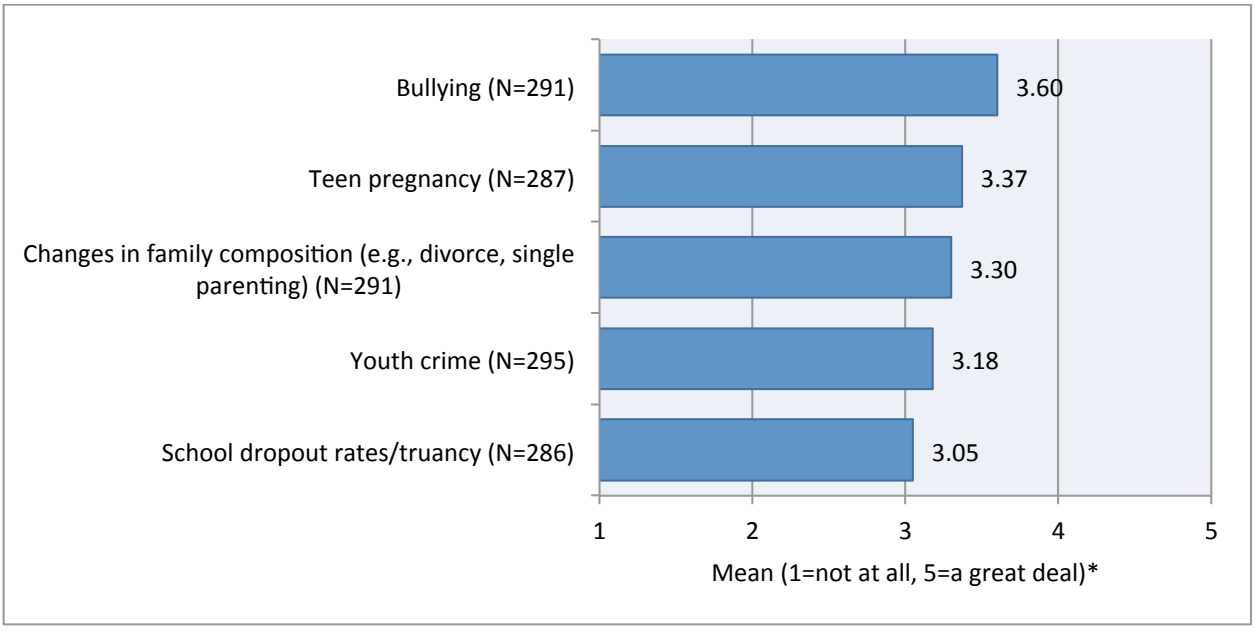


*Means exclude “do not know” responses.

Youth Concerns

There is strong overall concern regarding the entire scope of Youth Concerns that included bullying, teen pregnancy, marriage issues, crime, and school dropout rates.

Figure 10. Level of concern with statements about the community regarding YOUTH CONCERNS

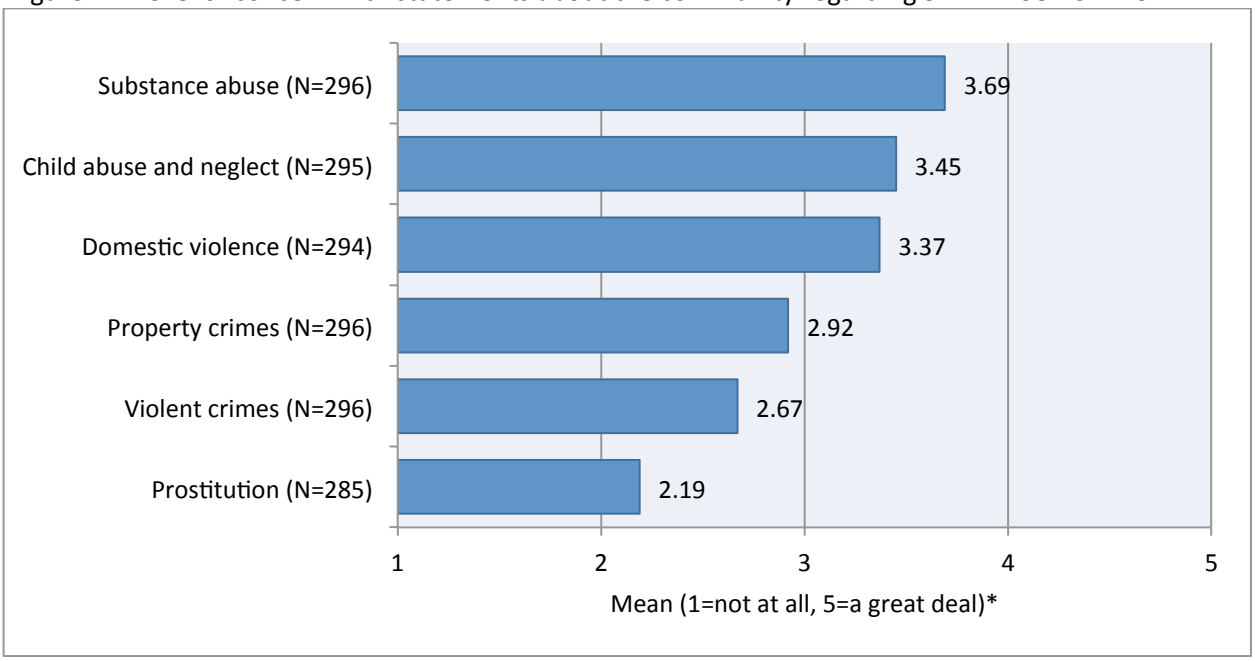


*Means exclude "do not know" responses.

Safety Concerns

There is strong concern with substance abuse, child abuse, and domestic violence in the community. Violent crimes and prostitution are less concerning with the respondents.

Figure 11. Level of concern with statements about the community regarding SAFETY CONCERNS



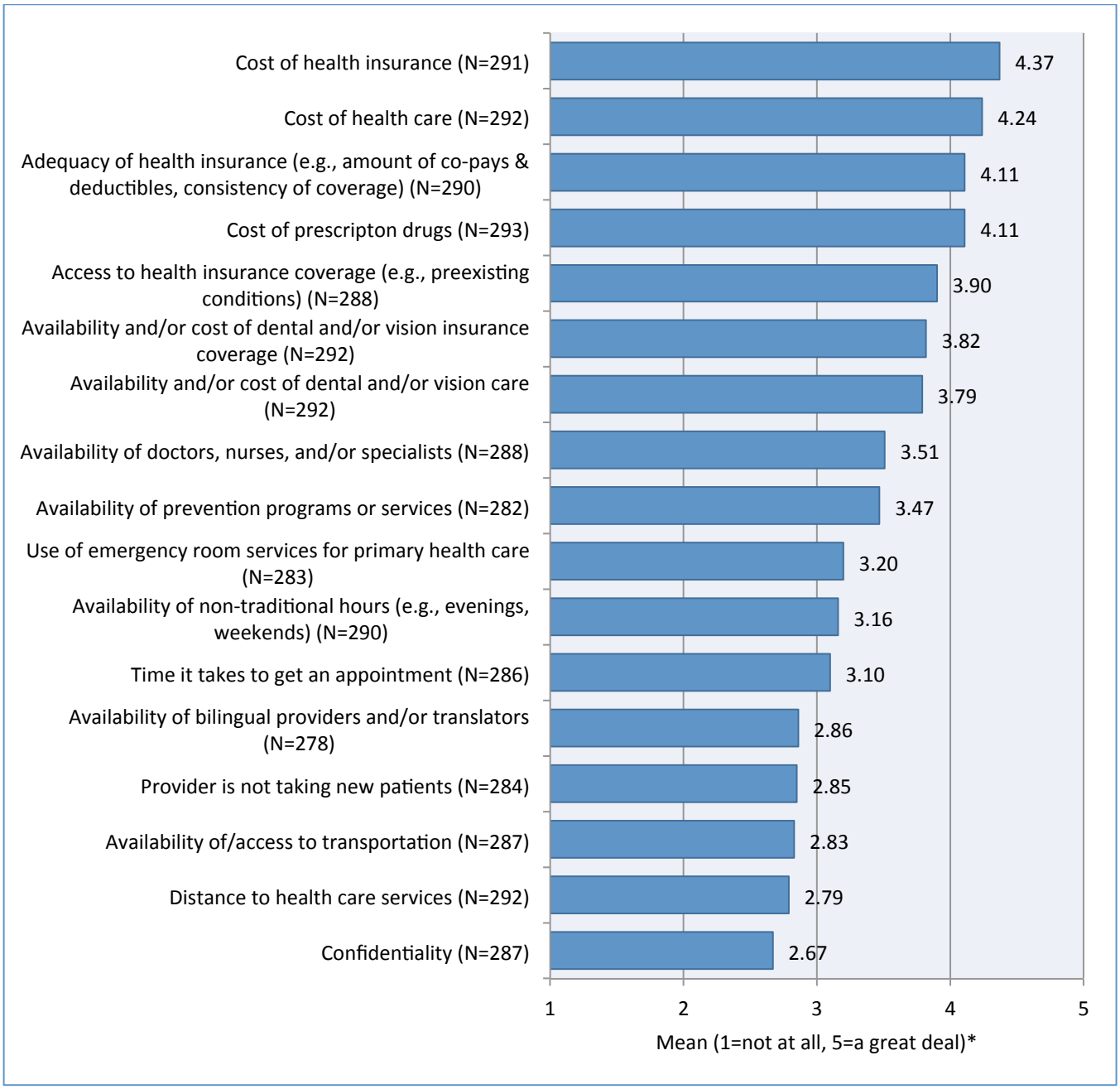
Community Health and Wellness Concerns

The leading health and wellness concerns from the respondents included: the cost of health insurance, the cost of healthcare, the adequacy of health insurance, the cost of medicine, and obesity.

Access to Health Care

Overall, the leading concerns about healthcare access in this community are cost of care related and also access to insurance. Although ways to access the health system rank lower than cost concerns, they still show moderately high results from the respondents.

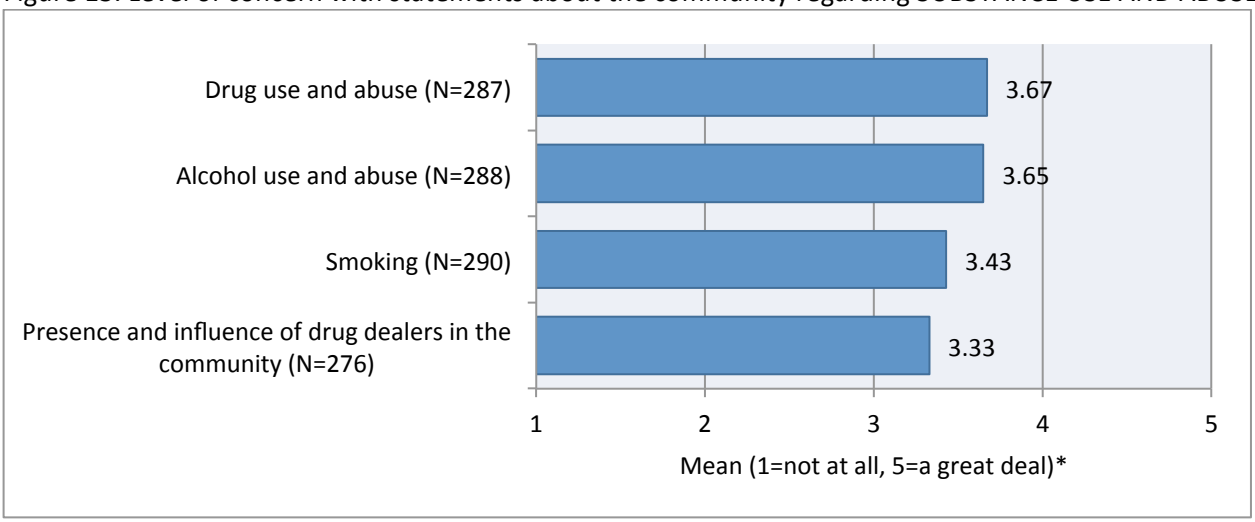
Figure 12. Level of concern with statements about the community regarding ACCESS TO HEALTH CARE



Substance Abuse

There is fairly strong concern shown by the respondents for drug and alcohol abuse and the presence of drug dealers in the community.

Figure 13. Level of concern with statements about the community regarding SUBSTANCE USE AND ABUSE

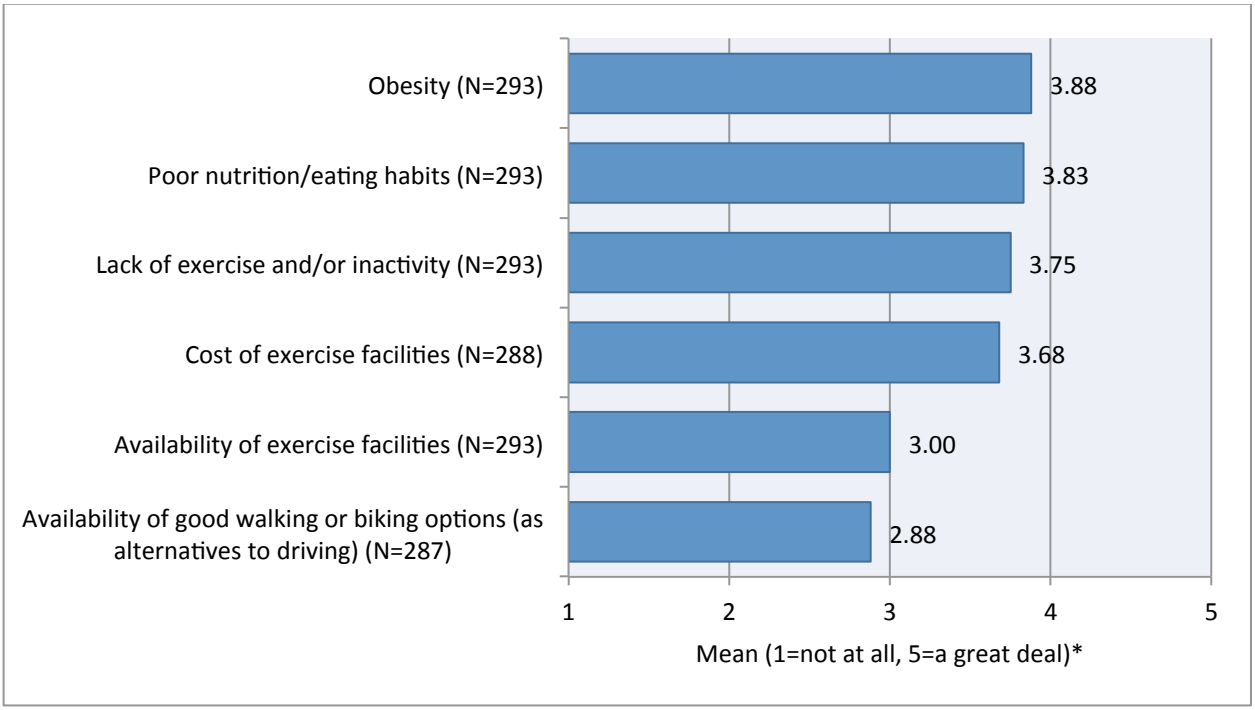


*Means exclude "do not know" responses.

Physical Health

There is strong concern in the community regarding obesity, eating habits, lack of exercise and the cost of exercise options.

Figure 14. Level of concern with statements about the community regarding PHYSICAL HEALTH

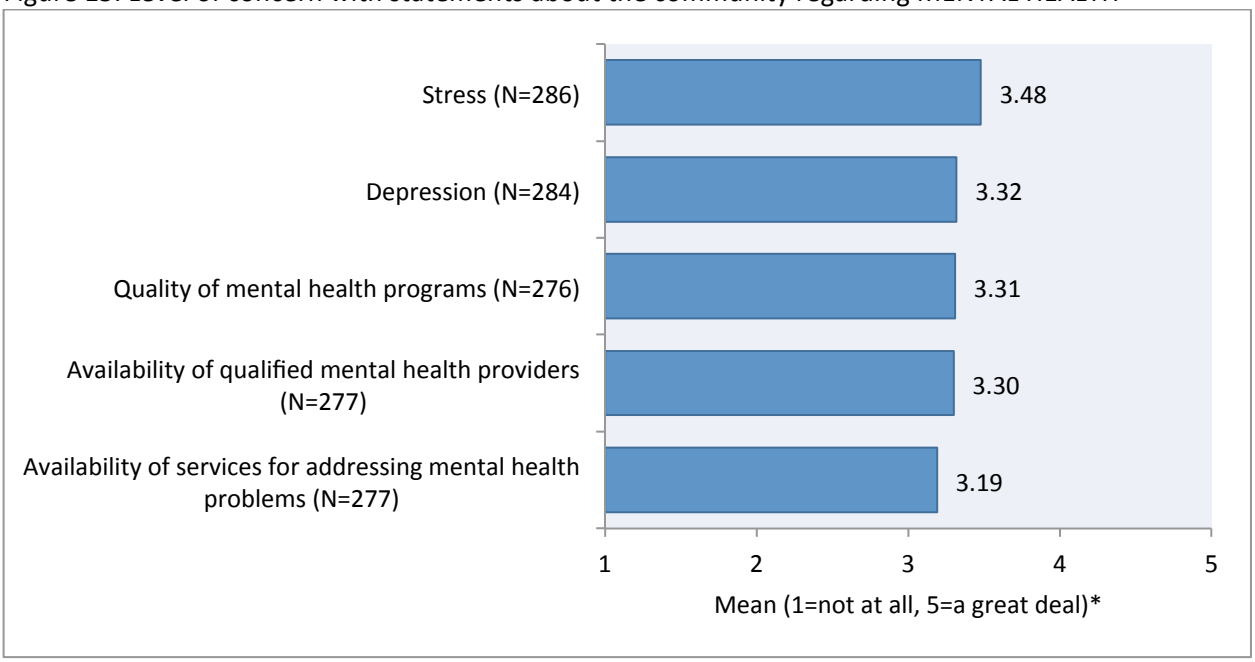


*Means exclude "do not know" responses.

Mental Health

Overall, there is fairly strong concern with the mental health variables in the survey. There is concern over the issues of stress and depression and accessing qualified mental health programs/providers to address the mental health issues.

Figure 15. Level of concern with statements about the community regarding MENTAL HEALTH

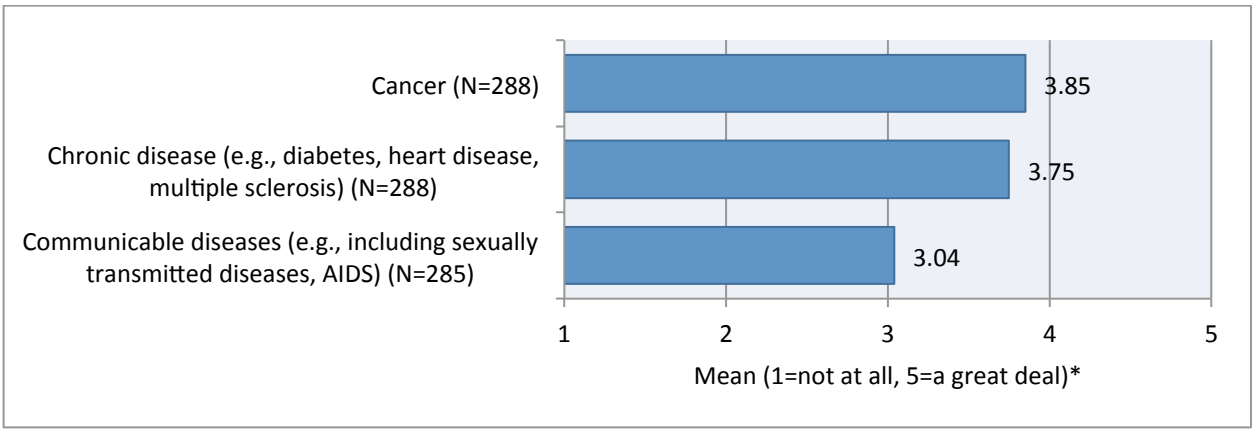


*Means exclude "do not know" responses.

Illness

Although less so for communicable disease, there is strong concern in the community regarding illness associated with cancer and chronic disease.

Figure 16. Level of concern with statements about the community regarding ILLNESS

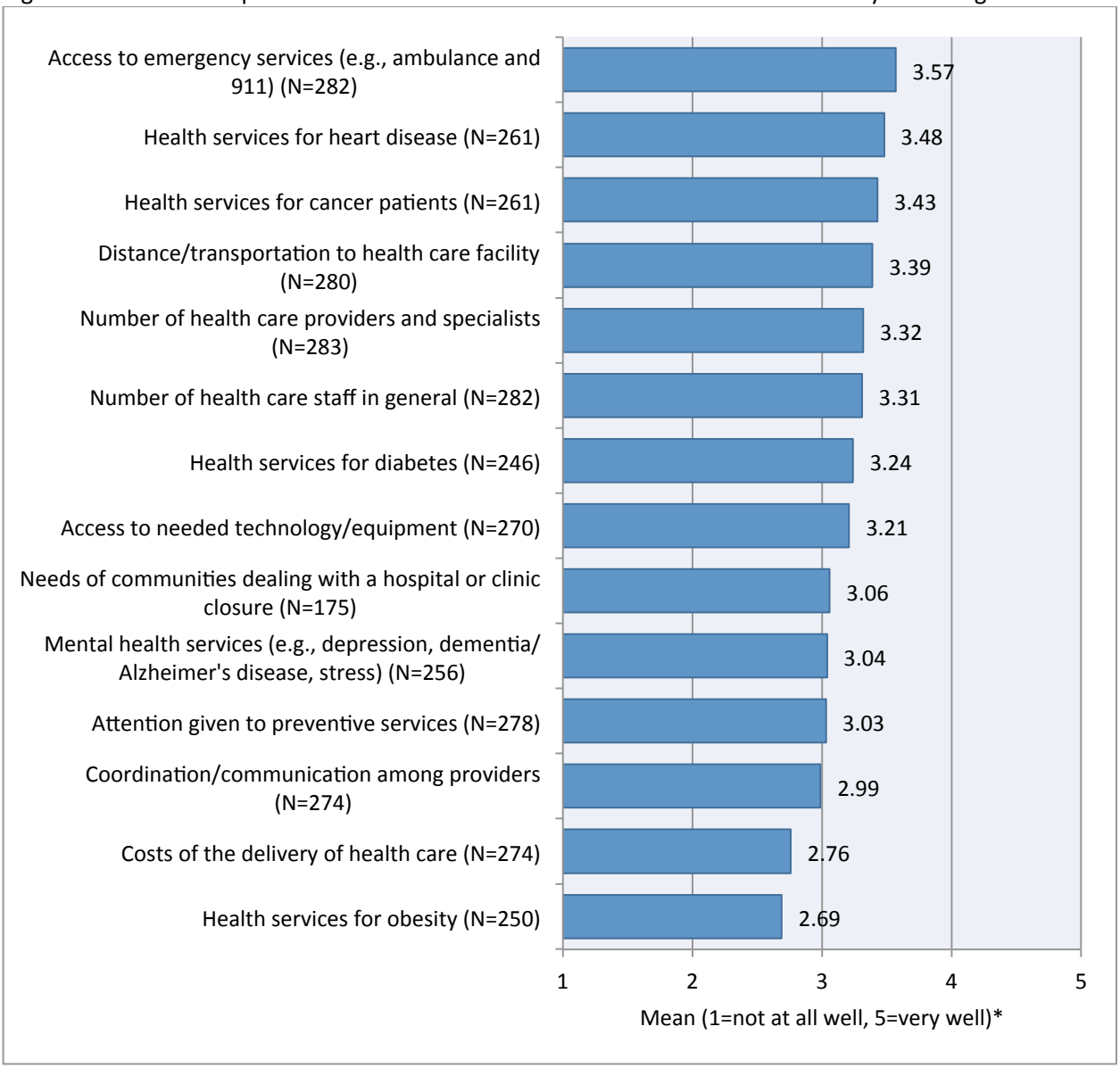


*Means exclude "do not know" responses.

Delivery of Health Care in the Community

Respondents were asked to rate how well DELIVERY OF HEALTH CARE topics are being addressed in their community. Overall, topics related to emergency services, heart disease, cancer, transportation, health care staffing, and diabetes were better addressed than those relating to obesity, cost of care, coordination of care, preventive care, or mental health issues.

Figure 17. How well topics related to DELIVERY OF HEALTH CARE in the community are being addressed



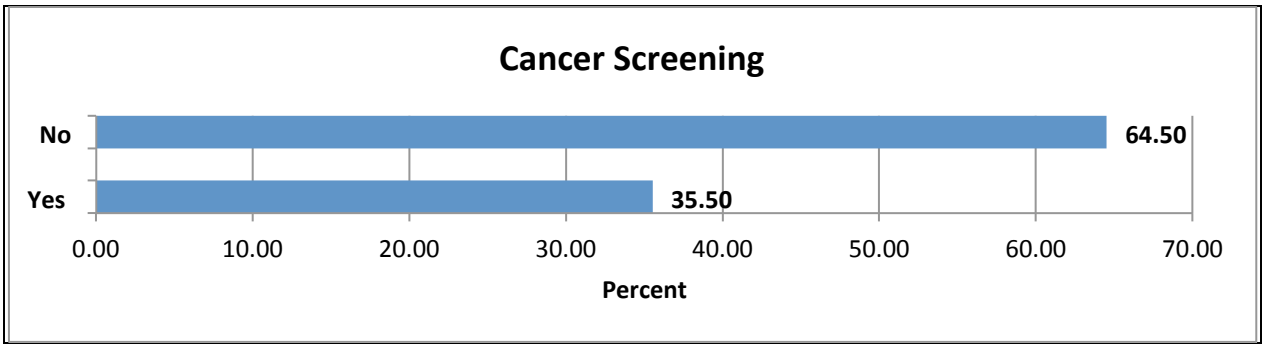
*Means exclude "do not know" responses.

Personal Health Care Information

Cancer Screening

Over 50% of the respondents said they had not had a cancer screening or cancer care in the past year. The most common reason for not having done so was because they felt it was unnecessary or because their doctor had not suggested it.

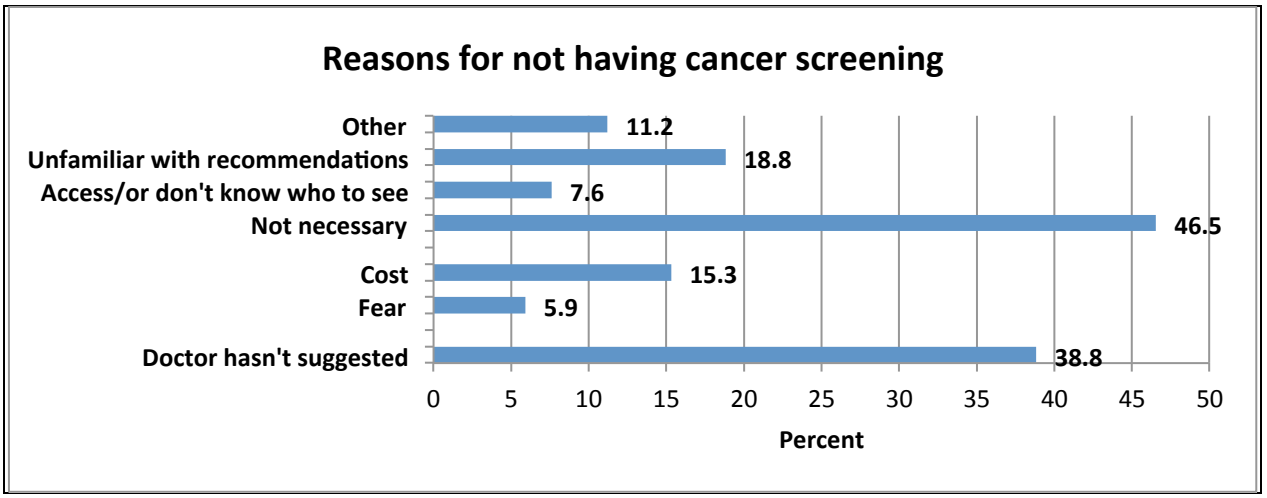
Figure 18. Whether respondents had a cancer screening or cancer care in the past year



Respondents were asked whether they had a cancer screening or cancer care in the past year, and if they had not, reasons for not having done so.

Among respondents who had not had a cancer screening or cancer care in the past year, 46.4% thought that is was not necessary and 38.8% said their doctor had not suggested it.

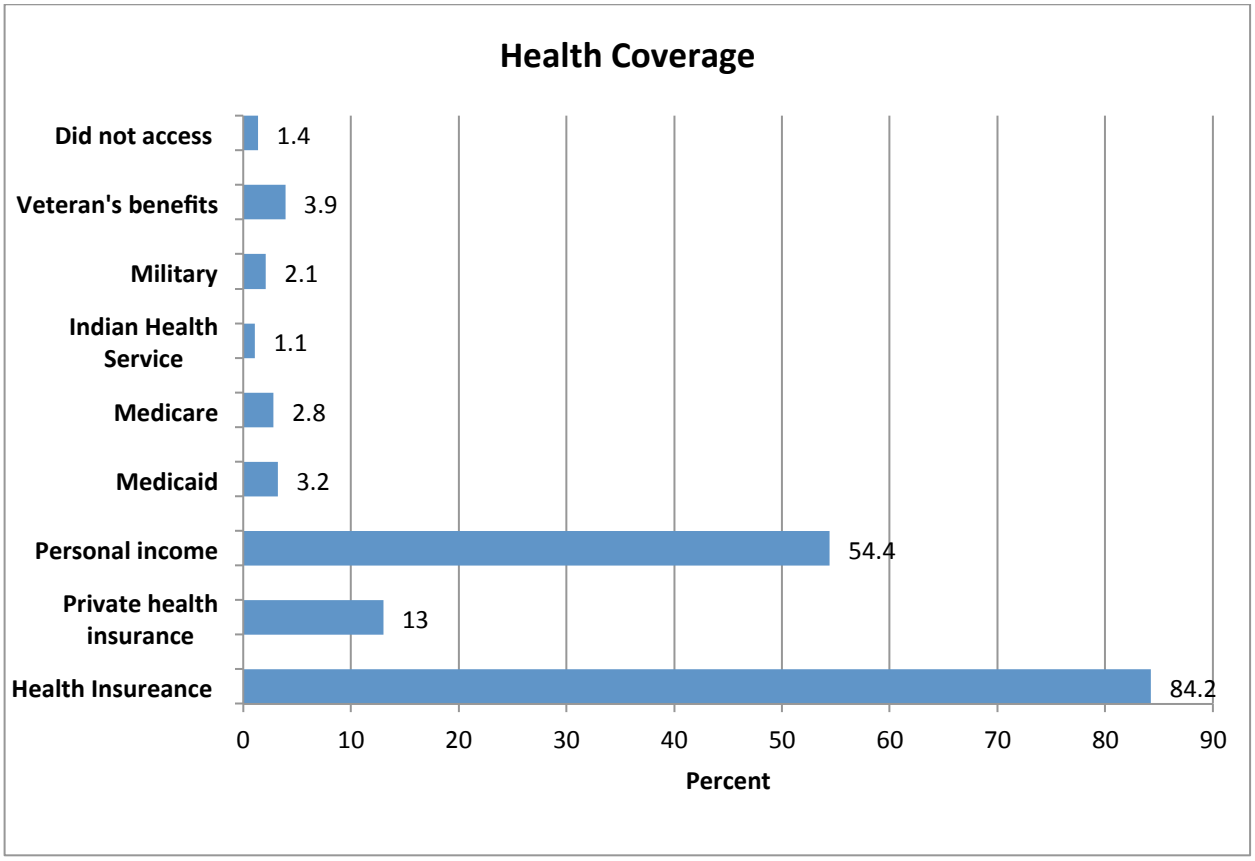
Figure 19. Among respondents who have not had a cancer screening or cancer care in the past year, reasons for not having done so



Health Care Coverage

Respondents were asked how they had paid for health care costs for themselves or family members, over the last 12 months. A majority of respondents said they had paid for health care costs over the last 12 months by health insurance. Personal income was also used.

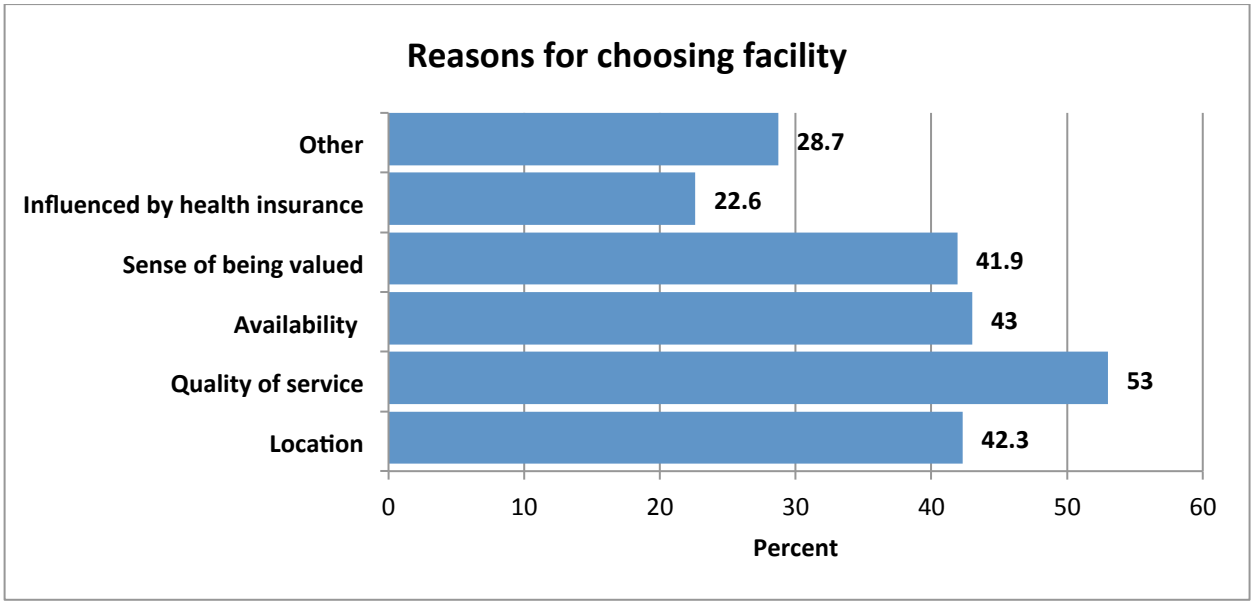
Figure 20. Methods respondents have used to pay for health care costs over the last 12 months



Primary Care Provider

The top reason respondents gave for their choice of primary health care provider was quality of care. (*Figure 21)* Other reasons that were high among responses were availability of services, location, and the sense of being valued as a patient.

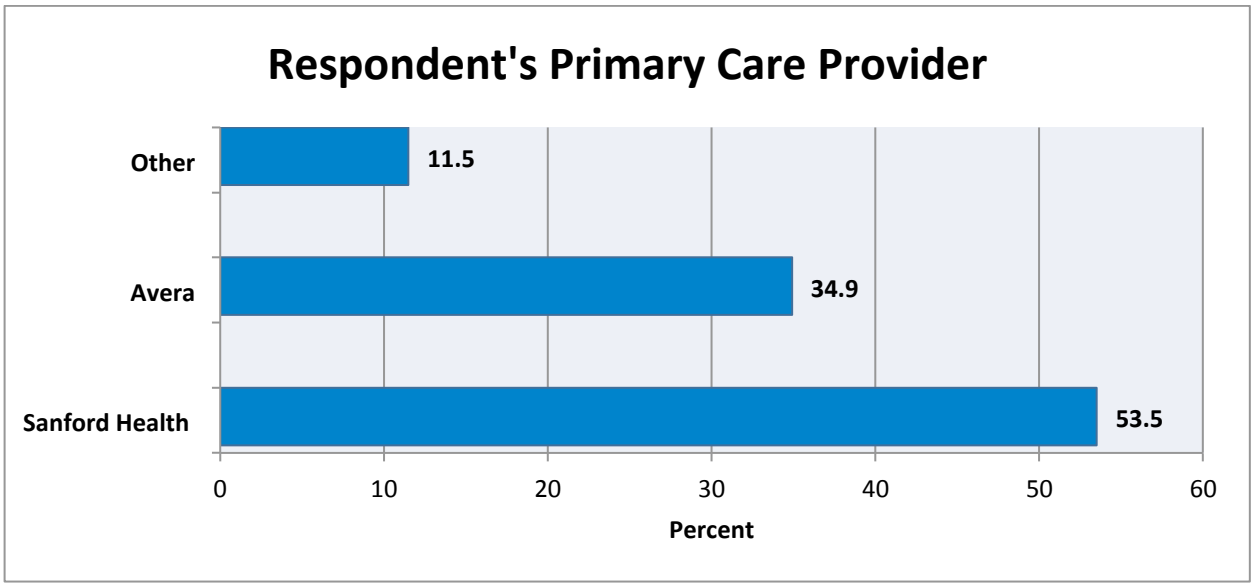
Figure 21. Respondents' reasons for choosing primary health care provider



Respondent's Primary Care Provider

Respondents were asked which provider they used for their primary health care. Over 50% of respondents said they use Sanford Health as their primary care provider.

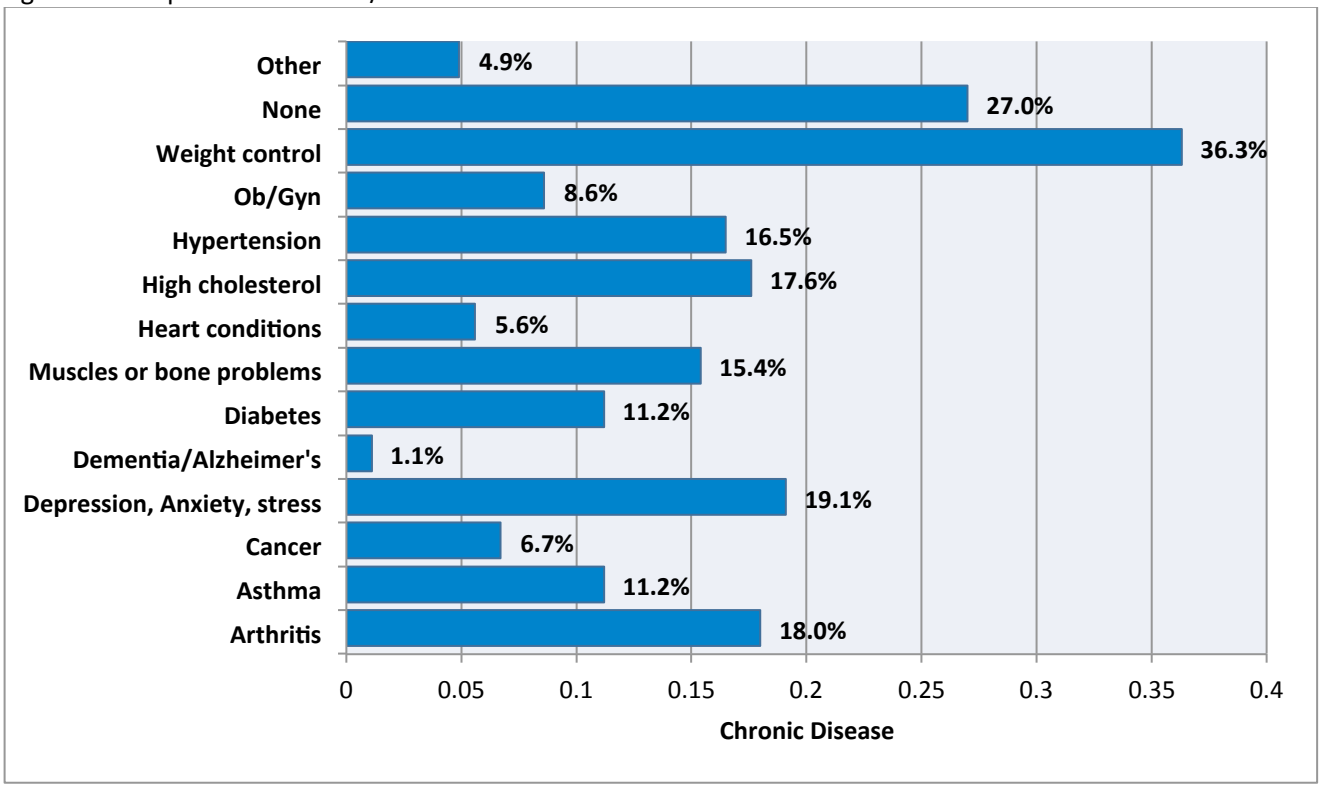
Figure 22. Primary Health Care Provider



Respondents Representing Chronic Disease

Respondents were asked to select their personal general health conditions/diseases. Weight control received the most responses with 36.3% of participants selecting this condition. The chronic diseases found in the highest percentage among respondents include, depression, anxiety or stress, arthritis, hypertension, and hypercholesterolemia.
(Figure 23)

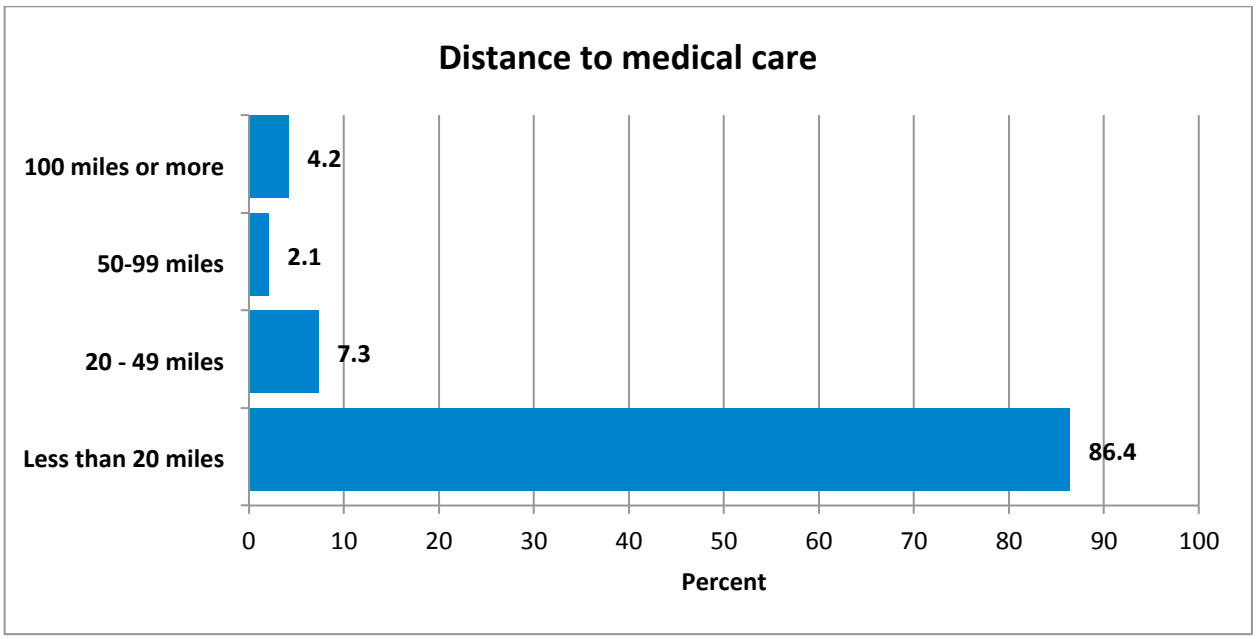
Figure 23. Respondent's health/chronic diseases



Distance to Access Medical Care

Respondents were asked how far they have to drive to access medical care. Over 86% responded that they had less than 20 miles to drive.

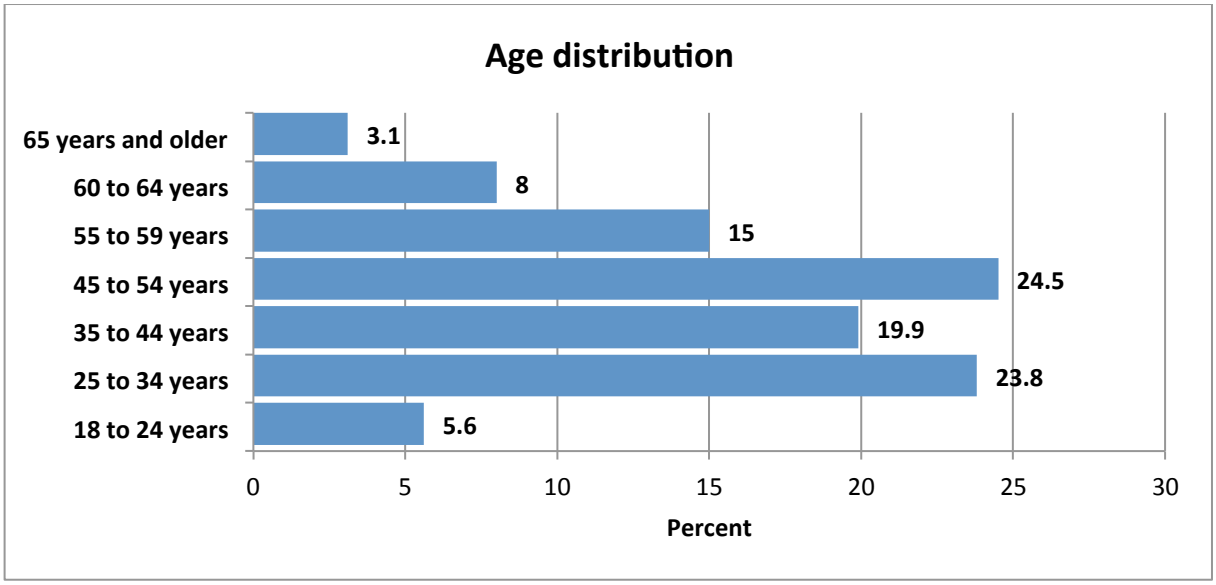
Figure 24. Distance traveled to access health care



Demographic Information

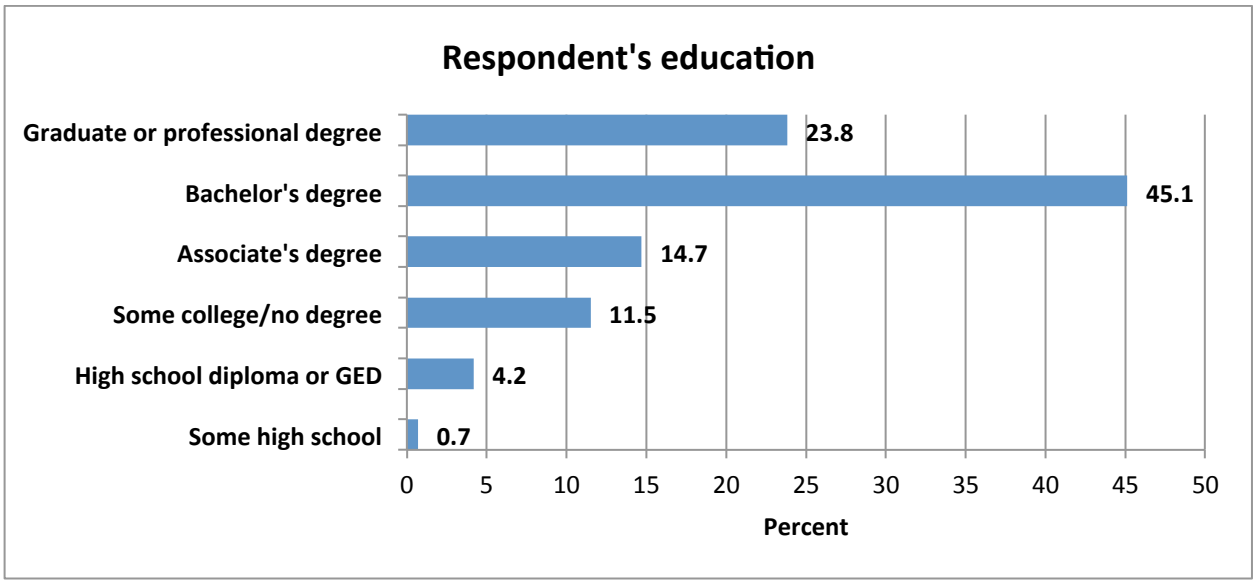
The majority of respondents are between the ages of 25 and 54 years of age (68.2%).

Figure 25. Respondents' age distribution.



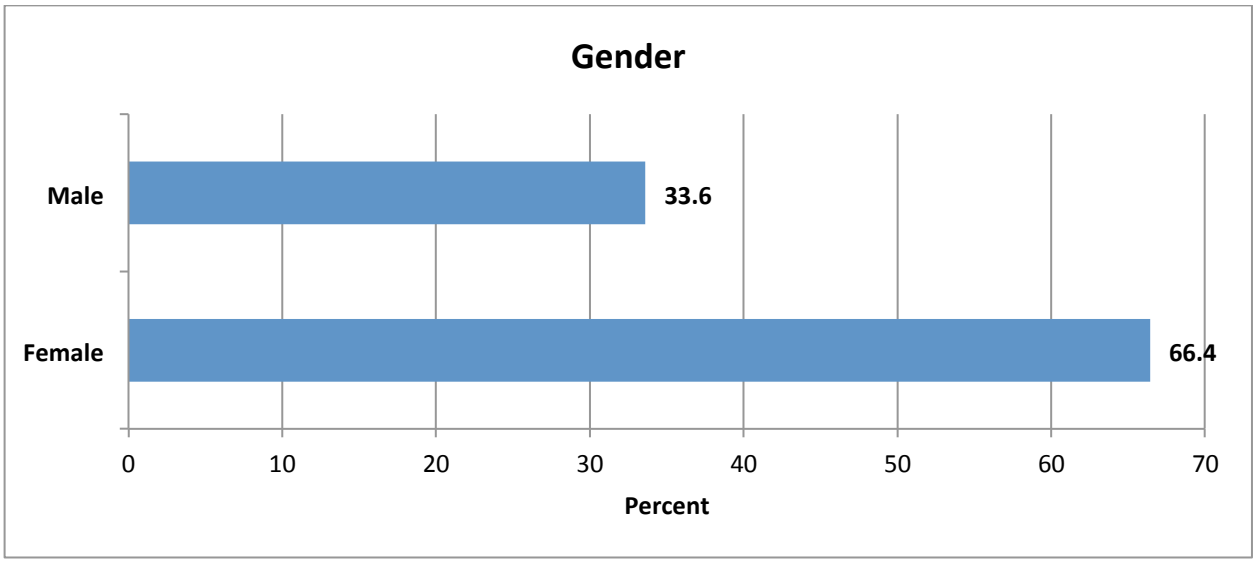
Most respondents (68.9%) have a Bachelor's degree or higher. A Bachelor's degree was held by 45.1% of respondents and 23.8% have a graduate or professional degree.

Figure 26. Respondent's education



More females responded to the survey than males (33.6% males compared to 66.4% females).

Figure 27. Respondents by gender



Secondary Research

Health Outcomes

Mortality

The Mortality health outcomes indicate that South Dakota as a state has more premature deaths than the national benchmark. While the state of South Dakota has more premature deaths than the national benchmark, Brown County has a lower rate than the national benchmark and South Dakota as a whole. Map 1 in the Appendix provides a county view of the premature deaths within the five-state region.

		National Benchmark	South Dakota	Brown County
Premature death	Years of potential life lost before age 75 per 100,000 (age-adjusted), 2005-2007	5,564	6,815	5,179

Morbidity

The Morbidity health outcomes indicate that Brown County citizens report more days of poor health (self-reported) than the national or South Dakota benchmark. They also report more physically unhealthy days than the state or national data.

South Dakota and Brown County report more mentally unhealthy days (self-reported) than the national benchmark. Brown County reports slightly fewer mentally unhealthy days than the state.

Brown County has the same percentage of low birth weight as the national benchmark, and also reports a lower percentage of low birth weight than the state. Maps 1-2 in the Appendix provide county views of the morbidity indicators within the five-state region.

		National Benchmark	South Dakota	Brown County
Poor or fair health	Percent of adults reporting fair or poor health (age-adjusted), 2003-2009	10%	12%	13%
Poor physical health days	Average number of physical unhealthy days reported in past 30 days (age-adjusted), 2003-2009	2.6	2.8	3.0
Poor mental health days	Average number of mentally unhealthy days reported in past 30 days (age-adjusted), 2003-2009	2.3	2.6	2.4
Low birth weight	Percent of live births with low birth weight (<2,500 grams), 2001-2007	6.0%	6.8%	6.0%

Health Factors

Health Behaviors

The Health Behavior outcomes indicate that South Dakota and Brown County have higher percentages of adult smokers (equal to or greater than 100 cigarettes) than the national benchmark. Adult obesity (greater than or equal to 30 BMI) is also higher in South Dakota and Brown County. South Dakota and Brown County have a higher percentage of physical inactivity than the national benchmark.

South Dakota (19%) and Brown County (20%) have much higher percentages of binge drinking reports (more than four drinks on one occasion for women and more than five for men) than the national benchmark (8%).

Motor vehicle crash death rates are slightly lower than the national benchmark in Brown County; however, the state of South Dakota is much higher than the national benchmark.

Sexually transmitted infections rank substantially higher than the national benchmark in South Dakota. Brown County is lower than the state benchmark but also is much higher than the national benchmark for sexually transmitted infections.

The teen birth rate is higher in South Dakota and Brown County than the national benchmark. Brown County's teen birth rate is lower than the state's teen birth rate. Maps 6 -12 in the Appendix provide county views of the Health Behavior indicators within the five-state region.

		National Benchmark	South Dakota	Brown County
Adult smoking	Percent of adults who currently smoke and have smoked at least 100 cigarettes in their lifetime, 2003-2009	15%	20%	19%
Adult obesity	Percent of adults that report a body mass index (BMI) of at least 30 kg/m2, 2008	25%	29%	30%
Physical inactivity	Percent of adults reporting no leisure physical activity, 2008	20%	26%	28%
Excessive drinking	Percent of adults reporting binge drinking and heavy drinking, (consuming >4 for women and >5 for men on a single occasion) 2003-2009	8%	19%	20%
Motor vehicle crash death rate	Motor vehicle crash deaths per 100,000 population, 2001-2007	12.0	23.7	11.4
Sexually transmitted infections	Number of Chlamydia cases (new cases reported) per 100,000 population 2008	83.0	371.3	224.7
Teen birth rate	Number of teen births per 100,000 females ages 15-19, 2001-2007	22.0	38.7	28.5

Clinical Care

The Clinical Care outcomes indicate that South Dakota and Brown County have a higher percentage of uninsured adults than the national benchmark. The percentage of uninsured youth in Brown County and the national benchmark are lower than South Dakota as a whole.

There are more patients per physician in South Dakota and Brown County than the national benchmark.

The ratio of population to mental health providers is less positive in South Dakota and Brown County than the national benchmark.

The number of professionally active dentists per 100,000 of population is lower than the national benchmark for South Dakota and Brown County.

Preventable hospital stays are slightly better than the national benchmark in Brown County but the state's rate is higher than the national benchmark.

Diabetes screening in South Dakota is lower than the national benchmark. The rate of diabetes screening is higher in Brown County than the national benchmark.

Brown County and South Dakota rank lower than the national benchmark for mammography screenings. Maps 13-20 in the Appendix provide county views of the Clinical Care indicators within the five-state region.

		National Benchmark	South Dakota	Brown County
Uninsured adults	Percent of adult population ages 18-64 without health insurance, 2007	13%	16%	14%
Uninsured youth	Percent of youth ages 0-18 without health insurance.	7%	9%	7%
Primary Care Physicians	Ratio of population to primary care physicians, 2008	631:1	769:1	761:1
Mental Health Providers	Ratio of total population to mental health providers, 2008	2,242:1	3,544:1	4378:1
Dentist rate	Number of professionally active dentists per 100,000 population, 2007	69.0	50.0	54.0
Preventable hospital stays	Hospitalization discharges for ambulatory care-sensitive conditions per 1,000 Medicare enrollees, 2006-2007	52.0	68.6	51.4
Diabetes screening	Percent of Medicare enrollees with diabetes that receive HbA1c screening, 2006-2007	89%	83%	90%
Mammography screening	Percent of female Medicare enrollees that receive mammography screening, 2006-2007	74%	68%	71%

Social and Economic Factors

The Social and Economic Factors outcomes indicate that South Dakota and Brown County have a lower high school graduation benchmark than the national benchmark. South Dakota has a lower percentage of post-secondary education than the national benchmark while Brown County has a higher percentage of adults with some post-secondary education than South Dakota or the national benchmark.

The unemployment rate was lower in South Dakota than the national benchmark during 2009. Brown County's unemployment rate was lower than South Dakota or the national benchmark.

The percentage of child poverty is higher in South Dakota and Brown County than the national benchmark. Brown County has a lower percentage than the South Dakota.

Inadequate social support is higher in South Dakota than the national benchmark; however, it is the same as the national benchmark in Brown County.

The percentage of children in single parent households is higher than the national benchmark for South Dakota and Brown County.

The number of homicide deaths per 100,000 people in South Dakota are higher than the national benchmark. There was no data for homicide deaths in Brown County.

Maps 21-27 in the Appendix provide county views of the Social and Economic indicators within the five-state region.

		National Benchmark	South Dakota	Brown County
High school graduation	Percent of ninth-grade cohort in public schools that graduates from high school in four years 2006-2007	92%	83%	80%
Some college	Percent of adults ages 25-44 with some post-secondary education, 2005-2009	68%	64%	70%
Unemployment	Percent of population ages 16 and older that is unemployed but seeking work 2009	5.3%	4.8%	3.5%
Child poverty	Percent of children ages 0-17 living below the Federal Poverty Line, 2008	11%	18%	13%
Inadequate social support	Percent of adults that never, rarely, or sometimes get the social and emotional support they need, 2003-2009	14%	17%	14%
Children in single parent households	Percent of children in families that live in a household headed by a parent with no spouse present, 2005-2009	20%	29%	25%
Homicide rates	Number of deaths due to murder or non-negligent manslaughter per 100,000 population, 2001-2007	1.0	2.5	0

Physical Environment

The Physical Environment outcomes indicate that there is no air pollution or ozone pollution in this area. Because of the rural geography, access to healthy food is ranked far below the national benchmark in South Dakota and Brown County.

Access to recreational facilities ranks lower than the national benchmark for South Dakota and Brown County.

Maps 28–31 provide county views of the Physical Environment indicators within the five-state region.

		National Benchmark	South Dakota	Brown County
Air pollution-particulate matter	Number of days air quality was unhealthy for sensitive populations due to fine particulate matter, 2006	0	0	0
Air pollution-ozone	Number of days air quality was unhealthy for sensitive populations due to ozone levels, 2006	0	0	0
Access to healthy foods	Percent of zip codes with a healthy food outlet (i.e. grocery store or produce stand/farmers market), 2008	92%	42%	42%
Access to recreational facilities	Number of recreational facilities per 100,000 population 2008	17.0	13.0	13.0

Demographics

Youth account for 22% of the population in Brown County, which is slightly lower than the national benchmark of 24%. Elderly account for 17% of the population in Brown County, which is higher than the national and South Dakota benchmarks.

Thirty percent (30%) of Brown County is rural compared to 48% of South Dakota and 21% as the national benchmark.

Only 2% of South Dakotans and 2% of Brown County's population is not proficient in English compared to the national benchmark, which is 9%.

South Dakota and Brown County at 7% each have a low illiteracy rate compared to the national benchmark of 15%.

Maps 32 –36 in the Appendix provide county views of the demographics within the five-state region.

		National Benchmark	South Dakota	Brown County
Youth	Percent of total population ages 0-17, 2009	24%	25%	22%
Elderly	Percent of total population ages 65 and older, 2009	13%	14%	17%
Rural	Percent of total population living in rural area, 2000	21%	48%	30%
Not English Proficient	Percent of total population that speaks English less than "very well". 2005-2009	9%	2%	2%
Illiteracy	Percent of population ages 16 and older that lacks basic prose literacy skills, 2003	15%	7%	7%

Population by Age

The population in Brown County has a higher percentage over the ages of 65 and 85 than South Dakota or the national benchmarks. The gender distribution is slightly higher for women than men in South Dakota and Brown County. The state of South Dakota is 50 % male and 50% female.

	National Benchmark	South Dakota	Brown County
Total population	308,745,538	814,180	36,531
Percent ages 65 and older	13%	14%	16%
Percent 85 and older	2%	2%	3%
Percent male	49%	50%	49%
Percent female	51%	50%	51%

Based on 2010 Census data

Brown County has slightly higher home ownership and slightly lower renter-occupied housing than the national benchmark. South Dakota has higher home ownership and lower renter-occupied housing than the national benchmark.

Housing

	National Benchmark	South Dakota	Brown County
Percent of occupied housing that is owner-occupied	65%	74%	66%
Percent of occupied housing that is renter-occupied	35%	26%	34%

Based on 2010 Census data

Economic Security

According to the 2010 Census Data, the population of working age in the labor force is 69% in South Dakota and 71% for Brown County. The percentage of those in South Dakota who are living at less than 100% of the Federal poverty level is lower in Brown County than the state or the national benchmark. Brown County also has a smaller percentage of the population with income less than 200% of the Federal poverty level than the state of South Dakota or the national benchmark. The median household annual income is $46,369 in South Dakota, which is lower than the national benchmark. Brown County's median income of $45,615 is lower than South Dakota or the national benchmarks. A smaller percentage of people spend 30% of their income towards housing costs in Brown County than the state of South Dakota or the national percentages.

	National Benchmark	South Dakota	Brown County
Percent of working age population in the labor force	65%	69%	71%
Percent of total population with income less than 100% of poverty	14%	14%	10%
Percent of total population with income less than 200% of poverty	32%	33%	28%
Median household income	$51,914	$46,369	$45,615
Owner occupied housing units	76,089,650	217,250	10,377
Percent spending 30% or more income toward housing costs	30%	20%	17%
Renter occupied housing units	38,146,346	98,218	4,605
Percent renters spending 30% or more of income toward housing costs	47%	35%	29%

Diversity Profile

The population distribution by race demonstrates that South Dakota is predominantly white, followed by American Indian, Hispanic, Asian, and Black.

	National Benchmark	South Dakota	Brown County
Total population	308,745,538	814,180	36,531
White alone	223,553,265	699,392	34,057
Asian alone	14,674,252	7,610	355
Black alone	38,929,319	10,207	194
Hispanic origin – of any race	50,477,594	22,119	496
American Indian	2,932,248	71,817	1105

Health Needs Identified

Although no specific needs were identified in the survey, the SAMC team chose to focus on the chronic issues of obesity and access to mental health services.

IMPLEMENTATION STRATEGY

2013 Community Health Needs Assessment
Sanford Aberdeen Medical Center
Implementation Strategy

The following needs were identified through a formal community health needs assessment, resource mapping and prioritization process:

- Mental Health Services
- Obesity

Implementation Strategy: Mental Health Services

- Establish adolescent and adult mental health telemedicine services from Sanford Aberdeen to Sanford Medical Center in Sioux Falls

Implementation Strategy: Bariatric Services

- Establish a Sanford Aberdeen-based Bariatric Services accredited program

2013 Community Health Needs Assessment
Enterprise Implementation Strategy

The following unmet needs were identified through a formal community health needs assessment, resource mapping and prioritization process:

- Mental Health Services
- Obesity

Implementation Strategy: Mental Health Services - Sanford One Mind

- Completion (to the extent resources allow) of full integration of Behavioral Health services in all primary care clinics in Fargo and Sioux Falls
- Completion (to the extent resources allow) of full integration of Behavioral Health services or access to Behavioral Health outreach in all regional clinic sites in the North, South and Bemidji regions
- Complete presentation of outcomes of first three years of integrated Behavioral Health services
- Implementation of integrated Behavioral Health into clinics in new regions
- Design Team for Inpatient Psychiatric Unit, Partial Hospitalization and Clinic Space for Fargo presents recommendations for design of new spaces
- Design Team for Sioux Falls Inpatient Psychiatric Units and Partial Hospitalization

Implementation Strategy: Obesity

- Medical Management for Obesity
  - Develop CME curriculum for providers and interdisciplinary teams across the enterprise inclusive of medical, nutrition, nursing, and Behavioral Health professionals
- Develop community education programming
  - Include the following program options in the curriculum to create awareness of existing resources:
    - Family Wellness Center
    - Honor Your Health Program
    - WebMD Fit Program
    - Bariatric Services
    - Eating Disorder Institute
    - Mental Health/Behavioral Health
    - Profile
- Actively participate in community initiatives to address wellness, fitness and healthy living

APPENDIX

2011 County Health Profile

An adaptation of the County Health Rankings Project for the Fargo-Moorhead Community Health Needs Assessment Collaborative

Brown County
South Dakota

HEALTH OUTCOMES		Brown	*National Benchmark	South Dakota
Mortality				
Premature death	Years of potential life lost before age 75 per 100,000 population (age-adjusted), 2005-2007	5,179	5,564	6,815
Morbidity				
Poor or fair health	Percent of adults reporting fair or poor health (age-adjusted), 2003-2009	13%	10%	12%
Poor physical health days	Average number of physically unhealthy days reported in past 30 days (age-adjusted), 2003-2009	3.0	2.6	2.8
Poor mental health days	Average number of mentally unhealthy days reported in past 30 days (age-adjusted), 2003-2009	2.4	2.3	2.6
Low birthweight	Percent of live births with low birthweight (<2,500 grams), 2001-2007	6.0%	6.0%	6.8%
HEALTH FACTORS				
Health Behaviors				
Adult smoking	Percent of adults that currently smoke and have smoked at least 100 cigarettes in their lifetime, 2003-2009	19%	15%	20%
Adult obesity	Percent of adults that report a body mass index (BMI) of at least 30 kg/m2, 2008	30%	25%	29%
Physical inactivity	Percent of adults reporting no leisure time physical activity, 2008	28%	20%	26%
Excessive drinking	Percent of adults reporting binge drinking and heavy drinking**, 2003-2009	20%	8%	19%
Motor vehicle crash death rate	Motor vehicle crash deaths per 100,000 population, 2001-2007	11.4	12.0	23.7
Sexually transmitted infections	Number of chlamydia cases (new cases reported) per 100,000 population, 2008	224.7	83.0	371.3
Teen birth rate	Number of teen births per 1,000 females ages 15-19, 2001-2007	28.5	22.0	38.7
Clinical Care				
Uninsured adults	Percent of adult population ages 18-64 without health insurance, 2007	14%	13%	16%
Uninsured youth	Percent of youth ages 0-18 without health insurance, 2007	7%	7%	9%
Primary care physicians	Ratio of total population to primary care physicians, 2008	761:1	631:1	769:1
Mental health providers	Ratio of total population to mental health providers, 2008	4,378:1	2,242:1	3,544:1
Dentist rate	Number of professionally active dentists per 100,000 population, 2007	54.0	69.0	50.0
Preventable hospital stays	Hospitalization discharges for ambulatory care-sensitive conditions per 1,000 Medicare enrollees, 2006-2007	51.4	52.0	68.6
Diabetic screening	Percent of diabetic Medicare enrollees that receive HbA1c screening, 2006-2007	90%	89%	83%
Mammography screening	Percent of female Medicare enrollees that receive mammography screening, 2006-2007	71%	74%	68%

2011 County Health Profile (Page 2)

Brown County
South Dakota

HEALTH FACTORS (continued)		Brown	*National Benchmark	South Dakota
Social and Economic Factors				
High school graduation	Percent of ninth-grade cohort in public schools that graduates from high school in four years, 2006-2007	80%	92%	83%
Some college	Percent of adults ages 25-44 with some post-secondary education, 2005-2009	70%	68%	64%
Unemployment	Percent of population ages 16 and older that is unemployed but seeking work, 2009	3.5%	5.3%	4.8%
Child poverty	Percent of children ages 0-17 living below the Federal Poverty Line, 2008	13%	11%	18%
Inadequate social support	Percent of adults that never, rarely, or sometimes get the social and emotional support they need, 2003-2009	14%	14%	17%
Children in single-parent households	Percent of children in families that live in a household headed by a parent with no spouse present, 2005-2009	25%	20%	29%
Homicide rate	Number of deaths due to murder or non-negligent manslaughter per 100,000 population, 2001-2007	-	1.0	2.5
Physical Environment				
Air pollution-particulate matter	Number of days air quality was unhealthy for sensitive populations due to fine particulate matter, 2006	0	0	0
Air pollution-ozone	Number of days air quality was unhealthy for sensitive populations due to ozone levels, 2006	0	0	0
Access to healthy foods	Percent of zip codes with a healthy food outlet (i.e., grocery store or produce stand/farmers' market), 2008	25%	92%	42%
Access to recreational facilities	Number of recreational facilities per 100,000 population, 2008	23.0	17.0	13.0

Demographics		Brown	United States	South Dakota
Youth	Percent of total population ages 0-17, 2009	22%	24%	25%
Elderly	Percent of total population ages 65 and older, 2009	17%	13%	14%
Rural	Percent of total population living in a rural area, 2000	30%	21%	48%
Not English proficient	Percent of total population that speaks English less than "very well," 2005-2009	1%	9%	2%
Illiteracy	Percent of population ages 16 and older that lacks basic prose literacy skills, 2003	6%	15%	7%

*The national benchmark is the 90th percentile (i.e., 10% of counties nationwide ranked better). **Binge drinking is defined as consuming more than 4 (for women) or 5 (for men) alcoholic beverages on a single occasion in the past 30 days. Heavy drinking is defined as drinking more than 1 (for women) or 2 (for men) alcoholic beverages per day on average. - Blank values reflect unreliable or missing data.

Source: The overall format and content of the County Health Profiles is based largely on County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/. Additional data sources include the U.S. Census Bureau, Small Area Health Insurance Estimates, http://www.census.gov/sahie/ and the Centers for Disease Control and Prevention's National Center for Health Statistics - the Health Indicators Warehouse, http://healthindicators.gov and "Health, United States, 2010," Table 109, http://www.cdc.gov/nchs/hus.htm.

 The 2011 County Health Profile was prepared by researchers at North Dakota State University in Fargo for the 2011-2013 Fargo-Moorhead Community Health Needs Assessment Collaborative. December 2011

Definitions of Health Variables

Definitions of Health Variables from the *County Health Rankings 2011 Report* Variable	Definition
Poor or Fair Health	Self-reported health status based on survey responses to the question: "In general, would you say that your health is excellent, very good, good, fair, or poor?"
Poor Physical Health Days (in past 30 days)	Estimate 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?"
Poor Mental Health Days (in past 30 days)	Estimate 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?"
Adult Smoking	Percent of adults that report smoking equal to, or greater than, 100 cigarettes and are currently a smoker
Adult Obesity	Percent of adults that report a BMI greater than, or equal to, 30
Excessive Drinking	Percent of as individuals that report binge drinking in the past 30 days (more than 4 drinks on one occasion for women, more than 5 for men) or heavy drinking (defined as more than 1 (women) or 2 (men) drinks per day on average
Sexually Transmitted Infections	Chlamydia rate per 100,000 population
Teen Birth Rate	Birth rate per 1,000 female population, ages 15-19
Uninsured Adults	Percent of population under age 65 without health insurance
Preventable Hospital Stays	Hospitalization rate for ambulatory-care sensitive conditions per 1,000 Medicare enrollees
Mammography Screening	Percent of female Medicare enrollees that receive mammography screening
Access to Healthy Foods	Healthy food outlets include grocery stores and produce stands/farmers' markets
Access to Recreational Facilities	Rate of recreational facilities per 100,000 population
Physical Inactivity	Percent of adults aged 20 and over that report no leisure time physical activity
Primary Care Provider Ratio	Ratio of population to primary care providers
Mental Health Care Provider Ratio	Ratio of population to mental health care providers
Diabetes Screening	Percent of Medicare enrollees with diabetes that receive HbA1c screening
Binge Drinking	Percent of adults that report binge drinking in the last 30 days. Binge drinking is consuming more than 4 (women) or 5 (men) alcoholic drinks on one occasion.

Aging Profile

2010 Demographic and Socio-Economic Profile for the Aging Population Ages 65 and Older

Brown County

South Dakota

CHARACTERISTICS	Total	AGE: Less than 65 Years	AGE: Ages 65 and Older
Population[1]			
Total population	36,531	30,658	5,873
Percent ages 65 and older	16%	-	100%
Percent ages 85 and older	3%	-	19%
Percent male	49%	50%	42%
Percent female	51%	50%	58%
Living Arrangements			
Total households (by age of householder)[1]	15,489	11,676	3,813
Percent with family households (i.e., at least two people who are related)	61%	64%	49%
Percent with householder living alone	33%	28%	49%
Grandparents living with their grandchildren*[2]	173	152	21
Percent who are responsible for their grandchildren	92%	97%	62%
Housing[1]			
Percent of occupied housing that is owner-occupied	66%	66%	69%
Percent of occupied housing that is renter-occupied	34%	34%	31%
Economic Security[2]			
Percent of working-age population in labor force	71%	84%	20%
Percent of total population with income less than 100% of poverty	10%	9%	15%
Percent of total population with income less than 200% of poverty	28%	26%	37%
Median household income (by age of householder)	$45,615	$44,142	$27,733
Owner-occupied housing units (by age of householder)	10,337	7,607	2,730
Percent spending 30% or more of income toward housing costs	17%	16%	21%
Renter-occupied housing units (by age of householder)	4,605	3,358	1,247
Percent spending 30% or more of income toward housing costs	29%	26%	39%

Note: *The age categories for this indicator are grandparents ages 35 to 59 and grandparents ages 60 and older.

Source: U.S. Census Bureau, [1]2010 Census Summary File 1 and [2]2006-2010 American Community Survey 5-Year Estimates (sample data). The estimates presented are meant to give perspective on characteristics across age categories; however, because they are based on sample data, one should use caution when interpreting small numbers. - Blank values reflect data that are missing or not applicable.

 The Aging Profile was prepared by researchers at North Dakota State University in Fargo for Sanford Health. May 2012

Aging Profile

2010 Demographic and Socio-Economic Profile for the Aging Population Ages 65 and Older

United States

CHARACTERISTICS	Total	AGE: Less than 65 Years	AGE: Ages 65 and Older
Population[1]			
Total population	308,745,538	268,477,554	40,267,984
Percent ages 65 and older	13%	-	100%
Percent ages 85 and older	2%	-	14%
Percent male	49%	50%	43%
Percent female	51%	50%	57%
Living Arrangements			
Total households (by age of householder)[1]	116,716,292	90,896,456	25,819,836
Percent with family households (i.e., at least two people who are related)	66%	70%	55%
Percent with householder living alone	27%	22%	43%
Grandparents living with their grandchildren*[2]	6,445,885	3,594,928	2,850,957
Percent who are responsible for their grandchildren	41%	49%	31%
Housing[1]			
Percent of occupied housing that is owner-occupied	65%	62%	77%
Percent of occupied housing that is renter-occupied	35%	38%	23%
Economic Security[2]			
Percent of working-age population in labor force	65%	74%	16%
Percent of total population with income less than 100% of poverty	14%	15%	8%
Percent of total population with income less than 200% of poverty	32%	32%	31%
Median household income (by age of householder)	$51,914	$48,998	$33,906
Owner-occupied housing units (by age of householder)	76,089,650	57,117,163	18,972,487
Percent spending 30% or more of income toward housing costs	30%	31%	28%
Renter-occupied housing units (by age of householder)	38,146,346	33,079,489	5,066,857
Percent spending 30% or more of income toward housing costs	47%	46%	54%

Note: *The age categories for this indicator are grandparents ages 35 to 59 and grandparents ages 60 and older.

Source: U.S. Census Bureau, [1]2010 Census Summary File 1 and [2]2006-2010 American Community Survey 5-Year Estimates (sample data). The estimates presented are meant to give perspective on characteristics across age categories; however, because they are based on sample data, one should use caution when interpreting small numbers. - Blank values reflect data that are missing or not applicable.

 The Aging Profile was prepared by researchers at North Dakota State University in Fargo for Sanford Health. May 2012

Diversity Profile

2010 Demographic and Socio-Economic Profile for Racial and Ethnic Populations

Brown County

South Dakota

CHARACTERISTICS	Total	RACE: White alone	RACE: Black alone	RACE: American Indian alone	RACE: Asian alone	ETHNICITY: Hispanic Origin - of any race
Population [1]						
Total population	36,531	34,057	194	1,105	355	496
Percent ages 0 to 17	23%	22%	31%	35%	15%	41%
Percent ages 18 to 44	34%	33%	55%	39%	68%	41%
Percent ages 45 to 64	27%	27%	11%	21%	13%	12%
Percent ages 65 and older	16%	17%	3%	4%	4%	6%
Median age (in years)	38.6	40.1	23.4	26.0	24.1	22.8
Living Arrangements						
Total households [1]	15,489	14,776	58	380	88	140
Percent with householder living alone	33%	33%	48%	26%	33%	36%
Percent with families with children ages 0 to 17	27%	26%	26%	38%	30%	32%
Grandparents living with their grandchildren [2]	173	134	0	39	0	0
Percent who are responsible for grandchildren	92%	90%	-	100%	-	-
Housing [1]						
Percent occupied housing that is owner-occupied	66%	68%	14%	43%	39%	34%
Percent occupied housing that is renter-occupied	34%	32%	86%	57%	61%	66%
Educational Attainment [2]						
Percent of persons ages 25 and older with high school degree or higher	90%	90%	-	95%	100%	99%
Percent of persons ages 25 and older with Bachelor's degree or higher	24%	24%	-	22%	64%	36%
Economic Security [2]						
Unemployment rate	2%	2%	0%	1%	14%	0%
Median household income	$45,615	$45,320	-	$49,937	$46,463	$49,741
Percent of households with income <$25,000	27%	27%	100%	16%	0%	0%
Percent of persons with income <100% poverty	10%	10%	13%	11%	9%	0%
Percent of children ages 0 to 17 in families with income <100% poverty	10%	9%	18%	16%	-	0%
Percent of elderly ages 65 and older with income <100% poverty	15%	15%	-	39%	0%	0%

Source: U.S. Census Bureau, [1]2010 Census Summary File 1 and [2]2006-2010 American Community Survey (ACS) 5-Year Estimates (sample data). The estimates presented are meant to give perspective on characteristics across race and ethnic categories; however, because they are based on sample data, one should use caution when interpreting small numbers. - Blank values reflect data that are missing or not applicable. Racial categories not represented include Native Hawaiian and Other Pacific Islander alone, Some Other Race alone, and Two or More races.

 The Diversity Profile was prepared by researchers at North Dakota State University in Fargo for Sanford Health. May 2012

Diversity Profile

2010 Demographic and Socio-Economic Profile for Racial and Ethnic Populations

United States

CHARACTERISTICS	Total	RACE: White alone	RACE: Black alone	RACE: American Indian alone	RACE: Asian alone	ETHNICITY: Hispanic Origin - of any race
Population[1]						
Total population	308,745,538	223,553,265	38,929,319	2,932,248	14,674,252	50,477,594
Percent ages 0 to 17	24%	22%	28%	30%	22%	34%
Percent ages 18 to 44	37%	35%	39%	40%	44%	43%
Percent ages 45 to 64	26%	28%	24%	23%	24%	17%
Percent ages 65 and older	13%	15%	9%	7%	9%	6%
Median age (in years)	37.2	40.3	32.4	30.2	35.4	27.3
Living Arrangements						
Total households[1]	116,716,292	89,754,352	14,129,983	939,707	4,632,164	13,461,366
Percent with householder living alone	27%	28%	30%	23%	19%	15%
Percent with families with children ages 0 to 17	30%	27%	33%	36%	37%	48%
Grandparents living with their grandchildren[2]	6,445,885	3,926,992	1,257,630	91,084	477,100	1,531,538
Percent who are responsible for grandchildren	41%	42%	50%	55%	17%	33%
Housing[1]						
Percent occupied housing that is owner-occupied	65%	71%	44%	54%	58%	47%
Percent occupied housing that is renter-occupied	35%	29%	56%	46%	42%	53%
Educational Attainment[2]						
Percent of persons ages 25 and older with high school degree or higher	85%	87%	81%	77%	86%	62%
Percent of persons ages 25 and older with Bachelor's degree or higher	28%	29%	18%	13%	50%	13%
Economic Security[2]						
Unemployment rate	8%	7%	14%	14%	6%	10%
Median household income	$51,914	$54,999	$35,194	$36,779	$68,950	$41,534
Percent of households with income <$25,000	24%	21%	37%	36%	18%	29%
Percent of persons with income <100% poverty	14%	11%	25%	26%	11%	22%
Percent of children ages 0 to 17 in families with income <100% poverty	19%	15%	35%	33%	12%	29%
Percent of elderly ages 65 and older with income <100% poverty	10%	8%	20%	20%	13%	19%

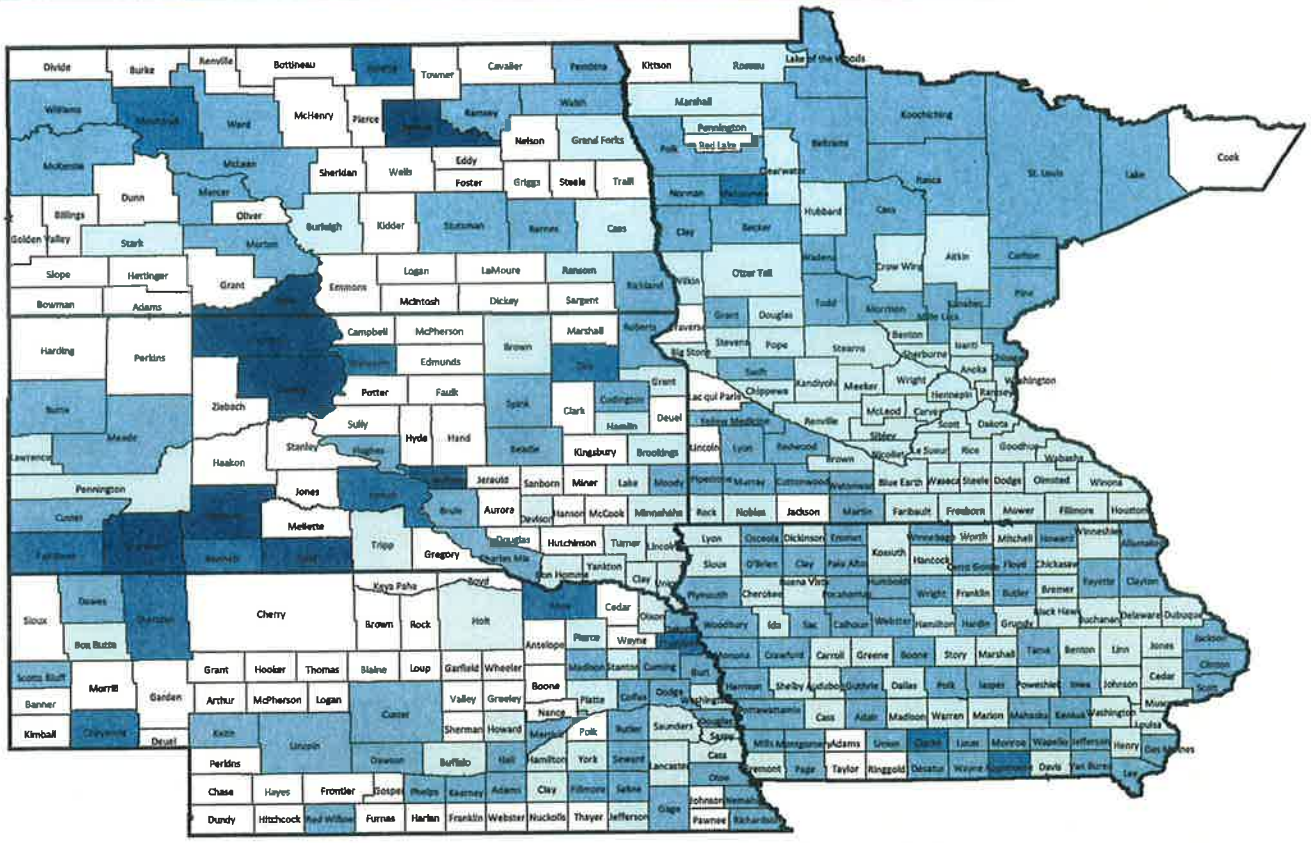
Source: U.S. Census Bureau, [1]2010 Census Summary File 1 and [2]2006-2010 American Community Survey (ACS) 5-Year Estimates (sample data). The estimates presented are meant to give perspective on characteristics across race and ethnic categories; however, because they are based on sample data, one should use caution when interpreting small numbers. - Blank values reflect data that are missing or not applicable. Racial categories not represented include Native Hawaiian and Other Pacific Islander alone, Some Other Race alone, and Two or More races.

 The Diversity Profile was prepared by researchers at North Dakota State University in Fargo for Sanford Health. May 2012

Map 1

Premature Death - A health outcome measure focusing on mortality

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Years of potential life lost before age 75 per 100,000 population (age-adjusted), 2005-2007

- 3,624 - 5,999
- 6,000 - 8,899
- 8,900 - 14,999
- 15,000 - 24,829
- Unreliable or missing data

CONTEXT

What It Is: 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 who dies 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.

Where It Comes From: 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). NVSS calculates age-adjusted YPLL rates based on three-year averages to create more robust estimates of mortality, particularly for counties with smaller populations.

Importance: 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.

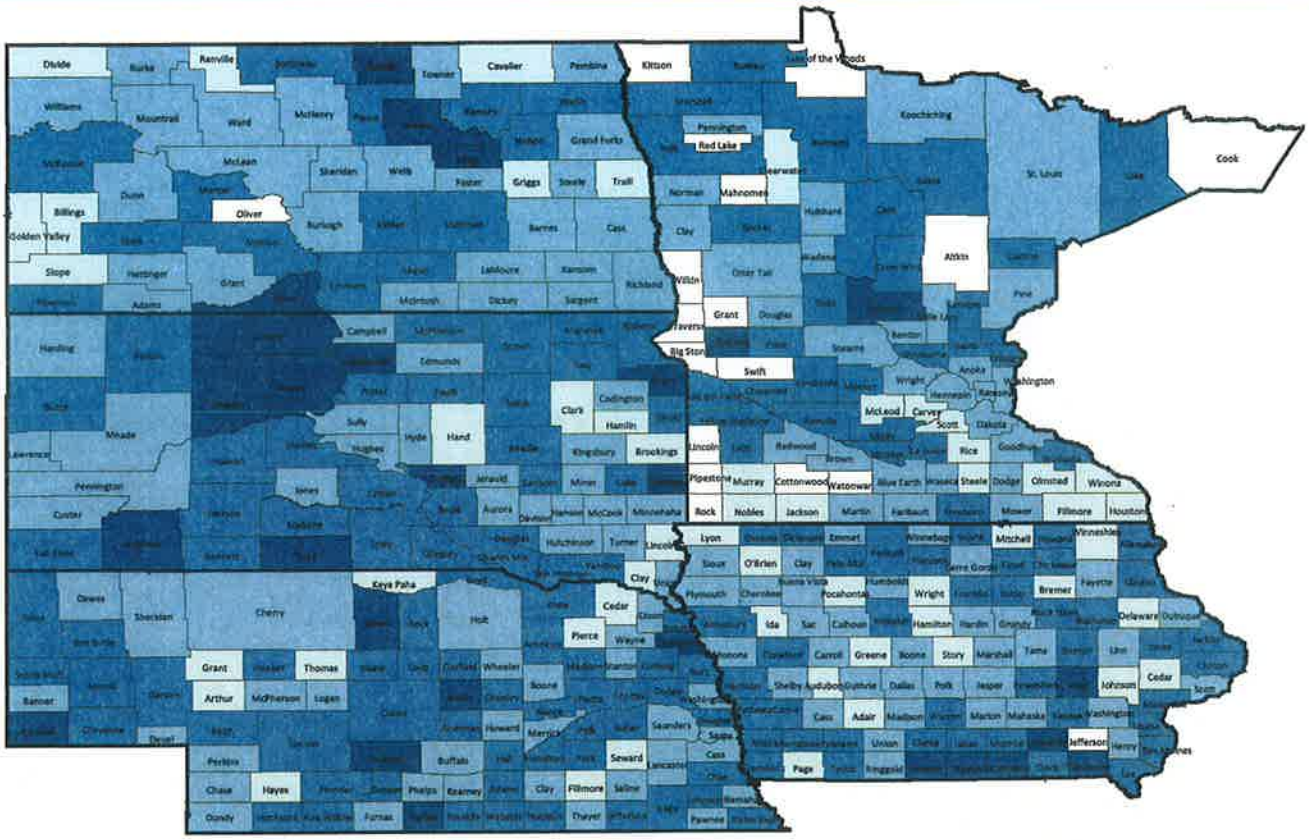
- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

 This map was prepared by researchers at North Dakota State University in Fargo for the 2011-2013 Fargo-Moorhead Community Health Needs Assessment Collaborative. December 2011

Poor or Fair Health - A health outcome measure focusing on morbidity

Map 2

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Percent of adults reporting fair or poor health (age-adjusted), 2003-2009

- 3.5% - 8.9%
- 9.0% - 11.9%
- 12.0% - 16.9%
- 17.0% - 29.1%
- Unreliable or missing data

CONTEXT

What It Is: 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 is the percent of adult respondents who rate their health "fair" or "poor." The measure is age-adjusted to the 2000 U.S. population.

Where It Comes From: This measure was calculated by the National Center for Health Statistics using data 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 ages 18 and older living in households with a land-line telephone. Seven years of data are used to generate more stable estimates of self-reported health status.

Importance: 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.

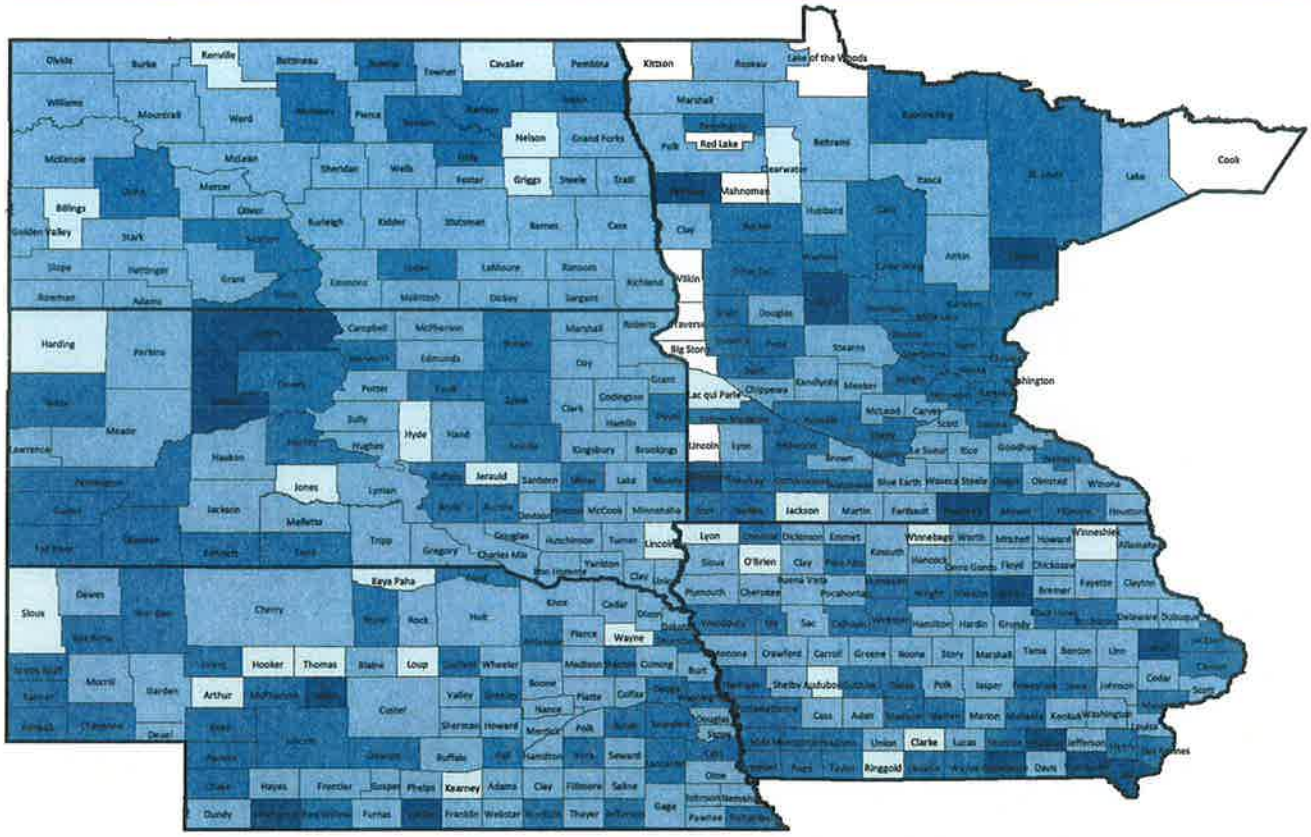
- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

 This map was prepared by researchers at North Dakota State University in Fargo for the 2011-2013 Fargo-Moorhead Community Health Needs Assessment Collaborative. December 2011

Map 3

Poor Physical Health Days - A health outcome measure focusing on morbidity

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Average number of physically unhealthy days reported in past 30 days (age-adjusted), 2003-2009

- 0.6 - 1.9
- 2.0 - 2.9
- 3.0 - 3.9
- 4.0 - 6.5
- Unreliable or missing data

CONTEXT

What It Is: The poor physical health days measure 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?" Presented is 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.

Where It Comes From: This measure was calculated by the National Center for Health Statistics using data 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 ages 18 and older living in households with a land-line telephone. Seven years of data are used to generate more stable estimates of poor physical health days.

Importance: 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.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

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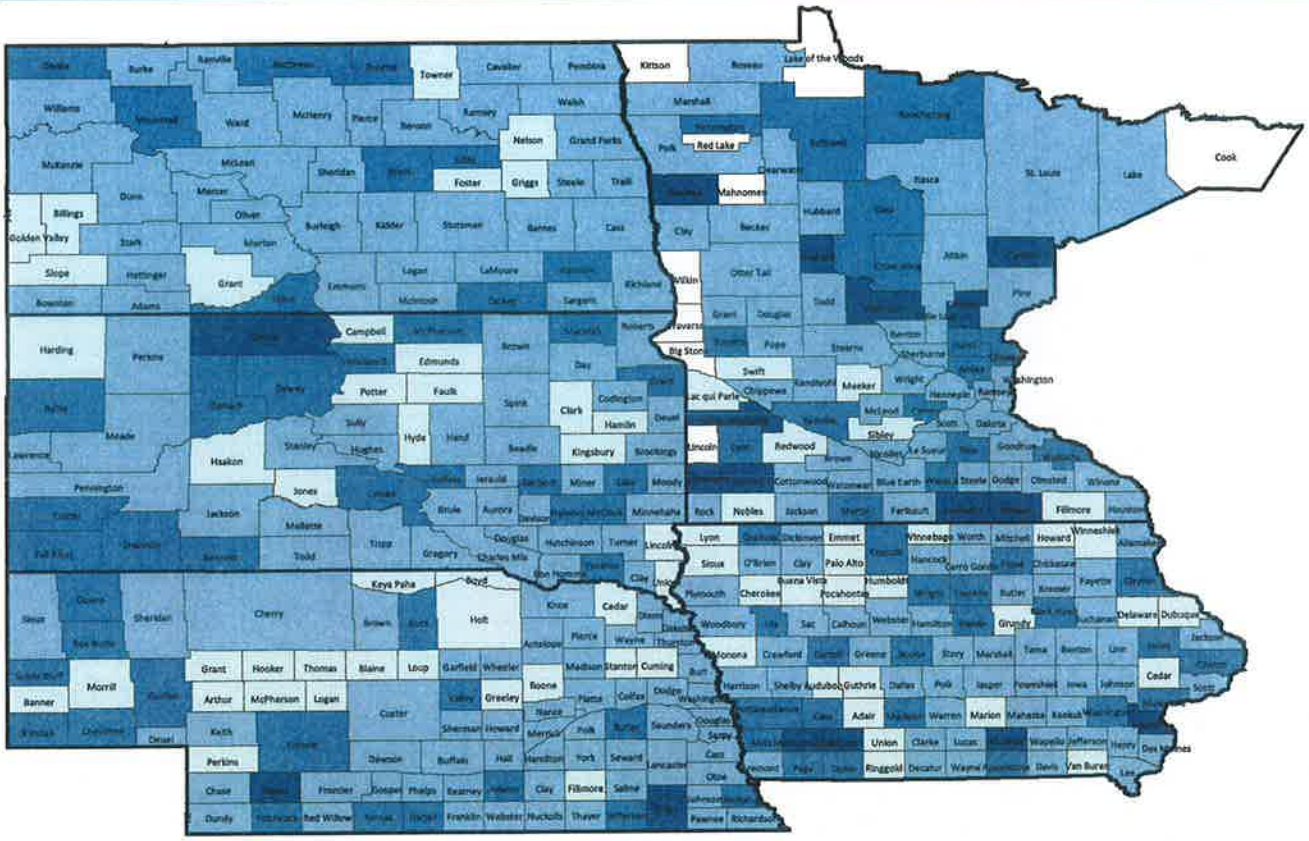
Map 4

Poor Mental Health Days - A health outcome measure focusing on morbidity

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Average number of mentally unhealthy days reported in past 30 days (age-adjusted), 2003-2009

- 0.7 - 1.9
- 2.0 - 2.9
- 3.0 - 3.9
- 4.0 - 4.8
- Unreliable or missing data

CONTEXT

What It Is: The poor mental health days measure is 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?" Presented is 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.

Where It Comes From: This measure was calculated by the National Center for Health Statistics using data 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 ages 18 and older living in households with a land-line telephone. NCHS used seven years of data to generate more stable estimates of poor mental health days.

Importance: 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.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

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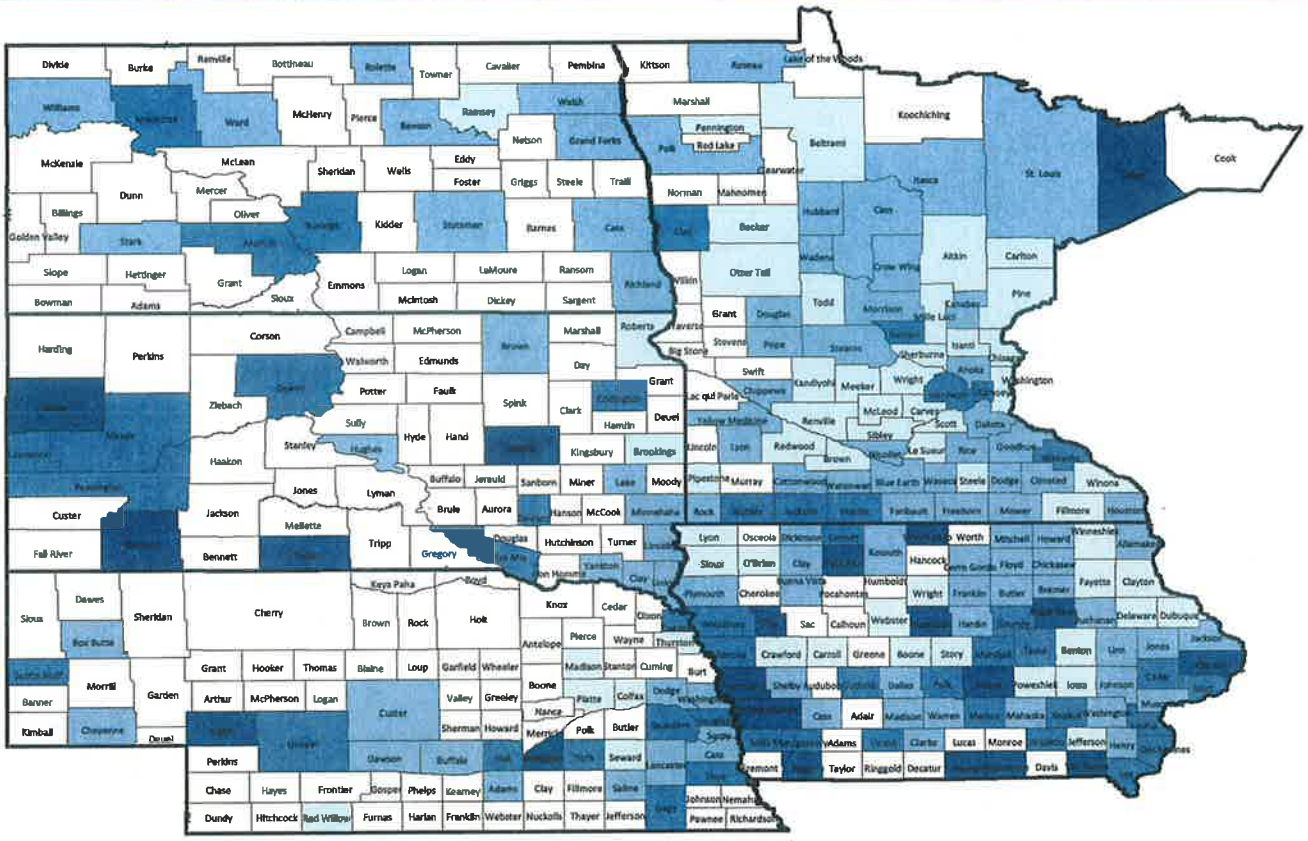
Map 5

Low Birthweight - A health outcome measure focusing on morbidity

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Percent of live births with low birthweight (<2,500 grams), 2001-2007

- 4.7% - 5.9%
- 6.0% - 6.9%
- 7.0% - 7.9%
- 8.0% - 9.1%
- Unreliable or missing data

CONTEXT

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

Where It Comes From: 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 (NCHS), part at the Centers for Disease Control and Prevention (CDC). NCHS provides this measure based on the percent of live births with low birthweight for a seven-year period. They use seven-year averages to create more robust estimates, particularly for counties with smaller populations.

Importance: 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.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

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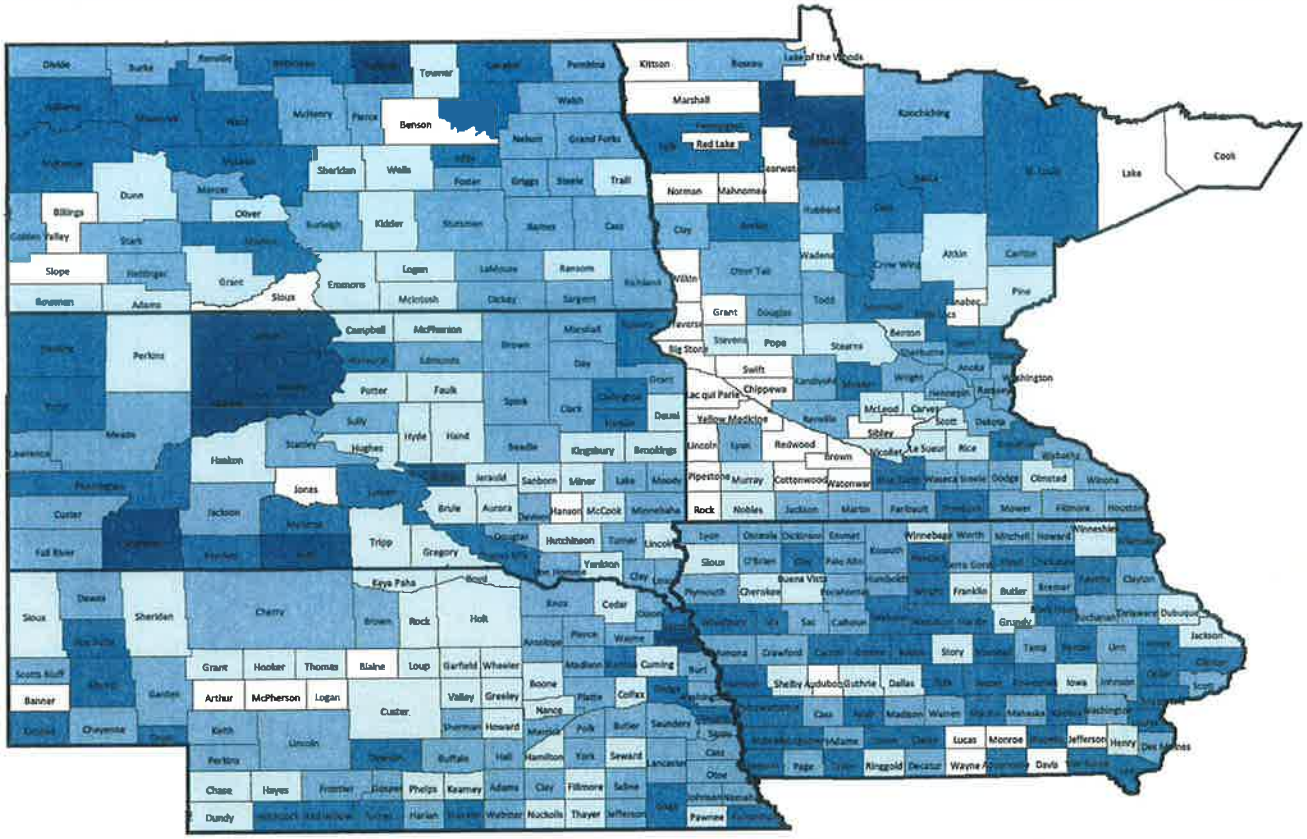
Map 6

Adult Smoking - A health factor measure focusing on health behaviors

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Percent of adults that currently smoke and have smoked at least 100 cigarettes in lifetime, 2003-2009

- 3.6% - 15.9%
- 16.0% - 20.9%
- 21.0% - 29.9%
- 30.0% - 48.5%
- Unreliable or missing data

CONTEXT

What It Is: 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.

Where It Comes From: This measure was calculated by the National Center for Health Statistics using data 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 ages 18 and older living in households with a land-line telephone. The estimates are based on seven years of data.

Importance: Each year approximately 443,000 premature deaths occur in the U.S. 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.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

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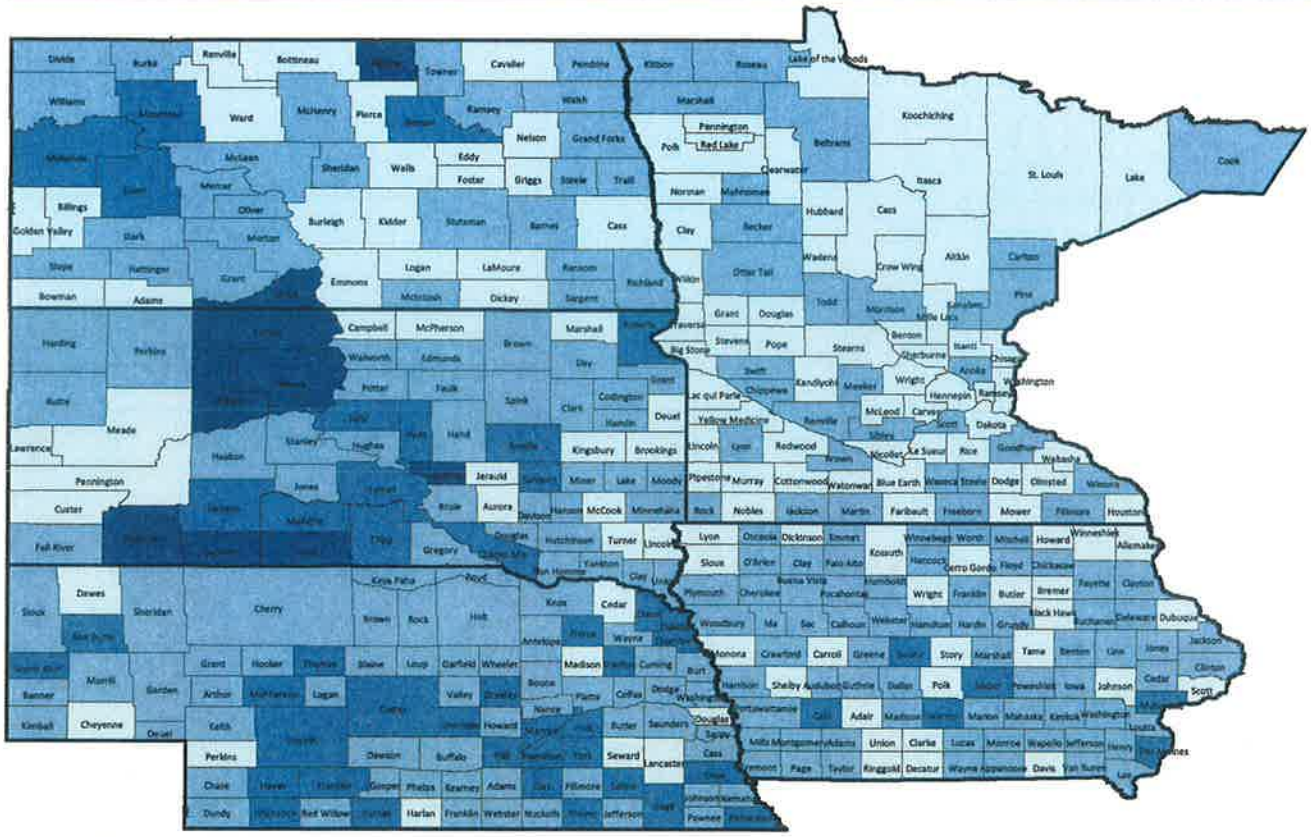
Map 7

Adult Obesity - A health factor measure focusing on health behaviors

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Percent of adults that report a body mass index (BMI) of at least 30 kg/m2, 2008

- 22.5% - 27.9%
- 28.0% - 29.9%
- 30.0% - 33.9%
- 34.0% - 41.0%

CONTEXT

What It Is: 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.

Where It Comes From: 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 multiple years of Behavioral Risk Factor Surveillance System (BRFSS) data. BRFSS data are representative of the total non-institutionalized U.S. population ages 18 and older living in households with a land-line telephone.

Importance: 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.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

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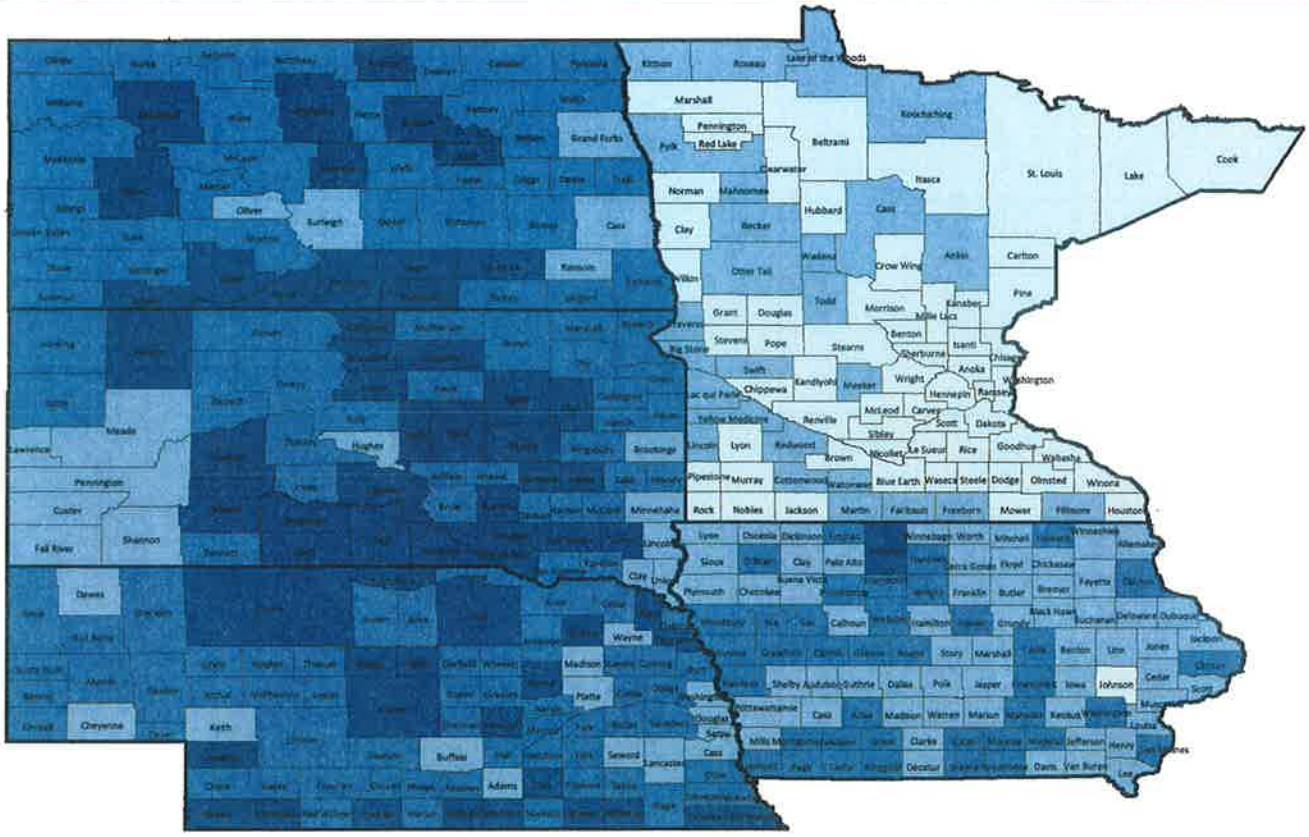
Physical Inactivity - A health factor measure focusing on health behaviors

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Percent of adults reporting no leisure time physical activity, 2008

- 14.6% - 19.9%
- 20.0% - 25.9%
- 26.0% - 29.9%
- 30.0% - 35.7%

CONTEXT

What It Is: Physical inactivity is the estimated percent of adults ages 20 and older reporting no leisure time physical activity.

Where It Comes From: Estimates of physical inactivity by county were calculated by the CDC's National Center for Chronic Disease Prevention and Health Promotion, Division of Diabetes Translation, using multiple years of Behavioral Risk Factor Surveillance System (BRFSS) data. BRFSS data are representative of the total non-institutionalized U.S. population ages 18 and older living in households with a land-line telephone.

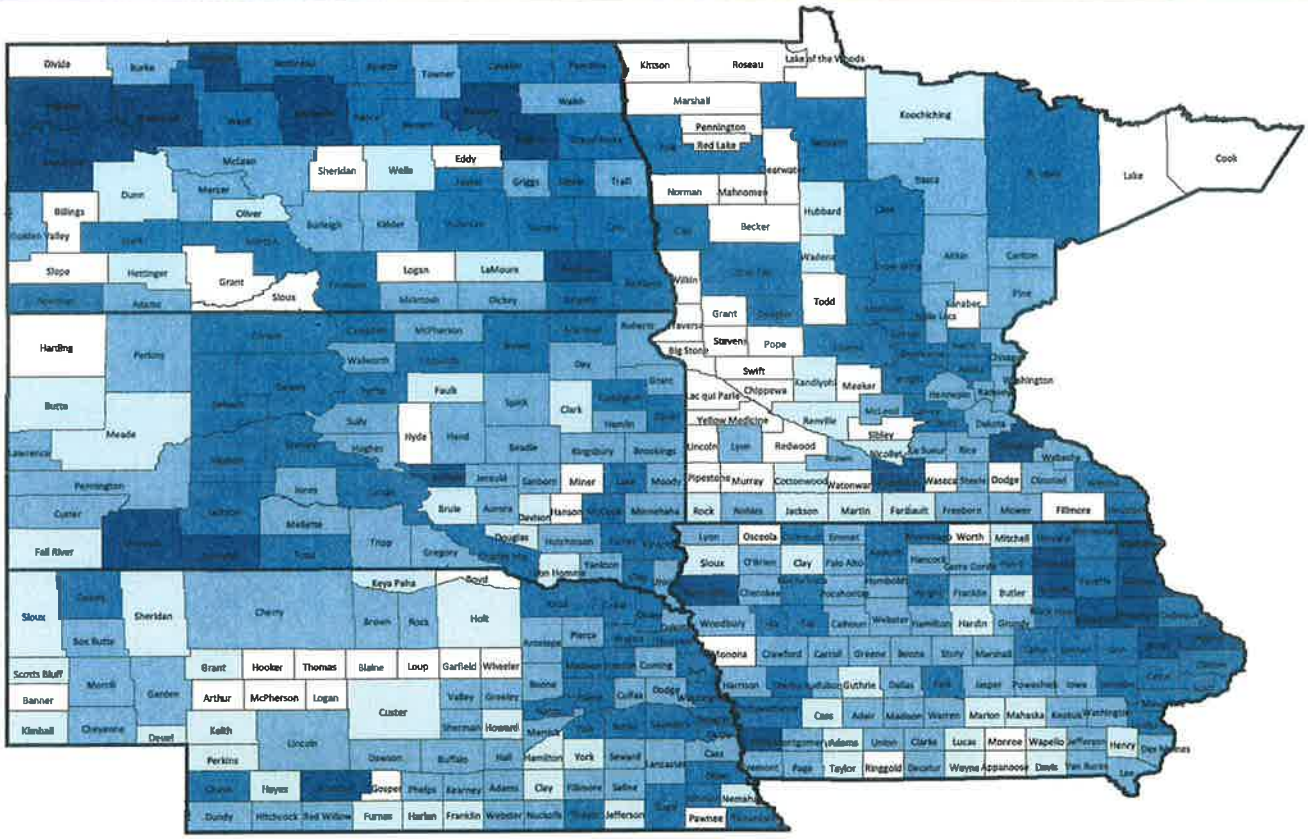
Importance: Regular physical activity is one of the most important things one can do for their health. It can help control weight, reduce risk of cardiovascular disease, reduce risk for type 2 diabetes and metabolic syndrome, reduce risk of some cancers, strengthen bones and muscles, improve mental health and mood, improve ability to do daily activities and prevent falls in older adults, and increase chances of living longer (Centers for Disease Control and Prevention, http://www.cdc.gov/physicalactivity/everyone/health/index.html).

- Data were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

Map 9

Excessive Drinking - A health factor measure focusing on health behaviors

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Percent of adults reporting binge drinking and heavy drinking, 2003-2009

- 7.5% - 14.9%
- 15.0% - 19.9%
- 20.0% - 24.9%
- 25.0% - 35.9%
- Unreliable or missing data

CONTEXT

What It Is: The excessive drinking measure reflects the percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average.

Where It Comes From: This measure was calculated by the National Center for Health Statistics using data 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 ages 18 and older living in households with a land-line telephone. The estimates are based on seven years of data.

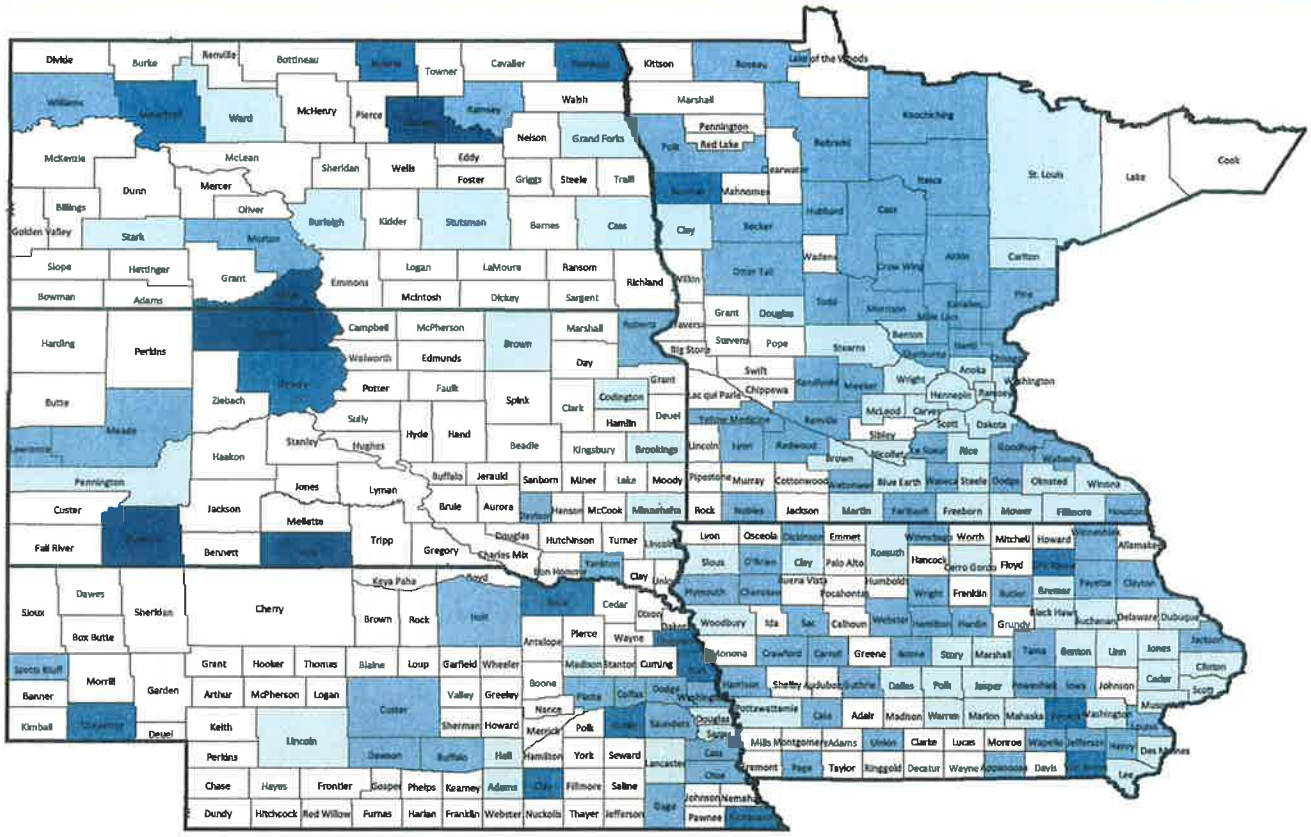
Importance: Excessive drinking is a risk factor for a number of adverse health outcomes such as alcohol poisoning, hypertension, acute myocardial infarction, sexually transmitted infections, unintended pregnancy, fetal alcohol syndrome, sudden infant death syndrome, suicide, interpersonal violence, and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

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

 This map was prepared by researchers at North Dakota State University in Fargo for the 2011-2013 Fargo-Moorhead Community Health Needs Assessment Collaborative. December 2011

Motor Vehicle Crash Death Rate - A health factor measure focusing on health behaviors

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Motor vehicle crash deaths per 100,000 population, 2001-2007

- 7.1 - 17.9
- 18.0 - 31.9
- 32.0 - 59.9
- 60.0 - 135.7
- Unreliable or missing data

CONTEXT

What It Is: 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. Motor vehicle deaths includes traffic and non-traffic accidents involving motorcycles and 3-wheel motor vehicles; cars; vans; trucks; buses; street cars; ATVs; industrial, agricultural, and construction vehicles; and bikes and pedestrians when colliding with any of the vehicles mentioned. Deaths due to boating accidents and airline crashes are not included in this measure.

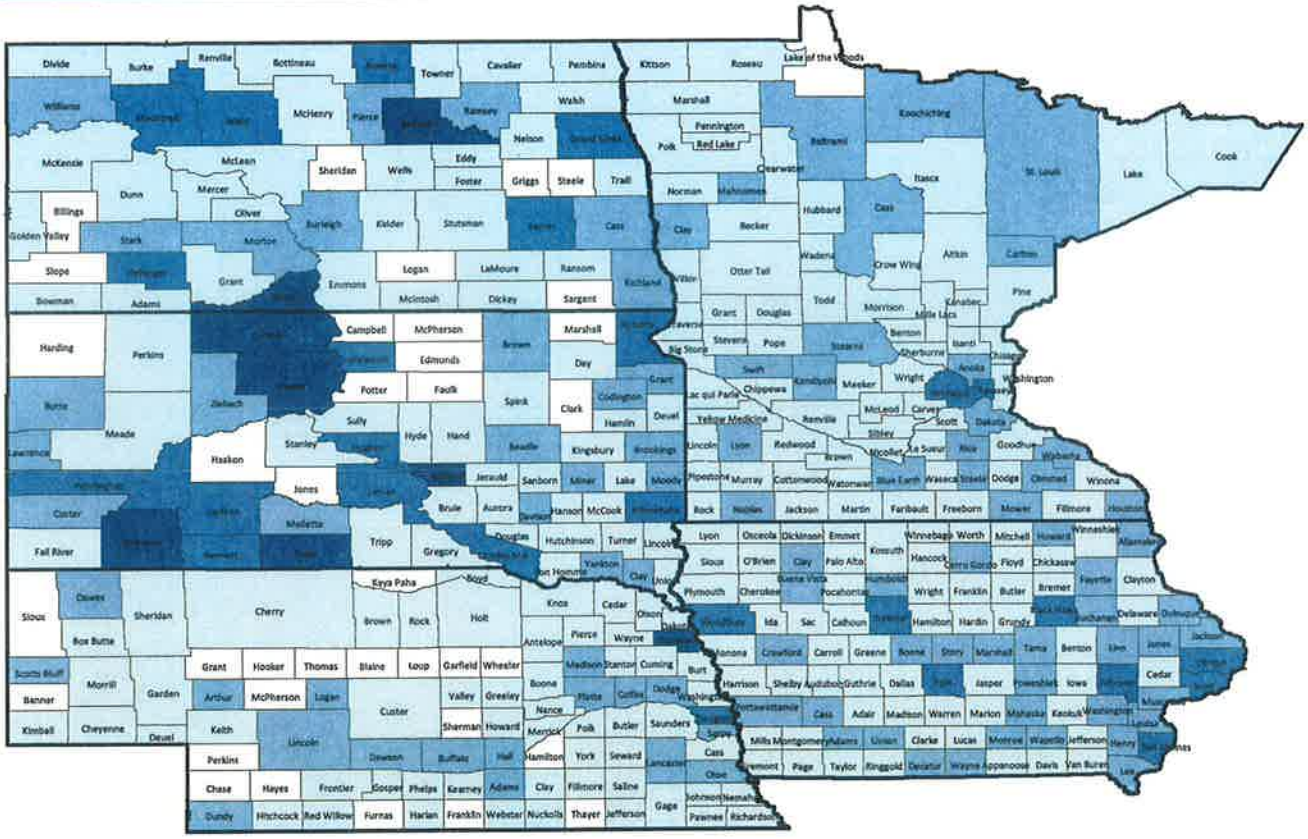
Where It Comes From: These data were calculated by National Center for Health Statistics (NCHS), part of the Centers for Disease Control and Prevention (CDC), based on data reported to the National Vital Statistics System (NVSS). NCHS used data for a seven-year period to create more robust estimates of cause-specific mortality, particularly for counties with smaller populations.

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

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

Sexually Transmitted Infections - A health factor measure focusing on health behaviors

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Number of chlamydia cases (new cases reported) per 100,000 population, 2008

- 15.4 - 176.9
- 177.0 - 399.9
- 400.0 - 1,015.9
- 1,016.0 - 2,326.8
- Unreliable or missing data

CONTEXT

What It Is: The Sexually Transmitted Infection (STI) rate is measured as chlamydia incidence (the number of new cases reported) per 100,000 population.

Where It Comes From: The county-level measures were obtained from the CDC's National Center for Hepatitis, HIV, STD, and TB Prevention.

Importance: 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.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

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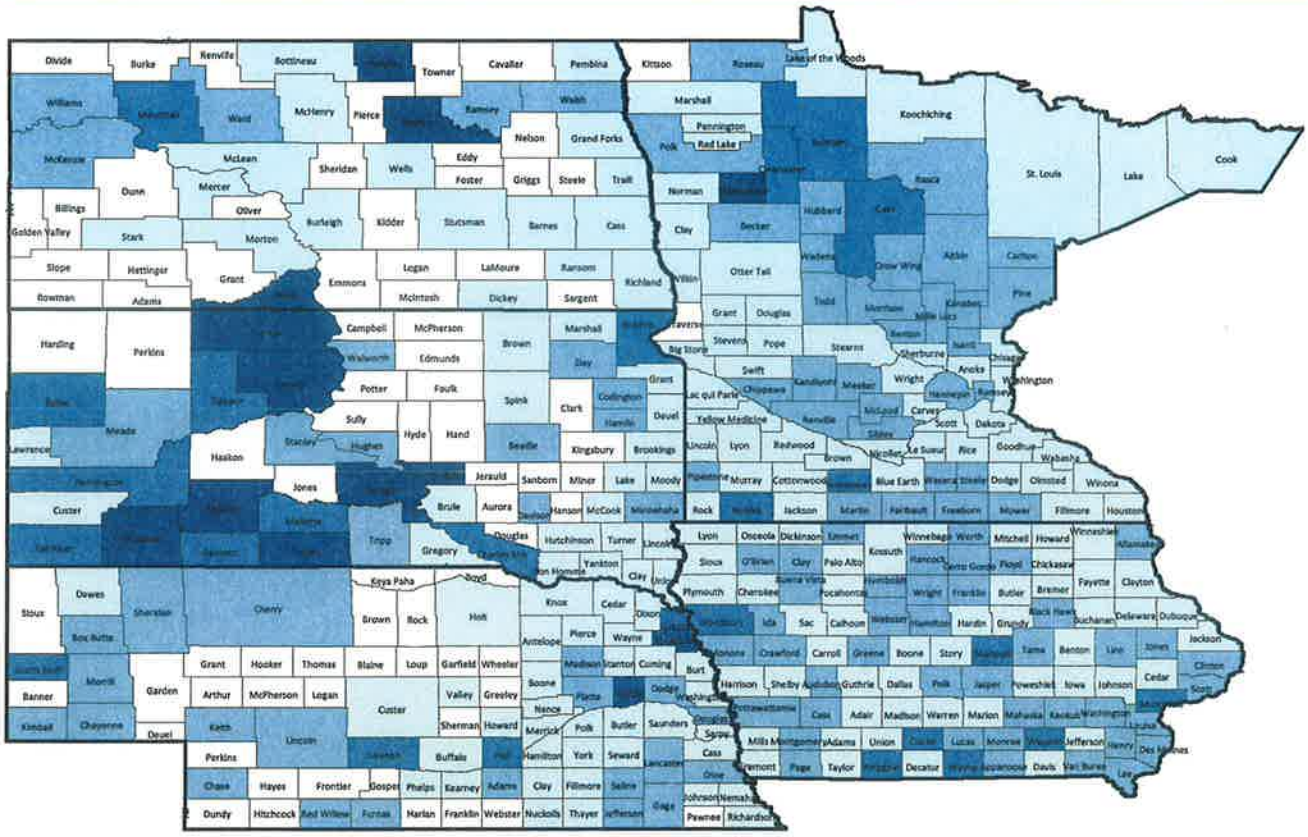
Map 12

Teen Birth Rate - A health factor measure focusing on health behaviors

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Number of teen births per 1,000 females ages 15 through 19, 2001-1007

- 8.1 - 28.9
- 29.0 - 45.9
- 46.0 - 79.9
- 80.0 - 137.8
- Unreliable or missing data

CONTEXT

What It Is: Teen births are reported as the number of births per 1,000 female population ages 15 through 19.

Where It Comes From: Teen birth rates 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).

Importance: 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.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

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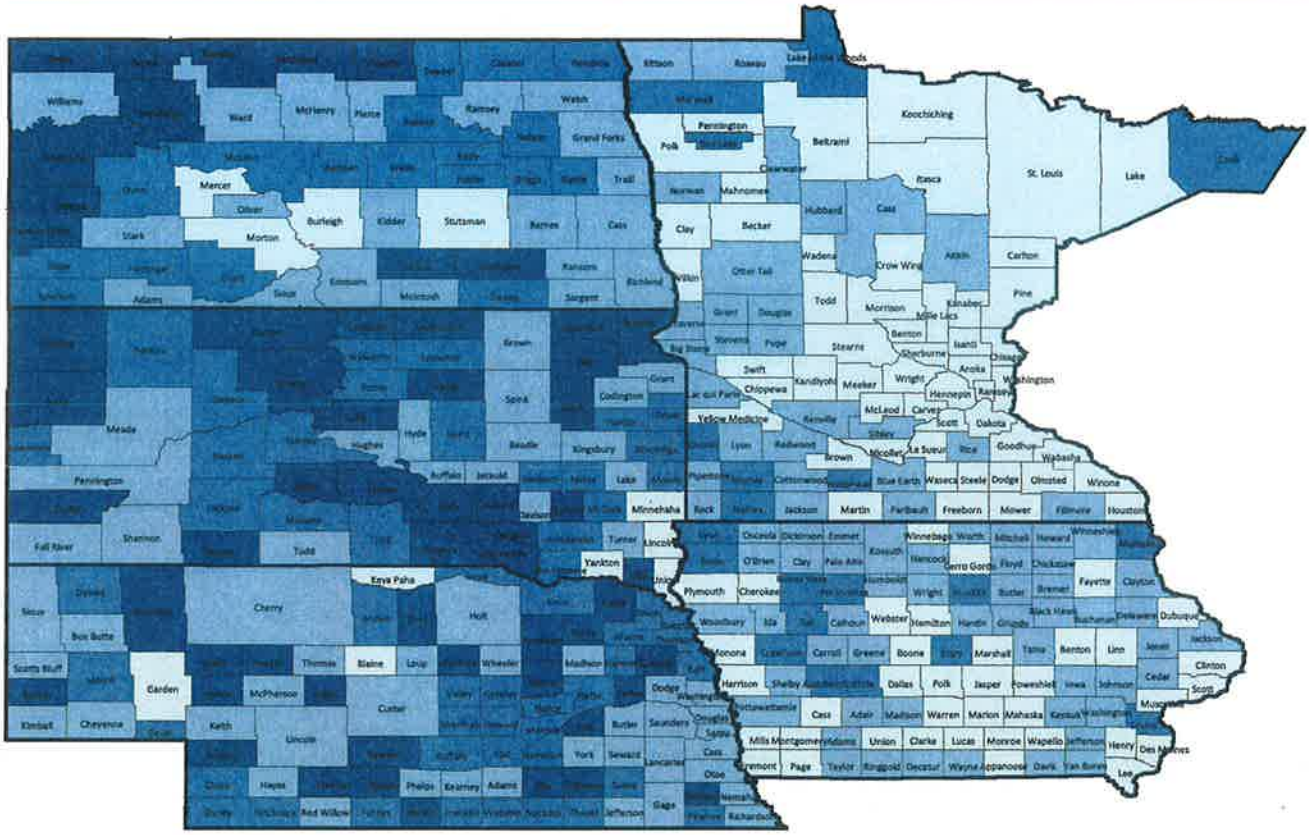
Uninsured Adults - A health factor measure focusing on clinical care

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Percent of adult population ages 18 through 64 without health insurance, 2007

- 8.3% - 12.9%
- 13.0% - 16.9%
- 17.0% - 20.9%
- 21.0% - 27.5%

CONTEXT

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

Where It Comes From: 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 used are for the most recent year for which reliable county-level estimates are available.

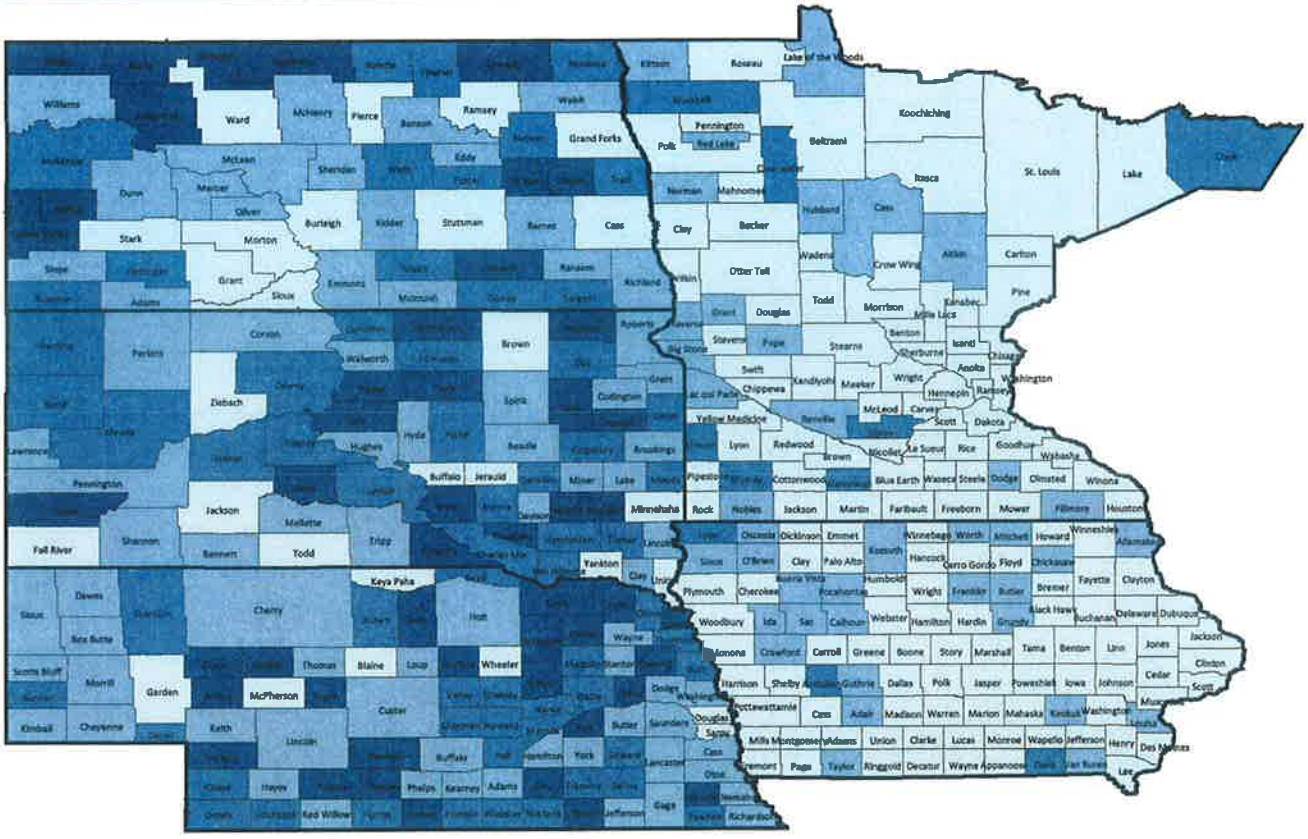
Importance: Lack of health insurance coverage is a significant barrier to accessing needed health care.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

Uninsured Youth - A health factor measure focusing on clinical care

Map 14

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Percent of youth ages 0 through 18 without health insurance, 2007

- 4.1% - 7.9%
- 8.0% - 10.9%
- 11.0% - 13.9%
- 14.0% - 20.5%

CONTEXT

What It Is: The uninsured youth measure represents the estimated percent of the children ages birth through 18 that has no health insurance coverage.

Where It Comes From: 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 used are for the most recent year for which reliable county-level estimates are available.

Importance: Children without health insurance are more likely than others to receive late or no care for health problems, putting them at greater risk for hospitalization. In addition to resulting in reduced access to health care, a lack of health insurance can also negatively influence children's school attendance and participation in extracurricular activities, and increase parental financial and emotional stress. (Child Trends DataBank, http://www.childtrendsdatabank.org/?q=node/297)

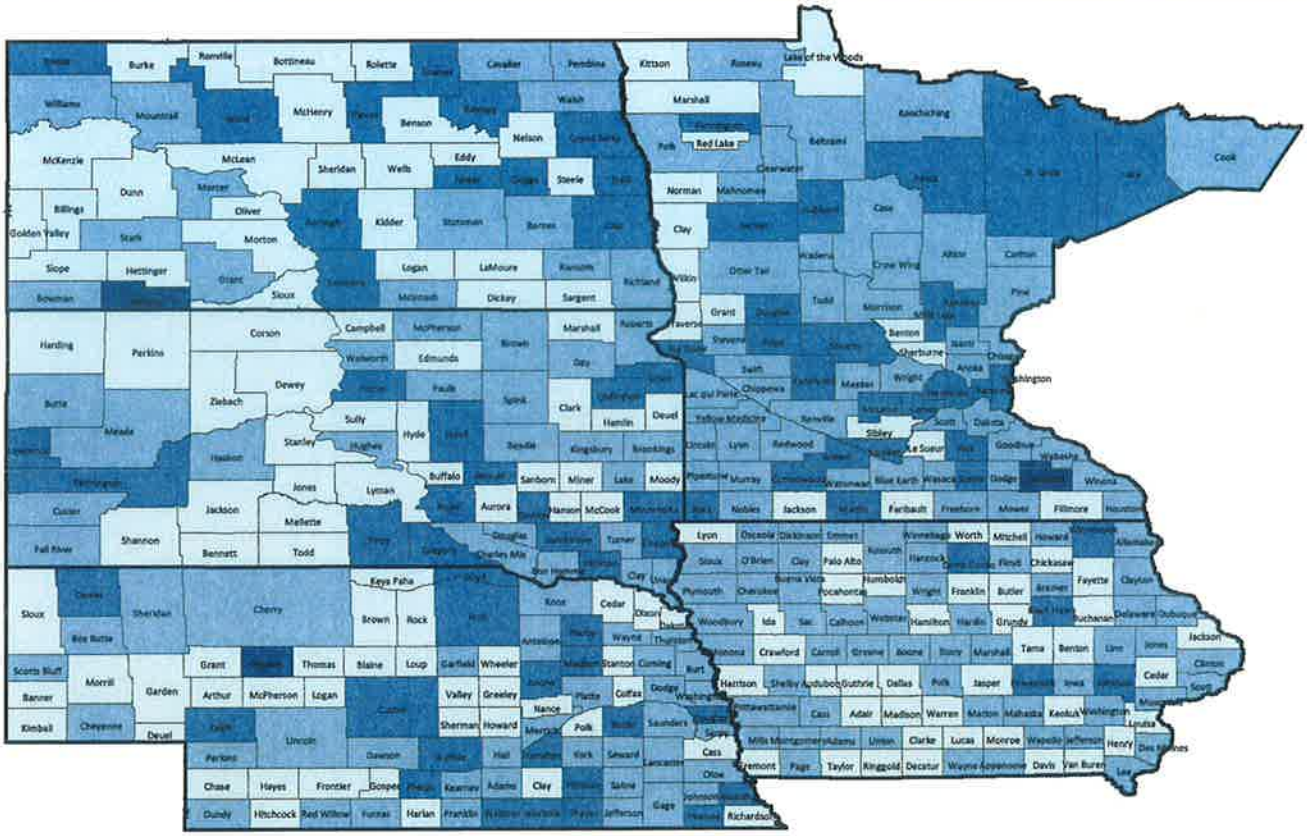
- Data were obtained from the Small Area Health Insurance Estimates (SAHIE), a program of the U.S. Census Bureau, http://www.census.gov/did/www/sahie/.

 This map was prepared by researchers at North Dakota State University in Fargo for the 2011-2013 Fargo-Moorhead Community Health Needs Assessment Collaborative. December 2011

Primary Care Physicians - A health factor measure focusing on clinical care

Map 15

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Number of primary care physicians per 100,000 population, 2008

- 0.0 - 60.9
- 61.0 - 139.9
- 140.0 - 339.9
- 340.0 - 793.0

CONTEXT

What It Is: Primary care physicians include practicing physicians specializing in general practice medicine, family medicine, internal medicine, pediatrics, and obstetrics/gynecology. The measure represents the number of providers per 100,000 population.

Where It Comes From: The data on primary care physicians were obtained from the Health Resources and Services Administration's Area Resource File (ARF). The ARF data on practicing physicians come from the AMA Master File (2008), and the population estimates are from the U.S. Census Bureau's 2008 population estimates.

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

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

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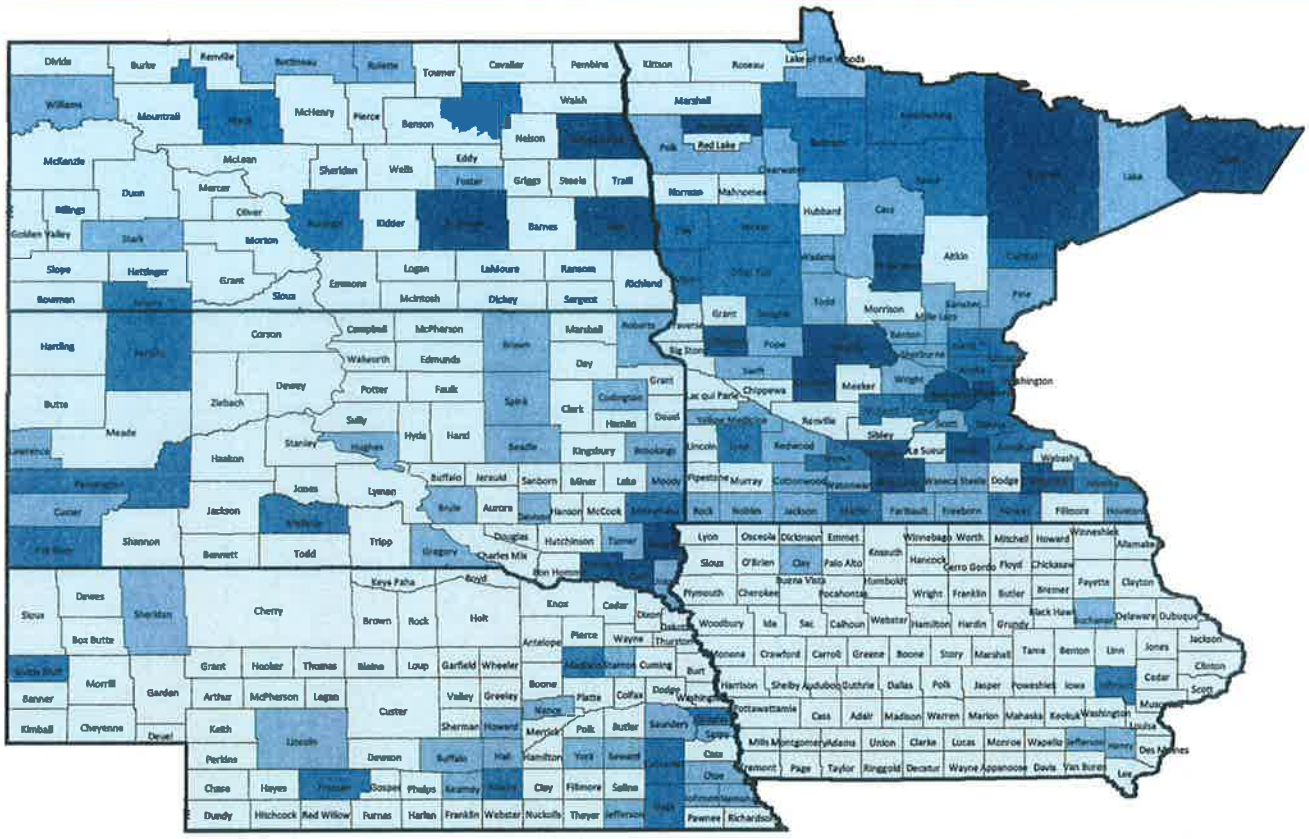
Map 16

Mental Health Providers - A health factor measure focusing on clinical care

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Number of mental health providers per 100,000 population, 2008

- 0.0 - 10.9
- 11.0 - 31.9
- 32.0 - 57.9
- 58.0 - 155.1

CONTEXT

What It Is: Mental health providers include psychiatrists, clinical psychologists, clinical social workers, psychiatric nurse specialists, and marriage and family therapists who meet certain qualifications and certifications. This measure represents the number of mental health providers per 100,000 population.

Where It Comes From: Data on mental health providers were obtained from the Health Resources and Services Administration's (HRSA) Area Resource File (ARF).

Importance: Even more than other areas of health and medicine, the mental health field is plagued by disparities in the availability of and access to its services. These disparities are viewed readily through the lenses of racial and cultural diversity, age, and gender. A key disparity often hinges on a person's financial status; formidable financial barriers block off needed mental health care from too many people regardless of whether one has health insurance with inadequate mental health benefits, or is one of the 44 million Americans who lack any insurance. (David Satcher, M.D., Ph.D., Surgeon General, http://www.surgeongeneral.gov/library/mentalhealth/home.html)

- Data were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

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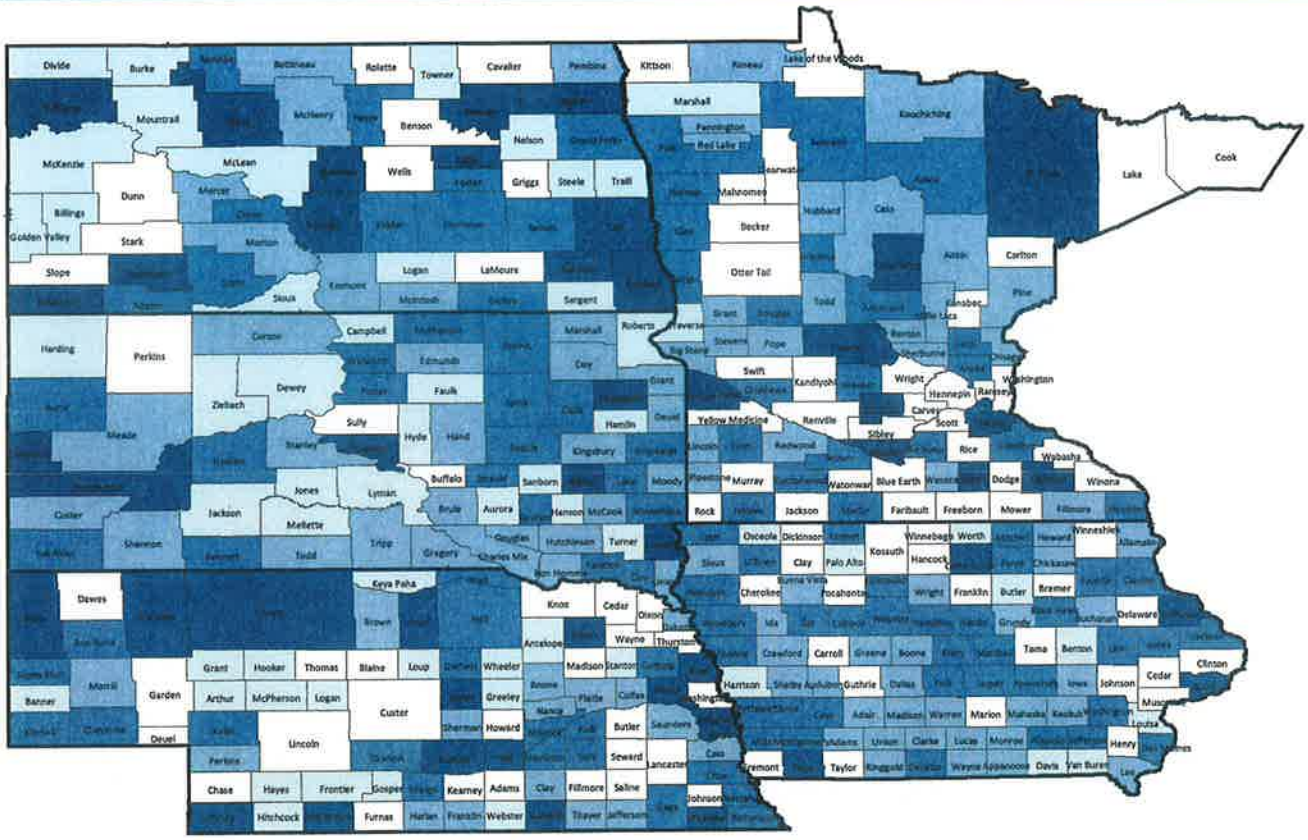
Map 17

Dentist Rate - A health factor measure focusing on clinical care

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Number of professionally active dentists per 100,000 population, 2007

- 0.0 - 15.9
- 16.0 - 37.9
- 38.0 - 60.9
- 61.0 - 149.9
- Unreliable or missing data

CONTEXT

What It Is: The dentist rate is defined as the number of professionally active dentists per 100,000 population. Professionally active dentist occupation categories include active practitioners; dental school faculty or staff; armed forces dentists; government-employed dentists at the federal, state, or local levels; interns and residents; and other health or dental organization staff members.

Where It Comes From: Data on the number of dentists are tracked by the American Dental Association (ADA) and the American Medical Association (AMA). County-level data are housed in the Health Resources and Services Administration's Area Resource File (ARF) and made available through the Health Indicators Warehouse developed by the National Center for Health Statistics.

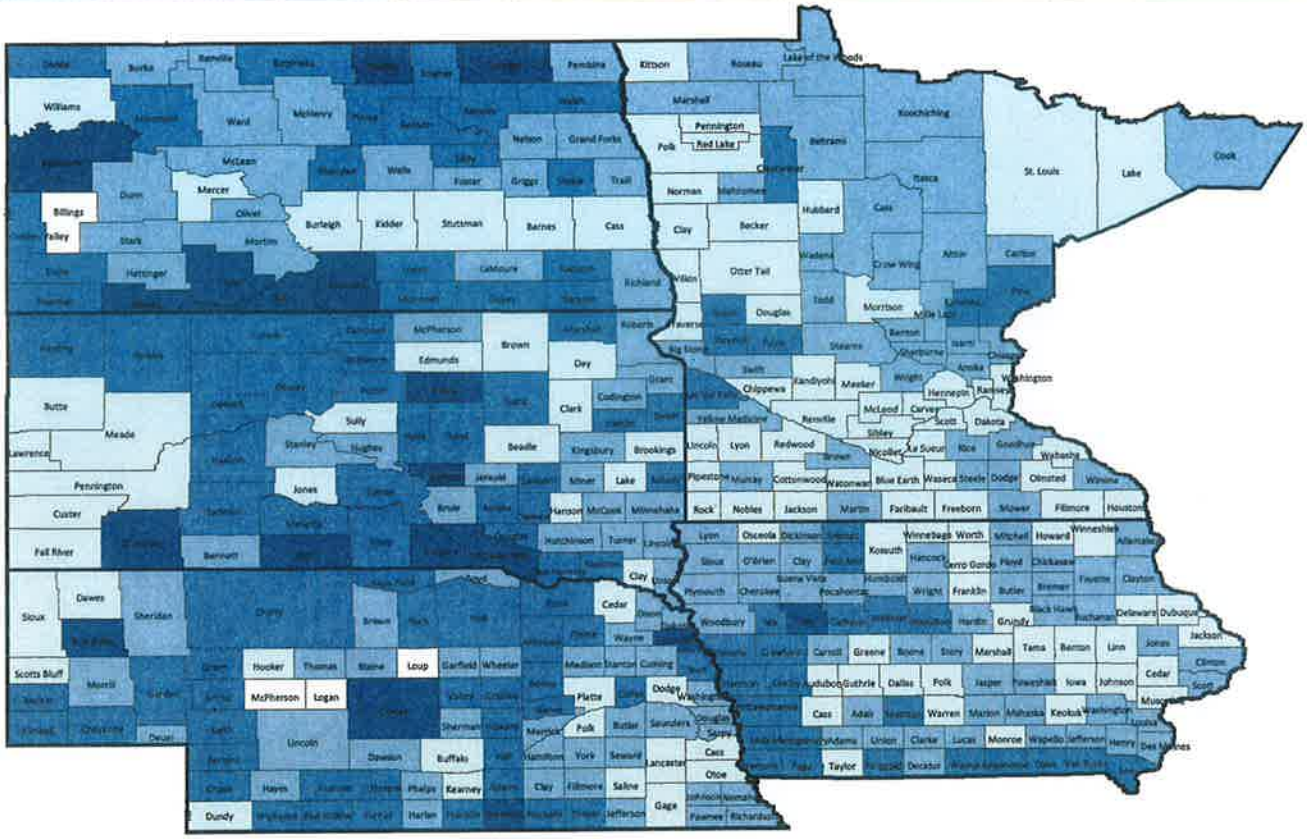
Importance: Today, thanks to fluoride, healthier lifestyles and quality dental care, more people than ever before are keeping their natural teeth throughout their lifetime. Yet for those who live in areas where a dentist is not available or those who cannot afford treatment, getting dental care can be difficult (American Dental Association, http://www.ada.org).

- Data were obtained from the Health Indicators Warehouse at http://healthindicators.gov/ which is maintained by the Centers for Disease Control and Prevention's National Center for Health Statistics.

Map 18

Preventable Hospital Stays - A health factor measure focusing on clinical care

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Hospitalization discharges for ambulatory care-sensitive conditions per 1,000 Medicare enrollees, 2006-2007

- 28.9 - 60.9
- 61.0 - 79.9
- 80.0 - 116.9
- 117.0 - 205.8
- Unreliable or missing data

CONTEXT

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

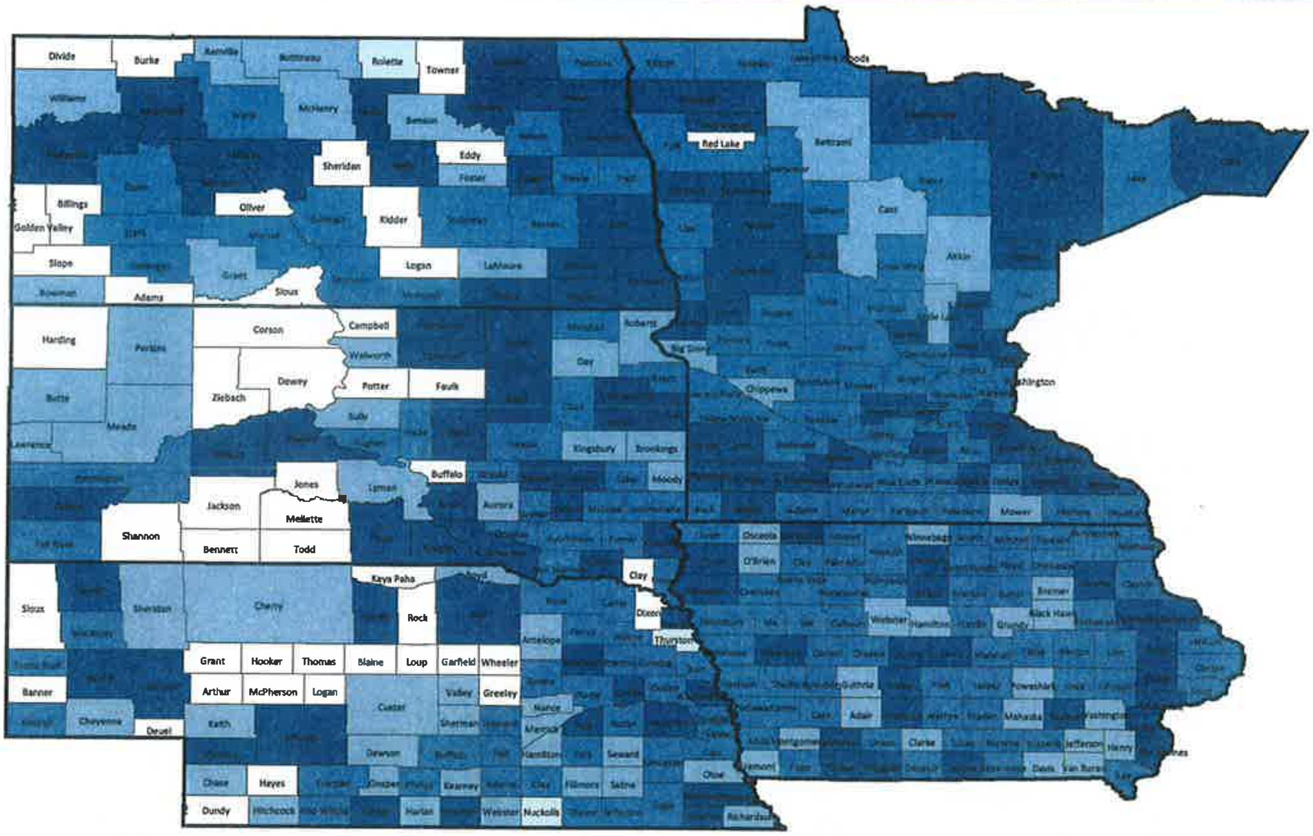
Where It Comes From: Estimates of preventable hospital stays were calculated by the authors of the Dartmouth Atlas of Health Care using Medicare claims data.

Importance: 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.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

Diabetic Screening - A health factor measure focusing on clinical care

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Percent of diabetic Medicare enrollees that receive HbA1c screening, 2006-2007

- 31.4% - 52.9%
- 53.0% - 80.9%
- 81.0% - 88.9%
- 89.0% - 100.0%
- Unreliable or missing data

CONTEXT

What It Is: 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 glycated hemoglobin (HbA1c) levels.

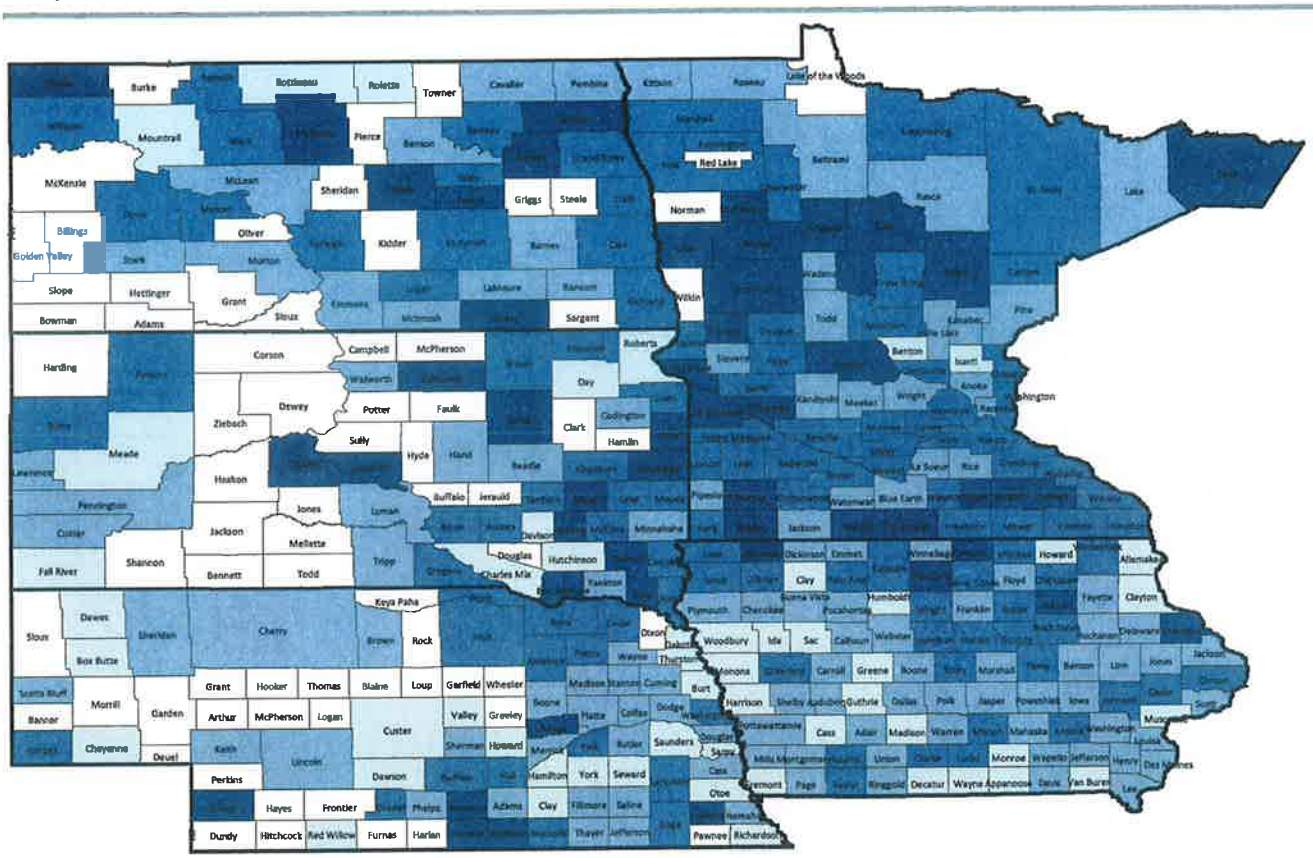
Where It Comes From: Estimates of diabetic screening were calculated by the authors of the Dartmouth Atlas of Health Care using Medicare claims data.

Importance: 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.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

Mammography Screening - A health factor measure focusing on clinical care

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Percent of female Medicare enrollees that receive mammography screening, 2006-2007

- 40.0% - 59.9%
- 60.0% - 69.9%
- 70.0% - 79.9%
- 80.0% - 100.0%
- Unreliable or missing data

CONTEXT

What It Is: This measure represents the percent of female Medicare enrollees ages 40 through 69 that had at least one mammogram over a two-year period.

Where It Comes From: Estimates were calculated by the authors of the Dartmouth Atlas of Health Care using Medicare claims data.

Importance: Evidence suggests that mammography screening reduces breast cancer mortality, especially among older women. A physician's recommendation or referral—and satisfaction with physicians—are major facilitating factors among women who obtain breast cancer screening. The percent of women ages 40 through 69 receiving a mammogram is a widely endorsed quality of care measure.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

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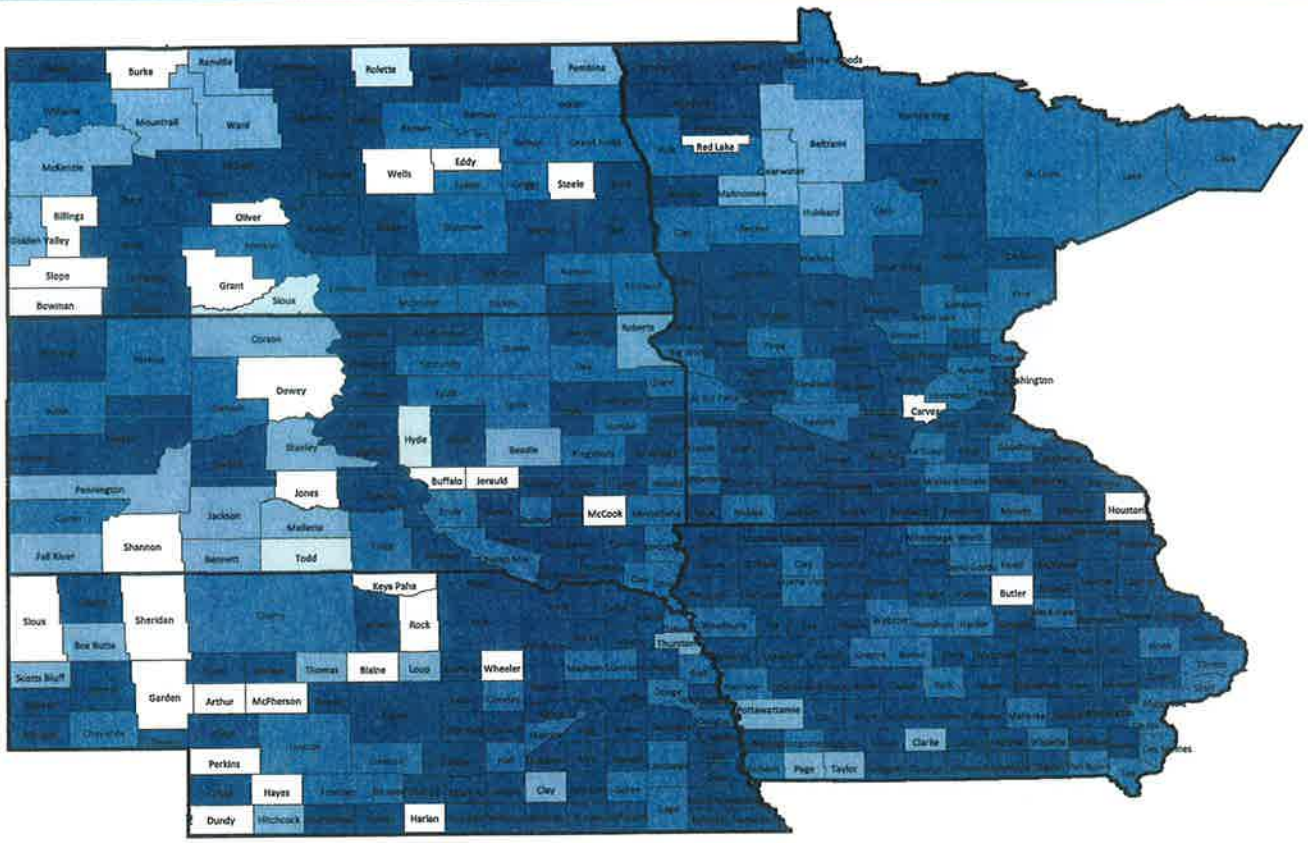
High School Graduation - A health factor measure focusing on educaton

Map 21

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Percent of ninth-grade cohort in public schools that graduates from high school in four years, 2006-2007

- 40.0% - 59.0%
- 60.0% - 79.0%
- 80.0% - 89.0%
- 90.0% - 100.0%
- Unreliable or missing data

CONTEXT

What It Is: 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.

Where It Comes From: Estimates of high school graduation are based on the restricted-use versions of the LEA Universe Survey Dropout and Completion data and the Public Elementary/Secondary School Universe Survey data. These data were requested from NCES for the school year 2006-07.

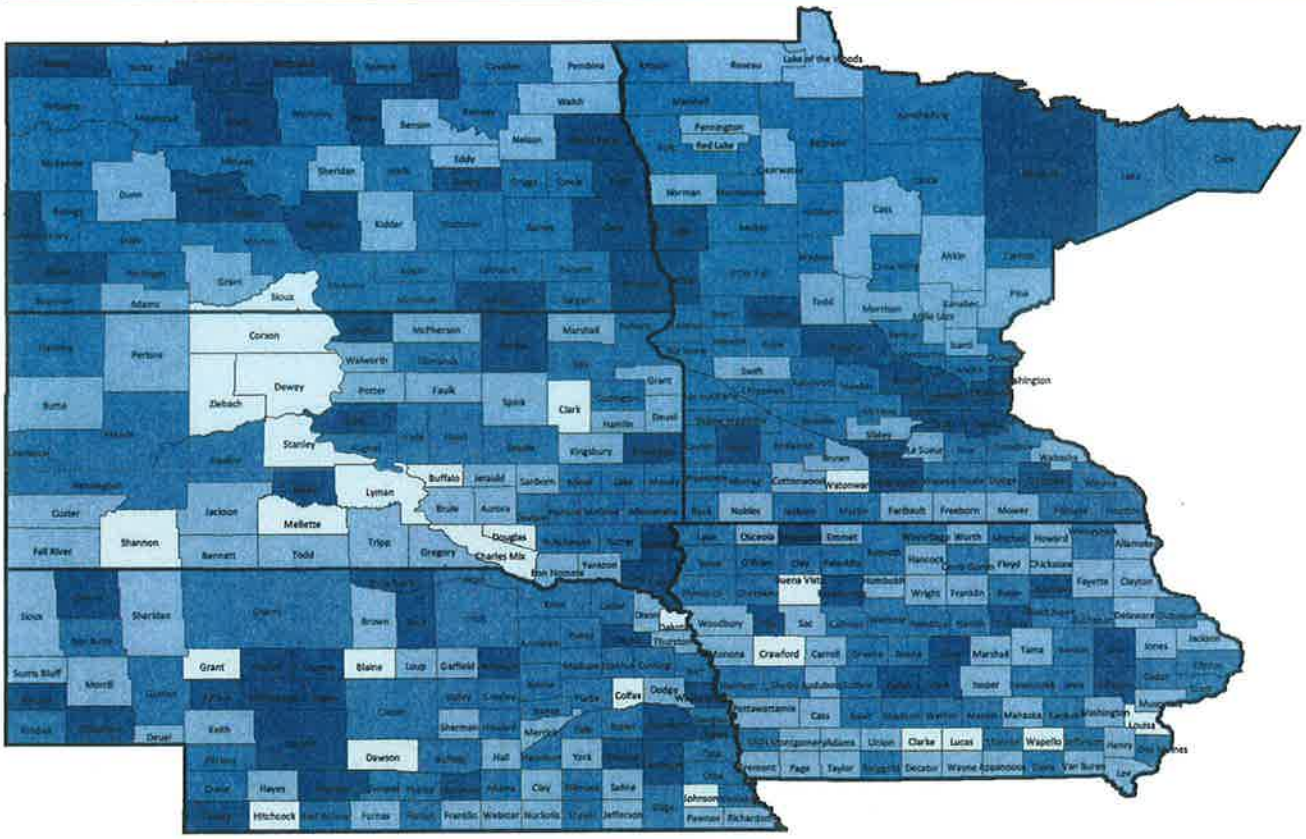
Importance: The relationship between more education and improved health outcomes is well known, with years of formal education correlating strongly with improved work and economic opportunities, reduced psychosocial stress, and healthier lifestyles.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

Map 22

Some College - A health factor measure focusing on education

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Percent of adults ages 25 through 44 with some post-secondary education, 2005-2009

- 25.2% - 49.9%
- 50.0% - 59.9%
- 60.0% - 69.9%
- 70.0% - 85.6%

CONTEXT

What It Is: This measure represents the percent of the population ages 25 through 44 with some post-secondary education, such as enrollment at vocational/technical schools, junior colleges, or four-year colleges. It includes individuals who pursued education following high school but did not receive a degree.

Where It Comes From: Estimates of the population ages 25 through 44 with some post-secondary education were calculated using the 5-year estimates from the U.S. Census Bureau's American Community Survey (ACS).

Importance: 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.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

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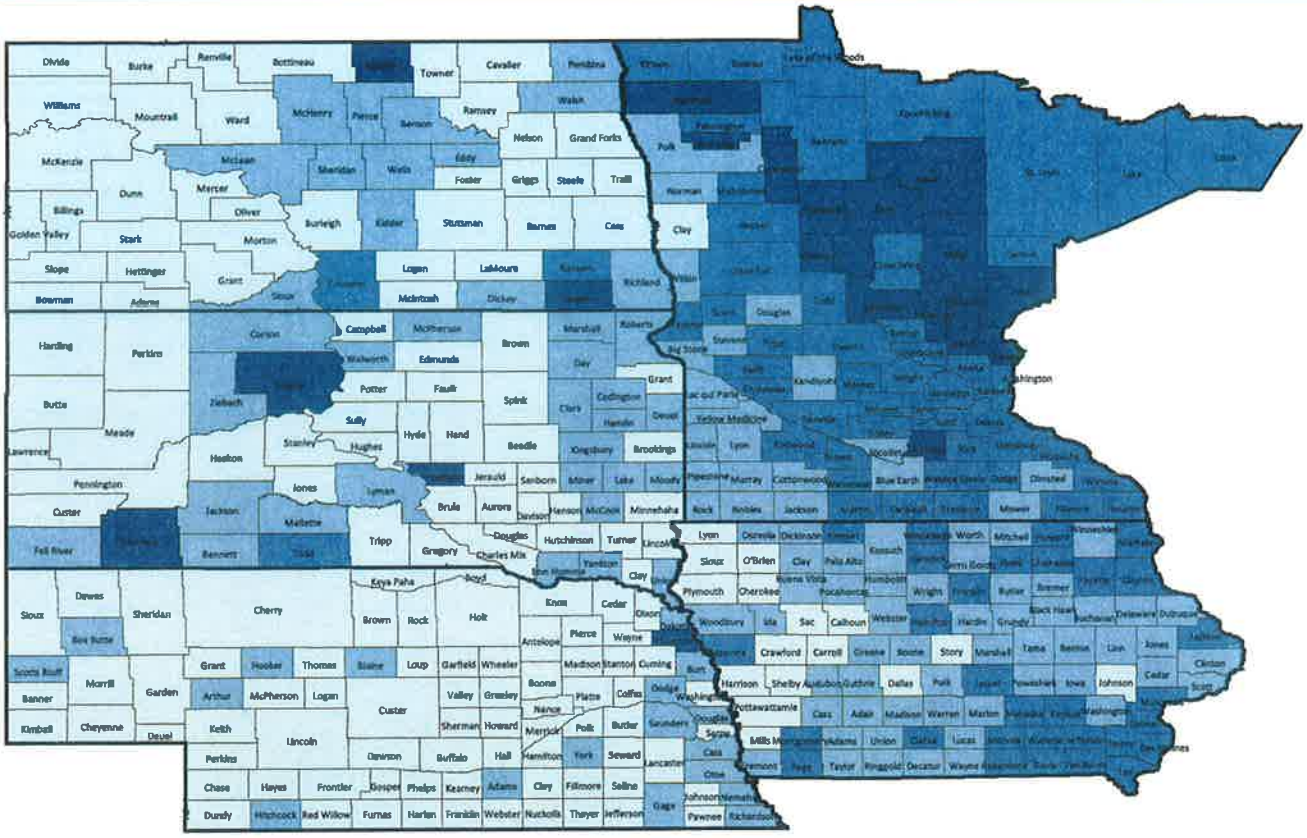
Map 23

Unemployment - A health factor measure focusing on labor

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Percent of population ages 16 and older that is unemployed but seeking work, 2009

- 2.4% - 4.9%
- 5.0% - 6.9%
- 7.0% - 9.9%
- 10.0% - 15.1%

CONTEXT

What It Is: Unemployment is measured as the percent of the civilian labor force ages 16 and older that is unemployed but seeking work.

Where It Comes From: Data on unemployment is obtained from the Bureau of Labor Statistics (BLS), Local Area Unemployment Statistics (LAUS).

Importance: 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 employee-sponsored health insurance is the most common source of health insurance coverage, unemployment can also limit access to health care.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

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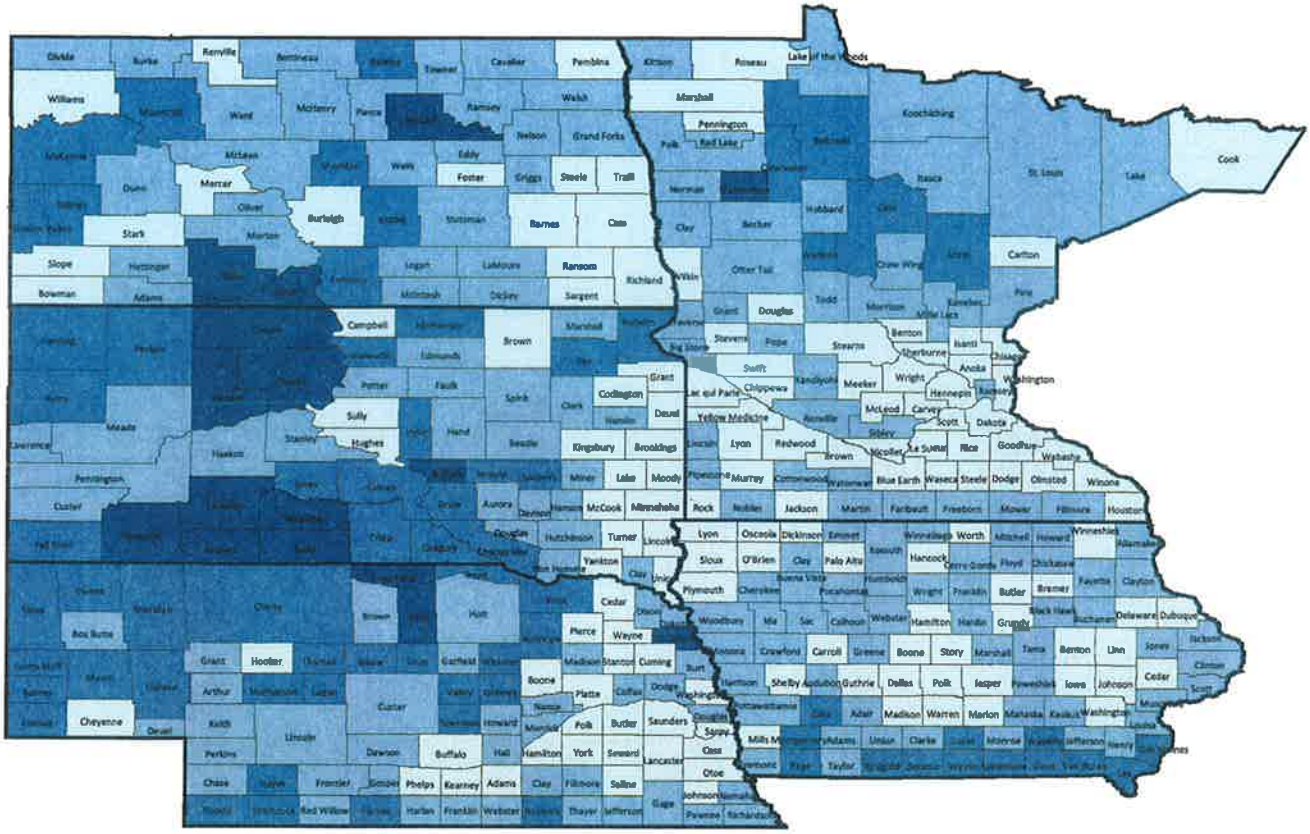
Children in Poverty - A health factor measure focusing on income and poverty

Map 24

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Percent of children ages 0 through 17 living below the Federal Poverty Line, 2008

- 4.7% - 12.9%
- 13.0% - 19.9%
- 20.0% - 34.9%
- 35.0% - 67.1%

CONTEXT

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

Where It Comes From: Children in poverty estimates are provided by the Small Area Income and Poverty Estimates (SAIPE) program through the U.S. Census Bureau.

Importance: 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 experience 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 acheivement associated with poverty. The children in poverty measure is highly correlated with overall poverty rates.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

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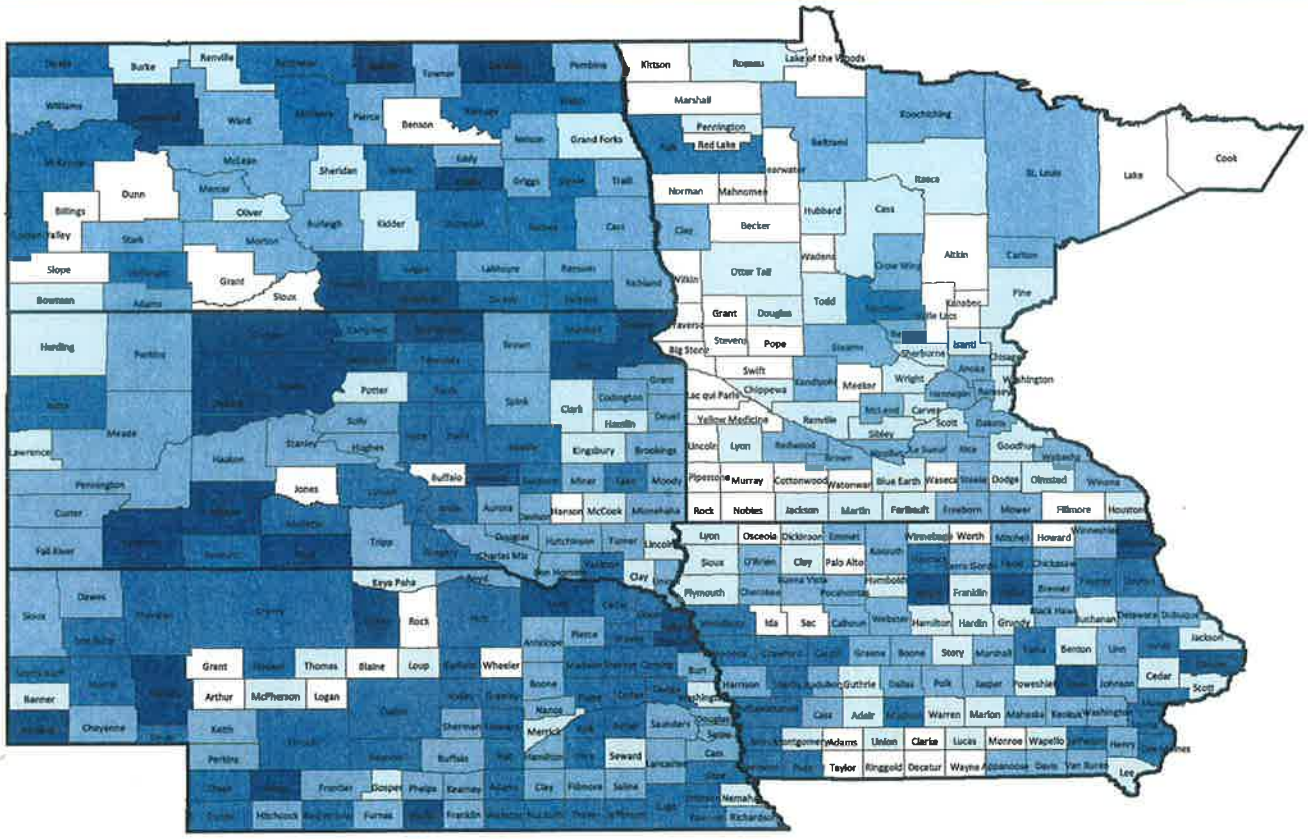
Inadequate Social Support - A health factor measure focusing on social networks

Map 25

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Percent of adults that never, rarely, or sometimes get the social and emotional support they need, 2003-2009

- 7.1% - 13.9%
- 14.0% - 17.9%
- 18.0% - 22.9%
- 23.0% - 39.1%
- Unreliable or missing data

CONTEXT

What It Is: 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 value presented is the percent of the adult population that responds that they "never," "rarely," or "sometimes" get the support they need.

Where It Comes From: This measure was calculated by the National Center for Health Statistics using data 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.

Importance: 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.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

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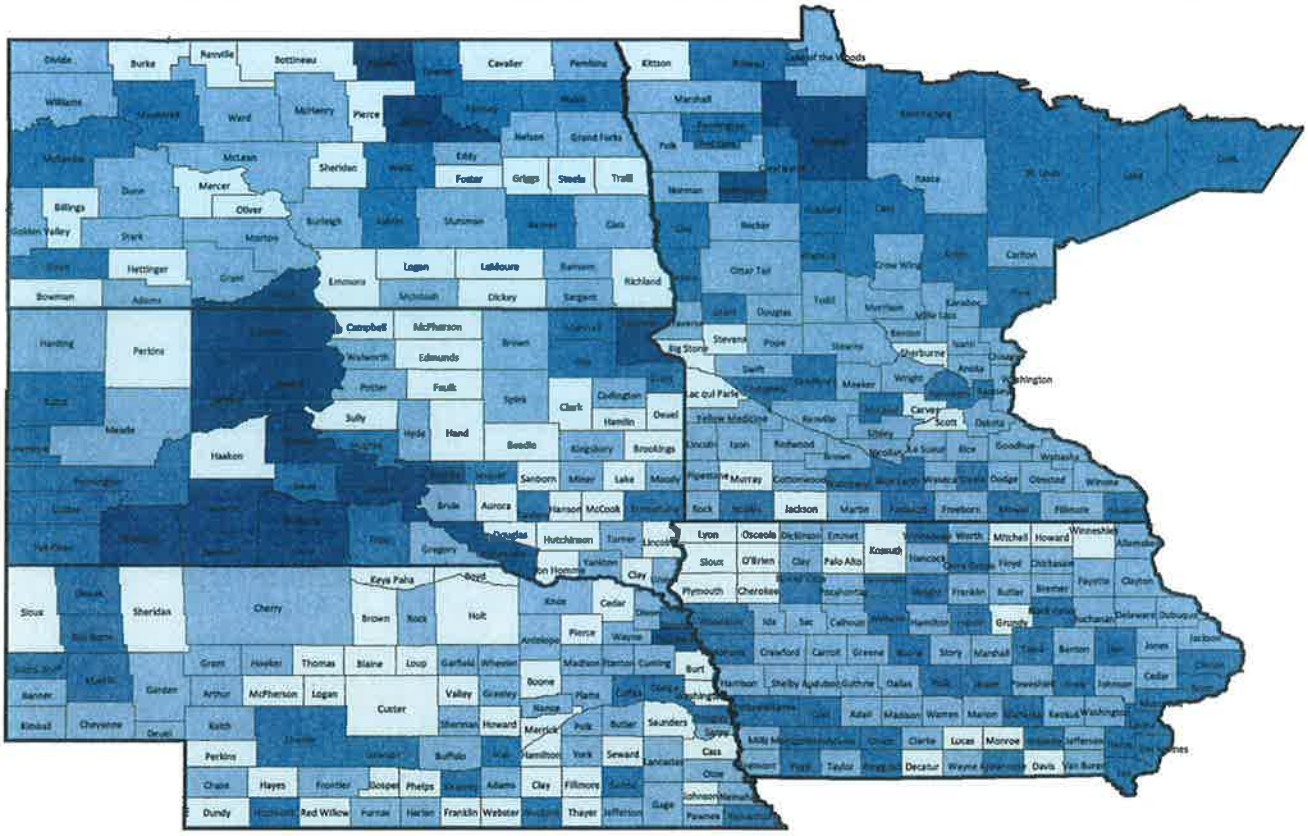
Children in Single-Parent Households - A health factor measure focusing on families

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Percent of children in families that live in a household headed by a parent with no spouse present, 2005-2009

- 0.0% - 17.9%
- 18.0% - 25.9%
- 26.0% - 39.9%
- 40.0% - 72.0%

CONTEXT

What It Is: The single-parent household measure is the percent of all children in family households that live in a household headed by a single parent (male or female householder with no spouse present).

Where It Comes From: Estimates of the percent of children in single-parent households were calculated using data from the U.S. Census Bureau's American Community Survey (ACS) 5-year estimates.

Importance: 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.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

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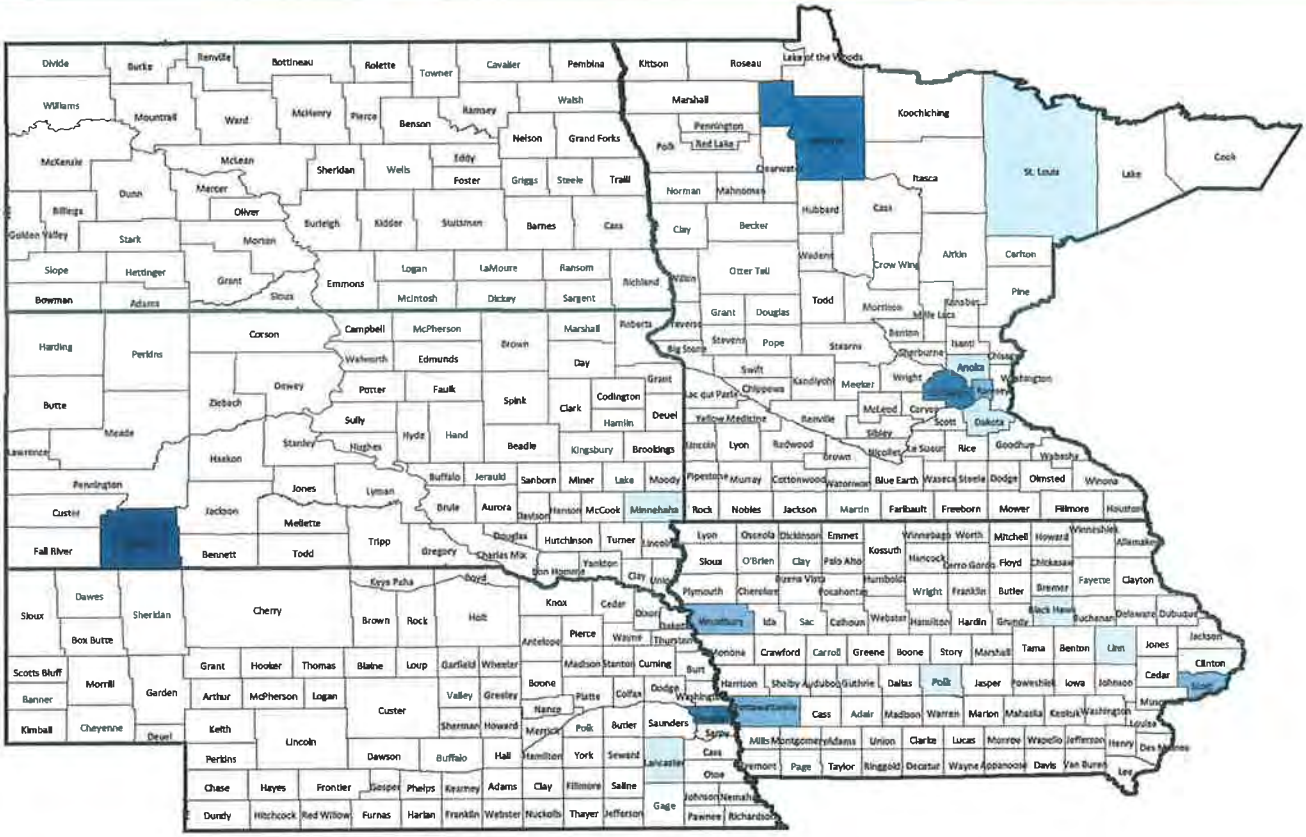
Map 27

Homicide Rate - A health factor measure focusing on violent crime

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Number of deaths due to murder or non-negligent manslaughter per 100,000 population, 2001-2007

- 1.3 - 2.9
- 3.0 - 4.9
- 5.0 - 8.9
- 9.0 - 22.7
- Unreliable or missing data

CONTEXT

What It Is: Homicide is represented as a crude death rate due to murder or non-negligent manslaughter per 100,000 population.

Where It Comes From: These data were calculated by National Center for Health Statistics (NCHS) at the Centers for Disease Control and Prevention (CDC) using data from the National Vital Statistics System (NVSS). NCHS used data for a seven-year period to create more robust estimates of cause-specific mortality, particularly for counties with smaller populations.

Importance: Because homicide is one of the five offenses that comprise violent crime, a homicide rate is used as a proxy when violent crime data are not available.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

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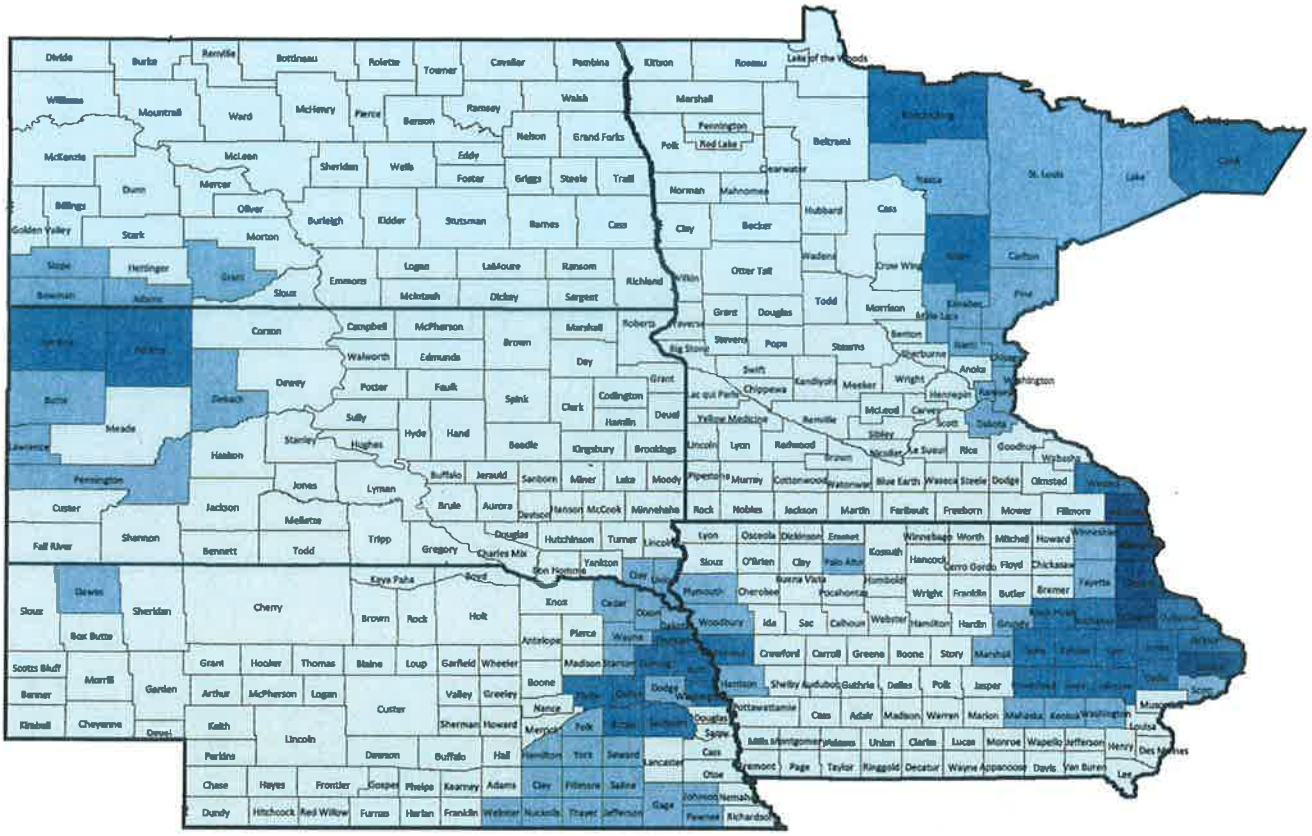
Map 28

Air Pollution-Particulate Matter Days - A health factor measure focusing on physical environment

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Number of days air quality was unhealthy for sensitive populations due to fine particulate matter, 2006

- 0
- 1
- 2
- 3 - 4

CONTEXT

What It Is: 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).

Where It Comes From: 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 populations due to FPM.

Importance: 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.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

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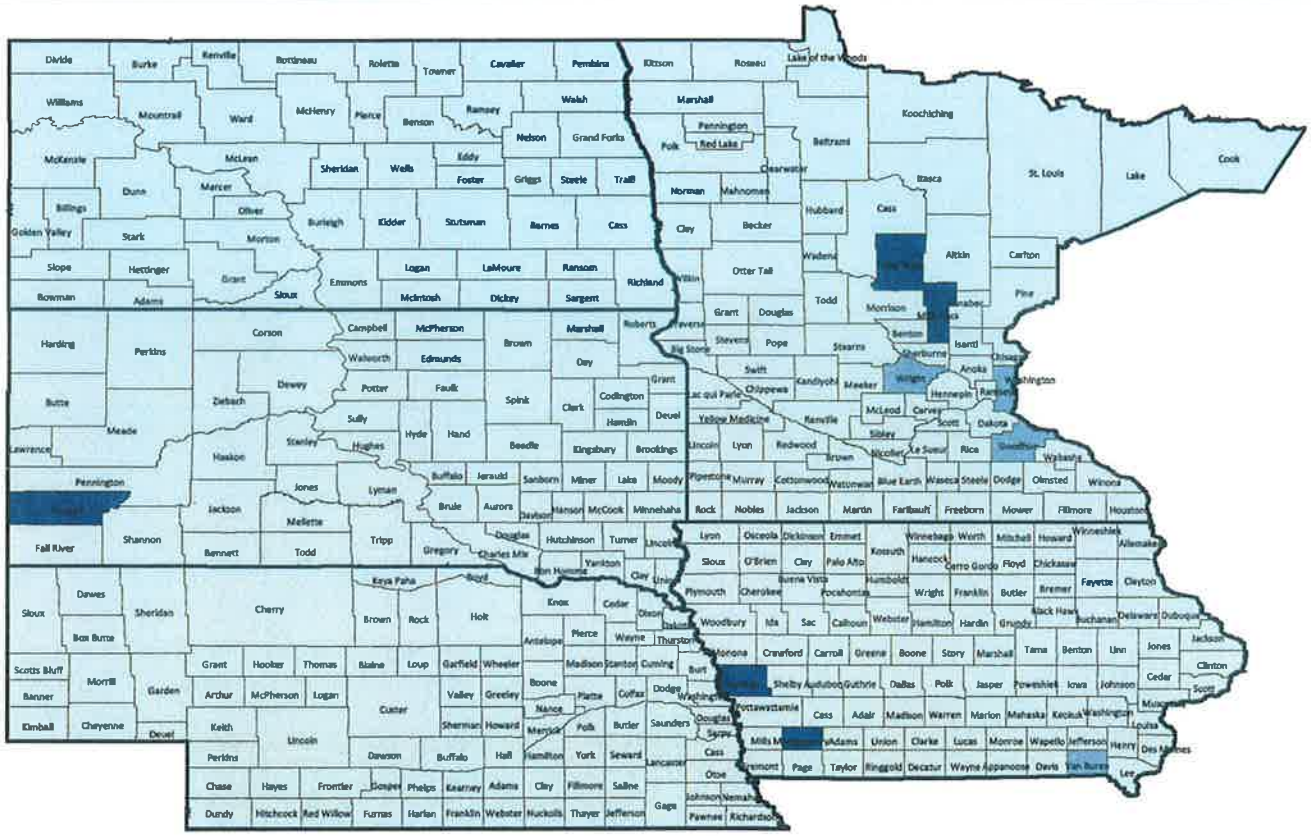
Air Pollution-OzoneDays - A health factor measure focusing on physical environment

Map 29

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Number of days air quality was unhealthy for sensitive populations due to ozone levels, 2006

0
1
2

CONTEXT

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

Where It Comes From: 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 populations due to ozone.

Importance: 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.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

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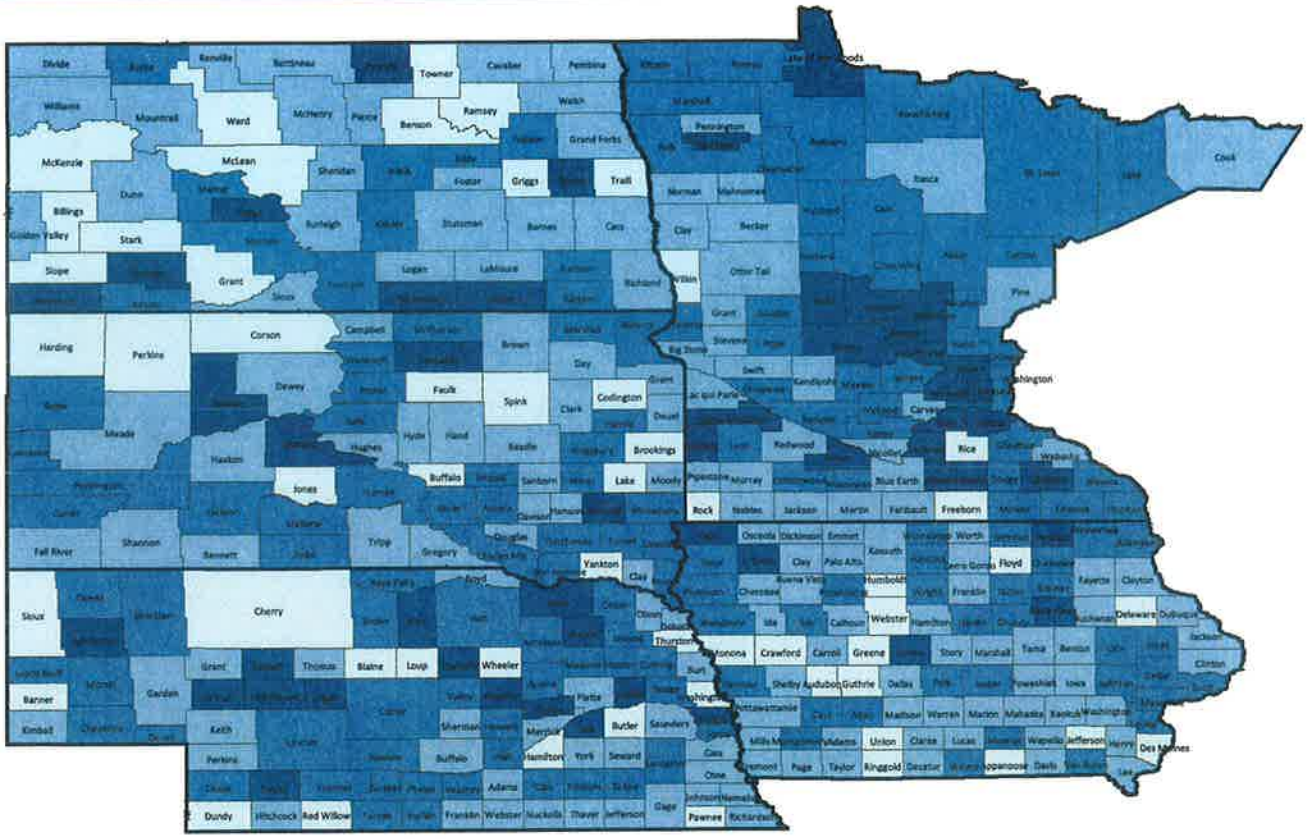
Map 30

Access to Healthy Foods - A health factor measure focusing on physical environment

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Percent of zip codes with healthy food outlets (i.e., grocery store or produce stand/farmers' market), 2008

- 0.0% - 24.9%
- 25.0% - 42.9%
- 43.0% - 69.9%
- 70.0% - 100.0%

CONTEXT

What It Is: 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.

Where It Comes From: The measure is based on data from the U.S. Census Bureau's Zip Code Business Patterns. Healthy food outlets include grocery stores and produce/farmers' markets, as defined by their North American Industrial Classification System (NAICS) codes.

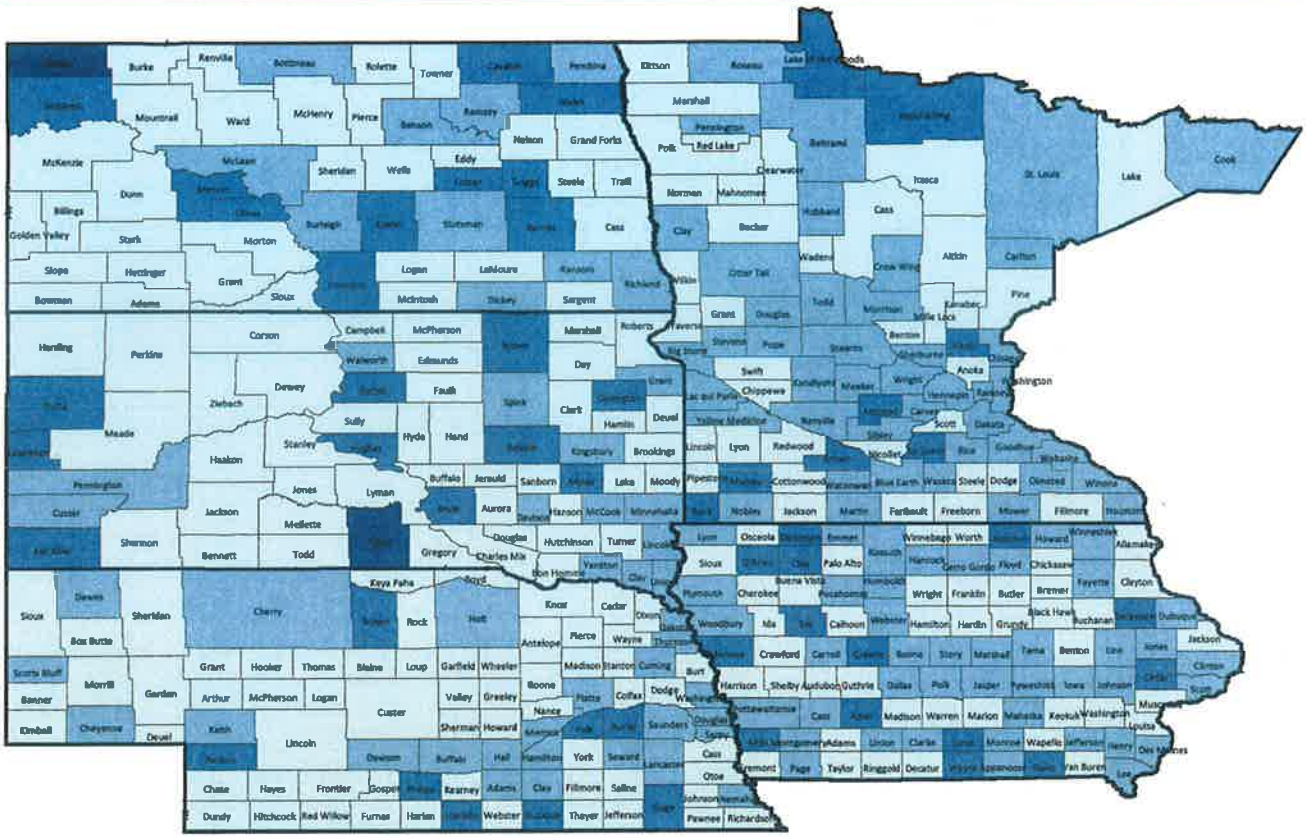
Importance: Studies have linked the food environment to consumption of healthy food and overall health outcomes.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

 This map was prepared by researchers at North Dakota State University in Fargo for the 2011-2013 Fargo-Moorhead Community Health Needs Assessment Collaborative. December 2011

Access to Recreational Facilities - A health factor measure focusing on physical environment

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Number of recreational facilities per 100,000 population, 2008

- 0 - 9
- 10 - 19
- 20 - 69
- 70 - 150

CONTEXT

What It Is: This measure represents the number of recreational facilities per 100,000 population in a given county. Recreational facilities are defined as establishments primarily engaged in operating fitness and recreational sports facilities, featuring exercise and other active physical fitness conditioning or recreational sports activities such as swimming, skating, or racquet sports.

Where It Comes From: This measure is based on a measure from United States Department of Agriculture (USDA) Food Environment Atlas, and is calculated using the most current County Business Patterns data set. Recreational facilities are identified by North American Industrial Classification System (NAICS) code 713940.

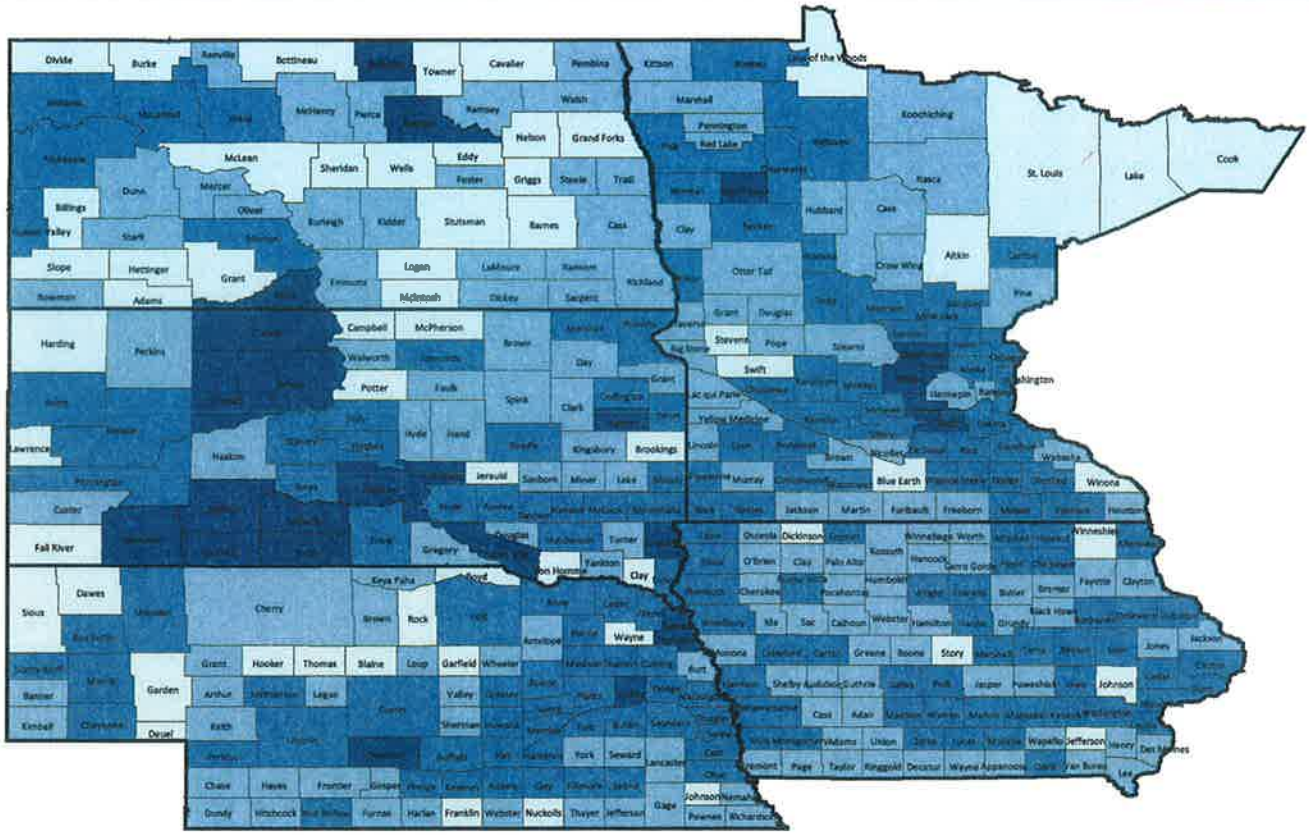
Importance: The availability of recreational facilities can influence individuals' and communities' choices to engage in physical activity. Proximity to places with recreational opportunities is associated with higher physical activity levels, which in turn is associated with lower rates of adverse health outcomes associated with poor diet, lack of physical activity, and obesity.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

Youth - A demographic measure

Map 32

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Persons ages 0 through 17 as a percent of the total population, 2009

- 14.7% - 20.4%
- 20.5% - 23.4%
- 23.5% - 28.4%
- 28.5% - 40.5%

CONTEXT

What It Is: This measure represents the percent of a county's population that is less than 18 years of age.

Where It Comes From: County demographic figures come from the U.S. Census Bureau's annual population estimates.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

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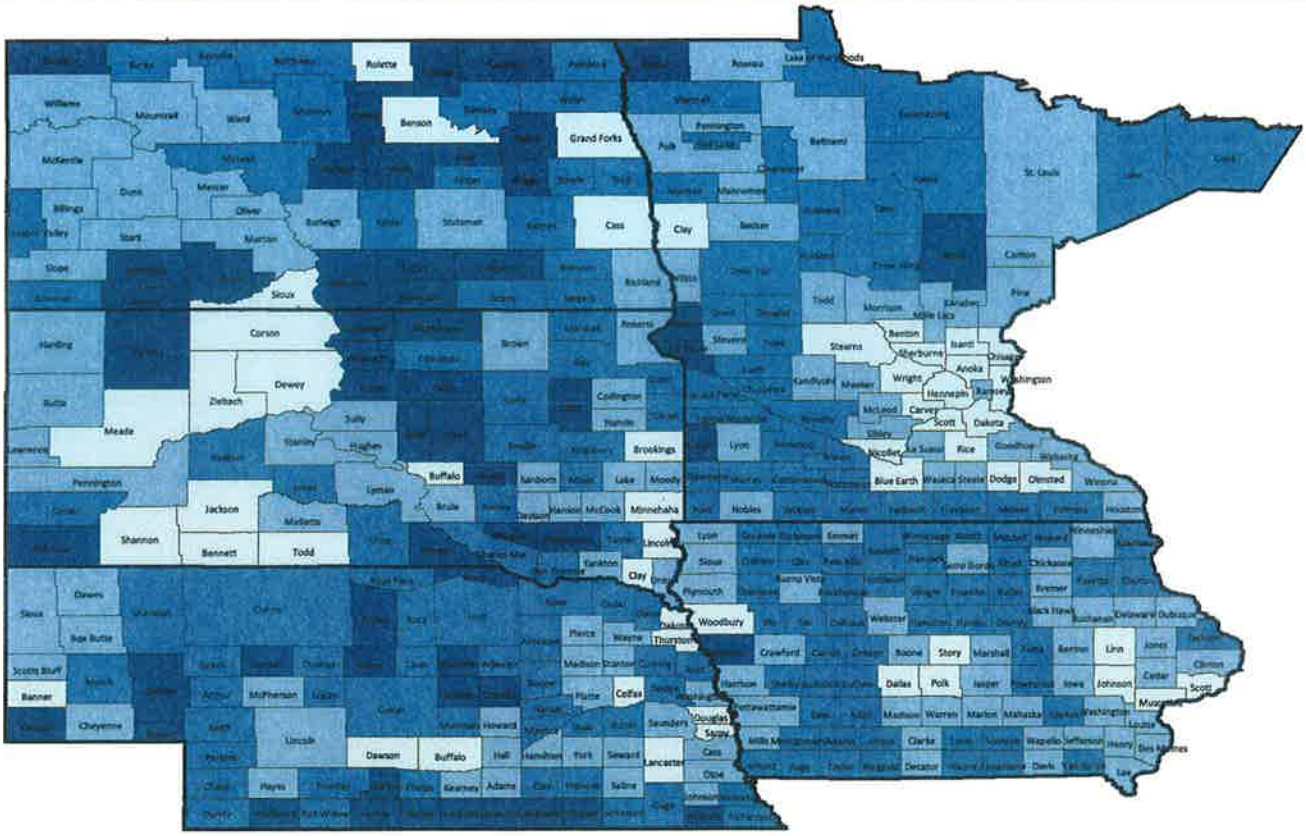
Elderly - A demographic measure

Map 33

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Persons ages 65 and older as a percent of the total population, 2009

- 5.3% - 12.9%
- 13.0% - 17.9%
- 18.0% - 22.9%
- 23.0% - 37.2%

CONTEXT

What It Is: This measure represents the percent of a county's population that is 65 years of age and older.

Where It Comes From: County demographic figures come from the U.S. Census Bureau's annual population estimates.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

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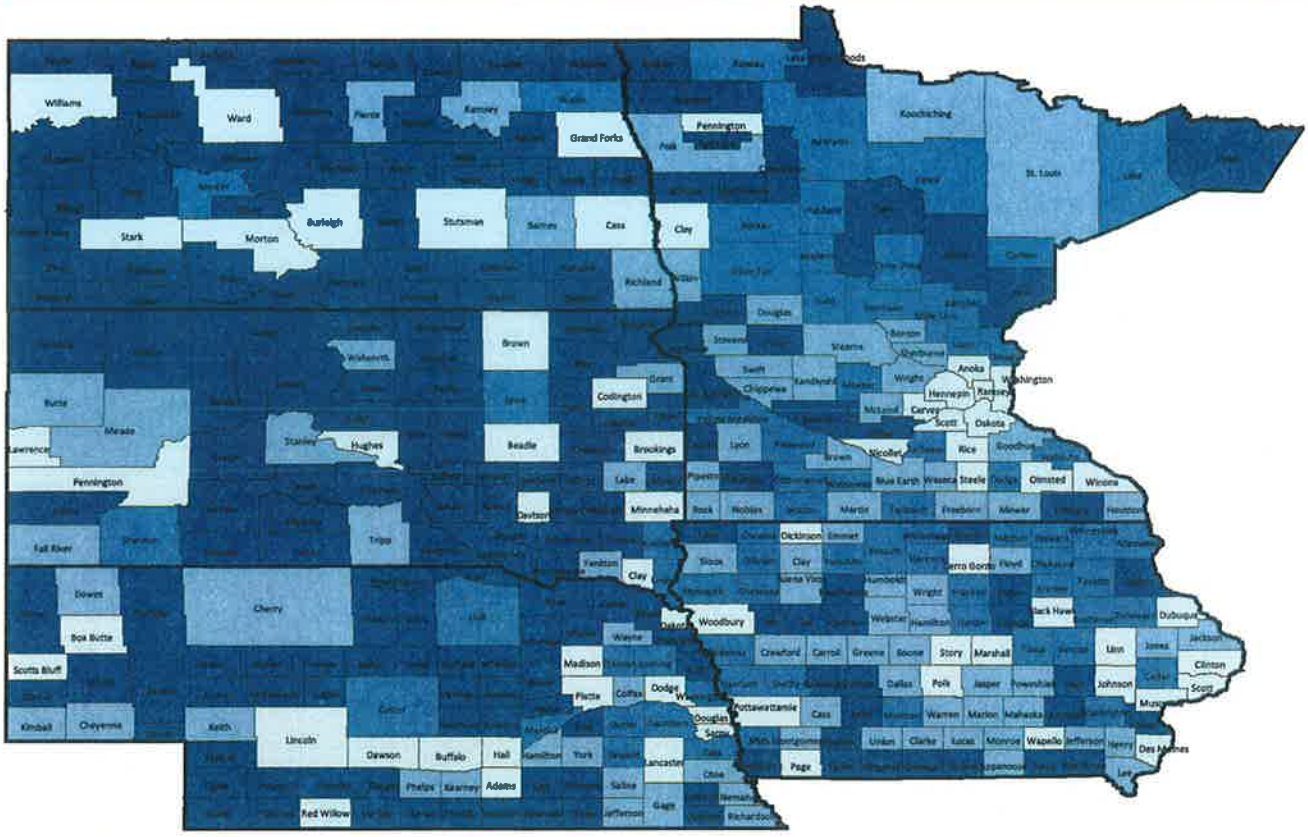
Rural - A demographic measure

Map 34

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Percent of total population living in a rural area, 2000

- 0.1% - 35.9%
- 36.0% - 58.9%
- 59.0% - 83.9%
- 84.0% - 100.0%

CONTEXT

What It Is: This measure represents the percent of a county's population that lives in a rural area, which the U.S. Census Bureau defines as all territory located outside of urbanized areas and urban clusters. Urbanized areas and urban clusters are geographic areas with a core population density of at least 1,000 people per square mile that are surrounded by areas with an overall population density of at least 500 people per square mile.

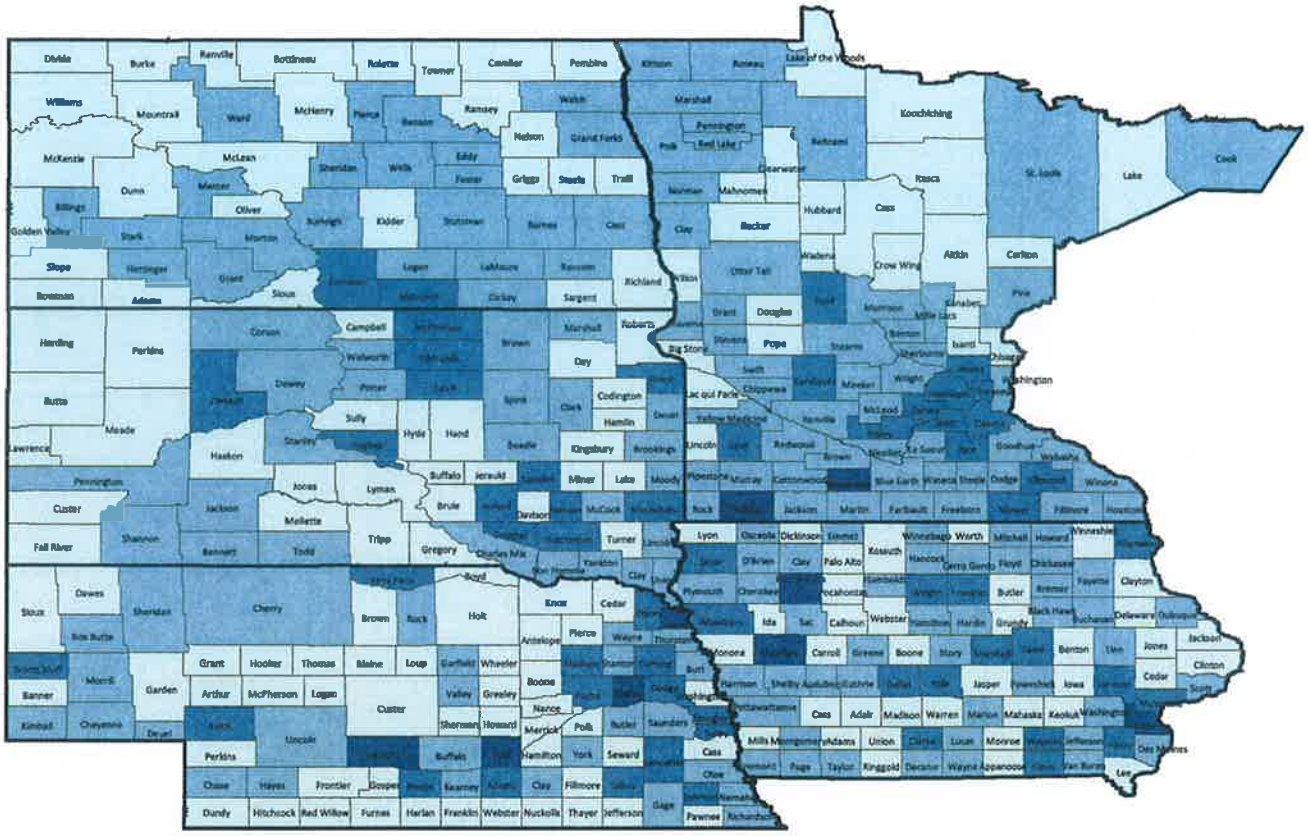
Where It Comes From: This measure is calculated by the U.S. Census Bureau using data from 2000.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

Not English Proficient - A demographic measure

Map 35

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Percent of total population that speaks English less than "very well", 2005-2009

- 0.0% - 0.9%
- 1.0% - 2.9%
- 3.0% - 8.9%
- 9.0% - 23.0%

CONTEXT

What It Is: This measure represents the percent of the total population that reports speaking English less than "very well."

Where It Comes From: Data on spoken English proficiency come from the U.S. Census Bureau's American Community Survey 5-year estimates.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

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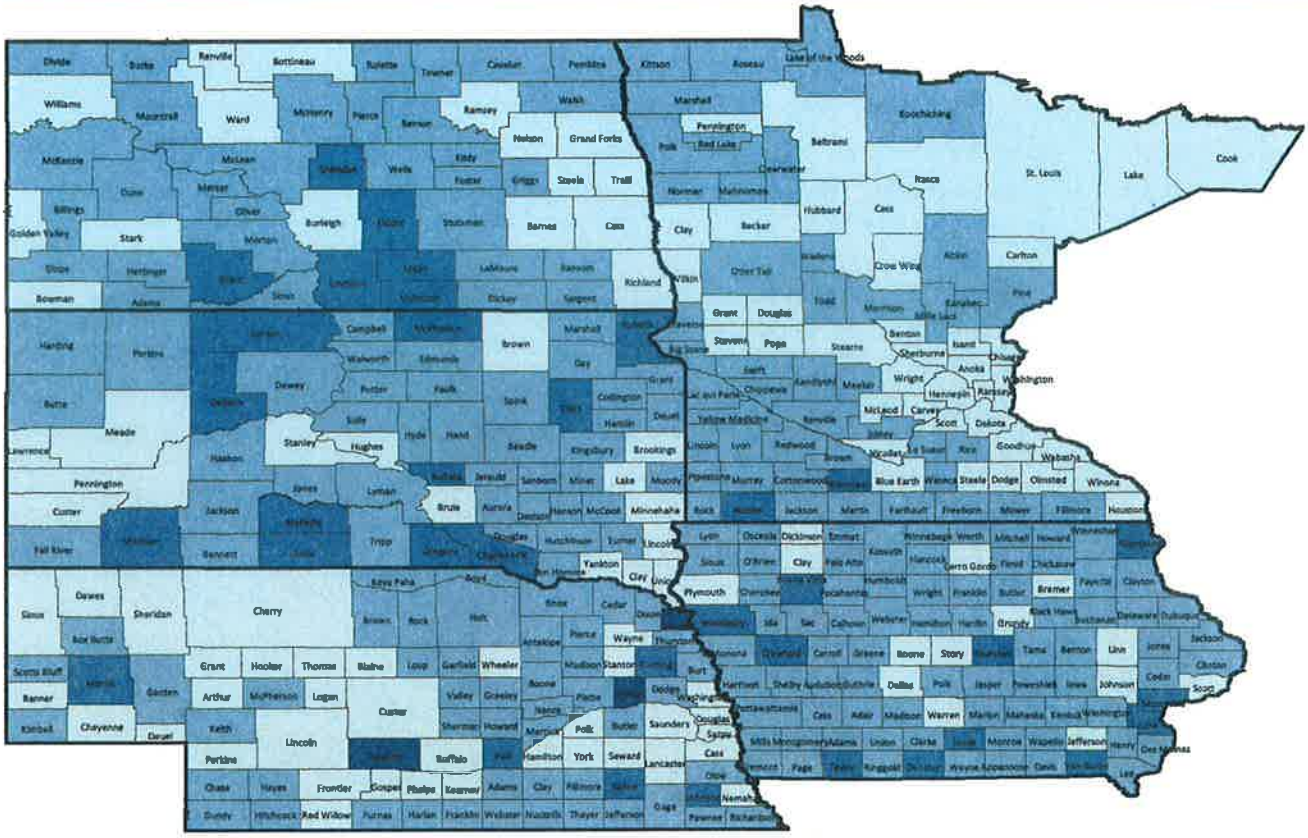
Map 36

Illiteracy - A demographic measure

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Percent of population ages 16 and older that lacks basic prose literacy skills, 2003

- 4.0% - 6.9%
- 7.0% - 8.9%
- 9.0% - 13.9%
- 14.0% - 21.4%

CONTEXT

What It Is: This measure reflects the percent of the population ages 16 and older that lacks basic prose literacy skills.

Where It Comes From: This measure is obtained from the National Center for Education Statistics and is based on the 2003 National Assessment of Adult Literacy.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, http://www.countyhealthrankings.org/.

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Table 1
Community Health Needs Assessment Asset Mapping
Aberdeen Stakeholders

Identified Concerns	Specific concerns	Alignment with Sanford resources or other community resource partners	Unmet need

Access	• Concern about having to travel too far for specialist care - need more local specialists
	  ○ Pediatric Pulmonologist
	  ○ Pediatric Orthopedic Surgeon
	  ○ Endocrinologist
	  ○ Gastroenterologist
	  ○ Cardiologist
	  ○ Oncology/Hematology
	  ○ Allergy specialists
	  ○ Obesity Clinic, bariatric specialist
	  ○ Urologist
	  ○ Arthritis/RA specialists
	  ○ Neurologist
	• Concern with not having a NICU within a 200-mile radius
	• Concern about lack of prenatal care or care for infants during 1st year
	• Concern when patient can't see a doctor – must see a PA
	• Difficult to find healthcare for those without insurance, Medicaid, Medicare
		New Sanford Hospital opened in 2012 and will provide specialty care. Recruiting continues for needed specialties.
		Acute Care provides after hours care at the Sanford Clinic.
		All patients are accepted at the Clinic and Hospital.
		Primary Care physicians are being recruited.	

Identified Concerns	Specific concerns	Alignment with Sanford resources or other community resource partners	Unmet need
	• Need urgent care clinic for after hours • Need primary care physicians		
Alternative Medicine	• Need more providers skilled in alternative therapies	Several already provide services in the community	
Cancer	• Concern about high rates of cancer • Concern about the distance to travel for cancer treatment	Cancer Biology Research Center in SF	
Care Coordination	• Need follow-up care, especially for the elderly, help implementing a plan of care, including home intervention if family is not able to participate	Medical Home Initiative began in 2012	
Chronic Conditions	• Concern about strokes • Concern about HPV infections • Need more support groups for chronic conditions (AIDS etc.)	The Sanford Project – to cure Type 1 DB in Denny Sanford's lifetime. Support groups are being formed for several areas.	
City Infrastructure	• Infrastructure (roads, sewer, water) & traffic routing have not kept up with city growth • Not enough sidewalks & some sidewalks need work • Roads are terrible – City doesn't do a good job of fixing them; City doesn't do a good job on new roads; there are damaged roads on the outskirts of town • Need another bypass on the east side of town & west on 5th Street by the train tracks • Lack of roads on the southwest side of town beside 6th Avenue • We should change the mog from an eyesore to a community attraction		
Competition	• Lack of coordination among medical providers, resulting in triplication of expensive equipment among the three entities		

Identified Concerns	Specific concerns	Alignment with Sanford resources or other community resource partners	Unmet need
	• Need good coordination between the different healthcare providers so records etc. can be available to all providers (including pharmacies) in a timely fashion • Concern that Avera has purchased most of the practices of the Aberdeen physicians & they will not then be part of Sanford	Sanford My Chart will allow the patient to grant access to their medical record electronically.	
Day Care	• Concern with the high cost of child care • Need quality, convenient child care • Need day care for sick children so parents can go to work	YMCA is developing the Youth Development Center Sanford Children's Services provide training and education.	
Dental Care	• Concern that dental care is not available to the indigent and those on Medicaid, especially children		
Disabilities	• Need transitional housing for disabled adults (supervised apts.)		
Economic Situation/ Business community	• Lack of options in the economic environment create monopolies for retailers & employers • High price of gasoline for those who commute • High property taxes • Lack of primary jobs • Incomes are relatively stagnant – some work more than one job to get by • High cost of electricity • Need to improve retention of local grads by providing good-paying jobs • Need more national franchises (Applebee's, Walgreens, etc.) • Need fast food shops to offer more healthy choices • Need a technical college (hair, electrical, plumbing, etc.)		
Education	• Need a technical college (hair, electrical, plumbing, etc.) Graduation rates are low (80% graduate in 4 years)		

Identified Concerns	Specific concerns	Alignment with Sanford resources or other community resource partners	Unmet need
Elderly	• Need Meals on Wheels • Elderly should not be on the roads during rush hour • Elderly drivers need competence monitoring so that they can remain independent as long as possible • Concern about high costs for the elderly with diabetes – transportation, meds, test strips • Need follow-up care, especially for the elderly, help implementing a plan of care, including home intervention if family is not able to participate		
Emergency Care	• Need more ER providers (long wait in the ER) • Concern with those who use the ER as their primary provider • Perception that patients will die if they go to the Aberdeen ER because of the physicians' lack of concern for the patient		
Healthcare Cost/Insurance Cost	• Concern with high cost of healthcare and healthcare insurance. There is no point in paying a $30 copay & then finding out you can't afford the recommended treatment. • Prescription costs (if not generic) are high • Healthcare on a sliding fee scale is needed • Concern about the limited number of insurance carriers in rural SD		
Handicapped	• Need more services for handicapped individuals		
Healthy Nutrition	• High cost of food/grocery store price gouging • Need more choices for organically grown produce • Need education on a healthy diet – could there be a dietician connected with the local grocery stores?		

Identified Concerns	Specific concerns	Alignment with Sanford resources or other community resource partners	Unmet need
Housing	• Need a homeless shelter • Community needs a halfway house or long-term residential treatment center. Currently incarceration is the only option. • Shortage of housing – which increases cost of apartments & houses • Cost of housing is high, especially for new housing • Need transitional housing for disabled adults (supervised apts.) • Shortage of housing for disabled & low income		
Judicial	• Community needs a halfway house or long-term residential treatment center. Currently incarceration is the only option. • Need adequate law enforcement to meet growing population demands		
Mental Health	• Need mental health services for juveniles; need a child psychologist • No mental health services for those in jail • Need activities & programs that focus on prevention of mental illness • Takes too long to get a mental health appointment • Mental health services are too costly • Need increased funding for mental health programs • Need low cost mental health services for those with little money • Need better services for marriage counseling, depression, drug & alcohol use, parenting issues • Need more mental health providers	Sanford One Care	
Native American issues	• Concern about obesity in Native American children • Need to educate the Native American population on prevention	Sanford WebMD Fit Kids	

Identified Concerns	Specific concerns	Alignment with Sanford resources or other community resource partners	Unmet need
New Americans	• Concern about the language barrier when new cultures move to the area • Need to educate New Americans about prevention		
Obesity	• Need concentrated services for obesity • Adult obesity	Sanford WebMD Fit Kids	
Physical Activity	• Concern about individuals not incorporating physical activity in their lifestyle	Sanford WebMD Fit Kids	
Physicians	• Lack of skilled & compassionate physicians • Physicians who don't explain things & have an attitude of "it's complicated, you wouldn't understand" • Providers need to be better equipped to handle other languages (Karen, Korean, Spanish, Vietnamese) • Concern about poor "bedside manner" of physicians • Perception that physicians abuse patients by prescribing more medication than needed or incorrectly diagnosing patients • Perception that patients will die if they go to the Aberdeen ER because of the physicians' lack of concern for the patient • Physicians need to stress prevention more during the appointments • Need physicians to become a permanent part of the community (not just be visiting specialists) •		
Pollution/ Environment	• Need recycling services & strict recycling enforcement • Septic system odor • Concern about chemicals in the water supply • Concern about drainage, high water table & discharge into Moccasin Creek (pollution) • Need to clean up the many junk yards in town		

Identified Concerns	Specific concerns	Alignment with Sanford resources or other community resource partners	Unmet need
	• Concern about garbage lying on the road • Lack of monitoring for potential environmental issues		
Poverty	• Need a homeless shelter • Need more resources for lower social economic class that needs help with substance abuse • Shortage of housing for low income • Concern with the entitlement mentality – children of poor people have I Pods, X Boxes, laptops, but middle class children do not • Concern that those on entitlement programs can use these government programs indefinitely with no desire to break the cycle • Concern that the increase in Medicaid/lower income population will lower quality of education & expectations in the schools • Concern that dental care is not available to indigent and those on Medicaid • Need more mental health services for those with little income • Need a sliding fee scale at the clinic		
Prevention	• Need community-wide focus on immunizations • Need focus on prevention of conditions like obesity, diabetes • Prevention services to be considered – education, interactive support groups, seminars open to the community, education to immigrants/Native Americans/poor/those living alone • Sexually transmitted disease	The Sanford Project – to cure Type 1 DB in Denny Sanford's lifetime Sanford WebMD Fit Kids	
Safety	• Concern about child molesters in the community		
Schools	• No busing available to local schools • Concern that the increase in Medicaid/lower income		

Identified Concerns	Specific concerns	Alignment with Sanford resources or other community resource partners	Unmet need
	population will lower quality of education & expectations in the schools • Need more & better facilities • Need good programs • Need healthier school lunch options • Need more phy ed/exercise options in school • Need to enhance the healthcare classes in school		
Social Issues	• More focus on the causes of substance abuse – legal system is not the answer • Concern about the number of single mothers • Concern about increasing racism – increasing number of those wearing obvious racist tattoos/slogans on clothing & bumper stickers		
Substance Abuse	• Concern about substance abuse • Need more resources for lower social economic class that needs help with substance abuse • Need chemical dependency options, such as a halfway house or long-term treatment center	Sanford One Care	
Technology	• Need to stay current in NE South Dakota on the latest technology		
Traffic	• Concern with driving while talking on the phone • People drive too slowly • Lack of basic understanding & obeying of traffic laws • Bicycle laws & safety are ignored • Need more green arrow lights • Concern with elderly drivers		
Transportation	• Lack of affordable public transportation • Rideline transportation service not provided on weekends • No busing available to local schools • Need airline service		

Identified Concerns	Specific concerns	Alignment with Sanford resources or other community resource partners	Unmet need
	• Need to find a way to keep the elderly off the roads during rush hour • Transportation for low income residents		
Wellness	• Need a family-oriented gym/health club • Concern that the YMCA is not family-friendly to younger families & is expensive • Need more options for exercise facilities – what we have are too high priced • Need more sidewalks for walking, biking • Tobacco use	Sanford WebMD Fit Kids	
Workforce	• Lack of qualified applicants for job openings		
Youth	• Need mental health services for juveniles • Concern about smoking & drugs • Concern about STDs • Concern about obesity & juvenile diabetes • Lack of opportunity for young adults to get them to stay in the community & raise their families here • Need more activities for youth • Concern about increase in homeless youth in Aberdeen • Concern about lack of good parenting & lack of parental supervision or direction (culture of letting kids drink, poor nutrition, lack of activity, etc.) • Concern about bullying in school • Concern about kids who get in trouble with the law • Need role models for kids • Need more focus on education & life skills/values for kids • Parents who do not take substance abuse seriously • Lack of affordable healthcare for kids – complicated to get on CHIPs	Sanford WebMD Fit Kids Sanford One Care	

Identified Concerns	Specific concerns	Alignment with Sanford resources or other community resource partners	Unmet need
	• Lack of affordable dental care for children • Concern about youth with autism		
Sanford Specific	• Concern with the clinic no longer accepting Medicaid due to poor reimbursement rates • Concern over long wait at the clinic • Concern that physicians discuss birth control & abortion with teens at clinic appt. when parent is out of the rm. • Concern with billing procedures • Need a sliding fee scale at the clinic		

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Table 2
Prioritization Worksheet

Criteria to Identify Priority Problem

- Cost and/or return on investment
- Availability of solutions
- Impact of problem
- Availability of resources (staff, time, money, equipment) to solve problem
- Urgency of solving problem (H1N1 or air pollution)
- Size of problem (e.g. # of individuals affected)

Criteria to Identify Intervention for Problem

- Expertise to implement solution
- Return on investment
- Effectiveness of solution
- Ease of implementation/maintenance
- Potential negative consequences
- Legal considerations
- Impact on systems or health
- Feasibility of intervention

Health Indicator/Concern *(from asset mapping and gap analysis worksheet)*	**Round 1 Vote**	**Round 2 Vote**	**Round 3 Vote**
Aberdeen found no unmet needs			

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