Healthy People/Healthy Communities: 2013 Dakota County Community Health Assessment

Building healthy families and communities in Dakota County through partnerships
Message to the Community

I am pleased to present the Dakota County Community Health Assessment, a combined effort by the Public Health Department and our many community partners. Special thanks to the Healthy Dakota Initiative steering committee for their excellent input and guidance.

The Community Health Assessment provides a snapshot of the health of people who live in the county and the many factors that impact our health. The report provides a solid foundation for setting priorities and developing effective strategies to improve the health of county residents.

We welcome your feedback on the Community Health Assessment and encourage you to use this information in your work with communities in Dakota County.

Healthy regards,

Bonnie Brueshoff
Public Health Director, Dakota County Public Health Department

Acknowledgments

The Healthy Dakota Initiative Steering Committee began meeting in April 2013 to provide oversight for the development of the 2013 Dakota County Community Health Assessment report.

Thank you to the committee members for their contributions to the Community Health Assessment:

- Brian Carlson, City of Burnsville Fire Department
- Barb Doherty, Dakota County Human Services Advisory Committee
- Linda Feist, Dakota County Human Services Advisory Committee
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- Peggy Johnson, Dakota Electric Association
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- Connie Marsolek, Park Nicollet Clinic - Burnsville
- Sal Mondelli, 360 Communities
- Juli Seydell Johnson, City of Eagan Parks and Recreation Department
- Karen Strauman, Regina Medical Center

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About this report

The Dakota County Public Health Department prepares a comprehensive assessment of the health of its residents every five years. The report is updated periodically through Community Health Profiles. This report and related Profiles are posted on the Dakota County website at: [http://www.co.dakota.mn.us/Government/publiccommittees/CHA/Pages/profiles.aspx](http://www.co.dakota.mn.us/Government/publiccommittees/CHA/Pages/profiles.aspx).

Additional reports and data about Dakota County are posted by the Office of Planning and Analysis at: [http://www.co.dakota.mn.us/Government/Analysis/Pages/default.aspx](http://www.co.dakota.mn.us/Government/Analysis/Pages/default.aspx).

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2013 Dakota County Community Health Assessment

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Introduction

A community health assessment is an important part of public health practice that forms the basis for all local public health planning. It helps the local public health system to gain a better understanding of the issues affecting the health of the residents and the community and to identify populations that may be at greater risk of poor health outcomes. It provides the opportunity for community leaders, organizations, and residents to talk about health priorities and concerns. The ultimate goal is to identify interventions that are aligned with the interests and health issues of the community.

Every five years, local health departments in Minnesota are charged with conducting a comprehensive assessment of the health status of their residents. The role of this mandatory process is to "collect, analyze and use data to educate and mobilize communities, develop priorities, garner resources, and plan actions to improve the public's health." (1) In Dakota County, this was accomplished through the selection of the Healthy Dakota Initiative Steering Committee that collaborated over the course of a year to gather, review and analyze data. The process culminated with the steering committee members identifying priorities that will form the basis of a five-year Community Health Improvement Plan.

Background of the Healthy Dakota Initiative

The Healthy Dakota Initiative is a comprehensive community health assessment and improvement project initiated in April 2013. The Healthy Dakota Initiative Steering Committee includes representatives from a broad cross-section of partner organizations, including hospitals, clinics, schools, non-profits, and businesses, as well as community members from the Dakota County Human Services Advisory Committee (HSAC). The Healthy Dakota Initiative aims to engage the community in a strategic planning process to improve the health and safety of all Dakota County residents, and to ensure that the priorities and strategies are shared by the partners in the county. As a framework for pursuing common community goals, the vision of the Healthy Dakota Initiative is health and well-being for all in Dakota County, based on the values of connectedness, engagement, and inclusiveness. The Dakota County Community Health Assessment represents the first step in the planning process and provides the basis for creating a community health improvement plan. This document and the series of 15 two-page Community Health Profiles found on the Dakota County website serve as documentation of the Community Health Assessment process.

Process used by the Healthy Dakota Initiative

The Healthy Dakota Initiative adapted components of the Mobilizing for Action through Partnerships and Planning (MAPP) model to collect data that will be used to develop community health improvement strategies. MAPP is a strategic planning process used by communities to collect and analyze data, prioritize issues, identify resources to address priorities, and develop goals and strategies. It was jointly developed by the National Association of City and County Health Officials (NACCHO) and the Centers for Disease Control and Prevention (CDC). The graphic representation of the model in Figure 1 below shows that MAPP consists of four assessment methods that work together to provide information needed to make decisions about health priorities and strategies. The conclusion of the four assessments is a comprehensive report about the health of the community that includes information about the assets, challenges, barriers, and resources that can be used to develop a Community Health Improvement Plan (2).
The Healthy Dakota Initiative Steering Committee completed three of the four assessments: Community Themes and Strengths Assessment, Forces of Change Assessment, and Community Health Status Assessment. The Dakota County Public Health Department completed a Public Health Accreditation self-assessment in October 2011 and the results from that assessment were used in place of a Local Public Health System Assessment. The first part of this document contains the results of the Community Health Status Assessment. The Community Themes and Strengths and Forces of Change assessments are documented at the end of the document.

**Data sources**

The Community Health Status Assessment utilized a variety of data sources, including the 2010 Metro Adult Health Survey, the 2010 Minnesota Student Survey, and local, state, and national databases. Data presented were the most recent data available at the time the assessment was compiled. Data from the 2013 Minnesota Student Survey were not yet available at the time of this assessment and the Metro Adult Health Survey is scheduled to be repeated in 2014. Every effort was made to locate data sources that were compiled at a county level; however, in some cases data were only available at a metropolitan region, state or national level and, therefore, include a geographic area larger than the county. When county-level data are available, historical trends and comparisons to metro, state, and national data are provided, if possible.

Multiple methods were used to complete the Community Themes and Strengths Assessment, including a Community Health Opinion Survey that provided insights about health concerns of people who live and work in Dakota County, and a shorter opinion survey that was conducted with target populations to fill gaps in the groups reached with the Community Health Opinion Survey. In addition, community assets in Dakota County that could be mobilized for health improvement were identified by the Healthy Dakota Initiative Steering Committee. Additional information was
provided by the 2013 Dakota County Resident Survey and themes identified during hospital community needs assessments completed in 2012 and 2013. The Forces of Change Assessment completed by the Healthy Dakota Initiative Steering Committee helped identify external factors that could impact health improvement efforts, as well as the threats and opportunities presented by each.

**Limitations**

This health assessment discusses many important health topics, but it does not present every possible health-related issue. The indicators included were selected to represent the breadth and complexity of public health, but the amount of investigation and detailed analysis is necessarily limited. It should not be considered a research document. References are included at the end of the document to enable readers to access additional information.

Frequently, the types of data that would be useful for health assessment are not available. This may be because data related to a specific topic area are not collected, they are not collected at the county level, or data available at the county level cannot be broken down by race/ethnicity, income, or other factors. When race/ethnicity breakdowns are available, the level of specificity is often limited, preventing the examination of specific ethnic groups in more depth. For purposes of this assessment, if data were not available at a county level, data from a regional, state, or national level were used instead.

The assessment does not include information about programs, services, or interventions that could address these health-related issues. This information will be included in the Community Health Improvement Plan that will be developed by the Healthy Dakota Initiative in 2014.

**Framework for assessing health**

In developing the Dakota County Community Health Assessment, the ideas from two frameworks were incorporated: 1) Healthy Minnesota 2020 and 2) Healthy People 2020.

Healthy Minnesota 2020 is the statewide framework for improving health in Minnesota. Healthy People 2020 establishes 10-year, national benchmarks for improving health of all Americans. Both are based on the principle that health is the product of many factors, from individual biology to community and system health. These factors create the conditions that allow people to be healthy. Importance is placed on high quality of life across the lifespan, from early childhood through old age. Because both frameworks emphasize the achievement of health equity and elimination of disparities, every attempt is made to include breakdowns by age, gender, race and ethnicity when available (3; 4).

Research has shown that social and environmental factors have a large impact on the development of healthy individuals, families, and communities. These determinants include economic opportunity, early childhood development, schools, housing, the workplace, community design, and others. To reflect this understanding of health, the Dakota County Health Assessment discusses a variety of indicators that measure the conditions and factors that affect health, as well as indicators of health status.

**Public input**

The Healthy Dakota Initiative gathered information from the public in several ways during the assessment process. The Healthy Dakota Initiative Steering Committee included two members from the Dakota County Human Services Advisory Committee, a citizen advisory committee appointed by the County Board to review and make recommendations on topics related to human services in Dakota County. A webpage was developed to post materials about the Healthy Dakota Initiative as it progressed. The Community Health Opinion Survey was designed to gather
data on health issues that are important to the community. The survey was promoted through a number of methods, including a news release; the county website; nearly 7,000 emails sent to community partners, program participants, volunteers, and staff; the Public Health electronic newsletter; cities and Chambers of Commerce email distributions; and rack cards distributed through Public Health offices, libraries, and Workforce Centers. There were 1,304 respondents. A follow-up survey, which was a shortened version of the Community Health Opinion Survey, was designed to gather data from several target populations that were under-represented in the Community Health Opinion Survey: 18-24 year olds, persons 75 and older, respondents with incomes at 200 percent of poverty or below, and respondents of color. The survey was promoted to clients at each of the Public Health offices; through outreach workers; at senior centers; and through two non-profits, DARTS and Comunidades Latinas Unidas En Servicio (CLUES). There were 1,028 respondents, including 189 who completed the Spanish version. Data from the assessment were presented to the Human Services Advisory Committee and another community group that works on youth mental health and aging issues in the county. Feedback was requested from both groups and incorporated into the assessment document, where possible. The draft document was posted on the website for a three-week public comment period which was promoted through a news release; the county website; nearly 2,700 emails sent to community partners, program participants, volunteers, and staff; and the Public Health electronic newsletter. The request for public comment was covered in six local newspapers. Twenty-five responses, that made thoughtful and helpful suggestions for improving the document, were collected through an online survey or by email. The comments and suggestions received were incorporated into the 2013 Dakota County Community Health Assessment, wherever feasible.

**Determining community health priorities**

The Healthy Dakota Initiative Steering Committee met in November 2013 to review the findings from the Community Health Assessment and to consider input collected during the public comment period. The committee initially identified 12 priorities to evaluate on four dimensions: extent (e.g., groups at risk and number of people affected), seriousness (e.g., urgency of health problem, public concern, potential for long-term illness or disability, economic impact), gap in resources available (e.g., gaps or limitations in service or location of services, impact of lack of services on the community), and health disparities (e.g., differences in impact on various groups).

The prioritization process identified the following ten issues as top health priorities in Dakota County:

- Mental Illness
- Physical activity/eating habits/obesity
- Use of alcohol, tobacco, and other drugs
- Promoting mental health
- Public health funding
- Preventing/management chronic conditions
- Income/poverty/employment
- Healthy start for children and adolescents
- Access to health care
- Affordable housing
Executive Summary

The Healthy Dakota Initiative conducted the Community Health Assessment to provide an overview of population health in Dakota County. It recognizes trends in population health status and considers high-risk populations and those with disparities in health outcomes. It also establishes data-driven public health priorities that can be used in the development of a Community Health Improvement Plan.

The Community Health Assessment utilized a variety of data sources, including the 2010 Metro Adult Health Survey, the 2010 Minnesota Student Survey, and local, state, and national databases. This information is summarized in six sections in the report: demographics, environment, socioeconomic characteristics, access to health care, risk and protective factors, and health outcomes.

Demographic data indicates there are 405,088 residents in Dakota County. The racial composition of Dakota County is 83 percent White, non-Hispanic; six percent Black/African-American; five percent Asian; less than one percent American Indian/Alaskan Native; and six percent Hispanic. Children less than 18 years of age comprise 25 percent of the county population, females outnumber males and are living longer, and the White proportion of the population is decreasing while the proportion of people of color is increasing.

Regarding the environment, fine particulate matter concentrations in Dakota County meet the national ambient air quality standards, even as the standards continue to be revised to lower levels. However, non-point emission sources, such as vehicles, are an increasing source of pollution and they are the primary source of particulate matter. Of the 16 Dakota County lakes that were tested in 2012 for mercury in fish, all had some restrictions for pregnant women and children, and all but one had restrictions for the general population.

Socioeconomically, the percent of Dakota County residents living below the poverty level (eight percent) is below the state (11 percent) and the nation (16 percent), but it generally increased from 2008 to 2012. In addition, poverty among Dakota County residents varies by race and ethnicity. The percent of Dakota County children under age 18 living below the poverty level increased by eight percent from 2008 to 2012 (faster than the total poverty rate).

Regarding access to health care, seven percent of Dakota County residents were not insured in 2012, compared to eight percent in Minnesota and 15 percent nationwide. Nearly one-fifth of persons with household incomes below the federal poverty level were uninsured and 26 percent of Hispanics/Latinos were uninsured. In 2010-11, 20 percent of U.S. adults 18-64 and five percent of children under 18 did not have a usual source of health care.

Risk and protective factor data indicate that Dakota County has a greater percent of overweight/obesity adults than the state goal. Individuals do not consume enough fresh fruits and vegetables. Twenty-five percent of high school seniors engage in binge drinking (five or more drinks on one occasion) and 19 percent of high school seniors smoke cigarettes.

Health outcomes include birth, death, chronic diseases, mental illnesses, and infectious diseases. Cancer and heart disease are the leading causes of death in Dakota County. Unintentional injuries, stroke, chronic obstructive pulmonary disease, Alzheimer’s, suicide, and diabetes are also included in the top ten causes of death, but have substantially lower mortality rates than cancer and heart disease. The overall incidence rate of cancer trended upward between 1997 and 2007 for both Dakota County and the state, but the upward trend was greater for Dakota County than the state. Cancer incidence is highest for breast and prostate, colon, and lung cancer. In Minnesota, American Indians and Blacks/African-Americans have higher rates of cancer incidence than Whites. Heart attacks and coronary heart disease are more common in males and people over 65. Heart attacks are more common in low-income people and people with a high school education or less. Twenty-one percent of Dakota County residents reported having high blood pressure, compared to 26 percent statewide and 31 percent nationwide. In 2010, eight...
percent of Dakota County residents said they had ever been told they had diabetes (Type 1 or 2). Statewide, people of color, particularly American Indians, are more likely to develop Type 2 diabetes than Whites.

Sexually-transmitted diseases (STDs) are the most common reportable disease for Dakota County residents and the rates continue to increase. In 2012, the majority of cases of STDs reported to the Minnesota Department of Health for Dakota County residents were chlamydia cases. From 2003 to 2012, the rate of chlamydia in Dakota County increased by 48 percent. The highest number of cases was reported in females, people 15-24, and people of color.

Suicide is one of the leading causes of death in Dakota County. For 15-24 year olds, it was the leading cause of death in 2011. For the period 2009-2011, the suicide rate in Dakota County was above the statewide rate. The suicide rate increased by 35 percent from 2007 to 2010, after several years of relative stability. Males have a higher rate of suicide than females. The highest rate of suicide in Dakota County for the period 2009-2011 was in 45-54 year olds. Statewide, the highest rates of suicide are in American Indians.

Overall, data from this assessment supports the results of the 2013 University of Wisconsin Population Health Institute’s national county health rankings. Of 87 Minnesota counties, Dakota County ranked 15 for health outcomes and 6 for health factors. The County Health Rankings found that Dakota County has lower rates of premature death, motor vehicle crash deaths, obese adults, people who are physically inactive, teen births, children in poverty, uninsured persons; better dentist to population ratio; higher rates of sexually transmitted diseases; and more fast-food restaurants than the statewide mean. In general, these findings agree with the findings of the Dakota County Health Assessment. However, the assessment found that the percent of adults who are either overweight or obese is 60 percent, which exceeds the 2020 Minnesota goal of 53 percent. In addition, people age 45-54 and low-income people in the county have a higher rate of obesity than the population overall. While the percent of people who are inactive overall is favorable to state and national goals, people over 75, people with less than a college education, and low-income people were more likely to have not engaged in any physical activity. The percent of children under 18 living below the poverty level is less than the state overall; however, it increased by eight percent from 2008 to 2012 (faster than the overall poverty rate increased). The number of dentists per population is similar to other metro-area counties; however, only one out of every five dentists in the county accepts new Medical Assistance patients, making it harder for those on Medical Assistance to get dental care.
Overview of Dakota County

Dakota County is the third most populous county in Minnesota, comprising 7.5 percent of the population of Minnesota (5). It is located in the southeast corner of the Twin Cities Metropolitan area and encompasses 587 square miles, 562 square miles in land and 25 square miles in water (6). Two major rivers, the Mississippi and the Minnesota, form the county’s northern and eastern borders. The county shares borders with the following counties: Hennepin County in the northwest, Scott County in the west, Rice County in the southwest, Ramsey County in the north, Washington County in the northeast, Pierce County, Wisconsin in the east, and Goodhue County in the southeast (7).

The county was founded in 1849 as one of the first nine counties of the Minnesota Territory. The seven member, elected Board of County Commissioners is the legislative body of the county. Each member represents a specific district within the county (7).

Geographically, Dakota County is largely rural; however, the county maintains an equal land use mix of urban, suburban and rural (7). Nearly 80 percent of the county’s population resides in the northern and northwestern portions of the county (8).

- Dakota County had an estimated 405,088 residents in 2012 (5).
- Dakota County is divided into 21 incorporated municipalities. A small portion of Hastings is in Washington County and the majority of Northfield is in Rice County (9).
- The five largest cities are: Eagan (64,206), Burnsville (60,306), Lakeville (55,954), Apple Valley (49,084), and Inver Grove Heights (33,880), which comprise 66 percent of the population of the county (8). Eagan is also the ninth largest city in Minnesota (10).
Demographics

**Highlights**

- From 1990 to 2000, the population of Dakota County grew by nearly 30 percent. In the most recent decade (2000-2010), growth slowed to 12 percent, but was still faster than the state (eight percent) and the United States (10 percent).

- Dakota County will continue to grow faster than the state in the future. It is projected that the county will experience a 30.5 percent growth from 2010 to 2040. The state is projected to experience a 23 percent growth rate during the same time period.

- In 2012, the population of Dakota County was slightly younger than the state and the United States, with a median age of 37.3, compared to 37.6 statewide and 37.4 in the United States.

- The fastest growing age group in Dakota County is the population 65 and older, which is projected to increase by 201 percent from 2010 to 2030 and by 252 percent from 2010 to 2040. This is two times faster than this population is expected to grow in Minnesota. By contrast, the two youngest age groups, 0-4 and 5-14, are expected to grow at a rate similar to the state or slower.

- Populations of color have grown faster than the county’s White population in the past 20 years. In 1990, people of color represented five percent of the total population. In 2010, that had grown to 16.5 percent. The Hispanic population grew by 489 percent during that time and the Black/African-American population grew by 510 percent. Hispanics now make up a larger portion of the population of Dakota County (six percent) than the state (five percent).

- Diverse populations will continue to grow in Dakota County in the future. In 2030, people of color will reach 25 percent of the population.

- A slightly larger proportion of the Dakota County population (eight percent) is foreign born than the state (seven percent).

**Population (general statistics)**

Population growth depends on the number of births, the number of deaths, and migration into and out of the county. Population density is a measure of the persons per square mile of land area in a region. Understanding the overall population is important to understanding current and future health needs. Knowing how fast the population is growing and its density may impact the health conditions the population experiences and what kind and number of services they might need.

For the 2010 Census, the U.S. Census Bureau defined two types of urban areas: 1) urbanized areas that contain 50,000 or more people; and 2) urbanized clusters that contain at least 2,500 people and less than 50,000 people. Rural constitutes any population outside of one of the two types of urban areas (11). Using the 2010 Census definitions, five percent of the population of Dakota County lives in rural designations. Parts of the cities of Eagan, Farmington, Hastings, Inver Grove Heights, Lakeville and Rosemount are designated rural and parts of the townships of Castle Rock, Empire, Nininger, and Waterford are designated urban (8).
Table 1 – Overall population data

<table>
<thead>
<tr>
<th></th>
<th>Overall population data, 2000-2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
</tr>
<tr>
<td>Dakota County</td>
<td>355,904</td>
</tr>
<tr>
<td>Minnesota</td>
<td>4,919,479</td>
</tr>
<tr>
<td>United States</td>
<td>281,421,906</td>
</tr>
<tr>
<td>Apple Valley</td>
<td>45,527</td>
</tr>
<tr>
<td>Burnsville</td>
<td>60,220</td>
</tr>
<tr>
<td>Eagan</td>
<td>63,557</td>
</tr>
<tr>
<td>Farmington</td>
<td>12,365</td>
</tr>
<tr>
<td>Hastings (part)</td>
<td>18,201</td>
</tr>
<tr>
<td>Inver Grove Heights</td>
<td>29,751</td>
</tr>
<tr>
<td>Lakeville</td>
<td>43,128</td>
</tr>
<tr>
<td>Lilydale</td>
<td>552</td>
</tr>
<tr>
<td>Mendota</td>
<td>197</td>
</tr>
<tr>
<td>Mendota Heights</td>
<td>11,434</td>
</tr>
<tr>
<td>Northfield (part)</td>
<td>557</td>
</tr>
<tr>
<td>Rosemount</td>
<td>14,619</td>
</tr>
<tr>
<td>South St. Paul</td>
<td>20,167</td>
</tr>
<tr>
<td>Sunfish Lake</td>
<td>504</td>
</tr>
<tr>
<td>West St. Paul</td>
<td>19,405</td>
</tr>
<tr>
<td>Rural cities and townships</td>
<td>15,720</td>
</tr>
</tbody>
</table>

¹ Persons per square mile
Source: United States Census Bureau, American FactFinder. [www.factfinder2.census.gov](http://www.factfinder2.census.gov), accessed on November 29, 2012

Figure 2 – Total population

![Total population, Dakota County, 2000-2012](image)


Table 1 and Figure 2 above show the total population of Dakota County from 2000-2012. From 1990 to 2000, the population of Dakota County grew by nearly 30 percent. In the most recent decade (2000-2010), growth slowed to 12 percent. Even though growth slowed from 2000-2010, Dakota County still grew faster than the state (eight percent) and the United States (10 percent). The larger northern cities – Mendota Heights, South Saint Paul and West Saint...
Paul—experienced little to no population growth during the most recent decade (from a three percent decrease in Mendota Heights to less than a one percent increase in West Saint Paul). West Saint Paul and South Saint Paul are also the cities with the highest population density, so little additional growth is expected in the future. Farmington, Rosemount, and Lakeville had the fastest growth rates (from 30 percent for Lakeville to 70.5 percent for Farmington). Although Rosemount had a high growth rate, 50 percent, it has a lower population density than other cities in the county, due to residential development being concentrated in the western half of the city (8).

### Population projections

Understanding how the population is expected to change in the future is important to understanding future health needs. Knowing how fast the population is growing may impact what kind and number of services the population needs.

#### Table 2 – Population projections

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dakota County</td>
<td>398,552</td>
<td>453,621</td>
<td>493,195</td>
<td>520,068</td>
<td>23.7%</td>
<td>30.5%</td>
</tr>
<tr>
<td>Minnesota</td>
<td>5,303,925</td>
<td>5,772,258</td>
<td>6,182,306</td>
<td>6,537,710</td>
<td>16.5%</td>
<td>23.3%</td>
</tr>
</tbody>
</table>


#### Figure 3 – Projected population

Table 2 and Figure 3 above show that the population of Dakota County is expected to continue to grow more rapidly than the state overall in the coming years. In 2020, the population of Dakota County is projected to be 453,621, an increase of 14 percent from 2010. It is projected that the county will experience a 30.5 percent growth from 2010 to 2040. The state is projected to experience a 23 percent growth rate during the same time period (12).

### Age and gender

The age structure of a population determines a number of things, including labor force composition, school enrollment and medical needs. A larger elderly population may increase demands on the public health system, medical services and social services. Many older adults are affected by chronic diseases, which increase disability, diminish quality of life, and increase health and long-term care costs (13).
Table 3 – Age distribution

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Dakota County</th>
<th>Minnesota</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Total</td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Under 5</td>
<td>28,949</td>
<td>6.7%</td>
<td>348,338</td>
</tr>
<tr>
<td>5 to 9 years</td>
<td>28,873</td>
<td>7.2%</td>
<td>366,773</td>
</tr>
<tr>
<td>10 to 14 years</td>
<td>29,077</td>
<td>7.2%</td>
<td>352,847</td>
</tr>
<tr>
<td>15 to 19 years</td>
<td>27,733</td>
<td>6.6%</td>
<td>362,813</td>
</tr>
<tr>
<td>20 to 24 years</td>
<td>22,121</td>
<td>5.5%</td>
<td>357,753</td>
</tr>
<tr>
<td>25 to 29 years</td>
<td>26,856</td>
<td>6.6%</td>
<td>369,197</td>
</tr>
<tr>
<td>30 to 34 years</td>
<td>28,366</td>
<td>7.0%</td>
<td>367,898</td>
</tr>
<tr>
<td>35 to 39 years</td>
<td>26,046</td>
<td>6.4%</td>
<td>319,127</td>
</tr>
<tr>
<td>40 to 44 years</td>
<td>29,311</td>
<td>7.2%</td>
<td>348,092</td>
</tr>
<tr>
<td>45 to 49 years</td>
<td>31,717</td>
<td>7.8%</td>
<td>376,991</td>
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<tr>
<td>50 to 54 years</td>
<td>33,549</td>
<td>8.3%</td>
<td>410,124</td>
</tr>
<tr>
<td>55 to 59 years</td>
<td>27,616</td>
<td>6.8%</td>
<td>368,941</td>
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<tr>
<td>60 to 64 years</td>
<td>21,784</td>
<td>5.4%</td>
<td>306,478</td>
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<td>65 to 69 years</td>
<td>15,583</td>
<td>3.8%</td>
<td>227,325</td>
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<tr>
<td>70 to 74 years</td>
<td>10,432</td>
<td>2.6%</td>
<td>164,400</td>
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<tr>
<td>75 to 79 years</td>
<td>7,462</td>
<td>1.8%</td>
<td>124,877</td>
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<tr>
<td>80 to 84 years</td>
<td>5,678</td>
<td>1.4%</td>
<td>100,546</td>
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<tr>
<td>85 years and older</td>
<td>5,835</td>
<td>1.4%</td>
<td>112,619</td>
</tr>
<tr>
<td>Total Population</td>
<td>405,088</td>
<td>100%</td>
<td>5,379,139</td>
</tr>
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Median Age

<table>
<thead>
<tr>
<th>Dakota County</th>
<th>37.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minnesota</td>
<td>37.6</td>
</tr>
<tr>
<td>United States</td>
<td>37.4</td>
</tr>
</tbody>
</table>

Table 3 above shows the age distribution of the population. The population of Dakota County is slightly younger than the state and United States as a whole; however, the median age increased from 30.2 in 1990 to 37.3 in 2010. The largest proportion of the population is between the ages of 45 and 64, comprising 28 percent of the population. This is also the population that had the largest increase between 2000 and 2010. Youth age 14 and younger make up 21 percent of the population, compared to 20 percent statewide and in the United States. Residents over 65 make up 11 percent of the population, compared to 14 percent statewide and in the United States. Figures 4 above show that Dakota County has a much larger population ages 45-54 than Minnesota and also a larger population of children 5-14.

There are more women than men in Dakota County (0.97 males per 100 females). Women make up a larger proportion of the United States population than men and they tend to live longer. Fifty-one percent of residents are women and 49 percent are men; statewide, the percentages are 50 percent and 50 percent, respectively, and nationwide the percentages are 51 percent and 49 percent, respectively.

Table 4 – Population projections for specific age groups

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dakota County</td>
<td>398,552</td>
<td>453,621</td>
<td>493,195</td>
<td>520,068</td>
<td>23.7%</td>
<td>30.5%</td>
</tr>
<tr>
<td>Ages 0-4</td>
<td>27,871</td>
<td>27,397</td>
<td>30,431</td>
<td>30,609</td>
<td>9.2%</td>
<td>9.8%</td>
</tr>
<tr>
<td>Ages 5-14</td>
<td>58,740</td>
<td>61,378</td>
<td>60,942</td>
<td>66,106</td>
<td>3.7%</td>
<td>12.5%</td>
</tr>
<tr>
<td>Ages 65+</td>
<td>39,816</td>
<td>76,453</td>
<td>119,883</td>
<td>140,315</td>
<td>201%</td>
<td>252%</td>
</tr>
<tr>
<td>Minnesota</td>
<td>5,303,925</td>
<td>5,772,258</td>
<td>6,182,306</td>
<td>6,537,710</td>
<td>16.5%</td>
<td>23.3%</td>
</tr>
<tr>
<td>Ages 0-4</td>
<td>355,504</td>
<td>354,493</td>
<td>385,338</td>
<td>415,871</td>
<td>8.4%</td>
<td>17.0%</td>
</tr>
<tr>
<td>Ages 5-14</td>
<td>707,878</td>
<td>751,032</td>
<td>744,926</td>
<td>816,511</td>
<td>5.2%</td>
<td>15.3%</td>
</tr>
<tr>
<td>Ages 65+</td>
<td>683,121</td>
<td>1,002,418</td>
<td>1,389,726</td>
<td>1,519,192</td>
<td>103%</td>
<td>122%</td>
</tr>
</tbody>
</table>

The nation, including Minnesota and Dakota County, is aging. Figure 5 below shows that the highest percent of population 65 and older is in Mendota Heights, West St Paul, and the area around Hastings. The largest percent increase occurred in the central part of the county and the area around Hastings. From 2000 to 2010, the proportion of Dakota County residents under age 45 decreased by three percent while the proportion of persons 45 and over increased by 49 percent (8). Table 4 above shows that the proportion of the county’s population over 65 will increase as the “Baby Boom” generation continues to move toward retirement age. It will increase about two times faster than the population over 65 will increase statewide (201 percent between 2010 and 2030, compared to 103 percent statewide) (12).

**Figure 5 – Population age 65 and over**

Diversity

The occurrence of many diseases, injuries and other public health problems often differs by race and ethnicity. It is important to understand these disparities in order to appropriately target public health interventions.

**Table 5 – Population by Race and Ethnicity**

<table>
<thead>
<tr>
<th>Race/ethnicity</th>
<th>Percentage of Dakota County population</th>
<th>Pop. growth (1990-2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1990</td>
<td>2000</td>
</tr>
<tr>
<td>White</td>
<td>95.3%</td>
<td>90.7%</td>
</tr>
<tr>
<td>Black/African-American</td>
<td>1.2%</td>
<td>2.6%</td>
</tr>
<tr>
<td>American Indian</td>
<td>0.3%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Asian</td>
<td>1.7%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1.5%</td>
<td>3.0%</td>
</tr>
</tbody>
</table>

Figure 6 – Race/ethnicity distribution

The United States is becoming more racially and ethnically diverse. Dakota County is not the most diverse county in the state, but this is rapidly changing. People of color are about the same proportion of the Dakota County population as statewide (17 percent). However, the Hispanic population makes up a slightly larger proportion of Dakota County (six percent) than the state (five percent). Among Hispanics in Dakota County, 87 percent identify their race as White (5).

Figure 7 – Population of Hispanic/Latino ethnicity
In 1990, people of color represented five percent of the total population. In 2010, that had grown to 16.5 percent. The Hispanic population grew by 489 percent during that time and the Black/African-American population grew by 510 percent. Populations of color have grown faster than the county’s White population in the past 20 years. Figure 7 above shows that the percent of the population who are Hispanic is highest in the northwest portion of the county. The greatest increase in the Hispanic population occurred in the central part of the county (8) (14). In 2020, people of color are expected to be 22 percent of the total population, and in 2030, they will reach 25 percent (15). On average, populations of color tend to be younger than the county’s White population, largely because these populations have a higher proportion of women of childbearing age and they often have more children.

In the 2012-13 school year, 27 percent of Dakota County public and charter school students were students of color. Blacks (10 percent), Hispanics (nine percent) and Asian/Pacific Islanders (seven percent) are the largest minority groups in the county. The minority population in Dakota County schools increased from 22 percent of the population in the school year 2008-09. In the 2012-13 school year, it was the same as the minority population in Minnesota schools overall (16).

**Foreign-born population**

Many immigrants do not seek health care because they lack health insurance or they do not understand the health care system. Refugees and new immigrants often have unique health concerns, depending on their conditions prior to leaving their home country and the health care they received. They may suffer from malnutrition, dental issues, and infectious diseases and may have been victims of violence. The most common conditions identified in refugees settling in Minnesota are tuberculosis (TB) and parasitic infections (17).

A slightly larger proportion of the Dakota County population (eight percent) is foreign-born than the state (seven percent). Among the native population in Dakota County, 66 percent were born in Minnesota (18).

From 2008-2012, 90 refugees settled in Dakota County. The largest numbers of refugees were from Somalia and Ethiopia (19). Based on five-year estimates, in 2010, 28 percent of the Black population in Dakota County was African-born (approximately 4,844 people). The number of students in Dakota County public schools who spoke an African language at home increased by 19 percent from the 2008-09 to 2012-13 school years. During the 2012-13 school year, there were 1,973 students who spoke an African language at home, with Somali being the most common (1,336 students) (18) (20).

People who lack proficiency in English can encounter barriers in accessing health care and have difficulty communicating effectively with health care providers. This may limit their ability to properly care for themselves and to follow their provider’s instructions.
The percent of the Dakota County population age five and older who speak a language other than English at home (11 percent) is the same as the percent in the state and lower than the United States (21 percent) (18). In the 2012-13 school year, 13 percent of Dakota County students spoke a language other than English at home, the same as the statewide percent. Figure 8 above shows that this percent slightly increased from the 2008-09 school year to the 2012-13 school year. Spanish is the most commonly spoken language other than English. Figure 9 above shows that the highest percent of non-English speaking students is in the northwest part of the county, while the greatest increase from 2007 to 2012 occurred in the southeast corner of the county and Inver Grove Heights (20).
Environment

Highlights

- Ninety-one percent of Dakota County residents rely on groundwater as their primary source of drinking water.

- Twenty-one percent of private wells sampled in 2007 exceeded the drinking water standard for nitrates. This is a particular concern in the rural townships in the eastern part of the county.

- Dakota County has a variable climate that can result in temperature extremes that may impact the health of vulnerable populations.

- Global climate change has increased the risk for hazardous weather events in the county, such as blizzards, heavy rain, and floods.

- Dakota County has met the United States Environmental Protection Agency standard for annual concentration of fine particulate matter for the past five years.

- Of the 16 Dakota County lakes that were tested in 2012 for mercury in fish, all had some restrictions for pregnant women and children, and all but one had restrictions for the general population.

- Dakota County residents and businesses recycle more than 50 percent of materials—the highest rate in the Twin Cities.
**Water quality**

People use water for many activities including drinking, hygiene, and recreation; therefore, clean, safe water is essential for human health. Water naturally contains some impurities, such as minerals, that are essential for human health. But, it can also contain microorganisms, minerals and man-made chemicals that can be harmful to health, leading to both infectious and chronic conditions (21).

Dakota County has 175 lakes, more than 40 streams and rivers, and 24,501 acres of wetlands (22; 23). Four percent, or 24 square miles, of Dakota County is covered with water (6).

**Drinking water**

The United States has one of the safest public water supplies in the world. Disinfection and treatment of water has greatly decreased the burden of disease from waterborne infections. Adding fluoride to tap water has helped to reduce the amount of tooth decay in the population. The disinfection and fluoridation of public water systems are among the greatest public health achievements of the 20th century.

Under the Safe Drinking Water Act (SDWA), the Environmental Protection Agency (EPA) sets drinking water standards for public water systems. The majority of public water systems meet all water quality standards and the risk of developing disease due to water from a public water system in Minnesota is considered low. Private wells that serve fewer than 25 individuals are not regulated by the Safe Drinking Water Act. Owners of private wells must make sure that their well water is safe from contaminants (21). Approximately 88 percent of Dakota County residents get their water from public water systems (24). About 7,500 households rely on private wells for their water supply (25). Nearly 96 percent of the population of Dakota County is served by a fluoridated water system (26).

The majority of drinking water in Dakota County comes from groundwater (water found in underground aquifers in the pores and spaces between sand, clay, and rock). Ninety-one percent of Dakota County residents rely on groundwater as their primary source of drinking water, either through a public water system or a private well. In much of Dakota County, the drinking water supply is highly susceptible to contamination due to human activities related to land use and land management. The primary groundwater quality concerns in Dakota County include naturally occurring arsenic and radium; nitrates, which are often associated with human and animal wastes, fertilized and irrigated crops, and landfills; perfluorochemicals, which are associated with industrial activities; and pesticides (27; 21). Based on sampling of new private wells by the Minnesota Department of Health, it is estimated that between one and five percent of private wells in Dakota County have arsenic levels exceeding 10 micrograms per liter (28). Twenty-one percent of private wells sampled in 2007 in Dakota County exceeded the drinking water standard for nitrates (10 milligrams per liter or parts per million). This is a particular concern in the rural townships in the eastern part of the county (27). The water supplies in Dakota County may also contain contaminants that are emerging as concerns, such as endocrine-disrupting chemicals, prescription and non-prescription pharmaceuticals, and additives to personal care and consumer products. These substances are all currently being watched by state, national and local health officials as new or revised health and exposure information becomes available (3).

Another potential source of groundwater contamination is failing septic systems. Residents living in parts of the county that do not have access to public sewer systems maintain their own septic systems or subsurface sewage treatment systems (SSTS). A septic system that is not functioning properly poses a risk to human health and the environment because it may not remove infectious agents and/or harmful chemicals from the used water before it enters the groundwater or lakes.
**Surface water**

Surface water is vulnerable to the same potential contaminants as groundwater. The federal Clean Water Act requires states to adopt water quality standards for lakes, streams, and wetlands to support specific uses, such as drinking, fishing, and swimming. A water body that does not meet one or more of the standards is considered to be “impaired”. This means that it is not always suitable for drinking, fishing, swimming, or wading due to excessive algae growth, high bacteria levels, or contaminants, such as mercury or nitrates (29).

In 2012, there were 41 water bodies in Dakota County that were impaired for aquatic consumption, aquatic recreation or drinking water (five of these are impaired for more than one use) (30). Having contact with or swallowing contaminated water from lakes, streams, and rivers can result in waterborne illnesses. Bacteria, viruses and other organisms present in contaminated water can cause diarrheal illnesses, or skin, ear, eye, or respiratory symptoms (31). There are six public beaches in Dakota County that are regularly monitored for contaminants that commonly result in waterborne illness. In 2011, all three public beaches in Lakeville closed due to high levels of bacteria in the water. In 2012, one of the three Lakeville beaches closed due to high levels of bacteria in the water. There were no illnesses reported as a result of these beach closings.

**Climate and weather**

Climate and weather can impact human health. Heat can cause acute events, such as heat stroke. It also causes ground-level ozone to build up, which may increase the severity of respiratory diseases, such as asthma and chronic obstructive pulmonary disease. Extreme heat events are especially dangerous for the very young, the elderly, and people living in poverty. Extreme cold can lead to serious health concerns, such as frostbite and hypothermia, for the elderly, the homeless, and people who live in homes that do not have good insulation or heat (21; 32; 33).

Over the last few decades, there has been an unprecedented rate of change in the climate, which is likely to have an impact on public health. Unusually warm summers decrease air quality, increase pollution, and affect water quality. Consistently high summer temperatures also promote increased insect populations and, therefore, disease transmission. Flooding increases the breeding ground for disease-carrying insects and the potential for waterborne infections. Droughts can result in shortages of clean water and decreased agricultural productivity, which affects the food supply. Severe weather poses risks to life, health and safety due to the event itself and to issues that occur in the aftermath of the event. Power failures, water supply disruption, and loss of shelter can take a toll on physical and mental health. Infectious disease outbreaks are also common after a major disaster (3; 34).

**Table 6 – Precipitation and temperature**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average annual precipitation (in.)</td>
<td>31-34</td>
</tr>
<tr>
<td>Average annual snowfall (in.)</td>
<td>34-43</td>
</tr>
<tr>
<td>Average spring temperature (degrees F)</td>
<td>44-46</td>
</tr>
<tr>
<td>Average summer temperature (degrees F)</td>
<td>68-70</td>
</tr>
<tr>
<td>Average fall temperature (degrees F)</td>
<td>46-48</td>
</tr>
<tr>
<td>Average winter temperature (degrees F)</td>
<td>14-18</td>
</tr>
<tr>
<td>Warmest temperature on record (degrees F)</td>
<td>102-105</td>
</tr>
<tr>
<td>Coldest temperature on record (degrees F)</td>
<td>-36 to -38</td>
</tr>
</tbody>
</table>


Minnesota normally has cold, snowy winters and hot, humid summers, with a variety of conditions in between. The normal temperatures in Dakota County range from an average low of 14-18 degrees F in winter to an average high of 68-70 degrees F in the summer. (July is normally the hottest month). Table 6 above shows climate statistics for Dakota County. Dakota County receives 31-34 inches of rain and 34-43 inches of snow each year. These averages do not show
the extremes that occur each year in the form of blizzards, floods, heat waves, and cold snaps. The coldest temperature on record in Dakota County was -36 to -38 degrees F; the warmest was 102-105 degrees F (35; 36).

Weather data for Minnesota show a trend toward increasingly warm weather in recent decades. Minnesota has also seen more extreme weather events, in the form of frequent heavy rainfalls, record-breaking floods, and tornadoes in recent years. Three of the five warmest years on record in the Twin Cities have occurred in the last 10 years (3). Two recent heat waves, one in early July 2012 and one in late August 2013, resulted in six days with excessive heat warnings.

Outdoor air quality

Outdoor pollutants cause odors, reduce visibility, diminish the protective ozone layer, and contribute to other environmental problems, such as acid rain, mercury in fish, and global climate change. Outdoor air pollutants can affect human health, quality of life, and the environment. They are associated with serious respiratory and cardiovascular health effects, such as asthma, pneumonia, bronchitis, and heart attacks. Ozone and particulate matter are the main cause of air quality problems in the United States (37; 38).

Particulate matter is a mixture of solid particles and liquid droplets of varying origin and chemical composition that are suspended in air. The particles are directly released into the environment when coal, gasoline, diesel fuels, wood and other fuels are burned. They are also formed by chemical reactions with other pollutants in the air. Fine particles (those that are smaller than 2.5 microns, known as PM$_{2.5}$) pose a greater risk to human health than coarse particles, because they can be inhaled deeply into the lungs where they accumulate and they may reach the bloodstream (37).

Ozone is a colorless gas that, when formed at ground-level, is a lung irritant, associated with respiratory conditions, such as asthma, bronchitis, and emphysema. Ground-level ozone is created by chemical reactions that occur in the presence of heat and sunlight. On hot, sunny days in Minnesota, ground-level ozone can build up to unhealthy levels. Sources of the pollutants that form ozone include gasoline and diesel vehicles, construction equipment and coal-fired power plants. Paints, solvents, and adhesives can also contain ozone-forming chemicals (37).

Point sources that are regulated, such as factories and power plants, are becoming a smaller portion of the air pollution in the Twin Cities. Non-point sources that are not regulated, such as vehicles, construction equipment and residential burning, are much more common sources, accounting for 74 percent of emissions in Minnesota in 2008. Overall, air quality in the Twin Cities has improved over the past 20 years. The United States Environmental Protection Agency (EPA) has outdoor air standards for six “criteria” pollutants – particulate matter, ozone, sulfur dioxide, nitrogen dioxide, lead, and carbon monoxide. In 2011, nearly all areas of Minnesota were in compliance with these standards. However, there are higher levels of fine particulate matter in the Twin Cities than in greater Minnesota (38).
Unhealthy air quality days occur when the Air Quality Index reaches a level that is harmful to sensitive populations, such as people with cardiovascular and respiratory conditions, children, the elderly and people participating in strenuous outdoor activities. The number of unhealthy days fluctuates from year to year, usually due to climate conditions rather than changes in air pollution emissions. There were 13 unhealthy air quality days in Dakota County from 2008 to 2012 (39). Measurements of air quality come from specific locations within the county and may not be representative of air quality in the entire county.

Figure 11 above shows the average annual PM$_{2.5}$ concentration for Dakota County. Although the trend through 2009 was slightly upward, Dakota County did not exceed the national standard. The standard was lowered to 12 micrograms/m$^3$ in 2012 and the county still meets this revised standard. Even though the national regulatory standard for annual concentration is met, there are days when the concentration exceeds the daily concentration standard and an alert is issued. In Minnesota, there were 11 days from 2007 to 2011 in which the daily concentration standard for
PM$_{2.5}$ was exceeded and there were seven days in which the daily concentration standard for ozone was exceeded (38; 21).

**Mercury in fish**

Mercury is an element that occurs naturally in rocks, soil, water, and air. Because it is an element, it does not break down into less toxic substances. The majority of mercury found in Minnesota lakes and rivers comes from the atmosphere. Mercury emissions travel with the wind until rain or snow bring them down to settle in lakes and rivers. In the Twin Cities, mercury is emitted into the air primarily from the burning of coal. Bacteria in lakes and rivers convert mercury to a more toxic form, called methylmercury that is absorbed by plankton and smaller fish. As larger fish eat the smaller fish, the methylmercury is concentrated up the food chain in greater amounts. Mercury primarily affects the nervous system (brain, spinal cord, and nerves) and the kidneys. Developing fetuses, infants, and children are especially sensitive to mercury because their nervous systems are rapidly developing (40; 41).

Fish from some Minnesota lakes and rivers have been found to have higher levels of mercury. For this reason, Minnesota issues fish consumption advisories to inform people about how many fish meals they can safely eat from specific lakes or streams over a period of time. Of the 16 Dakota County lakes that were tested in 2012 for mercury in fish, all have some restrictions for pregnant women and children, and all but one have restrictions for the general population (42).

**Waste management**

Waste management involves the collection, transport, storage, processing, recycling and disposal of waste materials. It includes both hazardous and non-hazardous materials.

**Solid waste management**

Solid wastes must be stored, handled, and disposed of properly in order to ensure the public’s health and protect the environment. Improper disposal of waste can affect human health due to emissions into the air or seepage into the soil and groundwater. In recent years, fewer materials are going to landfills as people and organizations are reducing the amount of waste they generate and reusing, recycling, or composting more waste materials. Dakota County has two sanitary landfills that accept non-hazardous solid waste from waste haulers, businesses, and the public (43; 44).

Recycling makes waste materials into new resources. This decreases the amount of trash that is sent to landfills and conserves natural resources (44).

**Figure 12 – Solid waste and recycling**

Dakota County residents and businesses recycle more than 50 percent of materials—the highest rate in the Twin Cities. Figure 12 above shows the tons per capita of solid waste and recycling in Dakota County. The amount of solid waste decreased slightly from 2007 to 2011. The amount of recycling increased slightly during the same period. In 2011, the solid waste disposed in Dakota County (0.53 tons per person) was below the state (0.58 tons per person) and Dakota County residents recycled more than the state (0.59 tons per person, compared to 0.48 tons per person) (45).

**Hazardous waste**

Hazardous waste is waste that is dangerous or potentially harmful to human health or the environment. Often, hazardous wastes are the by-products of manufacturing processes; however, they can also be found in leftover products from homes and businesses, such as paints, cleaning fluids, or pesticides (46). The Environmental Protection Agency operates an environmental program, called Superfund, designed to address abandoned hazardous waste sites. These are sites where toxic chemicals were dumped in the past or where chemicals that were previously contained have started to leak. There are seven Superfund sites in Dakota County that are in the process of cleanup and are regularly monitored by the Minnesota Pollution Control Agency (47).
Socioeconomic Characteristics

Highlights

- Overall, high school students in Dakota County graduate at a higher rate (83.5 percent) than high school students in Minnesota as a whole (78 percent). However, there are disparities in graduation rates among some populations.

- The percent of Dakota County population in the labor force that are unemployed decreased from a high of 7.4 percent in 2009 to five percent in 2012. This percent is still higher than it was in 2006.

- Per capita income in Dakota County is higher than the per capita income of the state and the nation. It decreased slightly from 2008 to 2009, but slightly increased from 2009 to 2012. Per capita income is significantly lower for Hispanics and Blacks/African-Americans than it is for Whites.

- The percent of residents living below the poverty level is lower than the state and the nation overall, but the percent increased from 2008 to 2012. The rate also varies by race and ethnicity, with Blacks/African-Americans and Hispanics having a higher rate of poverty than Whites. The percent of children under 18 in poverty grew at a faster rate than the percent in poverty overall.

- An estimated 22.5 percent of homeowner households and 51 percent of rental households in Dakota County are cost-burdened (i.e. spend more than 30 percent of their household income on housing). There are a limited number of affordable housing options in the county for low-income families.

- Only one percent of Dakota County residents who work walked or biked to work, compared to four percent statewide.

- In 2013, 93 percent of Dakota County residents reported that the quality of life in the county was “Excellent” or “Good”.

- The percent of households led by a single-parent in Dakota County is slightly higher (15 percent) than the state overall (14 percent). Hispanic households are more likely to be led by a single parent than White households.

- Twenty-five percent of Dakota County residents 65 and older live alone. This percent is lower than Minnesota overall (28 percent) and trended down from 2008 and 2012.

- Eighty-six percent of Dakota County students report that they participate in organized afterschool activities.

- In 2013, 54 percent of Dakota County residents said they had volunteered in a community organization in the past year. Twenty-eight percent volunteered at least once a month.

- From 2008 to 2011, the rate of serious crime per 100,000 population in Dakota County dropped. Dakota County remained below the state through 2012, but there was a slight increase from 2010 to 2012. Five percent of serious crimes are violent crimes in Dakota County.
**Education**

Early learning experiences at home, in child care, and in preschool are important for healthy brain development, which impacts long-term social and educational success (48). Education is one of the strongest predictors of health. People with more formal education have better health and live longer than people without a high school diploma. High school dropouts are at risk for poor health, lower lifetime earnings, unemployment, and crime. Education is important because it opens up opportunities for better jobs and an increased income, which allows people to acquire housing in safer neighborhoods, purchase healthier food, and access health insurance and medical care (49).

There are an estimated 26,949 children under age five in Dakota County (5). As of December 2013, there were 125 licensed child care facilities and 728 licensed family child care homes in Dakota County (50).

**Figure 13 – Graduation rate (4-year)**

In 2013, Dakota County ranked third among metro area counties for third-grade reading scores and fourth in eighth-grade math scores (51). Students in Dakota County graduate at a higher rate (83.5 percent) than students in Minnesota overall (78 percent). However, four-year graduation rates are highest for White and Asian students and lowest for Hispanic and Black students. Students with limited English proficiency, students in special education, and students receiving free or reduced price lunch also have significantly lower four-year graduation rates than the general population. Figure 13 above shows that the four-year graduation rate for Dakota County students trended up from 2008 to 2012—a four percent increase (from 79 to 83.5 percent) (52). The Healthy People 2020 objective for four-year graduation rate is 82.4 percent (4).

Educational attainment of Dakota County residents is high, compared to the state and the nation. In 2012, 95 percent of residents 25 and older had a high school education or higher (compared to 92.5 percent in Minnesota and 86 percent in the United States) and 39 percent had a bachelor’s degree or higher (compared to 33 percent in Minnesota and 29 percent in the United States) (18).
Figure 14 – Educational attainment

Figure 14 above shows that these percentages remained relatively stable from 2008 to 2012. In 2012, the percent with less than a high school education was low (five percent, compared to 7.5 percent for Minnesota and 14 percent for the United States). Mendota Heights, Eagan, Apple Valley, Rosemount and Lakeville have the highest percent of people with a bachelor’s degree or higher, while Hastings, South St. Paul, and West St. Paul have the lowest percent (18).

Employment

Unemployed workers and their families have decreased income and increased stress, which can lead to negative physical and mental health consequences. People often lose health insurance coverage when they lose their job, which can lead to delays in getting necessary medical care. Employment in a stable, well-paying job allows a person to live in a safe neighborhood, purchase healthy foods, and provide high-quality child care and education for their children (53).
Figure 15 above shows the average unemployment rate in Dakota County and Minnesota for the past 10 years. Dakota County remained slightly below Minnesota but consistently followed the Minnesota trend. In 2012, the unemployment rates in Dakota County and Minnesota were very close (Dakota County: 5.3 percent, Minnesota: 5.7 percent). Minnesota had a lower unemployment rate than the United States overall (8.1 percent). An upward trend started in 2007 and peaked in 2009 at 7.4 percent. The trend has been downward for the past three years; however, unemployment has still not reached the level it was in 2006 (3.6 percent) (54).

A recent analysis of unemployment in the largest metropolitan areas in the United States shows that the Minneapolis-St. Paul-Bloomington metropolitan area currently experiences the worst relative disparity in unemployment between African-Americans and Whites in the United States (3).

Income

Income influences the opportunity people have to choose where to live, to purchase healthy food, and to participate in physical activity and, therefore, has an impact on their overall health. Wealth (which includes income, personal property, and other assets) is the biggest predictor of health. Every step down the income ladder corresponds to poorer health with those at the highest incomes having the best health and living the longest. The gradient gets steeper the more income inequality exists. Currently, the United States has the greatest income inequality among the developed countries (55).
Figure 16 – Per capita income

Dakota County has a higher per capita income than the state and the nation. In 2012, the per capita income was $33,854 (compared to $30,529 for the state and $27,319 for the United States). Figure 16 above shows that the per capita income in Dakota County dropped from 2008 to 2009, but slightly increased from 2009 to 2012. This is similar to the trend in Minnesota and the United States. In spite of a high overall per capita income, the per capita income of Hispanics in the county is less than half of the per capita income of non-Hispanic, Whites. The per capita income of Blacks/African-Americans is about half of the per capita income of Whites. The highest per capita incomes in the county are in Mendota Heights, Lakeville, Eagan, and Apple Valley. The lowest are in South St. Paul, West St. Paul, Farmington, and Hastings (18).

Poverty

People who live in poverty have limited choices in education, employment, living conditions, places to buy healthy food, places to engage in physical activity, and medical care. This in turn can influence lifestyle behaviors that impact health. Being poor also creates chronic stress that can lead to adverse health outcomes. Poor health can perpetuate poverty, as it has an impact on a person’s ability to work, get an education, and advance his/her income. Children who grow up in families that experience chronic stress due to poverty have a greater risk of developing long-term health problems. They are also more likely to remain in poverty as adults (3).
Table 7 – Percent in poverty

<table>
<thead>
<tr>
<th>Area</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dakota County</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children (under 18)</td>
<td>3.3%</td>
<td>8.2%</td>
<td>10.0%</td>
<td>9.2%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Families</td>
<td>2.0%</td>
<td>3.8%</td>
<td>4.6%</td>
<td>4.1%</td>
<td>5.6%</td>
</tr>
<tr>
<td>Total</td>
<td>4.0%</td>
<td>6.0%</td>
<td>7.1%</td>
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Although the percent of Dakota County residents living below the poverty level (eight percent) is below the state (11 percent) and the nation (16 percent), it generally increased from 2008 to 2012. Figure 17 below shows that the highest percent of people living below poverty level is in Burnsville, West Saint Paul, South Saint Paul and the area around Randolph in the southern part of the county. The highest percent increase in people living below poverty occurred in the central part of the county and the area around Hastings. In addition, poverty among Dakota County residents varies by race and ethnicity. Whites have the lowest percent, while Blacks/African-Americans have the highest percent. The percent of Hispanics living below poverty level is nearly six times higher than the percent of non-Hispanic, Whites living below poverty level. Residents who live in poverty are less likely than those who live above the poverty level to have a bachelor’s degree or higher and more likely to have less than a high school education. The percent of Dakota County children under 18 living below the poverty level increased by eight percent from 2008 to 2012 (faster than the total poverty rate) (18).

Figure 17 – Population below the poverty level
Food insecurity, or hunger, is a United States Department of Agriculture measure of lack of consistent access to enough food for a healthy, active life and limited or uncertain availability of nutritionally adequate foods. Food insecurity can be particularly harmful for children, who are more vulnerable. Children who do not receive adequate nutrients, particularly during the first three years of life, are in danger of developmental delays and other health concerns. They may also have behavioral problems that interfere with their ability to do well in school (56). An estimated 32,560 people in Dakota County, eight percent of the population, were food insecure in 2011. An estimated 12,760 children in Dakota County, 12 percent of children, were food insecure (57).

Participation in food support programs is increasing. Women, Infants, and Children (WIC) is a United States Department of Agriculture (USDA) program that helps low-income women, infants, and children up to age five stay healthy. WIC provides nutritious foods to supplement diets, information on healthy eating, and referrals to health care. In 2012, Dakota County had 11,098 participants in the WIC program. This represented 10 percent of the population of women of childbearing age and children birth to age five (18; 58). In 2011, among those for whom WIC status could be determined, 24 percent of Dakota County infants were born to mothers who had participated in the WIC program (59). Although the percent of Dakota County households accessing food stamps or Supplemental Nutrition Assistance Program (SNAP) benefits (six percent) is lower than the state (nine percent) and the United States (14 percent), Figure 18 above shows that it steadily increased from 2008 to 2012 (18). Hispanic households are four times more likely to access food stamps or SNAP benefits than non-Hispanic, Whites. The highest percent of households accessing food stamps or SNAP benefits is in West St. Paul and South St. Paul. The lowest percent is in Mendota Heights, Farmington, and Lakeville. During the 2012-13 school year, 27 percent of students in Dakota County public and charter schools received free or reduced-price lunches. This is lower than the state as a whole (38 percent); however, this percent increased steadily from 13 percent in the 2003-04 school year (60).

Food shelves help people obtain groceries that they are unable to pay for on their own. In recent years, the number of people using food shelves has increased significantly. Long-term unemployment caused by the Great Recession has resulted in many people using food shelves who never have before. In 2012, more than 8,500 people per day used food shelves in Minnesota, a 59 percent increase from 2007. More than 1.2 million food shelf visits in Minnesota are families with children. In 2012, nearly 20,000 more children used food shelves than in 2011 (61).
Housing and home ownership

Affordable and safe housing is an important factor in both physical and mental health. Home ownership provides financial stability and control over the living environment. Home owners are more likely to be involved in the life of the community. Affordable housing in the community also contributes to better health. Excessive housing costs limit the amount of funds available for other needs, such as food and medical care. It also results in elevated stress levels that have an impact on health. Children who have a stable living environment have higher academic achievement and better health outcomes (3; 62).

Figure 19 – Owner-occupied housing units

Figure 19 above shows that a higher percent of housing units in Dakota County are owner-occupied (74 percent) than the state (71 percent) or the United States (64 percent). However, this percent decreased by five percent from 2008 to 2012 (from 79 percent to 74 percent). The highest percent of households living in owner-occupied units is among households led by a White householder. The lowest percent is among households led by a Black/African-American householder. The highest percent of owner-occupied housing units is in Mendota Heights, Farmington, Lakeville, and Rosemount. The lowest percent is in West St. Paul, South St. Paul, and Burnsville (18).

Among Dakota County households who own their home, 22.5 percent are cost-burdened, spending more than 30 percent of their household income on housing. Among households who rent their home, it goes up to 51 percent. The percent for homeowners is similar to the percent statewide; however, the percent for renters is slightly higher than the percent statewide (48 percent) (18). For families living in poverty, the options for affordable housing are limited. In 2009, three percent of the housing units in Dakota County were federally subsidized, which included public housing units and units that accept housing vouchers. Many of these units were specialized housing for seniors or the disabled (63). Additional low-income housing that is funded by state and local sources is available, but represents a small portion of total rental units in the county. Foreclosures increased in the county from 336 in 2004 to 1,525 in 2012. The number of foreclosures represents less than two percent of all resident parcels in the county (64).

In October 2012, a count on a specific day found 328 persons in Dakota County homeless. This is likely to be an underestimate of the number of homeless, because many people who live outside of the shelter system are not found. Forty-five percent of the households reported were children with their parents (65). In the 2010-11 school year, a total of 435 homeless students were enrolled in Dakota County public and charter schools during the school year (0.5 percent of the total student population) (66).
**Built environment**

The built environment encompasses the human-made resources and infrastructure that is designed to support human activity, including buildings, roads, parks, places to buy food, retail establishments, and other amenities (67). It is where people spend the majority of their time and, therefore, has an impact on physical, mental, and social health.

**Parks and playgrounds**

Having well-maintained, safe parks and playgrounds in a community increases the number of people who engage in regular physical activity. Racial and ethnic minority and lower-income groups are the most likely to benefit from parks and recreation resources, but tend to have less access to them (68).

There are 327 city parks and recreation areas, six county parks, a portion of one regional park and a portion of one state park in Dakota County.

**Transportation**

The transportation system in the county is a network of roads, bridges, highways, sidewalks, trails, and public transit that connects people from home to work, school and other destinations. A person’s mental and physical health can be impacted by their transportation experiences. The current system is largely dependent on motorized transportation, which can have health implications. Traffic congestion can increase stress levels, create unsafe driving conditions, and increase noise and air pollution. In addition, when people travel by car, they may be missing opportunities for physical fitness. Walkability and bikability in a community contributes to people being able to walk or bike to destinations while engaging in physical activity. Ability to walk to destinations is dependent on distance, availability of sidewalks and trails, and safety (3; 69).

**Figure 20 – Travel time to work 30 minutes or greater**

Traffic congestion plays a significant role in the daily lives of county residents. More than 50 percent of roadway travel in Minnesota occurs in the Twin Cities metropolitan area. Although freeway congestion decreased slightly in 2011, it is still at its highest level since 2007 (3). Dakota County residents spend more time on the road than residents of the state overall, but less than the nation overall. Figure 20 above shows that 35 percent of Dakota County workers 16
and older had a commute of 30 minutes or greater in 2012. This is higher than the state (30 percent) and slightly below the United States (36 percent). The percent of workers with a commute 30 minutes or greater increased slightly for both Minnesota and Dakota County from 2008 to 2012 (18).

One percent of Dakota County residents who work walked or biked to work in 2012. Statewide, about four percent walked or biked to work. This percent was relatively stable from 2008 to 2012 (18). In 2010, 69 percent of Dakota County adults rated their neighborhood as a very pleasant place to walk, but 30 percent said they have no sidewalks in their neighborhood. Fewer than half (43 percent) said their neighborhood has a transit stop, such as a bus stop or train station (70).

**Social connectedness**

Social connectedness, or social capital, refers to the complex relationships between individuals and among groups. It can encompass interactions with family and friends, trust in neighbors, volunteering, and involvement in the community. Developing relationships between individuals contributes to healthy social norms, helps people connect to local services, provides emotional support, and may contribute to knowledge about health. This helps to decrease stress levels and lower blood pressure, which contribute to chronic disease. In addition, people who are socially connected are more likely to engage in healthy behaviors (3; 71).

**Satisfaction with quality of life**

In 2013, 93 percent of residents reported that the overall quality of life in Dakota County was “Excellent” or “Good”. This was the same as 2011. Dakota County’s overall quality of life rating was much higher than the ratings of three of the other four Minnesota counties that participated in the survey in 2013 (72).

**Single-parent families**

Single-parent families can occur due to divorce or death of a spouse. Some single parents have never been married. Children raised in single-parent homes may be at a disadvantage if their parent has a low income and/or lacks social support. These children are more likely to lack health insurance, to engage in risky behaviors and to have mental health problems. Adults in single-parent households can also be at higher risk of adverse health outcomes and unhealthy behaviors as a consequence of stress, isolation, and the stigma associated with being a single parent (3).

**Figure 21 – Single-parent households**

A slightly higher percent of Dakota County households (15 percent) are headed by a single parent than in Minnesota overall (14 percent), but less than the United States (18 percent). The percent increased from 2008 to 2012. Asians have the lowest percent of households that are single parent households while Hispanics have the highest percent (18). In 2011, 28 percent of live births to Dakota County residents were to unmarried mothers – a percent that steadily increased from 2002 to 2008. It was stable from 2009 to 2011 (73).

Growing older

Older residents may have challenges in maintaining social connectedness, especially if they have difficulty leaving the home due to physical, cognitive, and other health limitations. Older adults who live alone are more at risk for depression due to isolation and loneliness and they are less likely to have someone to take care of them if they become sick or disabled. In addition, older people living alone are at risk for nutritional deficiencies, injuries, and delays in seeking medical care (3).

Figure 22 – Population 65 and older who are living alone

A smaller percent of Dakota County residents 65 and older live alone (25 percent) than Minnesota residents (28 percent) and United States residents (27 percent). This percent trended down in Dakota County, statewide, and nationally from 2008 to 2012 (18).

Informal caregivers

People with chronic health conditions, physical disabilities, and cognitive impairment need a significant amount of care. Most of that care is provided at home by family members or other informal caregivers. Informal caregivers in Minnesota are typically female, between 45 and 64 years old, employed, and in good or excellent health. These caregivers usually provide less than 10 hours per week of care. A smaller subset provide from 21 to more than 40 hours per week of care. Caregivers who provide a larger amount of care are typically women, 60 and older, who are caring for a child or a spouse with cognitive impairment or memory loss. As the population ages, the number of informal caregivers will also increase (3). Caregiving can be physically, emotionally, and financially stressful, leading to physical illness and depression (74).

In addition to informal caregivers who provide care to adult family members, there are also grandparents who are responsible for the care of their grandchildren. This can happen due to death of a parent, divorce, military deployment, teen pregnancy, substance abuse or mental health issues, and other family situations. While there are
positive benefits for the children in being able to stay in their family and develop bonds, it may also create a great deal of physical, mental, and financial stress for the grandparents, especially those who are older and/or have health conditions (75). In 2012, there were 1,812 grandparents who were responsible for their grandchildren who are under 18. Seventeen percent of these grandparents were 60 years and older (18).

School mobility

Residential mobility can impact the ability for parents and children to develop and maintain social connections, particularly when there are multiple moves during a year. The stress of finding new housing and moving can take a toll on the health of both adults and children. When children move frequently during the school year, their learning is disrupted and it is more difficult to make friends. They may be at risk for emotional and behavioral problems, including depression (3).

Figure 23 – Students who transfer schools mid-year

Eleven percent of students in Dakota County public and charter schools transferred schools mid-year in the 2011-12 school year, compared to 13 percent at the state level. This percent slightly decreased in Dakota County from 2007-08 to 2010-11, but there was a slight upward trend from the 2010-11 school year to the 2011-12 school year. The West St. Paul-Mendota Heights-Eagan and Burnsville-Eagan-Savage school districts have the highest rate of student mobility, while the Lakeville and Farmington school districts have the lowest rate (76).

Youth involved in organized school- or community-based extracurricular activities

Participation in extracurricular activities can keep children safe outside of school hours and improve academic achievement, attendance, and behavior. Participation in recreational programs can increase physical activity level, thus decreasing the likelihood of obesity and chronic health conditions (77).

In 2010, 86 percent of Dakota County students in grades 9-12 participated in one or more organized afterschool activities, which included fine arts activities (lessons, band, choir, etc.), school sports, community clubs and organizations, and religious activities. This percent remained relatively stable from 1998 to 2010 (78). The Healthy People 2020 goal is 90.6 percent for youth ages 12-17 (4).
Incarceration

Incarceration poses both acute and long-term health concerns. Incarcerated individuals are exposed to violence and infectious diseases, such as tuberculosis, in close quarters. In the long-term, persons who have been incarcerated may suffer health limitations. This may be largely due to factors such as employment, income, and marital stability, which are all impacted by incarceration (3).

Minnesota has a low rate of incarceration compared to other states. However, Minnesota has one of the highest relative disparities of incarceration rates between African-Americans and Whites, with nine African-American residents incarcerated for every one White resident (3).

Community involvement

People who get involved with the community through volunteering, civic activities, and other activities tend to have a higher sense of connection to their community and a sense of purpose, which can impact physical and mental well-being. Civic engagement and community involvement are important for individual, family, and community health. Youth involved in the community learn to respect others, develop an understanding of people who are different, develop leadership skills, and are less likely to engage in risky behaviors. In addition, community involvement allows different generations to work together toward a common goal and develop a mutual understanding (79; 80).

There are nearly 150 non-profit civic organizations in the county, including parent teacher associations, 4-H clubs, fraternal organizations, veterans organizations, service clubs, and men’s and women’s clubs (81; 82). There are more than 245,000 registered voters in Dakota County, 81.5 percent of the population 18 and older (83).
In 2013, 54 percent of Dakota County residents said they had volunteered in a community organization in the past year. Twenty-eight percent volunteered at least once a month (72). Figure 25 above shows that the percent of Dakota County students who volunteer one or more hours per week increases as the students get older. In 2010, 31 percent of 6th graders, 35 percent of 9th graders, and 43 percent of 12th graders reported spending one or more hours per week volunteering (78).

**Community and personal safety**

Violence and crime affect health in a number of ways. High-crime neighborhoods keep people from going outdoors, thereby limiting their interaction with neighbors and their physical activity. Fear of violent crime can result in anxiety. People who experience crime and those who witness it experience a number of effects ranging from delay in cognitive development (children) to poor mental health. Some populations, such as those living in poverty, may be more likely to experience violence and crime. Violence and crime at school can make learning difficult and contribute to absenteeism. It makes youth less likely to engage in healthy behaviors like walking to school or participating in school activities (3).
Figure 26 – Serious crimes per 100,000

![Figure 26](image)

Source: Minnesota Bureau of Criminal Apprehension, Uniform Crime Reports, accessed March 12, 2013

Figure 26 above shows the rate of serious crimes (Part I offenses) in Dakota County compared to Minnesota. Part I offenses include murder, rape, aggravated assault, robbery, burglary, larceny, motor vehicle theft, and arson. Murder, rape, aggravated assault, and robbery are also known as violent crimes. From 2008 to 2011, the rate of serious crime per 100,000 residents dropped for both Dakota County and the state, but Dakota County had a much larger drop (18 percent compared to 11 percent). Dakota County remained below the state through 2012, but there was an increase from 2011 to 2012. In 2012, five percent of Part I offenses in Dakota County were violent crimes. There were 10 bias incidents reported in 2012. Bias incidents are crimes that are motivated or perceived to be motivated by characteristics of the victim, such as race (84).

Figure 27 – 9th graders who missed School one or more times during the previous 30 days because they felt unsafe

![Figure 27](image)

Source: Minnesota Student Survey Interagency Team, Minnesota Student Survey

In 2010, more than 95 percent of Dakota County students felt safe going to and from school and more than 93 percent felt safe at school. The percent of Dakota County students who felt that illegal gang activity was a problem slightly decreased or remained stable from 2007 to 2010 for 6th and 9th graders and increased for 12th graders. Figure 27 above shows that the percent of Dakota County ninth-grade students who reported missing school one or more days during the previous 30 days because they felt unsafe was low, but increased from 1998 to 2010 (from three percent to six percent) (78).
Access to Health Care

Highlights

- Dakota County has 227 licensed dentists, or 5.7 per 10,000 residents. This is about average for the Twin Cities metropolitan area; however, only 25.5 percent are accepting new Medical Assistance patients, which means it is difficult for residents on Medical Assistance to access dental care.

- There are 650 total physicians in Dakota County, or 16.2 per 10,000 residents, which is one of the lowest rates per 100,000 among the counties in the Twin Cities metropolitan area. Forty-seven percent of the physicians accept Medical Assistance and there are a limited number of specialists available to Medical Assistance recipients.

- There are 272 primary care physicians in Dakota County, or 6.8 per 10,000 residents. This is one of the lowest rates per 10,000 of counties in the Twin Cities metropolitan area. Nationally, there has been a decrease in medical school graduates going into primary care.

- There are three hospitals in Dakota County with 244 acute care beds, or 60.6 per 100,000 residents. Although this is the lowest hospital bed rate of counties in the Twin Cities metropolitan area, many residents access hospital care outside of the county.

- There are ten nursing homes licensed in Dakota County, with a total of 968 beds, or 239 beds per 100,000 population. This is one of the lowest nursing home bed rates for a county in the Twin Cities metropolitan area, which may force residents to seek nursing home care outside of the county.

- Seven percent of Dakota County residents were not insured in 2012, compared to eight percent in Minnesota and 15 percent nationwide. One-fifth of persons with household incomes below the federal poverty level were uninsured and 26 percent of Hispanics/Latinos were uninsured.

- In 2010-11, 20 percent of U.S. adults 18-64 and five percent of children under 18 did not have a usual source of health care.

- The total amount of state and federal funding to Dakota County Public Health Department decreased by four percent from 2008 to 2012.
Availability of health care

Health care workforce

The health care workforce that carries out most routine and preventive care consists of nurse practitioners, primary care physicians and dentists. Residents in some of the rural parts of the county may have to travel greater distances to seek primary care than those in the urban or suburban areas of the county.

The dentist rate per 10,000 residents is an indicator of the supply of dentists relative to the population. It cannot be used to determine if there is an adequate supply of dentists, because it is dependent on geographic location, hours available, population needs, and population perception. Residents may travel to other counties for dental care.

In 2010, there were 227 licensed dentists, or 5.7 per 10,000 residents, in Dakota County. This is about in the middle of the range for the other Twin Cities metropolitan counties (from 3.4 to 9.4) (73). Residents on Medical Assistance may have a more difficult time accessing dental services than residents on private insurance, because many dentists either do not accept Medical Assistance or have closed their practices to new Medical Assistance patients. Of the 227 licensed dentists in Dakota County, only 58 were accepting new Medical Assistance patients in December 2013. There were 807 Medical Assistance eligibles to every participating dentist (85; 86). This means it is difficult for people on Medical Assistance to access regular dental care, even if they have coverage. With the implementation of the Medicaid Expansion portion of the Affordable Care Act, an additional 141,000 Minnesotans will be covered under Medical Assistance.

The physician rate per 10,000 residents is an indicator of physician numbers relative to the population. It cannot be used to assess whether there is an adequate number of physician resources, because it is dependent on geographical distribution, specialties, hours available, population needs, and population perception. Residents may travel to other counties for medical care. In 2011, there were 650 total physicians, or 16.2 per 10,000 residents, in Dakota County. This is one of the lowest rates per 100,000 among Twin Cities metropolitan counties (from 10.9 to 50.3). Dakota County is about the middle of the range for nurse practitioners also with 1.9 nurse practitioners per 10,000 residents in 2012 (87). Residents on Medical Assistance may have a more difficult time accessing medical services than residents on private insurance, because many physicians do not accept Medical Assistance. There are also a limited number of specialists available to Medical Assistance recipients. Of the 650 total physicians, 303 were accepting Medical Assistance patients in December 2013. There were 154 Medical Assistance eligibles to every available participating physician (85; 86). With the implementation of the Medicaid Expansion portion of the Affordable Care Act, an additional 141,000 Minnesotans will be covered under Medical Assistance.

In 2011, there were 272 primary care physicians, or 6.8 per 10,000 residents, a decrease from 7.6 in 2008. This is one of the lowest rates per 10,000 among counties in the Twin Cities metropolitan area, which range from 5.7- 11.4 (87). Primary care includes general practice, family practice, internal medicine, and pediatrics. Nationally, there has been a decrease in medical school graduates going into primary care. This has been attributed to a number of factors, including poor reimbursements to primary care physicians, lower income compared to specialists, and heavy patient loads (88).

Health care facilities

There are three hospitals in Dakota County: Fairview Ridges Hospital in Burnsville, Northfield Hospital in Northfield, and Regina Medical Center in Hastings. There are a total of 244 acute care beds, or 60.6 per 100,000 population, and 72 specialty care beds. This is the lowest hospital bed rate for a county in the Twin Cities metropolitan area, which range from 60.6 to 332.5 (89). However, many Dakota County residents have access to and use hospitals in other counties. Dakota County hospitals had 15,241 acute inpatient admissions and 64,478 emergency room registrations in 2011 (90).
From 2008 to 2012, there were 21 adverse events in Dakota County hospitals. No deaths resulted, but 14 events caused serious disability (91). In 2011-12, 67-78 percent of patients gave Dakota County hospitals a high overall satisfaction rating – similar to the state (72 percent) and higher than the United States (69 percent) (92).

There are ten nursing homes licensed in Dakota County, with a total of 968 beds, or 239 beds per 100,000 population. This is one of the lowest nursing home bed rates for a county in the Twin Cities metropolitan area, which range from 162.0 to 575.8 (89). This may force residents to seek nursing home care outside of the county.

There were 118 licensed adult living facilities in Dakota County in December 2013. This included boarding care homes, housing with services/assisted living facilities, and supervised living facilities. There were 47 organizations in Dakota County licensed to provide care in the place of residence, including home care nurses and paraprofessionals, who serve as home health aides and/or provide home management (89). There are other organizations in the Twin Cities metropolitan area that also provide these services to Dakota County residents. In 2012, nursing home costs for 813 Dakota County fee-for-service Medical Assistance recipients totaled $23.5 million (93). From 2010-2012, there were eight substantiated complaints posted against six Dakota County long-term care facilities and home health providers (94).

**Emergency medical services (EMS)**

The four primary ambulance providers received more than 24,000 EMS calls in 2012 (95). In 2012, the Dakota Communications Center handled more than 52,000 911 calls and dispatched more than 300,000 police, fire, and EMS units to emergency events (96).

**Insurance coverage**

Lack of health insurance or health insurance that does not cover all necessary care creates a financial barrier for accessing health care. Uninsured people get less preventive screening and may delay seeking necessary care, leading to poorer health outcomes and premature mortality (3).

**Figure 28 – Health insurance sources**

Health care coverage is provided through a system of health insurers. In 2012, 71 percent of Dakota County residents got their health insurance coverage privately, either through an employer or individual purchase. Eleven percent were covered by public programs, including Medical Assistance, MinnesotaCare, and Medicare. Eleven percent were
covered by both a public program and private insurance. Seven percent of Dakota County residents were not insured compared to eight percent in the state and 15 percent in the nation. The uninsured population is expected to decrease significantly due to the implementation of the Affordable Care Act in 2014. The Healthy People 2020 goal is for no one to be uninsured (4). However, there may continue to be a number of people without adequate insurance coverage, due to the increase in high-deductible health plans. Figure 28 above shows that from 2009 to 2010, the percent of residents covered only through private insurance dropped from 74 percent to 71 percent. It remained relatively stable from 2010 to 2012 (18). Differences in the rate of insurance coverage exist by income and by race/ethnicity. In 2012, 18 percent of persons with incomes under 200 percent of the Federal Poverty Guidelines were uninsured, compared to three percent of persons with incomes at or above 400 percent of the Federal Poverty Guidelines. In 2012, 26 percent of the Hispanic/Latino population and 17 percent of the Black/African-American population in the county were uninsured, compared to five percent of the non-Hispanic, White population (18).

Medical Assistance is Minnesota’s Medicaid program that provides health care coverage for low-income people, including pregnant women, families with children, adults and children with disabilities, and adults without children. In 2012, 46,821 Dakota County residents were ever eligible for Medical Assistance (11.5 percent of the population), compared to 17 percent statewide (86). Forty-three percent of the average monthly enrollees in Medical Assistance in 2011 were children (73). The number of persons ever eligible for Medical Assistance increased by 17 percent from 2010 to 2012 (86). A large portion of the change from 2010 to 2011 was due to the early Medicaid expansion that was implemented in March 2011. By 2014, with the full implementation of the Medicaid Expansion portion of the Affordable Care Act, an additional 141,000 Minnesotans will be covered under Medical Assistance.

In 2011, the payments through Minnesota Health Care Programs (Medical Assistance, MinnesotaCare, and General Assistance Medical Care) for care for Dakota County residents totaled $425.3 million, a decrease from $436.3 million in 2010 (97). The decrease was primarily due to the end of the General Assistance Medical Care (GAMC) program.

Health care utilization

It is important for people to have a regular source of primary care in order to receive preventive services, manage acute illnesses, and provide coordination of care for chronic health conditions among multiple specialists. Having a regular primary care provider results in better communication and increases the likelihood of receiving appropriate care. People without a regular source of primary care often seek care in the emergency room, where it is more expensive. The majority of people without a regular source of primary care are uninsured; however, having insurance does not guarantee that you will have a regular source of primary care (4).

In 2010-11, 20 percent of U.S. adults 18-64 and five percent of U.S. children under 18 did not have a usual source of health care. This varied by race and ethnicity, with one-third of Hispanic adults not having a usual source of health care. Thirty-three percent of adults with household incomes below the poverty level did not have a usual source of health care, while only 10 percent of those with incomes at 400 percent or more of the poverty level did not have a usual source of health care (98). In 2011, 14 percent of adults in the U.S. ages 18-64 delayed or did not get medical care in the previous 12 months due to cost. This was an increase from 9.5 percent in 2001. The highest rate is among American Indians, Blacks/African-Americans, and Hispanics. The lowest rate is among Asians (98).

In 2008, Minnesota passed legislation approving a Medicare demonstration project that would reimburse primary care clinics for care coordination if they meet specific criteria to qualify them as a health care home. A health care home, or medical home, is designed as a partnership between providers, patients, and families to achieve better outcomes and quality of care for people with disabilities or chronic health conditions. Twenty-two clinics in Dakota County have been certified as medical homes (99).
Figure 29 – Percent of expected Child & Teen Checkups received by eligible participants

[Image of a graph showing the percent of expected Child & Teen Checkups received by eligible participants from 2008 to 2012 for Dakota County and Minnesota.]

Source: Minnesota Department of Human Services, CMS-416 Annual C&TC Participation Report
NOTE: 2010 data is not available

Child & Teen Checkups (C&TC) is a comprehensive child health program provided for children and adolescents from birth through age 20 who are enrolled in Medical Assistance or MinnesotaCare. These periodic checkups identify potential health problems, provide diagnosis and treatment, and encourage healthy behaviors. The goal is to have all children enrolled in Medical Assistance or MinnesotaCare up-to-date on Child & Teen Checkups. In 2012 in Dakota County, 88 percent of expected Child & Teen Checkups were completed for eligible Medical Assistance or MinnesotaCare children (70 percent of children received at least one screen). This was a decrease from 95 percent in 2008 and slightly higher than the statewide percent (86 percent). Dakota County followed the statewide trend very closely. The percent of Child & Teen Checkups completed was 100 percent through age two. After age two, the percent begins to drop off at each subsequent age (100).

Uncompensated care is a measure of the amount of care provided in hospitals for which no payment is received. It includes charity care for which the hospitals do not expect reimbursement and debt that the hospitals are unable to collect. Dakota County hospitals provided $15.9 million in uncompensated care in 2011, a 203 percent increase from 2002 (90).

Potentially preventable hospitalizations

Research has shown that a number of hospitalizations could be avoided if the patient had received appropriate primary care, better care coordination, and patient education. These hospitalizations may be an indicator of lack of access to high quality primary and preventive care (101).

Table 8 – Potentially preventable hospitalizations

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<td>365</td>
<td>353</td>
<td>360</td>
</tr>
<tr>
<td>Asthma</td>
<td>315</td>
<td>255</td>
<td>274</td>
<td>233</td>
<td>196</td>
</tr>
<tr>
<td>Hypertension</td>
<td>174</td>
<td>169</td>
<td>170</td>
<td>170</td>
<td>159</td>
</tr>
</tbody>
</table>

Source: Minnesota Hospital Association
Figure 30 – Hospital discharges – potentially preventable hospitalizations

Table 8 above shows the number of discharges for four common potentially preventable hospitalizations from 2007 to 2011. Figure 30 above shows that the discharge rates per 1,000 for all of these conditions, except asthma, were relatively stable from 2007 to 2011, with congestive heart failure and diabetes having the highest discharge rates of the four. The asthma discharge rate decreased by 40 percent from 2007 to 2011 (102).

Public health infrastructure

A strong public health infrastructure can assure that residents have access to disease prevention, health promotion, surveillance, and other population-based services.

Figure 31 – Public health funding sources

Source: Minnesota Hospital Association

Source: Dakota County Financial Services
In 2012, the expenditures for public health services in Dakota County were $8.5 million, or $21 per resident. This was a 22 percent decrease from 2011 when expenditures were $11 million, or $27 per resident. (The decrease was largely due to the shift of long-term care waiver services from Public Health to Social Services in 2011). The expenditures per capita of Dakota County were about half that of the Twin Cities metropolitan area ($52 per resident) and the state overall ($51 per resident) in 2012 (103). Figure 31 above shows the breakdown of Dakota County Public Health Department expenditures by funding source. In 2012, state and federal funds accounted for the largest portion of funding (49 percent), followed by local tax levy (41 percent). The total amount of state and federal funding to the Dakota County Public Health Department decreased by four percent from 2008 to 2012. Reimbursements from Medicaid and private insurance accounted for five percent of the funding. Eleven percent of funding is Local Public Health Act dollars from the state general fund (104; 103).

In 2012, Dakota County Public Health had 22 filled and contracted full-time equivalents (FTEs) per 100,000 residents. This decreased from 26 per 100,000 in 2011. Dakota County had a lower FTE per 100,000 rate in 2012 than both the Twin Cities metropolitan area (31.5 per 100,000) and the state (43 per 100,000) (103). Twelve percent of the Dakota County Public Health workforce in 2012 was racially or ethnically diverse. This compares to 17 percent of the county population that is racially or ethnically diverse (104; 103; 5).

The mission of local public health departments has expanded in recent years to include readiness for emergency response and recovery. Public health concerns include emerging infectious diseases, the possibility of bioterrorism incidents, disease pandemics, and public health impacts of natural and man-made disasters. The Dakota County Public Health Department and other public health agencies use rigorous drills and exercises—the same tools that have proven effective for the U.S. military, law enforcement, and firefighters—to test and improve systems. Households can also prepare for emergencies like floods, widespread disease outbreaks, or terrorist incidents. Recommended actions include: creating a family communication plan; preparing a disaster kit; and having a three-day supply of food, water and medications. A 2009 national survey found that 71-74 percent of Americans had set aside food and water in case of a disaster, but less than half (44 percent) updated their supplies annually. Fewer had other essentials, such as flashlights, portable radios and first aid kits (105).

Medical Reserve Corps (MRC) is a nationwide initiative to mobilize and coordinate health care professionals and other volunteers to assist in a public health emergency. MRC volunteers receive periodic training and participate in both emergency and non-emergency events in Dakota County. As of July 2013, the Medical Reserve Corps of Dakota County had 506 registered volunteers. 65 percent of the volunteers are health professionals; 35 percent do not have a healthcare background (95).
Risk and Protective Factors

Highlights

- The percent of mothers receiving prenatal care in the first trimester decreased slightly in Dakota County from 2007 to 2011 (from 87.5 percent to 86 percent).

- In 2011, among Dakota County babies for whom breastfeeding status could be determined, 86 percent were breastfeeding upon discharge from the hospital. Minnesota mothers breastfeed at a similar or slightly lower rate than those in the United States overall.

- In 2011, there were 94 births to mothers under 19. The teen birth rate has declined in Minnesota since 2001 and Dakota County has followed the state trend.

- Dakota County is in a high potential radon zone and more than a third of houses that tested with a short-term test kit tested above the level that poses a significant health threat (4 pCi/L).

- The percent of Dakota County students who were moderately physically active for 30 or more minutes on five of the last seven days slightly increased from 1998 to 2010 for all grades. Ninth-graders had the highest percent; 12th graders the lowest - 49 percent (6th graders), 56 percent (9th graders), and 46 percent (12th graders).

- In 2010, 78 percent of Dakota County adults met the national recommendations of 150 minutes or more of moderate or vigorous activity per week. Twelve percent of Dakota County adults said they did not engage in any physical activities during the past 30 days.

- Forty-one percent of Dakota County adults reported eating five or more servings of fruits and vegetables the previous day (2010). About one in five Dakota County students ate five or more servings of fruits and vegetables the previous day - 2010 percents: 21 percent (6th graders), 20 percent (9th graders), and 18 percent (12th graders).

- In 2010, approximately one-fourth of 12th graders reported binge drinking during the last two weeks - 2010 percents: nine percent for 9th graders and 25 percent for 12th graders. The percent of Minnesota adults (18 and older) who engaged in binge drinking in 2012 (22 percent) is higher than in the United States overall (17 percent).

- In 2010, 12.5 percent of Dakota County adults were current smokers. The percent of Dakota County students who smoked cigarettes declined for all grades from 1998 to 2010. Eight percent of 9th graders and 19 percent of 12th graders reported smoking cigarettes in the past 30 days.

- In Minnesota in 2011-12, an estimated six percent of persons 12 and older reported use of marijuana during the past month. The highest rate was among 18 to 25 year olds at 17.5 percent. Among Dakota County students, use of marijuana within the past year was highest among 12th graders, with more than one-third reporting marijuana use in 2010.

- There were 29 deaths in Dakota County in 2010 due to drug misuse or drug-related suicide. The rate of drug-related mortality for Dakota County residents increased by 59 percent from 2006 to 2010. At a metro level, the rate increased only slightly during the same time period.

- Forty-one percent of Dakota County children 24-36 months of age are up-to-date for the recommended vaccinations, compared to 56 percent statewide.
Ensuring healthy mothers and babies

Prenatal Care

Prenatal care provides care for the pregnant mother and the unborn baby and prepares the mother for labor and delivery. Prenatal care includes: helping the mother to make healthy choices and preparing her for body changes; prenatal testing and counseling; treating medical complications like gestational hypertension, diabetes, and anemia; promoting optimal weight gain; testing for sexually transmitted infections; oral health assessment and treatment; and maternal mental health and substance abuse screening. Early and ongoing prenatal care can improve health outcomes for the baby and the mother, by preventing complications of pregnancy or providing early intervention. Two of the most significant benefits are decreased risk of premature birth and improved birth weight, both of which are contribute to infant mortality and high costs of care (3).

Figure 32 – Births to mothers who started prenatal care in the first trimester

The percent of mothers receiving prenatal care in the first trimester decreased slightly in Dakota County from 2007 to 2011 (from 87.5 percent to 86 percent). It very closely followed the statewide trend and, in 2011, the rate for Dakota County (86 percent) was slightly above the Minnesota rate (85 percent). Dakota County and Minnesota already exceed the Healthy People 2020 goal of 77.9 percent. In 2011, two percent of mothers did not access prenatal care until the third trimester of pregnancy and less than one percent had no prenatal care. A higher percent of non-Hispanic, White (89 percent) and Asian (83 percent) mothers accessed prenatal care in the first trimester than African-American/African (74 percent) and Hispanic (73 percent) mothers in 2011 (4; 106).

Folic acid is a B vitamin that can help prevent major nervous system birth defects, such as spina bifida. A woman needs to have enough folic acid in her body before and during pregnancy, so it is important to ensure adequate intake in all women of childbearing age. In 2007, 60 percent of U.S. women of childbearing age did not take folic acid supplements daily. Hispanic/Latina women have the highest rate of babies with neural tube defects, such as spina bifida, and are less likely to have an adequate intake of folic acid (107; 108).
Smoking and alcohol use during pregnancy

Smoking during pregnancy is the most preventable cause of poor maternal and infant outcomes. Mothers who smoke cigarettes during pregnancy are at risk for pregnancy complications, preterm birth, having low birth weight babies, and stillbirth. If a woman quits smoking before pregnancy or early in pregnancy, it significantly reduces her risk for complications of pregnancy and poor birth outcomes. There is no known safe amount of alcohol to drink while pregnant and no known safe time to drink alcohol during pregnancy. Drinking alcohol during pregnancy can cause miscarriage, stillbirth, and a range of chronic disorders, known as fetal alcohol spectrum disorders (FASDs). Children with FASDs may have many physical, mental, and behavioral problems, including low birth weight, hyperactive behavior, difficulty paying attention, and learning disabilities (3).

Figure 33 – Births to mothers who smoked during pregnancy

Although the percent of births to Dakota County mothers who smoked during pregnancy is consistently lower than the state, Figure 33 above shows that the Dakota County percent increased slightly from 2006 to 2010 (from five percent to six percent) while the percent for Minnesota remained relatively stable. The smoking status questions on the birth certificate changed in 2011, so the data is not comparable to previous years. In 2011, the Dakota County percent (nine percent) was below the statewide percent (14 percent) (73). In Minnesota, from 2007-2009, rates of smoking during pregnancy were significantly higher in African-American women, women under 25, women with a high school education or less, and women who are poor or unmarried (3).

In Minnesota, the rates of alcohol use during pregnancy vary widely by race, income, and education. White mothers, those with greater than a high school education, and those with an annual income greater than $50,000 were more likely to have had alcohol during the three months prior to getting pregnant than Hispanic mothers, those with less than a high school education, and those with less than $10,000 annual income (3).

Cesarean section (C-section) rate

A Cesarean section (C-section) is a surgery performed to deliver a baby. C-sections are normally done when unexpected problems occur during delivery, such as health problems in the mother, position of the baby, not enough room for the baby to be delivered vaginally, and signs of distress in the baby. The surgery is relatively safe for the mother and baby, but it is major surgery which carries certain risks. Surgical complications such as infections, blood loss, injury to nearby organs, and reaction to anesthesia can occur. In addition, it takes longer to recover from a C-
section than from a vaginal birth. Although a C-section may be necessary in some cases to protect the mother and baby, the number of C-sections has risen rapidly in the United States. Some health care providers believe that many of these surgeries are not medically necessary (109; 110).

In Dakota County, C-sections increased from 20 percent of births in 2002 to 30 percent of births in 2011. In 2011, Dakota County had a higher percent of C-sections than the state (26.5 percent) (73).

**Postpartum depression**

Postpartum depression is depression that can occur any time after childbirth, but usually within the first few months after delivery. Depression makes it difficult for a new mother to take care of herself and her baby. It can also interfere with mother-baby bonding. If left untreated, it can get worse and may hinder infant development and put the mother at risk of injuring herself or her baby (111). During the period 2009-2011, eight percent of Minnesota mothers reported frequent symptoms of postpartum depression. This was a decrease from 12 percent in the period 2004-2008 (112).

**Breastfeeding**

Breastfeeding conveys important protective factors for infants, such as heightened immune system response and obesity prevention. Breastfeeding also promotes maternal-child bonding. The American Academy of Pediatrics recommends breastfeeding for a year or more after birth, with exclusive breastfeeding for the first six months (3).

**Figure 34 – Breastfeeding in Minnesota and United States**


In 2011, among Dakota County babies for whom breastfeeding status could be determined, 86 percent were breastfeeding upon discharge from the hospital (59). Figure 34 above shows that Minnesota mothers breastfeed at a similar or slightly lower rate than those in the United States overall. In Minnesota, 73.5 percent of infants are ever breastfed, compared to 76.5 percent nationally. Forty-nine percent are breastfed at six months in Minnesota and nationally. Twenty-three percent are breastfed at 12 months, compared to 27 percent nationally (113). Minnesota is below the Healthy People 2020 goals: 81.9 percent ever breastfed, 60.6 breastfed at six months, and 31.1 at one year (4).
**Adverse childhood experiences**

Childhood health and experiences have a significant impact on lifelong health and well-being. Adverse childhood experiences include abuse, neglect, and other traumatic stressors. An individual with a higher number of adverse childhood experiences has an elevated risk for mental health disorders and other disease conditions. People with a higher number of adverse childhood experiences are also more likely to engage in high-risk behaviors, such as alcohol abuse, illicit drug use, and risky sexual activity (3).

**Child maltreatment**

Child maltreatment includes actions by a parent or other caregiver, such as child care provider, clergy, coach, or teacher that result in harm, potential harm, or threat of harm to a child (114).

**Figure 35 – Child maltreatment**

In 2012, 1,548 Dakota County children were the subjects of a child maltreatment assessment or investigation. Nearly 66 percent of subjects went through an alternative response process called family assessment, which does not make a determination of child maltreatment (115). Twenty-nine percent of traditional investigations (230 children) resulted in a determination of maltreatment. There were 15 injuries due to maltreatment in children 19 and under that required emergency room and/or hospital treatment (116). In 2012, about 43 percent of Minnesota child subjects of maltreatment reports were five years old and younger. Seventy-seven percent of alleged abusers were the biological parents of the victim. American Indian and Black/African-American children are over-represented in the child protection system. In 2012, 68 percent of Dakota County reports of child abuse included neglect, 24 percent included physical abuse, and 10 percent included sexual abuse. Some victims suffered from more than one form of abuse and neglect (115). Figure 35 above shows that the number of children involved in an assessment remained relatively steady from 2008-2012, while investigations slightly declined. The rate of determined child maltreatment in Dakota County children was below the rate for Minnesota and the metro in 2012 (115).

More students report sexual abuse by non-family members than by family members. In 2010, three percent of 6th graders and five percent of 9th and 12th graders reported being touched sexually or being forced to touch someone...
else sexually (older, non-family member). 1.5 percent of 6th graders and 2.5 percent of 9th and 12th graders reported being touched sexually or being forced to touch someone else sexually (older, stronger family member) (78).

**Intimate partner violence**

Intimate partner violence describes physical, sexual, or psychological harm done by a current or former partner or spouse or dating partner. Intimate partner violence can have a negative effect on health throughout life. Victims of intimate partner violence suffer both physical and emotional injury and are more likely to engage in unhealthy behaviors (117).

**Figure 36 – Students who have ever been physically, emotionally or sexually abused by someone they were dating**

![Bar chart showing students who have ever been physically, emotionally or sexually abused by someone they were dating in Dakota County, 2007 and 2010.](source)

In 2010, nine percent of Dakota County 9th graders and 15 percent of Dakota County 12th graders reported they were ever hit, hurt or threatened or forced to do something sexual by someone they were dating. This was similar to the statewide percentages (9th graders: 10 percent, 12th graders: 15 percent) (78; 118). In Minnesota, the highest rates were reported by American Indian and Hispanic students. In 2013, 12 percent of female college students in Minnesota reported intimate partner violence within the past 12 months (119). Three percent of Minnesota women 18-44 reported being physically assaulted by a current or former intimate partner in the previous year (2004) (120).

**Reproductive health**

**Unintended pregnancy**

An unintended pregnancy is a pregnancy that is mistimed, unplanned, or unwanted at the time of conception. Unintended pregnancy can result in an increased risk of problems for the mother and the baby. If a pregnancy is not planned, a woman may not be in optimal health for childbearing. A woman with an unintended pregnancy could delay prenatal care and this can affect the health of the mother and the baby (121). Forty-one percent of Minnesota mothers surveyed in 2010 said their pregnancy was unintended (112). The Healthy People 2020 goal is 44 percent (4).

Unintended pregnancies can lead to abortions, particularly for mothers who are not married. In 2011, 13 percent of pregnancies in Dakota County residents resulted in induced abortions, similar to the statewide percent. The abortion rate per 1,000 females ages 15-44 in Dakota County dropped by 14.5 percent from 2007 to 2011 (73).
Teen parenting

Teen parents and their children have unique challenges. Teenage girls who become parents are less likely to graduate from high school, and are more likely to live in poverty and receive government assistance than women who become parents later in life. Teen mothers often do not access appropriate prenatal care (3).

Children of teen parents are more likely to be born at low weight, be reported as abused or neglected, and be placed in foster care. They are less likely to perform well in school than children of older parents. Daughters of teen parents are more likely to become teen parents themselves (3).

In 2010, among students who were being sexually active, 37 percent of 9th graders and 62 percent of 12th graders reported always using birth control. The percentage declined in both grades between 2001 and 2010 (78).

Figure 37 – Teen birth rate (mothers aged 15-19)

In 2011, there were 94 births to mothers under 19 (two percent of live births) (106). Figure 37 above shows that, for the period 2009-2011, the rate of teen births in Dakota County (14.6 per 1,000 births) was below the state (22.0 per 1,000 births). The teen birth rate has declined in Minnesota since 2001 and Dakota County has followed the state trend (73). In Minnesota, Asian, African-American, Hispanic and American Indian teen birth rates range from three to six times higher than that of White teens (3).
Environmental risk factors

Lead

Lead poisoning is a medical condition that occurs when lead builds up in the body. In young children, elevated blood lead levels are associated with learning and behavioral issues. Lead enters the body through ingestion or inhalation of paint chips, dust, and materials contaminated with lead. Children less than six years old are most at risk for lead poisoning, because their bodies absorb more lead and their brains are still developing. Young children may also put contaminated objects into their mouths. The highest risk for lead exposure happens when paint is deteriorating or gets disturbed due to repair or remodeling projects. Young children living in poverty are at a higher risk of lead poisoning than children in higher income brackets.

The United States Environmental Protection Agency estimates that more than 80 percent of housing built in the United States before 1978 contains lead-based paint. Lead-based paint in housing built before 1950 may contain higher concentrations of lead. In Dakota County, 47 percent of housing units were built through 1979. Seven percent of these units were built before 1950 (21).

Figure 38 – Percent of children under age 6 tested for lead with levels above 5 ug/dL

![Graph showing percent of children under age 6 tested for lead with levels above 5 ug/dL from 2007 to 2011 in Dakota County.]

Source: Minnesota Department of Health, Blood Lead Surveillance Reports, [www.health.state.mn.us](http://www.health.state.mn.us), accessed February 7, 2013

Twenty-one percent of Dakota County children under age six were tested for blood lead in 2011, an increase from 2002. Of these children, 0.1 percent had blood lead levels 10 micrograms/dL or above. This declined from two percent in 2002. In 2012, the Centers for Disease Control and Prevention released new recommendations for primary prevention of lead poisoning in children, which lowered the blood lead level to trigger public health intervention from 10 micrograms/dL to 5 micrograms/dL. In 2011, one percent of Dakota County children tested had blood lead levels 5 micrograms/dL or above. This percentage has fluctuated since 2007 (122).

Indoor air

Mold, radon, tobacco smoke, and carbon monoxide are some of the important pollutants that may be present in homes, schools, and other indoor environments.

Radon is an important indoor air quality issue in Minnesota. Radon is a colorless, odorless gas that occurs naturally in the environment. It seeps from the earth and enters homes and other buildings through a variety of cracks and gaps. When it is inhaled, it gives off radioactive particles that can damage the cells lining the lungs. Long-term exposure can
lead to lung cancer, making it the leading cause of lung cancer in non-smokers. There is no safe level of radon for humans, but the risk increases at higher concentrations and with longer term exposure (123). In Dakota County, among homes that tested using a short-term test kit for radon, 38 percent had radon levels above the level that poses a significant health threat (4 pCi/L) (124). Dakota County is in a high potential radon zone (125).

Carbon monoxide is an odorless, colorless gas that can build up inside homes at dangerous levels when fuel-burning devices are not properly maintained and vented. It is harmful to humans because it interferes with normal oxygen uptake. From 2006-2011, there were 89 emergency room visits and seven hospitalizations in Dakota County due to carbon monoxide poisoning (21).

Mold, a type of fungus, can become a problem indoors if there is excess moisture. This can cause respiratory problems and is a particular concern for people with allergies and asthma and people with severely weakened immune systems. Dakota County Public Health received 48 complaints due to mold in 2012 (126; 95).

Exposure to secondhand smoke

Secondhand smoke, or environmental tobacco smoke, is a mixture of chemicals from the smoke given off by the burning end of a cigarette, pipe, or cigar, and from the smoke exhaled by smokers. Even brief exposure to secondhand smoke puts a non-smoker’s health at risk, because of the thousands of chemicals released into the air. Secondhand smoke causes disease and premature death in children and adults who do not smoke (21). It is estimated that 3,400 non-smokers die from lung cancer and 46,000 from coronary heart disease each year due to exposure to secondhand smoke (3; 127).

In October 1, 2007, the Freedom to Breathe amendment to the Minnesota Clean Indoor Air Act became effective. It prohibits smoking in virtually all public indoor places and indoor places of employment. In addition, many private organizations have instituted policies to prohibit outdoor smoking on their grounds or smoking indoors in areas not addressed by the Freedom to Breathe amendment, such as hotel/motel rooms and rental units (128).

Since the passage of this amendment, more Minnesotans are protected from tobacco smoke in their environments by smoke-free policies at work and voluntary rules at home. Secondhand smoke exposure among nonsmoking adults has steadily decreased since 2003. The percent of Minnesota adults who report having a smoke-free policy at work increased from 76 percent in 2007 to 81 percent in 2010. Exposure to secondhand smoke in Dakota County homes and in vehicles is below the state. In 2010, 4.5 percent of Dakota County adults reported that someone regularly smokes in their home. Statewide, 9.5 percent were exposed to secondhand smoke in their home within the past seven days. 11.5 percent of Dakota County adults reported being in a car or other vehicle with someone who was smoking the past seven days, compared to 18 percent statewide. People who were older, those with less than a college education, and those with incomes at 200 percent of poverty or less were more likely to be exposed to secondhand smoke in their homes. Younger adults, those with less than a college education, and those with incomes at 200 percent of poverty or less were more likely to be exposed to secondhand smoke in vehicles (70) (129).
Figure 39 above shows that secondhand smoke exposure also decreased among non-smoking Minnesota youth in middle school and high school from 2000 to 2011. Non-smoking high school students (grades 9-12) are more likely to be exposed to secondhand smoke than non-smoking youth in middle school. In 2011, 19 percent of Minnesota middle school students and 24 percent of high school students who do not currently smoke reported repeated exposure to secondhand smoke during the previous week (130).

Physical activity and nutrition

Physical activity

Physical inactivity is one of the most important risk factors for chronic disease in the United States. Regular physical activity helps reduce the risk of chronic diseases, such as heart disease, stroke, diabetes, and certain cancers; helps control weight; strengthens bones, muscles, and joints; prevents falls or helps reduce injuries from falls among older adults; and relieves anxiety and depression. People who live in communities that support active living are more likely to engage in physical activity as part of their daily routine, such as walking or biking for transportation.

National guidelines recommend that children engage in at least 60 minutes of physical activity each day, including muscle strengthening and bone strengthening activity at least three days per week. Adults need 150 hours of moderate activity every week, 75 minutes of vigorous activity every week, or an equivalent mix of moderate and vigorous activity, plus muscle-strengthening activities on two or more days a week (131).
Figure 40 – Students who were physically active 30 minutes or more at least five of the last seven days

Figure 40 above shows that the percent of Dakota County students who were moderately physically active for 30 or more minutes on five of the last seven days slightly increased from 1998 to 2010 for all grades. Ninth-graders had the highest percent; 12th graders the lowest. 2010 percents: 49 percent (6th graders), 56 percent (9th graders), and 46 percent (12th graders). Dakota County students in all grades did slightly better than the state in 2010 (6th graders: 47.5 percent, 9th graders: 55.5 percent, and 12th graders: 43 percent). Vigorous physical activity (defined as exercise that makes you sweat or breathe hard for 20 minutes or more) at least three days per week also increased slightly in all grades between 1998 and 2010. Ninth-graders had the highest percent; 12th graders the lowest. 2010 percents: 71 percent (6th graders), 73 percent (9th graders), and 63 percent (12th graders). Ninth graders had the highest percent of physical activity (both moderate and vigorous). They were also most likely to participate in club, community or school sports teams three or more hours per week (about 55 percent in 2010, compared to 38 percent for 6th and 42 percent for 12th graders (78). In 2013, 65 percent of Minnesota college students met the national recommendations for physical activity (119).

In 2010, 78 percent of Dakota County adults met the national recommendations of 150 minutes or more of moderate or vigorous activity per week. Females, older people, those with less than a college education and those with incomes at 200 percent of poverty or less were less likely to meet the recommendations (70). Nationally, Blacks/African-Americans and Hispanics are less likely to meet the recommendations. The 2020 Minnesota target is 75 percent and the Healthy People 2020 goal is 47.9 percent (132).

Sedentary lifestyle

A sedentary lifestyle is a lifestyle that includes no physical activity or irregular physical activity. It is characterized by spending too much time sitting (commuting by car, working at a desk, screen time during leisure). Long periods of inactivity increase the risk of heart disease, diabetes, cancer, and obesity.

In 2010, 12 percent of Dakota County adults said they did not engage in any physical activities during the past 30 days. People over 75, people with less than a college education, and people with incomes at 200 percent of poverty or less were less likely to have engaged in any physical activity (70). The Dakota County percent was better than the state percent in 2010 (19 percent) (133). It is below the Healthy People 2020 goal of 32.6 percent (4).
Figure 41 – Students who engaged in six or more hours of screen time per week

Source: Minnesota Student Survey Interagency Team, Minnesota Student Survey

Figure 41 above shows the percent of Dakota County students who engaged in six or more hours of screen time per week. Screen time is defined as online activities (email, web surfing, etc.), playing computer or video games, or watching TV, DVDs or videos. Twelfth-graders had the highest percent; 6th graders the lowest. 2010 percents: 63 percent (6th graders), 75 percent (9th graders), and 76 percent (12th graders) (78).

Healthy eating

Unhealthy eating, combined with physical inactivity, contributes to the development of obesity and chronic diseases, such as heart disease, stroke, type 2 diabetes, high blood pressure, osteoporosis and certain cancers. Since the late 1970’s, the prevalence of overweight and obesity in the United States has nearly doubled in adults, more than doubled in children and more than tripled in adolescents. Unhealthy diets include too many calories, too much saturated fat and sodium, and too few nutrients.
Figure 42 – Students who reported eating 5 or more fruits and vegetables yesterday

Source: Minnesota Student Survey Interagency Team, Minnesota Student Survey

Figure 42 above shows that the percent of Dakota County students who ate five or more servings of fruits and vegetables the previous day stayed relatively stable for 6th graders and slightly increased for 9th and 12th graders. Sixth-graders had the highest percent; 12th graders the lowest. 2010 percents: 21 percent (6th graders), 20 percent (9th graders), and 18 percent (12th graders). Dakota County 6th and 12th graders did about the same as the state. Ninth graders did slightly better than the state percent (18 percent) (78). The Minnesota 2020 target is 30 percent for all students (132).

In 2010, 41 percent of adults reported eating five or more servings of fruits and vegetables the previous day. Males, people with less than a college education and people with incomes at 200 percent of poverty or less were less likely to have eaten five or more servings of fruits and vegetables (70). The Dakota County percent was better than the state percent in 2009 (22 percent) (133). In 2013, 18 percent of Minnesota college students reported eating five or more fruits and vegetables per day (119).

In Dakota County, the percent of students who drank three or more glasses of milk the previous day decreased for 6th graders from 2001 to 2010 and remained relatively steady for 9th and 12th graders (2010: 35 percent for 6th graders, 32 percent for 9th graders, and 24 percent for 12th graders). Males reported more milk consumption than females in all grades, and the percentage decreased by three percentage points for 6th grade females and remained stable for 9th and 12th grade females from 2004 to 2010 (78).

The percent of Dakota County students who drank one or more glasses of pop or soda the previous day decreased in all grades from 2001 to 2010 to roughly half of students (2010: 46 percent of 6th graders, 50 percent of 9th and 12th graders). While the consumption of pop has decreased, the percent of Dakota County students who drank one or more sports drinks the previous day increased steadily until 2007. It dropped for all grades from 2007 to 2010 (2010: 33 percent for 6th graders, 32 percent for 9th graders, and 30 percent for 12th graders) (78).
Use of Alcohol, Tobacco and Other Drugs

The misuse of alcohol and other drugs are important risk factors for chronic disease, death and disability in the United States. Alcohol and illicit drug use are associated with unintentional injuries, violence, risky sexual behavior, and illegal behavior, and can lead to liver disease, cancer, heart disease, and neurological and psychiatric problems. Use of alcohol or illicit drugs can lead to dependence in some people, which increases the risk of harmful consequences.

Alcohol use and binge drinking

Alcohol is consumed by more people than any other substance. Binge drinking, in which a person consumes a great deal of alcohol in a short period of time, is associated with the same serious health problems as other forms of alcohol abuse and binge drinkers are 14 times more likely to report engaging in alcohol-impaired driving than non-binge drinkers. (Binge drinking is defined as five or more drinks at one time for men, and four or more drinks at one time for women). About 90 percent of alcohol consumed by those under 21 occurs during binge drinking (3).

The percent of Dakota County students who reported drinking alcohol one or more times in the previous year generally decreased for all grades from 1992 to 2010. However, in 2010, more than 30 percent of Dakota County 9th graders and nearly 60 percent of 12th graders reported using alcohol at least once in the previous year. There was also a decrease in 9th and 12th graders who reported frequent drinking (drinking 20 or more times in the past year) from 2004 to 2010. In 2010, Dakota County was similar to the state for both grades (78). The majority of Dakota County students who used alcohol in the previous 30 days reported getting it from friends (2010: 54.5 of 9th graders and 66 percent of 12th graders) (78). Eight percent of compliance checks conducted in licensed establishments in Dakota County from 2008 to 2012 resulted in an illegal alcohol sale to an underage person (95).

Figure 43 – Students who reported binge drinking during the last two weeks

Figure 43 above shows that the percent of Dakota County students who reported binge drinking during the last two weeks slightly declined for both 9th and 12th graders from 1998 to 2010. Approximately one-fourth of 12th graders reported binge drinking during the last two weeks (2010 percents: nine percent for 9th graders and 25 percent for 12th graders). Dakota County 9th graders are similar to the state. 12th graders did slightly worse than the state percent (23
Males are more likely to report binge drinking than females (2010: 31 percent of 12th grade males and 18.5 percent of 12th grade females). Dakota County 9th graders are close to the Healthy People 2020 goal of 8.6 percent for adolescents aged 12-17. However, 12th graders are above the Healthy People 2020 goal of 22.7 percent for 12th graders. Statewide, Whites and American Indians report the highest rates of binge drinking and Asians and Hispanics report the lowest rates of binge drinking (78; 4).

In 2012, 63.5 percent of Minnesota adults had at least one drink of alcohol in the previous 30 days. Minnesota has a higher percentage of alcohol drinkers than the U.S. (55 percent). In 2012, six percent of Minnesota adults were considered heavy drinkers, same as the U.S. (Heavy drinking is defined as: males who drink more than two drinks per day, and females who drink more than one drink per day). The percent of Minnesota adults (18 and older) who engaged in binge drinking in 2012 (22 percent) is higher than in the United States overall (17 percent), although it remains lower than the rates in North Dakota and Wisconsin (133). The rate of binge drinking peaks between the ages of 21 and 25. Twenty-five percent of Minnesota college students reported binge drinking in 2012 (119). Minnesota college students are below the Healthy People 2020 goal of 37 percent for college students (4). The percent for Minnesota adults exceeds the Minnesota 2020 target (15.5 percent), but is below the Healthy People 2020 goal (24.4 percent) for all adults (132; 4).

Alcohol-induced deaths are a measure of the deaths that are directly caused by alcohol consumption. It includes alcoholic liver disease, nervous system degeneration due to alcohol, and alcohol poisoning. It does not include injuries and violence indirectly caused by alcohol use. It can help quantify the burden of excessive alcohol consumption and alcoholism. In Dakota County, there were 240 alcohol-induced deaths in the ten-year period from 2002 to 2011. More than half of them (57.5 percent) occurred from 2007 to 2011 (134).

Tobacco use

Tobacco use is the single most preventable cause of disease, disability, and death in the United States. Cigarette smoking is associated with cancer, emphysema, chronic bronchitis, heart disease, and stroke. In addition, there are health effects for non-smokers who are exposed to secondhand smoke, including an increased risk of dying from lung cancer or heart disease, and children are at increased risk of sudden infant death syndrome (SIDS), ear infections and asthma.

In 2010, 12.5 percent of Dakota County adults were current smokers and only two percent of Dakota County adults reported smoking 21 or more cigarettes per day. Dakota County is nearly at the Healthy People 2020 goal of 12 percent for adults. The highest smoking rates were among females, those 65-74 years of age, those with less than a college education, and those with incomes at 200 percent of poverty or less (70; 4). In 2010, 17 percent of U.S. adults were currently smoking. Fewer Minnesotans smoke now than in recent history, and the remaining smokers smoke fewer cigarettes per day. In 2010, 15 percent of Minnesota adults were current smokers, down from 22 percent in 2001 (133). The proportion of adult heavy smokers (25 or more cigarettes per day) declined from 10 percent in 2007 to six percent in 2010 (135). Nationally, the highest rates of smoking are among American Indians and Whites. In 2013, 23 percent of Minnesota college students were current smokers (119).
Figure 44 above shows that the percent of Dakota County students who smoked cigarettes declined for all grades from 1998 to 2010. Nineteen percent of 12th graders reported smoking cigarettes in the past 30 days. 2010 percents: one percent for 6th graders, eight percent for 9th graders, and 19 percent for 12th graders. Dakota County 9th graders are slightly below the state percent (nine percent). 6th and 12th graders are similar to the state. Twelfth-graders exceed the Healthy People 2020 goal of 16 percent. Statewide, American Indians and Hispanics report the highest rates of smoking and Asians report the lowest rates of smoking. The percent of Dakota County students who reported smoking a half a pack or more per day in the previous 30 days also steadily decreased in Dakota County 9th and 12th graders from 1998 to 2010. (2010: one percent of 9th graders, and nearly four percent of 12th graders). More than half of Dakota County 9th graders who smoked cigarettes in the previous 30 days reported getting them from friends (55 percent in 2010). 9.5 percent of compliance checks conducted in licensed retail outlets in Dakota County from 2008 to 2012 resulted in an illegal tobacco sale to an underage person (95; 4; 118; 78).

In Minnesota, even though cigarette smoking rates have decreased since 2000, the use of cigars, cigarillos or little cigars, and smokeless tobacco has not decreased. Cigars, cigarillos and little cigars are not as heavily taxed or regulated as cigarettes, are less expensive, and are available in a variety of flavors. In 2010, five percent of Dakota County 9th graders and 20 percent of Dakota County 12th graders reported smoking cigars or cigarillos during the previous 30 days. In 2010, the percent is slightly lower than the state for 9th graders and slightly higher than the state for 12th graders. Smokeless tobacco, also called chewing tobacco or snuff, is tobacco that is not burned. Smokeless tobacco products are addictive and contain more nicotine than cigarettes. They also cause cancer, heart disease and stroke. In 2010, 3.5 percent of 9th graders and 11 percent of 12th graders reported using smokeless tobacco during the previous 30 days, similar to the state. Twelfth-graders exceed the Healthy People 2020 goal of 6.9 percent. The majority of cigar smokers and smokeless tobacco users are males (130; 78; 4).

People who stop using tobacco greatly reduce their risk for disease and premature death. Nicotine addiction is a chronic condition and quitting is a difficult process that may require repeated attempts. In 2010, 49 percent of Dakota County adult smokers stopped smoking for one day or longer in the past 12 months because they were trying to quit. Forty-one percent of those who quit or tried to quit in the past year tried more than once (70).
Electronic cigarettes (e-cigarettes)

Electronic cigarettes and other electronic nicotine delivery systems are battery-operated products that heat liquid nicotine, along with flavors and other chemicals, to convert it into a vapor that the user inhales, or “vapes”. They are usually made to look like cigarettes, cigars and pipes, but can also mimic everyday items, such as pens or USB memory sticks. These products are unregulated, making it difficult to know the level of exposure to nicotine and other harmful chemicals for the users and those around them. Their use does not fall under the definition of “smoking” in the Minnesota Freedom to Breathe Act, so they can be used in public areas where smoking is not allowed. The products are heavily marketed online and their design is appealing to young people. Minnesota law prohibits their sale to minors; however, only eight states have such laws in place, making it possible for minors to purchase products online. The long-term impact of e-cigarettes on the health of users and those who are exposed to the vapors is still under investigation. However, nicotine is highly addictive, known to affect the cardiovascular system, and may negatively impact adolescent growth and brain development. There is concern that e-cigarettes may become a gateway for non-smokers, particularly youth, to try conventional tobacco products, which are known to be harmful to health. It is not known whether e-cigarettes are effective as a smoking cessation aid, a common reason adults use them (136; 137; 138; 139).

E-cigarette usage among both adolescents and adults is increasing. Nationally, the percent of middle school students who had ever used e-cigarettes increased from 1.4 percent to 2.7 percent from 2011 to 2012. The percent of high school students who had ever used e-cigarettes increased from 4.7 percent to 10 percent from 2011 to 2012 (140). In 2011, 21 percent of U.S. adults who currently smoke conventional cigarettes had ever used an e-cigarette, an increase from 10 percent in 2010 (141).

Prescription drug abuse

Improper prescription drug use is a rising public health concern in Minnesota and nationwide. Non-medical use of prescription and over-the-counter (OTC) drugs (i.e., taken for reasons or in ways not intended by a doctor or taken by someone other than the person for whom they were prescribed) is second to marijuana as the most prevalent drug abuse problem in the United States (142).

In Minnesota, the estimated percent of persons 12 and older who reported non-medical use of prescription pain relievers in the past year decreased from five percent to four percent from 2011 to 2012. The highest rate was among 18 to 25 year olds at nine percent. The overall rate for Minnesota is slightly below the United States (143).

Figure 45 – Students who used prescription drugs one or more times in the past year to get high

![Students who used prescription drugs one or more times in the past year to get high](source: Minnesota Student Survey Interagency Team, Minnesota Student Survey)
Figure 45 above shows the percent of Dakota County students who used prescription drugs one or more times in the past year to get high. This includes any of the following drug categories: stimulants, attention deficit hyperactivity disorder (ADHD) drugs, prescription pain relievers, and tranquilizers. Five percent of Dakota County 9th graders and nine percent of 12th graders reported using prescription drugs to get high in 2010. The two most commonly used prescription drug categories were prescription pain relievers, which include OxyContin, Percocet, Percodan, and Vicodan; and ADHD drugs, which include Ritalin and Adderall. Four percent of 9th graders used prescription pain relievers or ADHD drugs to get high; eight percent of 12th graders used prescription pain relievers and seven percent of 12th graders used ADHD drugs to get high (70).

Illicit drug use

From 2003 to 2012, the number of arrests for possession of narcotics in Dakota County dropped by 18 percent, from 1,555 to 1,282; however, there was a five percent increase between 2010 and 2012. Seventy-eight percent of the arrests in 2012 were for marijuana; 19 percent for other drugs (including methamphetamines); two percent for opium, cocaine, etc.; and one percent for synthetic drugs (84). In 2012, 20 percent of Dakota County residents who were admitted to chemical dependency treatment reported marijuana as their primary substance of abuse (144).

In Minnesota in 2011-12, an estimated six percent of persons 12 and older reported use of marijuana during the past month. The highest rate was among 18 to 25 year olds at 17.5 percent. These percentages were below the United States overall (143).

Figure 46 – Students who used marijuana one or more times in the past year

Figure 46 above shows that use of marijuana within the past year is highest among Dakota County 12th graders, with more than one-third reporting marijuana use in 2010. From 1998 to 2010, use among 6th and 9th graders declined; however, use among 12th graders increased, with a three percent increase from 2004 to 2010. In 2010, one percent of Dakota County 6th graders, 14.5 percent of 9th graders and 35 percent of 12th graders reported using marijuana in the past year. Sixth- and ninth-graders were about the same as the state, but 12th graders were four percent above the state (31 percent) in 2010 (78).

Synthetic marijuana products, known by such street names as “K2” or “Spice,” are substances that are not derived from the marijuana plant but mimic the effects of the drug. In recent years, they have been marketed as a “safe”, “legal” alternative to marijuana. Since July 2011, sale and possession of these products is illegal in Minnesota, and, in July 2012, the sale of these synthetic products was banned nationally. However, they continue to be sold online and at retail markets. The chemical composition of these products is largely unknown, which can lead to unpredictable
effects (145). Their use is responsible for a rise in emergency room visits due to a variety of symptoms, including agitation, nausea, vomiting, rapid heartbeat, high blood pressure, tremors, seizures, and hallucinations. The Hennepin County Regional Poison Control Center reported 149 exposures in 2011 and 157 in 2012 (146).

In 2011-12, an estimated three percent of Minnesotans 12 and older reported use of any illicit drug other than marijuana, including cocaine or crack, heroin, hallucinogens, inhalants, and psychotherapeutic drugs used non-medically, during the past month. The highest rate was among 18 to 25 year olds at six percent. These percentages are similar to the United States overall (143). Methamphetamine was reported as the primary substance of abuse in nine percent of chemical dependency treatment admissions for Dakota County residents in 2012, a decrease from 13 percent in 2005, but a slight increase from 2011 (144). Seizures of meth labs in the county dropped from a high of 28 in 2004 to 24 total in the eight years following the 2005 law restricting sales of products containing pseudoephedrine (95). Heroin and prescription painkiller abuse were significant in the Twin Cities in 2012, causing an increased number of deaths and emergency room visits. Heroin was also responsible for a heightened level of law enforcement activity in 2012 (146).

From 1998 to 2010, the use of inhalants, hallucinogens, ecstasy-type drugs, cocaine, heroin and methamphetamine remained stable or trended downward for Dakota County students. Three percent of 6th and 9th graders and two percent of 12th graders reported use of inhalants. Three percent of 9th graders and five percent of 12th graders reported use of hallucinogens, such as LSD or PCP. Two percent of 9th graders and five percent of 12th graders reported use of MDMA, GHB, or ketamine. Two percent of 9th graders and three percent of 12th graders reported use of cocaine (including crack). One percent of 9th and 12th graders reported using heroin and one percent reported using methamphetamine. The rates of use are similar to the state for all of these drugs (78).

Synthetic drugs, sold as “bath salts” online and in drug paraphernalia stores are consumed to produce effects similar to those of illegal drugs, such as cocaine, amphetamines, or ecstasy (MDMA). They contain a variety of chemicals alone or in combination. The effects are unpredictable and include agitation, paranoia, and extreme psychosis. This has made them a serious public health and public safety threat in recent years (147). The Hennepin County Regional Poison Control Center reported 144 bath salt exposures in 2011 and 87 in 2012. A 2011 Minnesota law makes it illegal for people to use synthetic drugs that are “substantially similar” in chemical structure and pharmacological effects to illegal drugs (146).

**Figure 47 – Drug-related mortality rate**

![Drug-related mortality rate 2006-2010](image)
There were 29 deaths in Dakota County in 2010 due to drug misuse or drug-related suicide. This includes deaths where drug use was related to the death, including appropriate and inappropriate use of legal or illegal substances; for people under 21, this includes alcohol alone. Eighty-three percent of these deaths were due to drug misuse, which includes appropriate and inappropriate use of legal or illegal substances. The remainder were drug-related suicides. Figure 47 above shows that the rate of drug-related mortality for Dakota County residents increased by 59 percent from 4.6 deaths per 100,000 population in 2006 to 7.3 deaths per 100,000 population in 2010. At a metro level, the rate increased only slightly during the same time period. The rate increased steeply in Dakota County from 2007 to 2009 and decreased in 2010 (148).

Preventing and managing chronic conditions

Living with a disability

Disability can involve a variety of factors including vision, hearing, movement, ability to walk, and cognition and affects more than 50 million American adults. By itself, it is not an indicator of poor health. However, individuals with disabilities may sometimes have more difficulty staying healthy, because of physical and social barriers. Accessibility or safety may make it difficult for a person with disabilities to engage in physical activity. A disability can lead to social isolation, which can have a negative impact on physical and mental health. Individuals with disabilities are also at higher risk for abuse (3).

Figure 48 – Non-institutionalized residents with one or more disabilities by age group

In 2012, an estimated 8.5 percent of non-institutionalized Dakota County residents lived with a disability, compared to 10 percent statewide and 12 percent nationally. The highest rate is among persons 65 and older (28 percent) (8). In 2012, sixteen percent of Minnesota adults reported having activity limitations due to a physical, mental or emotional problem (133).

Children with Special Health Care Needs

Children with special health care needs are identified as children 0-17 with chronic conditions or at risk of chronic conditions (physical, developmental, behavioral, or emotional) that require health care services beyond those needed by children in general. The most common conditions reported are allergies, attention deficit hyperactivity disorder (ADHD/ADD), asthma, and developmental delay. Approximately 14 percent of Minnesota children (estimated
179,162) have special health care needs. More males than females have special health care needs. A higher percent of Black children have special care needs (16 percent), while a lower percent of Asian children have special health care needs (eight percent) (149). The preschool population in Early Childhood Special Education in Dakota County grew by 23 percent from 2004 to 2013. Thirteen percent of the Dakota County K-12 population was enrolled in special education in public schools in the 2012-13 school year, similar to Minnesota. This percent has been relatively stable for the past 10 years (60).

**Cancer Screening**

Screening for cancer is an effective intervention for identifying disease before it spreads when it is generally more treatable. If screening reveals a problem, treatment such as removing polyps or other areas of abnormal cell growth, can occur right away (3).

**Figure 49 – Cancer screening**

![Cancer screening graph]


Figure 49 above shows that Minnesota exceeds the nation for colonoscopy/sigmoidoscopy, mammography and pap smears. In 2012, 74 percent of Minnesotans 50 and older had ever had a colonoscopy/sigmoidoscopy, compared to 67 percent of the U.S. overall. Seventy-eight percent of women 40 and older had a mammogram within the past two years, compared to 74 percent of U.S. women overall. This is below the Healthy People 2020 goal of 81 percent. Eighty-one percent of women 18 and older had a Pap smear within the past three years, compared to 78 percent of U.S. women overall. This is below the Healthy People 2020 goal of 93 percent of women receiving cervical cancer screening based on current guidelines (4; 133). Nationally, cancer screening rates are lower among Asians and Hispanics.

**Risk factors for heart disease and stroke**

Heart disease and stroke are leading causes of death in the United States. Some conditions and some lifestyle factors can put people at a higher risk for developing heart disease or stroke. Control of risk factors can help reduce complications for people who already have heart disease. The most common risk factors are high blood cholesterol, high blood pressure, and pre-diabetes or diabetes.
Figure 50 above shows the percent of the population with these risk factors. In 2010, Dakota County residents had a lower percent of high blood cholesterol and high blood pressure than the state and the nation (State and national data is for 2011).

In 2010, 25 percent of Dakota County residents reported having high blood cholesterol, compared to 36 percent statewide and 38 percent nationwide (State and national data is for 2011). Males, people age 55 and older, those with less than a college education, and those with incomes at 200 percent of poverty or less are more likely to have high blood cholesterol.

In 2010, 21 percent of Dakota County residents reported having high blood pressure, compared to 26 percent statewide and 31 percent nationwide (State and national data is for 2011). Dakota County is below the Healthy People 2020 goal of 26.9 percent. People age 55 and older and those with incomes at 200 percent of poverty or less are more likely to have high blood pressure.

In 2010, Dakota County had a slightly higher percent of diabetes than the state, but slightly lower than the nation (Dakota County: eight percent, state: seven percent, U.S.: nine percent). Males, people 55 and older, those with less than a college education, and those with incomes at 200 percent of poverty or less are more likely to have diabetes (70; 133; 4). Statewide, people of color, particularly American Indians, are more likely to develop Type II diabetes, than Whites (3).

**Maintaining oral health**

Good oral health is essential to overall health. A lack of oral health can lead to cavities (caries) and gum diseases, which in turn contribute to other diseases or conditions, such as heart disease, premature birth, and low birth weight. Certain chronic conditions, such as osteoporosis and diabetes, can also contribute to poor oral health. Poor oral health can also affect self-esteem, reduce employment opportunities, and increase absenteeism.

Good oral health is essential to overall health. A lack of oral health can lead to cavities (caries) and gum diseases, which in turn contribute to other diseases or conditions.
Dental caries is the most common childhood disease. Oral disease is nearly 100 percent preventable through fluoride use, application of dental sealants, effective oral hygiene, and regular dental check-ups (3).

**Figure 51 – Preventive dental visits in the past year for persons on fee-for-service Medical Assistance**

![Preventive dental visits in the past year for persons on fee-for-service Medical Assistance](image)

Source: Minnesota Department of Human Services, Minnesota Counties Data Collaborative

Achieving and maintaining oral health can be very difficult for some populations, particularly those with lower incomes. Figure 51 above shows that among fee-for-service Medical Assistance eligibles, Dakota County residents ages 21-64 were the most likely to have received preventive dental services (40 percent in 2011) and persons ages 65 and older were the least likely (21 percent in 2011). From 2007 to 2011, the trend was a slight increase for all age groups (150).

**Preventing disease and injury**

**Immunizations**

Immunizing individuals, especially children, helps protect the health of the entire community. Immunization is especially important in protecting those who cannot be immunized or who are not yet fully immunized, such as children too young to be vaccinated and children and adults who cannot be vaccinated for medical reasons. It can also slow and halt disease outbreaks (3).

Twelve immunization series are currently recommended for children birth-18 years. Five are required for school entry in Minnesota. The recommended vaccinations for this age group include DTaP (diphtheria, tetanus, and pertussis), polio, MMR (measles, mumps, and rubella), Hib (Haemophilus influenzae type b), hepatitis B, varicella (chickenpox), and PCV (pneumococcal) (21). Ninety-two percent of Dakota County primary care clinics (36 out of 39 clinics) submit data to the Minnesota Immunization Information Connection (MIIC) registry (151). As of 2011, 87.5 percent of Dakota County children 24-35 months of age have at least two immunizations in the registry. Forty-one percent of children in this age group are up-to-date for the recommended vaccinations, compared to 56 percent statewide. This is below the Healthy People 2020 goal of 80 percent for children 19-35 months (4). From 95-97 percent of Dakota County kindergarteners and 96-99 percent of 7th grade students were protected by each of the required immunizations, according to parent report for the 2012-2013 school year. One percent of Dakota County K-12 students have not received any vaccines due to conscientious objection. This is similar to the statewide percent (152). The Centers for Disease Control and Prevention estimated that 60 percent of Minnesota children 6 months-17 years were fully
immunized against the seasonal flu in the 2012-13 influenza season (153). This is below the Healthy People 2020 goal of 80 percent (4).

Figure 52 – Persons 65+ who have received influenza vaccine and pneumococcal vaccine

Figure 52 above shows the percent of Minnesota adults 65 and older who have received influenza vaccine in the past year and who have ever received pneumococcal vaccine. The percent who received influenza vaccine decreased from 2007 to 2010 (from 80 percent to 72 percent). Due to a change in survey methodology, data after 2011 are not comparable to previous years. In 2012, 65.5 percent received influenza vaccine, compared to 60 percent nationwide. This is below the Healthy People 2020 goal of 90 percent (133; 4).

The percent who ever received pneumococcal vaccine decreased slightly from 2007 to 2010 (from 71 percent to 70 percent). Due to a change in survey methodology, data after 2011 are not comparable to previous years. In 2012, 74 percent ever received pneumococcal vaccine, compared to 69 percent nationwide. This is below the Healthy People 2020 goal of 90 percent (133; 4). In 2011, 79 percent of Dakota County children 24-35 months received the series of four immunizations that prevent pneumonia, meningitis and other infections (21).

Preventing sexually transmitted infections (STIs)

Sexually transmitted diseases (STDs), also referred to as sexually transmitted infections (STIs), include more than 25 infectious organisms that are spread through sexual activity. The most common sexually transmitted infections are chlamydia, gonorrhea, and syphilis.
The most effective way to prevent the spread of sexually transmitted infections among youth is to delay the onset of sexual activity. Figure 53 above shows that the percent of Dakota County 9th graders who reported ever having sexual intercourse declined from 22 percent in 1998 to 18 percent in 2010. In 2010, it was below the state percent (20 percent). The percent of Dakota County 12th graders who reported ever having sexual intercourse declined from 52 percent in 1998 to 46 percent in 2007. However, it increased to 52 percent again in 2010. It was above the statewide percent (49.5 percent). Statewide, the percent of 9th graders who reported ever having sexual intercourse declined in every population; however, American Indians, African-Americans and Hispanics have a higher rate than the general population (40 percent, 39 percent, and 38 percent, respectively) (78; 118).

Among sexually-active youth, consistent condom use is the most effective way to prevent STIs. Figure 54 above shows that the percent of Dakota County students who reported always using a condom during sexual intercourse increased for both 9th and 12th graders from 1998 to 2010. The percent of 9th graders reporting always using a condom

Source: Minnesota Student Survey Interagency Team, Minnesota Student Survey
increased from 52 percent in 1998 to 55 percent in 2010. The percent of 12th graders who reported always using a condom increased from 45 percent in 1998 to 50 percent in 2010. Statewide, Asians were the least likely to report always using a condom and Whites and African-Americans were the most likely to report always using a condom (78; 118).

From 2005-2009, 55 women in Dakota County were diagnosed with cervical cancer (154). Nearly all of these cancers are associated with the genital human papillomavirus (HPV), the most common sexually transmitted infection. At least 50 percent of sexually active men and women get HPV during their lifetimes. Most infections do not progress to cancer. In 2006, two vaccines were developed that prevent the types of HPV that most commonly cause cervical cancer and genital warts. Vaccination is recommended for 11 and 12 year old girls, and for females 13 through 26 years of age, who have not been vaccinated previously. In 2012, 33 percent of adolescent girls in Minnesota had completed the three-dose series of HPV vaccines, a decrease from 35 percent in 2011. Nationally, the rate of vaccination was 33 percent (155).

**Safety belts and booster seats**

Safety belts and booster seats are highly effective in reducing injuries and deaths from motor vehicle crashes. Minnesota reached a statewide seatbelt use rate of 94 percent in 2012, the highest in the state’s history. Rates of use steadily increased from 2003 to 2009 and increased even more starting in 2009 with the passage of the state’s Primary Seat Belt Law. Booster seats are required by law in Minnesota for children who have outgrown a forward-facing harnessed restraint but are still too small to fit correctly into an adult safety belt (usually around age four and weight between 40 and 60 pounds) (3) (156).

**Figure 55 – Students who reported always wearing a seat belt when they ride in a car**

The lowest rates of safety belt use are found among young people. Figure 55 above shows that the percent of Dakota County students who reported always wearing a seat belt when they ride in a car increased substantially in all grades from 1998 to 2010 (by 18 percent in 6th graders, by 29 percent in 9th graders, and by 22 percent in 12th graders). More than 70 percent of all students reported always wearing a seat belt when riding in a car in 2010. The percent of Dakota County students exceed the statewide rates in all grades (6th grade: 75 percent compared to 72 percent, 9th grade: 71 percent compared to 66.5 percent, and 12th grade: 75 percent compared to 71 percent) (78). The percent of people injured or killed in car crashes who were not wearing seat belts decreased from 11 to five percent from 2004 to 2010 (73).
In a 2011 survey, two-thirds of children were properly restrained in a booster seat. Males and young caregivers were least likely to use booster seats (3). From 2009 to 2011, 558 children under age four were involved in crashes in Dakota County and nine percent were not restrained or not restrained properly (157).

**Bicycle helmet use**

In 2012, crashes between bicycles and motor vehicles in Minnesota decreased by 4.5 percent from 2011. There were 48 bicyclist injuries in Dakota County in 2012 – none were fatal (156). Wearing a helmet reduces the risk of severe brain injury in a crash. However, in 2011, 87.5 percent of U.S. 9th - 12th graders reported rarely or never wearing a bike helmet when they ride a bicycle (158).

**Promoting mental health**

**Having a caring adult**

Having caring friends and adults can mitigate the effects of negative life experiences and improve the opportunity for health and well-being in adolescents (3).

**Table 9**

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Source: Minnesota Student Survey Interagency Team, Minnesota Student Survey

In 2010, almost all Dakota County students felt that their parents cared about them quite a bit or very much (6th graders: 96 percent, 9th graders: 91 percent, and 12th graders: 92 percent). This percent remained stable from 1998 to 2010 for 6th graders and increased for 9th and 12th graders.

In 2010, the majority of Dakota County students in all grades felt that other adults cared about them quite a bit or very much (6th graders: 94 percent, 9th graders: 89 percent, and 12th graders: 87 percent). This percent remained stable from 2001 to 2010 for 6th graders and increased for 9th and 12th graders. (“Other adults” was a composite measure that includes teachers or other adults at school, religious or spiritual leaders, other adults in the community, and other adult relatives). Among Minnesota 9th graders, American Indians were least likely to feel that other adults cared about them quite a bit or very much.
In 2010, 79 percent of students in all graders felt that their friends care about them quite a bit or very much. This percent remained stable from 1998 to 2010 for 6th and 9th graders and decreased slightly for 12th graders. Statewide, more than two-thirds of 9th graders of color felt that their friends cared about them quite a bit or very much, but White students were the most likely of any group to report that their friends cared about them (78; 118).

Figure 56 – Students who feel they can talk to their mother

![Graph showing the percentage of students who feel they can talk to their mother from 1998 to 2010 for 6th, 9th, and 12th graders in Dakota County.](source)

In 2010, the majority of Dakota County students felt that they could talk to their mother some or most of the time (6th graders: 89 percent, 9th graders: 80 percent, and 12th graders: 83 percent). The percent remained stable for 6th and 9th graders and increased slightly for 12th graders. Dakota County 6th graders are slightly below the state, 9th graders are slightly above the state and 12th graders are six percent above the state (78).

Figure 57 – Students who feel they can talk to their father

![Graph showing the percentage of students who feel they can talk to their father from 1998 to 2010 for 6th, 9th, and 12th graders in Dakota County.](source)

In 2010, Dakota County students who felt that they could talk to their father some or most of the time was less than those who felt they could talk to their mother (6th graders: 72 percent, 9th graders: 65 percent, and 12th graders: 69.5 percent). This percent decreased slightly from 1998 to 2010 for 6th graders and increased for 9th and 12th graders. Dakota County 6th and 12th graders are slightly higher than the state in 2010, while 9th graders are similar to the state (78).
Bullying

Bullying involves actions, words or images that cause fear, distress, or harm to another. People who witness the bullying of another person can also be affected by the behavior. Bullying can result in physical injury, social and emotional distress, and even death. Youth who are bullied are at greater risk for anxiety and depression, poor school performance, and health problems (159).

In 2010, 24 percent of Dakota County 6th graders, 18 percent of 9th graders and 15 percent of 12th graders reported having been threatened by another student in the previous year. These percentages generally decreased or remained stable in all grades from 1995 to 2010. The Dakota County percentages were slightly below the state for 6th and 9th grades and slightly higher than the state for 12th grades. Males were more likely to report being threatened than females. Twenty-six percent of Dakota County 12th graders, 37 percent of 9th graders, and 52 percent of 6th graders reported that they were made fun of or teased by another student in the past 30 days (78).

Internet safety

With 95 percent of adolescents 12-17 having access to the Internet, the opportunity for online bullying (cyber bullying) and victimization has increased (160). Cyber bullying, or electronic aggression, is bullying that occurs through a computer (email, chat rooms, websites, social media) or through mobile devices (text messaging, videos or photos sent from a cell phone) (159). It differs from traditional bullying because it is harder to escape from, the potential audience is wider, and the perpetrator can be anonymous. Adolescents who are victims of cyber bullying are more likely to have physical complaints, such as headaches, and are at higher risk for mental health issues and substance use (161).

In 2011, among those teens that use the Internet, 80 percent use social networking sites (160). Twenty-nine percent of Dakota County 9th graders and 32 percent of 12th graders reported being online six or more hours per week. About half of 9th and 12th graders reported phone use or text messaging six or more hours per week (78).

In 2011, nine percent of U.S. teens reported that they experienced some form of online bullying in the past 12 months. Seven percent reported being bullied by phone (160).
Health Outcomes

Highlights

• Cancer, heart disease, and unintentional injuries are the leading causes of death in Dakota County.

• Dakota County residents rate their health higher than the state and nation. In 2010, 67 percent of Dakota County residents rated their health as “excellent” or “very good”, compared to 61 percent statewide and 55 percent, nationally.

• There were 5,103 births in Dakota County in 2011. From 2002 to 2004, the live birth rate per 1,000 women aged 15-44 in Dakota County closely followed the Minnesota rate, but starting in 2005, it dropped below the Minnesota rate. The rate started decreasing in 2008 for both Dakota County and Minnesota.

• Minnesota’s infant death rate for the period 2007 to 2011 was one of the lowest in the United States. The rate for Dakota County for the same period was even lower.

• In 2011, 220 singleton babies in Dakota County were born at low birth weight (four percent of all births). This was slightly below the statewide rate (five percent). The Dakota County percent remained relatively steady through 2009 and dropped slightly from 2009 to 2011.

• The overall incidence rate of cancer trended upward between 1997 and 2007 for both Dakota County and the state. The rate for Dakota County trended upward faster (10 percent for Dakota County and four percent for Minnesota). Starting in 2002, the rate for Dakota County exceeded the rate for the state.

• The heart disease death rate in Dakota County decreased by 19 percent from 2007 to 2011, with an increase from 2010 to 2011. During the period 2009 to 2011, the heart disease death rate in Dakota County was 14 percent below the rate for the state.

• Suicide is one of the leading causes of death in Dakota County. For 15-24 year olds, it was the leading cause of death in 2011. The suicide rate increased by 35 percent from 2007 to 2010 after several years of relative stability.

• In 2010, 60 percent of Dakota County adults reported height and weight that classified them as overweight or obese (34 percent overweight but not obese, 26 percent obese). This was below the statewide percent (63 percent). Eighteen percent of 9th graders and 19 percent of 12th graders were overweight or obese in 2010.

• In 2012, the majority of cases of sexually-transmitted infections reported to the Minnesota Department of Health for Dakota County residents were chlamydia cases (1,003 cases). From 2003 to 2012, the rate of chlamydia in Dakota County increased by 48 percent.

• In 2012, the rate of fall-related injuries in Dakota County is below the statewide rate. The rate generally declined for both Dakota County and the state from 2008 to 2012.

• In 2012, the rate of motor vehicle crash injuries in Dakota County was below the statewide rate. The rate generally declined in Dakota County and the state from 2008 to 2012.

• There were 19 motor vehicle-related deaths in Dakota County in 2012. The rate of motor vehicle-related deaths in Dakota County decreased by 36 percent from 2005 to 2011. Statewide, motor vehicle-related deaths increased in 2012 after a sharp decrease over the previous several years.
Mortality

Leading causes of death

Table 10

Ten leading causes of death in Dakota County: 2011

<table>
<thead>
<tr>
<th>Cause of death</th>
<th>Number</th>
<th>Age-adjusted rate/100,000</th>
<th>Years of Potential Life Lost (YPLL) to age 75</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td>599</td>
<td>162.9</td>
<td>5,280.0</td>
</tr>
<tr>
<td>Heart disease</td>
<td>345</td>
<td>96.9</td>
<td>1,790.0</td>
</tr>
<tr>
<td>Unintentional injuries</td>
<td>156</td>
<td>41.2</td>
<td>2,542.5</td>
</tr>
<tr>
<td>Stroke</td>
<td>108</td>
<td>32.0</td>
<td>295.0</td>
</tr>
<tr>
<td>Chronic obstructive pulmonary disease (COPD)</td>
<td>101</td>
<td>30.7</td>
<td>225.0</td>
</tr>
<tr>
<td>Alzheimer’s disease</td>
<td>77</td>
<td>23.5</td>
<td>5.0</td>
</tr>
<tr>
<td>Suicide</td>
<td>63</td>
<td>15.5</td>
<td>1,905.0</td>
</tr>
<tr>
<td>Diabetes</td>
<td>63</td>
<td>17.2</td>
<td>445.0</td>
</tr>
<tr>
<td>Nephritis (kidney disease)</td>
<td>33</td>
<td>9.6</td>
<td>95.0</td>
</tr>
<tr>
<td>Cirrhosis</td>
<td>32</td>
<td>7.2</td>
<td>602.5</td>
</tr>
<tr>
<td><strong>Total deaths</strong></td>
<td><strong>2,241</strong></td>
<td><strong>625.0</strong></td>
<td><strong>17,360.0</strong></td>
</tr>
</tbody>
</table>

Source: Minnesota Department of Health, Vital Statistics Interactive Query, www.health.state.mn.us

Figure 58 – Leading causes of death

Table 10 above shows the number and age-adjusted rates for the ten leading causes of death and the total for all causes in Dakota County. Cancer, heart disease, and unintentional injuries are the leading causes of death in Dakota County. The leading causes of death do not vary by gender, but they do vary by age group. Cancer and heart disease are the leading causes of death after age 45. For 15-24 year olds, the leading causes of death are suicide and unintentional injuries. For 25-44 year olds, the leading causes of death are cancer and unintentional injuries. Cancer and heart disease are also the leading causes of death for people of color. The Dakota County age-adjusted rates per
100,000 population for the ten leading causes are similar or below the statewide rates, except for cancer, Alzheimer’s disease, unintentional injuries and suicides, which are above the statewide rates. Figure 58 above shows that the mortality rate for cancer and heart disease declined from 2002 to 2011, while the mortality rate for unintentional injuries increased slightly. Cancer and heart disease have been the leading causes for many years. In 1997, cancer topped heart disease as the leading cause and in 2010, unintentional injuries topped stroke as the third leading cause. Cancer is also the leading cause of death in Minnesota, but nationally, heart disease tops cancer as the leading cause of death (3; 106).

**Years of potential life lost**

Years of potential life lost (YPLL) is a measure of premature mortality. It is an estimate of the average number of years lost for people who die before age 75. In 2011, cancer, unintentional injuries, and suicide had the highest years of potential life lost (106). In the case of cancer, this is because there are a large number of deaths and many occur before age 75. In the case of unintentional injuries and suicides, there are a smaller number of deaths, but they disproportionately affect younger people.

**Figure 59 – Years of potential life lost by cause of death**

[Image: Years of potential life lost by cause of death: Dakota County, 2011]

Source: Minnesota Department of Health, *Vital Statistics Interactive Query*, [www.health.state.mn.us](http://www.health.state.mn.us)

**General Health**

**General health status**

Self-assessed health status is a measure of how a person perceives his/her health at a point in time. It can provide an indication of the health of a population overall.
Self-assessed health status is a measure of how a person perceives his/her health at a point in time. It can provide an indication of the health of a population overall.

Dakota County residents rate their health higher than the state and nation, as shown in Figure 60 above. In 2010, 67 percent of Dakota County residents rated their health as “excellent” or “very good”, compared to 61 percent statewide and 55 percent, nationally. Nine percent rated their health as “fair” or “poor”, compared to 11 percent statewide and 15 percent nationally. Males, people 55 and older, people with less than a college education, and persons with incomes at 200 percent of poverty or less are more likely to rate their health as “fair” or “poor”. Nationally, Blacks and Hispanics are more likely to rate their health as “fair” or “poor” than Whites (70; 133).

Physically poor health days

Physically poor health days are a measure based on the self-reported number of days that physical health was not good in past 30 days. An average is computed for all persons who reported and it is age-adjusted to allow for comparison across different geographic regions. This measure can help characterize the burden of disabilities and chronic disease in a population.

For the years 2005-2011, Dakota County residents reported an average of 2.8 physically unhealthy days, similar to the state (2.9 days) and national (2.6 days) benchmarks (67). In 2012, female college students in Minnesota had a higher average of physically unhealthy days (4.1 days) than Minnesota residents overall (119).

Maternal and Child Health

The health of mothers, infants, and children is important for the health of the current generation and future generations. Healthy growth and development of infants depends on the health of the mother before conception and the health and safety of mother and infant during delivery. A positive, supportive environment for mother and infant following birth is also critical.

Fertility rate

Crude birth rate is often used as a measure of reproductive activity, but relates to the whole population, regardless of age or sex. General fertility rate relates the rate to the age-sex group who are of childbearing age (women aged 15-44
years), so it removes distortions caused by differences in the age-sex composition of populations. This makes it a better measure to use for comparing populations from year to year or from one geographic area to another. In 2012, there were an estimated 80,037 women of childbearing age (ages 15-44 years) in Dakota County (5). There were 5,103 births in Dakota County in 2011 (73).

Figure 61 – Fertility rate

Figure 61 above shows the fertility rate per 1,000 live births to women aged 15-44. From 2002 to 2004, the Dakota County rate closely followed the Minnesota rate, but starting in 2005, it dropped below the Minnesota rate. The rate started decreasing in 2008 for both Dakota County and Minnesota. The decrease in Dakota County mirrors a six percent decrease in the number of women of childbearing age from 2007 to 2011. In 2011, the rate in Dakota County was 63.8 per 1,000 live births to women aged 15-44, compared to 65.5 per 1,000 live births statewide (5; 73).

Infant deaths

Infant (under age one) death rates are frequently used as an indicator of the health of a community. The leading causes of death for infants under age one are birth defects, problems resulting from premature birth, infection, injury, low birth weight, and sudden infant death syndrome (SIDS).

Figure 62 – Infant death rate
Minnesota’s infant death rate for the period 2007 to 2011 (5.1 per 1,000 live births) was one of the lowest in the United States (3). The rate for Dakota County for the same period (3.3 per 1,000 live births) was even lower. The Healthy People 2020 goal is 6.0 per 1,000 live births. Statewide, the rate of infant deaths for African-Americans is more than twice as high as the rate for Whites. Figure 62 above shows that while the rate of infant deaths in Minnesota was relatively stable from 2006 to 2009, the rate in Dakota County decreased by 33 percent (4; 106).

Birth defects

An estimated 2,000 babies are born each year in Minnesota with a serious birth defect. Seventy percent of birth defects have unknown causes, and 10 percent are due to environmental causes – some preventable. Birth defects were one of the leading causes of death in infants under one year of age from 2007 to 2011 (23 percent of Dakota County infant deaths) (106).

Alcohol use during pregnancy can cause a wide range of damage to an unborn baby. This group of disorders, referred to as fetal alcohol spectrum disorders (FASD), include physical, developmental, and behavioral issues. The degree of damage is dependent on the amount of alcohol consumed and the stage of pregnancy in which the alcohol was consumed. Prevalence of fetal alcohol spectrum disorders is hard to estimate. Epidemiologic studies estimate the prevalence in the United States as 1 in 500 live births, with the highest rate in American Indians (162).

Preterm births (premature births)

A baby born before 37 weeks of gestation is considered premature and a baby born before 32 weeks of gestation is considered very premature. Prematurity is the leading cause of death in the first month of life and it contributes to about one-third of infant deaths. Babies who are born prematurely have a high risk for lifelong health problems and disability. The primary risk factors for prematurity are: multiple births, chronic health problems in the mother, and smoking or exposure to secondhand smoke (21).

Eight percent of singleton births in 2011 in Dakota County were preterm, a percentage that is similar to the state overall. The percent of preterm births in Dakota County was relatively stable from 2002 to 2011, ranging from seven to eight percent each year. In 2011, the Dakota County rate was similar to the state rate. The highest percentages are in teen mothers and African-American/African mothers (73).

Low birth weight

Low birth weight (less than 2,500 grams, or less than five pounds, eight ounces) is associated with elevated risk of death and disability in infants. Risk factors for low birth weight infants include multiple births, smoking during pregnancy, poor maternal nutrition, stress, and lack of emotional support (21). Because multiple births frequently result in low birth weight infants, we only include singleton births in the statistics that follow.
In 2011, 220 singleton babies in Dakota County were born at low birth weight (four percent of all births). This was slightly below the statewide rate (five percent). Statewide, African-American women are twice as likely to have a low birth weight infant as White women. Figure 63 above shows that the percent of low birth weight singleton infants in Minnesota remained relatively steady from 2007 to 2011. The Dakota County percent followed the state closely through 2009 and dropped slightly from 2009 to 2011. From 2009 to 2011, 0.8 percent of Dakota County infants were born at very low birth weight (less than 1,500 grams or three pounds, four ounces), the same as the state. This percent was stable from 2001 to 2010. The highest percentages of low birth weight infants are in African-American/African, Asian and Hispanic mothers (106).

**Child deaths**

Many children who die between the ages of one and 14 die from preventable causes, such as accidental injuries. From 2007 to 2011, 21 Dakota County children aged 1-4 years and 32 children aged 5-14 died. The most common causes of death in children aged 1-4 were birth defects, accidental injuries, and heart disease. The most common causes of death in children aged 5-14 were cancer and unintentional injuries (106).

**Chronic diseases and conditions**

Chronic diseases, including heart disease, stroke, cancer and diabetes, are among the most common, costly and preventable illnesses. About seven out of ten deaths in the United States each year are due to a chronic disease. In addition, the long course of illness for some chronic diseases results in activity limitations and pain, decreasing the quality of life for millions of Americans. Healthy behaviors, such as eating nutritious foods, engaging in physical activity, and avoiding tobacco use can prevent much chronic disease and control its complications.

**Alzheimer’s disease**

Alzheimer’s disease is the most common form of dementia, a condition that damages brain cells and diminishes brain function, resulting in the loss of memory and other intellectual abilities. It is a progressive disease and symptoms
gradually worsen over time. The most important risk factor for Alzheimer’s is age and the majority of people with Alzheimer’s are over 60 (163).

In 2010, an estimated 94,000 Minnesotans had Alzheimer’s disease. This is expected to increase by 17 percent to 110,000 in 2025 (164). In 2011, 77 Dakota County residents died from Alzheimer’s disease. The age-adjusted death rate for Alzheimer’s disease generally trended upward from 2002 to 2011. The rate for the three-year period from 2009 to 2011 (22.2 per 100,000) was similar to the state rate (22.8 per 100,000) (106).

Arthritis

Arthritis is a group of more than 150 conditions that affect the joints and connective tissues, including osteoarthritis, rheumatoid arthritis, lupus, juvenile arthritis and gout. It can affect people of all ages, although older people are more likely to have arthritis than younger people. Arthritis affects females more than males and Whites more than people of color. It is the leading cause of disability in the United States. People with arthritis experience physical limitations that may prevent them from being physically active. This can lead to overweight and obesity, which result in further complications (165).

In 2011, 20.5 percent of Minnesota adults had ever been diagnosed with arthritis, compared to 26 percent nationwide (133).

Asthma

Asthma is one of the most common chronic diseases in the United States. It is a chronic disease that causes muscle spasms, inflammation, and excess mucus in the respiratory tract, which interferes with breathing. A variety of factors may trigger asthma, including viral infections, pollen, dust mites, secondhand smoke, air pollution, mold, and stress. It ranges from mild to very severe and can result in death. It may interfere with school and work productivity, interrupt sleep, and make physical activity difficult (166).

In 2010, eight percent of Dakota County adults reported that they currently have asthma. This is similar to the state (eight percent) and slightly below the nation (nine percent). Nationally, Blacks, people with low-income, and people with less than a high school education are more likely to report currently having asthma. Sixteen percent of Dakota County 6th graders, 17.5 percent of 9th graders, and 19 percent of 12th graders reported that they ever had asthma, similar to the state (70; 78). In 2013, 17 percent of Minnesota college students reported that they ever had asthma (119). Asthma was the most common condition reported by school nurses in Dakota County public schools during the 2012-13 school year, with eight percent of students reported to have asthma. This is slightly higher than the state overall for children under 18 (seven percent) and similar to what was reported in 2008-09 (167).

Figure 64 – Asthma emergency room visits and hospital discharges

![Asthma emergency room visits and hospital discharges](Source: Minnesota Hospital Association)
Asthma can be effectively controlled with proper medication and by decreasing exposure to triggers and monitoring. When asthma results in an emergency room visit or an inpatient hospitalization, it can be an indicator of severity of illness or barriers to accessing health care (166). In 2010 and 2011, there were 429 hospitalizations and 2,000 emergency room visits for Dakota County residents with asthma. Figure 64 above shows that the rate of discharges with asthma as the primary diagnosis declined by 40 percent for Dakota County residents from 2007 to 2011. The rate of emergency room visits remained stable from 2007 to 2010, but increased by six percent from 2010 to 2011. The highest rates of discharges for asthma are in adults 75 years and older and the highest rates of emergency room visits for asthma are in children under age five (102).

Cancer

Cancer is a group of more than 100 diseases in which cells in the body grow out of control. Cancer is the leading cause of death in Dakota County.

From 2005-2009, there were 8,284 new cancers reported in Dakota County, an average of 1,657 per year (21). Cancer is the leading cause of death in Dakota County residents. In 2011, there were 599 deaths due to cancer, or 27 percent of all deaths in Dakota County (106). Half of men and one-third of women in the United States will develop cancer at some point in their lifetime. Because of the higher life expectancy in Dakota County, the lifetime risk of developing cancer is somewhat higher, because more people live long enough to develop cancer. The risk of developing many types of cancer can be reduced by lifestyle changes, such as not using tobacco, limiting unprotected exposure to the sun, being physically active, and developing healthy eating habits. American Indians and African-Americans/Africans in Minnesota have the highest incidence and mortality rates from cancer. The lowest rates are among Hispanics and Asian-Pacific Islanders. With the exception of American Indians, race and ethnicity-specific cancer rates in Minnesota are similar to national rates (3).

Figure 65 – Overall cancer incidence rate

Source: Minnesota Department of Health, Minnesota Public Health Access Portal, www.health.state.mn.us

Figure 65 above shows that the overall incidence rate of cancer trended upward between 1997 and 2007 for both Dakota County and the state. The rate for Dakota County trended upward faster (10 percent for Dakota County and four percent for Minnesota). Starting in 2002, the rate for Dakota County exceeded the rate for the state (21).
Lung cancer

Lung cancer affects the cells lining the air passages. It is the second most common newly diagnosed cancer among Dakota County residents (21; 73). The major risk factors are smoking, radon, and secondhand smoke exposure. The majority (80-90 percent) of lung cancers are caused by cigarette smoking, making it highly preventable. Statewide, American Indians have the highest incidence and death rate from lung cancer (154).

Figure 66 – Lung cancer incidence rate


Figure 66 above shows that, in Minnesota, the lung cancer incidence rate remained stable from 1997 to 2007. During the same period, the Dakota County rate slightly increased and, in the period 2005 to 2009, the Dakota County rate was 6.5 percent higher than the statewide rate (60.5 compared to 56.8 per 100,000) (21). Eleven percent of new cancer cases in Dakota County residents were lung cancer during the period 2005-2009 (73).

Breast cancer

The most common risk factors for breast cancer are lifetime exposure to estrogen and family history of breast cancer; however, known risk factors explain less than half of breast cancer cases (168).

Breast cancer is the most common newly diagnosed cancer among Dakota County women (21; 73). The survival rate for breast cancer is quite high (98 percent), which is why regular mammograms are important. If detected early, breast cancer is usually very treatable (168). Nationally and in Minnesota, women of color are less likely than White women to be diagnosed with breast cancer; however, half of breast cancers in African-American and Hispanic women were diagnosed at late-stage, which is more difficult to treat. African-American women are more likely to die from breast cancer, which may be in large part due to the number of cancers that are diagnosed late-stage (3).
Figure 67 – Female breast cancer incidence rate

![Female breast cancer incidence rate 1995-2009](source)

Source: Minnesota Department of Health, Minnesota Public Health Access Portal, [www.health.state.mn.us](http://www.health.state.mn.us)

Figure 67 above shows that, in Minnesota, the breast cancer incidence rate in females declined from 1997 to 2007. During the same period, the Dakota County rate increased and, in the period 2005 to 2009, the rate was 12 percent higher than the statewide rate (144.2 compared to 128.5 per 100,000) (21). Thirty-four percent of new cancer cases in Dakota County women were breast cancer during the period 2005-2009 (73).

**Prostate cancer**

The most common risk factors for prostate cancer are age, family history of prostate cancer, and race (168). Prostate cancer is the most common newly diagnosed cancer among Dakota County men (21; 73). The incidence rate for prostate cancer in Dakota County increased from 174.9 per 100,000 in the period 1998 to 2002 to 182.3 per 100,000 in the period 2005 to 2009. It is above the statewide rate of 179.0 per 100,000 in the period 2005 to 2009. In Minnesota, African-American men have the highest prostate cancer incidence and mortality rates (154). Thirty-three percent of new cancer cases in Dakota County men were prostate cancer during the period 2005-2009 (73).

**Colorectal cancer**

Colorectal cancer is cancer that starts in the colon or rectum. Most colorectal cancers begin slowly as a non-cancerous growth (or polyp) inside the lining of the large intestine. Most polyps can be found through screening and removed before cancer can develop. The primary risk factors for colorectal cancer are: age, personal or family history of polyps or colorectal cancer, inflammatory bowel disease, and race (21).

Colorectal cancer is the third most common newly diagnosed cancer among Dakota County residents (21; 73). In Minnesota, American Indians have the highest rate of colorectal cancer. Nationally, Blacks have the highest colorectal cancer incidence and mortality. American Indians, African-Americans and Hispanics diagnosed with colorectal cancer are more likely to have late-stage tumors (168; 154).
Figure 68 above shows that, in Minnesota and Dakota County, the colorectal cancer incidence rate declined from 1997 to 2007. During the period 2005 to 2009, the Dakota County rate was seven percent higher than the statewide rate (48.2 compared to 45.1 per 100,000) (21). Nine percent of new cancer cases among Dakota County residents were colorectal cancer during the period 2005-2009. (73).

Cervical cancer

Cervical cancer is cancer that occurs in the neck of the uterus. Almost all cervical cancers are caused by persistent infection with the human papilloma virus (HPV), a sexually-transmitted infection. This type of cancer can be prevented by vaccination and regular Pap smears to screen for pre-cancerous growths that can be removed before cancer develops (168). Pap smears can also detect cancer early, when it is very treatable. The incidence rate for cervical cancer in Dakota County declined from 5.8 per 100,000 in the period 1998 to 2002 to 5.5 per 100,000 in the period 2005 to 2009. It is below the statewide rate of 6.1 in the period 2005 to 2009. Minnesota has one of the lowest cervical cancer mortality rates in the United States, more than a third lower than the national rate. In Minnesota, the rate of cervical cancer is highest in American Indian and Asian/Pacific Islander women (154).

Melanoma

Melanoma of the skin is the least common, but most serious, form of skin cancer. The best prevention for this type of cancer is to limit unprotected exposure to the sun and other forms of ultraviolet radiation, such as tanning lamps beds (21). The incidence rate for melanoma in Dakota County increased from 16.8 per 100,000 in the period 1995 to 1999 to 22.4 per 100,000 in the period 2005 to 2009. It is below the statewide rate of 23.2 in the period 2005 to 2009. In Minnesota, the rate of melanoma is highest in non-Hispanic Whites (154).

Oral cancer

Oral cancer is cancer that begins in the mouth. Smoking and heavy alcohol consumption are the primary risk factors for oral cancer (21). The incidence rate for oral cancer in Dakota County increased from 10.8 per 100,000 in the period 1995 to 1999 to 12.1 per 100,000 in the period 2005 to 2009. It is above the statewide rate of 11.4 in the period 2005 to 2009. In Minnesota, the rate of oral cancer is highest in American Indians and lowest in non-Hispanic Whites (154).
Heart disease

Heart disease is a group of diseases that affect the heart and blood vessels, including coronary artery disease, angina, heart attack, and congestive heart failure. Age, gender, race/ethnicity and family history all impact the risk of heart disease. There are several risk factors for heart disease that are modifiable by lifestyle changes. These include high blood pressure, high cholesterol, smoking, physical inactivity, unhealthy diet, overweight and obesity, and diabetes (169).

Heart disease is the second leading cause of death in Dakota County and Minnesota (106). Nationally, it is the leading cause of death. Minnesota had the lowest rate of heart disease mortality in the United States in 2010 – about 32 percent below the national average (170). In 2010, two percent of Dakota County adults said they had ever been told they had a heart attack and three percent said they had ever been told they had angina or coronary heart disease. Heart attacks and coronary heart disease are more common in males and people over 65. Heart attacks are more common in people with incomes at or below 200 percent of poverty and people with a high school education or less (70). The heart disease death rate in Dakota County decreased by 19 percent from 2007 to 2011, with an increase from 2010 to 2011. During the period 2009 to 2011, the heart disease death rate in Dakota County (102.8 per 100,000) was 14 percent below the rate for the state (119.1 per 100,000). In 2010, Dakota County was below the Healthy People 2020 goal of 100.8 per 100,000. Heart disease death rates are higher in males than in females. (106; 4). Statewide, American Indians have the highest rate of heart disease deaths; Asians and Hispanics have the lowest (169).

Figure 69 – Age-adjusted heart disease deaths

Source: Minnesota Department of Health, Vital Statistics Interactive Queries, www.health.state.mn.us

Figure 69 above shows that the age-adjusted heart disease death rate decreased for both Dakota County and the state from 1998 to 2010. The Dakota County rate has been consistently below the statewide rate. During the period 2009 to 2011, the heart disease death rate in Dakota County (102.8 per 100,000) was 14 percent below the rate for the state (119.1 per 100,000) (106).

Stroke

When a blood vessel to the brain is blocked by a blood clot or a ruptured vessel, a stroke occurs. The loss of oxygen to the affected area causes nerve cells to lose function and die, which, in turn affects the body parts controlled by those cells (171).
Stroke is the fourth leading cause of death in Dakota County. In 2010, two percent of Dakota County adults said they had ever been told they had a stroke, the same as the statewide percent (70; 133).

**Figure 70 – Age-adjusted stroke deaths**

The stroke death rate in Dakota County decreased by 27 percent from 2007 to 2011. Figure 70 above shows that from 1998 to 2010, the stroke death rate in both Dakota County and Minnesota trended down. The rate for Dakota County was above the state until the three-year period from 2009 to 2011 when it dropped below the state. During the period 2009 to 2011, the stroke death rate in Dakota County (34.1 per 100,000) was slightly below the rate for the state (34.9 per 100,000) (106). Dakota County’s rate in 2011 is below the Healthy People 2020 goal of 33.8 per 100,000. Statewide, stroke deaths are more common in women than in men. The death rate is higher for African-Americans than Whites (171).

**Chronic obstructive pulmonary disease**

Chronic obstructive pulmonary disease (COPD) is a group of lung diseases, including emphysema and chronic bronchitis, which make it difficult to breathe. It is a progressive disease that gets worse over time and often results in hospitalizations in older people. There is no cure, but lifestyle changes can help slow the progression of the disease and prevent exacerbation of symptoms. Environmental factors, such as tobacco smoke, dust mites, and mold may increase the severity of COPD symptoms. The leading risk factor for COPD is smoking, making it a highly preventable disease (21).

In 2011, 101 Dakota County residents died from COPD. All of these deaths occurred in people 45 and older (106).
Figure 71 – Chronic obstructive pulmonary disease (COPD) discharges

![Chronic obstructive pulmonary disease (COPD) discharges](image)

Source: Minnesota Hospital Association

Figure 71 above shows that hospital discharges for Dakota County residents with COPD increased from 2007 to 2009 and dropped from 2009 to 2011 (102). In Minnesota, there are higher rates of death due to COPD in females, American Indians, and people of low-income (172).

**Diabetes**

Diabetes is a group of diseases that result when glucose (sugar) builds up in the blood. Type 1 diabetes occurs when the body quits producing insulin, which processes glucose in the body. Type 2 diabetes is the most common form of diabetes. It occurs when the body does not produce enough insulin or cannot properly process the insulin it produces. Diabetes is one of the leading causes of death in Dakota County. In adult Minnesotans, it is the leading cause of blindness and chronic kidney disease. It is the leading complication for mothers giving birth. Complications of diabetes can cause disabilities that affect daily activities. It is also a major risk factor for heart disease and stroke. The risk factors and triggers for Type 1 diabetes are still being studied, and currently it is not known how to prevent it. The primary risk factors for Type 2 diabetes are obesity and being overweight, family history of diabetes, and ethnicity (3; 173).

In 2010, eight percent of Dakota County residents said they had ever been told they had diabetes (Type 1 or 2) (70). This is slightly above the state (seven percent) and slightly below the United States (nine percent) (133). Statewide, people of color, particularly American Indians, are more likely to develop Type 2 diabetes than Whites. Type 1 diabetes is more common in non-Hispanic Whites than in any other ethnic group (173).
Figure 72 – Persons with diabetes

![Persons with diabetes (Type 1 or 2) 2004-2010](chart.png)

Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, [www.health.state.mn.us](http://www.health.state.mn.us)

Figure 72 above shows that the percent of people with diabetes in Minnesota and in the United States increased from 2004 to 2010, with Minnesota slightly below the United States (133).

**Chronic liver disease and cirrhosis**

Cirrhosis is one of the leading causes of death in Dakota County (134). Cirrhosis occurs when normal liver tissue is replaced by scar tissue, decreasing the function of the liver. The most common causes of cirrhosis are alcohol abuse and hepatitis (174). The death rate due to cirrhosis in Dakota County increased from 2004 to 2010. During the period 2009 to 2011, the Dakota County rate (6.6 per 100,000) was below the state (7.1 per 100,000) (106).

**Dental caries in school-aged children**

Dental caries (or tooth decay) is a disease in which acids from bacteria cause damage to the teeth. Left untreated, it can result in pain, infection, difficulty eating, and loss of teeth. It is the most common chronic disease in children ages six to 19. It can be prevented through proper nutrition, drinking fluoridated water, and applying dental sealants or dental varnish (3; 175). In 2010, 55 percent of Minnesota 3rd graders had experienced dental caries, compared to 53 percent nationally. Eighteen percent had untreated cavities. Non-White, non-Hispanic children were more likely to experience caries and have untreated cavities than White, non-Hispanic and Hispanic children. Minnesota has a higher percent of children with dental sealants than the national average (64 percent compared to 32 percent) (176).

**Mental illness**

Good mental health is associated with better health outcomes. Mental disorders are characterized by alterations in thinking, mood and/or behavior which interfere with normal daily activity. Mental disorders can impact the success of treatment for chronic diseases. In turn, people with depression and anxiety are at higher risk for chronic conditions, because they are less likely to engage in healthy behaviors and more likely to engage in risky behaviors, such as smoking and alcohol use (177). An estimated six percent of Minnesota adults experienced significant depressive symptoms during the past year in 2011-12 and four percent had symptoms suggestive of serious mental distress (143). Mental health disorders are a leading cause of disability in the United States (4). Socioeconomic factors, such as low income and poor educational attainment, are associated with poor mental health.
Mentally unhealthy days

This is a measure based on the self-reported number of days that mental health was not good in past 30 days. An average is computed for all persons who reported and it is age-adjusted to allow for comparison across different geographic regions. This measure can help characterize the burden of stress, depression, and emotional distress in a population. For the years 2005-2011, Dakota County residents reported an average of 2.5 mentally unhealthy days, similar to the state (2.7 days) and national (2.3 days) benchmarks (67). Among Minnesota college students in 2013, males reported an average of 4.1 days that mental health was not good and females reported an average of 6.6 days that mental health was not good (119).

Mental health treatment

The percent of people who receive treatment for mental health disorders, including inpatient hospitalization, can indicate the severity of mental illness in a population.

Figure 73 – Mental health discharges

Figure 73 above shows that hospital discharges where a mental health condition was the primary diagnosis remained relatively stable from 2007 to 2011. The highest rate of mental health hospital discharges was in people 15-24 years old. Females were more likely to be hospitalized for mental illness than males (102).
Figure 74 – Students who have been treated for a mental or emotional disorder in the past year

![Bar chart showing percentage of students treated for mental or emotional disorders in Dakota County, 2007 and 2010.](chart)

Source: Minnesota Student Survey Interagency Team, Minnesota Student Survey

Figure 74 above shows that, in 2010, 6.5 percent of Dakota County 9th and eight percent of 12th graders reported being treated for a mental or emotional disorder in the past year (78).

**Depression**

Depression is a common but serious illness that requires treatment with antidepressant medications. Depression interferes with a person’s ability to work, sleep, and engage in daily activities. It ranges from mild to severe. Severe cases may lead to self-injury and/or suicide (178). Emotional distress in adolescents can impair development and learning and interfere with sound decision-making. It can also lead to self-harm in adolescents, including cutting, suicide attempts, and suicide (3).

An estimated six percent of Minnesota adults 18 and older reported having at least one episode of major depression in 2011-12. The rates were highest among 18-25 year olds (nine percent) (143). In 2013, 24 percent of Minnesota college students were ever diagnosed with depression, nine percent within the past 12 months (119). Minnesota is above the Healthy People 2020 goal of 5.8 percent. The percentage of Dakota County students who said that they felt discouraged and hopeless in the previous month declined slightly from 1992 to 2010. (2010: 10 percent of 6th graders, 13 percent of 9th graders, and 11 percent of 12th graders). The percentage of Dakota County students who felt sad all or most of the time in the previous month declined for 12th graders and remained stable for 6th and 9th graders from 1992 to 2010. (2010: 10 percent of 6th graders, 13 percent of 9th graders, and 10 percent of 12th graders) (78; 4). In the 2012-13 school year, four percent of students in Dakota County public schools were estimated by the school nurse to have depression or anxiety. This is a slight increase from two percent estimated in 2008-09 (167).

**Anxiety**

Anxiety disorders are among the most common mental disorders in Americans. Anxiety occurs when worry becomes excessive or unrealistic and interferes with daily activities. Anxiety disorders include post-traumatic stress disorder, obsessive-compulsive disorder, and phobias (177).

Eighteen percent of the U.S. population 18 and older has an anxiety disorder in any given year (179). In 2013, 10 percent of Minnesota college students reported being diagnosed with anxiety within the past 12 months (119).
2010, 20 percent of Dakota County 6th graders, 18 percent of 9th graders and 14 percent of 12th graders said they have many fears and are easily scared (78).

**Figure 75 – Students who have felt nervous, worried, or upset all or most of the time**

![Graph showing the percentage of students who felt nervous, worried, or upset all or most of the time during the last 30 days in Dakota County, 1998-2010.](image)

Source: Minnesota Student Survey Interagency Team, *Minnesota Student Survey*

Figure 75 above shows that the percent of Dakota County students who felt nervous, worried, or upset all or most of the time during the last 30 days is highest for 9th and 12 graders (2010 percents: 6th grade: 11 percent, 9th grade: 13.5 percent and 12th grade: 13 percent). It remained relatively stable for 12th graders and declined slightly for 6th and 9th graders. In all grades, females have a higher percent than males. Statewide, students of color have the highest percents (78; 118).

**Suicide and self-injury**

Ultimately, mental illness can result in a person harming or killing themselves. Suicide is a serious public health problem with long-term consequences for individuals, families, and communities. Family members and friends who survive losing someone to suicide are often deeply impacted and may be at risk for suicide themselves. Completed suicides are only part of the picture - more people survive suicide attempts than die. Suicide attempts can result in serious injuries that require costly medical care (180; 3).
Suicide is one of the leading causes of death in Dakota County. For 15-24 year olds, it was the leading cause of death in 2011. For the period 2009-2011, the age-adjusted death rate for suicide in Dakota County (12.0 per 100,000) was above the statewide rate (11.5 per 100,000). Figure 76 above shows that the suicide rate increased by 35 percent from 2007 to 2010 (from 8.9 per 100,000 to 12.0 per 100,000), after several years of relative stability. It is above the Healthy People 2020 goal of 10.2 per 100,000. Males have a higher rate of suicide than females. During the period 2009-2011, the highest rate of suicide in Dakota County was in 45-54 year olds. Statewide, the highest rate of suicide is in American Indians (4; 106).

Figure 77 above shows the trend in Dakota County students who have thought about killing themselves during the past year. Ninth graders are the most likely to have thought about killing themselves. The percent decreased in all age groups from 1998 to 2010 (2010 percents: 6th grade – 10.5 percent, 9th grade – 18 percent, 12th grade – 12 percent). In 2010, the percent for 6th and 12th graders was similar to the state, but the percent for 9th graders was slightly higher.
than the state. Ninth-grade girls had the highest percent (22 percent) in 2010. Statewide, students of color, particularly American Indian students, have the highest rate of suicide attempts among 9th graders (78; 118).

The rate of non-fatal, self-inflicted injuries requiring emergency room or inpatient care in Dakota County increased by 20 percent from 2008 to 2012. The rate is highest for 15-24 year olds, and females have a higher rate than males (116). In 2010, eight percent of Dakota County 6th graders, 13 percent of 9th graders and seven percent of 12th graders reported hurting themselves on purpose during the last year (78).

**Autism spectrum disorders (ASDs)**

Autism-spectrum disorders are a group of developmental brain disorders that involve a wide range of symptoms and levels of impairment. Children with ASDs can experience social impairment, communication difficulties, and repetitive behaviors. An estimated average of 1 in 88 U.S. children is affected by an ASD (181). More children than ever before are being classified with ASDs. This increase may be due to improved diagnosis.

During the school year 2012-13, there were 1,763 children in Dakota County public schools with autism-spectrum disorders. This was an increase of 183 percent from the school year 2003-04. An estimated two percent of children in Dakota County public schools had autism during the 2012-13 school year, which is slightly higher than the one percent nationally (182; 167).

**Attention-deficit hyperactivity disorder (ADHD)**

ADHD is one of the most common neurobehavioral disorders in children, causing difficulty in paying attention and controlling impulsive behavior. It can be successfully managed and symptoms often improve as the child gets older, but it can last into adolescence and adulthood. About half of those with ADHD also have other behavioral disorders. Nationally, since the late 1990’s, the estimates of parent-reported ADHD diagnoses have increased. This may represent a change in the number of children who have ADHD or a change in the number of children who were diagnosed (181).

In 2011, 11.5 percent of Minnesota children ages 4-17 were ever diagnosed with ADHD. Boys have a rate that is more than double that of girls (183). An estimated seven percent of students in Dakota County public schools were reported to have ADHD during the 2012-13 school year. This was a slight increase from six percent during the 2008-09 school year (167).

**Eating disorders**

Eating disorders cause serious disturbances in diet patterns, such as eating very small amounts of food or severely overeating. Common eating disorders include anorexia nervosa, bulimia nervosa, and binge-eating disorder. Eating disorders may develop at any stage of life, but are most common in adolescence (184).

During their lifetime, an estimated one percent of females suffer from anorexia, 0.5 percent from bulimia, and 3.5 percent from binge eating disorders (179). In 2013, two percent of Minnesota college students reported ever being diagnosed with anorexia and one percent reported ever being diagnosed with bulimia (119). Fourteen percent of 9th graders and 17 percent of 12th graders fasted or skipped meals and three percent of 9th and 12th graders vomited or took laxatives to lose weight – a decline from 1998 to 2010 (78). Dakota County percentages are above the Healthy People 2020 goal of 12.9 percent engaging in disordered eating behaviors in order to lose weight (4).
Obesity

Obesity is epidemic in the United States. Since 1980, the prevalence of overweight and obesity in the United States has doubled in adults and tripled in children. Maintaining a healthy weight is an important part of overall health. Being overweight or obese increases the risk for many chronic conditions that can lead to disability and death, including high blood pressure, type 2 diabetes, heart disease, stroke, osteoarthritis and certain cancers. Lack of physical activity and unhealthy eating habits are the primary risk factors for becoming overweight or obese (185).

In adults, overweight is defined as a body mass index (BMI) between 25 and 29.9 and obese is defined as a BMI greater than or equal to 30. In children and adolescents, overweight is defined as a BMI between the 85th and 95th percentile for age and gender and obese is defined as BMI greater than or equal to the 95th percentile for age and gender. Minnesota is ranked the 32nd most obese state in the nation. Obesity affects all genders, ages, and racial and ethnic groups (3).

In 2010, 60 percent of Dakota County adults reported height and weight that classified them as overweight or obese (34 percent overweight but not obese, 26 percent obese). This was below the statewide percent (63 percent). More males were obese than females. The 2020 Minnesota target is 53 percent overweight or obese and the Healthy People 2020 goals are 66.1 percent overweight or obese, 30.5 percent obese. Dakota County meets the Healthy People 2020 goal for overweight or obese, but not the 2020 Minnesota target. The highest percent of overweight or obese was in persons aged 45-54. People with incomes at or below 200 percent of poverty had a higher rate of being obese than the general population (70; 132; 4). In 2013, 46 percent of Minnesota college students reported height and weight that classified them as overweight or obese (25.5 percent overweight but not obese, 20 percent obese) (119).

Figure 78 – Children aged 2-5 enrolled in WIC who are obese

![Graph showing the percentage of WIC enrollees aged 2-5 years with obesity from 2008 to 2012.](source: Centers for Disease Control and Prevention, Pediatric Nutrition Surveillance System, www.health.state.mn.us)

Figure 78 above shows that the rate of obesity among low-income children ages 2-5 enrolled in WIC in Dakota County is similar to the state. The percent declined slightly for Minnesota from 2008 to 2012 and decreased by two percent for Dakota County. In 2012, 11 percent of children were obese, compared to 13 percent statewide. The Healthy People 2020 goals are 66.1 percent overweight or obese, 30.5 percent obese. Dakota County meets the Healthy People 2020 goal for overweight or obese, but not the 2020 Minnesota target.
People 2020 goal is 9.6 percent. Statewide, American Indian children enrolled in WIC had the highest rate of obesity (4; 58).

**Figure 79 – Students who are overweight or obese**

![Students who are overweight or obese](image)

Source: Minnesota Student Survey Interagency Team, *Minnesota Student Survey*

Figure 79 above shows that 18 percent of 9th graders and 19 percent of 12th graders were overweight or obese in 2010. This was above the Healthy People 2020 goal of 16 percent for adolescents. More males than females reported height and weight that classified them as overweight or obese. In 2010, the percentage of Dakota County students who said that they tried to lose or control weight during the previous year was 59 percent of 9th graders and 62 percent of 12th graders (78; 4).

**Infectious Disease**

Diseases caused by bacteria, viruses, fungi and parasites cause more deaths worldwide than any other single cause. In the United States, the estimated annual cost to treat these diseases is about $120 billion dollars. Effective public health interventions, such as immunizations and improved sanitation, have significantly decreased infectious disease deaths in the U.S. since the early 20th century. However, trends since the 1980’s, including new and re-emerging infections, antibiotic resistance, and increased global travel, have raised the importance of continued vigilance with respect to infectious diseases. In 2012, 1,957 cases of reportable infectious diseases in Dakota County residents were reported to the Minnesota Department of Health (186; 187). Many infectious diseases are not reportable, like sexually-transmitted infections, and may go undetected.

**Vaccine preventable diseases**

Many serious infectious diseases that were once common can now be prevented with vaccinations. Since the early 20th century, the use of vaccinations has significantly decreased the number of deaths and disabilities due to infectious diseases in the United States. In recent years, outbreaks of some of these diseases have occurred due to waning immunity, unvaccinated people, and increased global travel. While vaccination rates are still relatively high in the United States, some parents have chosen not to vaccinate their children due to concerns about vaccine safety and their connection to serious chronic conditions, such as autism and type I diabetes.
Measles is very uncommon in the United States, but can be brought into the United States by unvaccinated travelers from countries where it is still common. It is a viral illness that results in a rash, fever, and cough or runny nose. Serious complications such as pneumonia and encephalitis can result in hospitalization and even death. In 2011, Minnesota had the highest number of cases of measles since 1991 (26 cases). Most of these cases were part of two unrelated outbreaks, one in Hennepin County and one in Dakota County. The Dakota County outbreak resulted in three confirmed cases. Two of these cases were seriously ill and required hospitalization (188).

Mumps is a viral infection that primarily affects the salivary glands, causing localized swelling. About 30 percent of people who are infected do not have symptoms. Serious complications, such as encephalitis, can occur. On average, two or fewer cases of mumps are reported in Dakota County each year. In 2006, mumps outbreaks occurred in several Midwest states including Minnesota. Dakota County had 16 cases of mumps during 2006. From 2008 to 2012, there were six confirmed and probable cases in Dakota County (189; 186).

Rubella, or German measles, is a viral illness that causes a rash. If it develops in a pregnant woman, it may cause a condition in the unborn child that results in serious health concerns after birth. Rubella is very rare in Minnesota, with only six cases of rubella and two cases of congenital rubella syndrome being reported since 1992. One case of rubella was reported in 2009 in a woman living in Dakota County. This was the first reported case in Minnesota since 2000 (190; 191).

Pertussis, or whooping cough, is a bacterial disease that affects the lungs. It is particularly severe in young infants. Pertussis remains endemic in Minnesota even though there is an effective vaccine with high coverage rates for the primary series. The number of newly-reported cases of pertussis has steadily increased over the past 10 years, particularly in adolescents and young adults. One reason for the increase is that immunity from the vaccine wanes after 5-10 years. Adolescents and adults need to receive a booster vaccine in order to be fully protected (192).

Figure 80 – Pertussis rate

In 2008, Dakota County experienced the largest number of pertussis cases in the state (359 cases), 35 percent of the total cases reported in the state. This outbreak continued into 2009 with 140 cases. 2012 was a record year for pertussis nationwide, with 4,144 cases reported in Minnesota. Dakota County had 277 cases in 2012. Figure 80 above shows that from 2008 to 2011, Dakota County had a higher pertussis rate than the state. In 2012, Dakota County dipped below the statewide rate, although both increased dramatically from 2011 to 2012 (193; 186).
Tetanus, or lockjaw, is a bacterial illness that affects the muscles and nerves. It occurs in people who get a deep wound or puncture and have not been vaccinated. It is very rare in Minnesota, with only six cases reported from 2002 and 2012 (194).

**Sexually transmitted infections**

Sexually transmitted infections (STIs) or sexually transmitted diseases (STDs) are the most commonly reported communicable disease, accounting for 59 percent of all reportable diseases in Dakota County in 2012. In 2012, the number of reported STIs in Dakota County was 1,153, nearly the same as 2011 (186).

Chlamydia is the most commonly reported bacterial STI. Many people do not display symptoms, but can still spread the infection. If it is untreated, it can lead to infertility, pregnancy complications, and pelvic inflammatory disease (in women) (195).

**Figure 81 – Chlamydia rate**

In 2012, the majority of cases of STIs reported to the Minnesota Department of Health for Dakota County residents were chlamydia cases (1,003 cases). From 2003 to 2012, the rate of chlamydia in Dakota County increased by 48 percent. More than two times as many females as males were diagnosed with chlamydia in 2012. People 15-24 were the most likely to be diagnosed with chlamydia. In 2012, 28 percent of Dakota County reported cases were 15-19 year olds and 42 percent were 20-24 year olds. Nearly one-third (32 percent) of cases in Dakota County were in persons of color (196). Figure 81 above shows that the rate of chlamydia infections generally rose from 2008 to 2012 in both Dakota County and Minnesota. However, the rate in Dakota County dropped by four percent from 2011 to 2012. In 2012, the Dakota County rate (247.6 per 100,000) was below the state rate (335.5 per 100,000). (196).

Gonorrhea is the second most commonly reported bacterial STI. If it is untreated, it can lead to infertility, pregnancy complications, and pelvic inflammatory disease (in women) (195).

In 2012, there were 128 gonorrhea cases reported to the Minnesota Department of Health for Dakota County residents. From 2006 to 2010, the rate of gonorrhea decreased in Dakota County by 40 percent. From 2010 to 2012, the rate increased by 40 percent to nearly the same level as it had been in 2006. Females were more likely to be diagnosed with gonorrhea than males. People 15-24 were the most likely to be diagnosed with gonorrhea. In 2012, 26
percent of Dakota County reported cases were 15-19 year olds and 40 percent were 20-24 year olds. Forty-two percent of cases in Dakota County were in persons of color. In 2012, the rate in Dakota County residents (31.6 per 100,000) was 45 percent below the state (57.3 per 100,000) (196).

Syphilis is an STI that can cause serious complications, including blindness, if left untreated. It can also cause pregnancy complications and birth defects in a baby whose mother is infected (195). Seventy-nine cases of syphilis were reported in Dakota County residents from 2008 to 2012 (196).

**HIV and AIDS**

Human immunodeficiency virus (HIV) is the virus that causes acquired immune deficiency syndrome (AIDS). It can be spread sexually or through the sharing of contaminated needles. An infected mother can also pass the virus to her baby during pregnancy, childbirth or breastfeeding. People can be infected with HIV for a long time before symptoms developed. Eventually, the infection becomes AIDS and attacks the immune system, putting the person at risk for other infections and cancers. There is no vaccine or cure for AIDS; however, there are treatments that delay the progression of the disease and allow people to live longer with AIDS (197).

In the past 30 years, the number of persons living with HIV or AIDS has steadily increased in Minnesota (3). In 2012, 339 people were known to be living with HIV/AIDS in Dakota County, an 87 percent increase in the 10-year period from 2003 to 2012. Among the 7,510 people in Minnesota living with HIV or AIDS in 2012, 59 percent of males are White, non-Hispanic and 61 percent of women are African-born or African-American (198).

The rate of newly-diagnosed HIV/AIDS cases in Dakota County generally increased between 2003 and 2009, but decreased by 74 percent from 2009 to 2012. The Dakota County rate for 2012 (2.0 per 100,000 population) was below the state (5.9 per 100,000 population). Statewide, rates of new HIV/AIDS infection are highest in males, people between 20 and 34 years of age, African-born Blacks, and African-Americans. Non-Hispanic, Whites and Asians have the lowest rates. Twenty-two Dakota County residents died from AIDS during the 10-year period from 2002 to 2011 (198; 106).

**Antibiotic-resistant infections**

Antibiotics are an important part of the control of diseases caused by bacteria. They are designed to inhibit the growth or multiplication of bacteria. Today, there are over 100 different antibiotics available to cure a variety of bacterial infections. However, misuse of antibiotics, such as taking antibiotics when there is not a bacterial infection or not taking antibiotics as prescribed, has led to infections that are resistant to antibiotics. Antibiotic resistance occurs when bacteria change so that drugs used to cure or prevent infections no longer work, allowing the bacteria to cause illness. Over the last decade, more bacteria have become resistant to the most commonly prescribed antibiotics. This threatens to make these infections untreatable (3; 199).

Staphylococcus aureus (commonly called “staph”) is an infection that was once almost exclusively associated with health care facilities. Methicillin-resistant S. aureus (or MRSA) is a strain of staph infection that is resistant to multiple antibiotics and has two main types: one that is health care-associated and one that is community-associated. Health care-associated MRSA occurs in people who have been hospitalized, had surgery, lived in a nursing home or had an in-dwelling device. Community-associated MRSA develops in healthy, young people who acquire the disease in a community, recreational, or educational setting. Since 2000, the number of community-associated MRSA cases in Minnesota has increased rapidly, while hospital-associated MRSA infections have decreased (3).
Pneumonia/influenza mortality rate

Pneumonia and influenza are leading causes of death in the United States. Both are largely preventable through vaccination. Influenza is a viral infection of the winter season that can range from mild to severe. It is easily spread from person to person. Certain people are more at risk for complications, such as pneumonia, following an influenza infection, including the elderly, pregnant women, and people with certain chronic conditions. Seasonal influenza can be prevented through annual immunization (200). Pneumonia is a lung infection caused by a variety of infectious agents or chemicals that can cause mild to severe illness. Although it can affect people of all ages, the elderly and children under five are the most vulnerable (201). Pneumonia is frequently a complication of influenza, especially in the elderly, so they are often grouped together for reporting purposes.

There were 826 hospitalizations of Dakota County residents in 2011 for pneumonia and influenza. The highest rate of hospitalizations was in adults 65 and older. In 2011, there were 23 deaths from pneumonia and influenza in Dakota County. From 2001-2010, the rate of death for pneumonia and influenza in Dakota County decreased by 54 percent. The largest percent of deaths occur in adults 75 and older. During the period 2009-2011, the Dakota County rate (6.6 per 100,000 population) was below the state rate (10.0 per 100,000 population) (134; 73; 102).

Tuberculosis

Tuberculosis (TB) is a serious bacterial infection that is spread through extended close contact with someone who is infected. It has two phases: a latent phase where the bacteria lies dormant and active disease where the person has symptoms and can spread the disease to others. Active TB typically occurs in the lungs, but can involve any part of the body (202).

From 2008-2011, the number of TB cases in Minnesota decreased, but it increased from 2011-2012. Statewide, the highest rates of TB are in foreign-born persons, Blacks, and Asians. There were 13 newly-diagnosed cases in Dakota County in 2012 (203). Twenty-four cases of active TB and 47 cases of latent TB infection were managed by the Dakota County Public Health Department in 2013 (95).

TB is treated with a combination of antibiotics. When the full course of treatment is not completed or when a physician incorrectly prescribes medication, the bacteria can become drug-resistant. In 2012, eighteen percent of newly-diagnosed TB cases that were tested were resistant to at least one first line antibiotic in Dakota County, compared to 19 percent statewide (204).

Hepatitis

Hepatitis is a group of viral infections affecting the liver. Hepatitis A is typically spread through food or water. There is a vaccine for people 12 months and older. Since 2000, the number of cases of Hepatitis A in Minnesota has decreased. There were five cases in Dakota County from 2008 to 2012 (186; 205).

Hepatitis B is a liver disease caused by a virus. It is typically spread through unsafe sex, injection drug use, or needlestick injuries. Some people become chronic carriers of hepatitis B with no symptoms. Chronic Hepatitis B infection increases the risk for certain types of liver cancer. Mothers can pass the virus to their infants during delivery (206). There is a series of three vaccines that are given to children. Since 2000, the number of acute cases of Hepatitis B in Minnesota has decreased. There were five cases in Dakota County from 2008 to 2012 (186; 205).

Hepatitis C is a serious illness that can lead to liver damage. The majority of newly-diagnosed cases have no symptoms or only mild illness, but people chronically infected with Hepatitis C with no symptoms can still go on to develop liver damage. There is no cure and no vaccine for Hepatitis C. This disease is spread by exposure to contaminated blood.
through injection drug use, needlestick injuries, or childbirth. It is infrequently spread through unsafe sex or sharing of personal items (206). As of December 31, 2012, there were 39,303 people assumed to be living with a past or present infection with Hepatitis C in Minnesota (207).

**Group B streptococcus**

Group B streptococcus (or Group B strep) is a bacterial illness that can cause illness in people of all ages. It is the leading cause of life-threatening infections in newborns. About 20 percent of women carry the group B strep and can pass it on to their baby during childbirth. Testing during pregnancy allows for the woman to receive antibiotics during labor, which greatly decreases the likelihood of the baby becoming infected. Although newborns have the highest rate of Group B strep, adults can also be affected with bloodstream infections, pneumonia, and other serious infections. It is more common in older adults and people with chronic conditions (208).

From 2007 to 2012, the incidence of invasive Group B strep infections increased. The largest number of cases in Minnesota since 1995 was reported in 2012 (564 cases). There were 37 cases in Dakota County in 2012 (191; 186).

**Tick-borne disease**

A variety of diseases may be spread by ticks in Minnesota. Most of these diseases result from the bite of an infected black-legged tick (or deer tick), including Lyme disease, human anaplasmosis, and babesiosis (209). Tick-borne disease cases have increased substantially in recent years in Minnesota. The risk of tick-borne diseases is higher in eastern Minnesota (3). Dakota County is in a moderate risk area for tick-borne disease; however, Dakota County residents may work, recreate, or travel in areas with higher risk (210).

The rate of Lyme disease in Dakota County fluctuated from 2003 to 2012, with 59 cases reported in 2012. In 2012, the Dakota County rate (14.6 per 100,000) was below the state (16.9 per 100,000). Eleven cases of human anaplasmosis were reported in Dakota County in 2012 (186).

**Mosquito-borne diseases**

Diseases that are transmitted by mosquitoes are less common in Minnesota than in tropical areas, but there are some that are of potential concern, including West Nile virus and LaCrosse encephalitis.

West Nile virus is a virus transmitted by mosquitoes that can cause encephalitis in some people. It is normally found in Africa and Europe. In 1999, an outbreak occurred in New York City and it has since spread to 48 states and the District of Columbia in the United States. It was first identified in Minnesota in 2002 (211). The highest number of human cases in Dakota County was five in 2003. Since then, there have been three or fewer cases each year. From 2008 to 2012, there was one case reported in a Dakota County resident. No positive mosquito pools were identified from 2010 to 2012 (212).

**Foodborne illness**

During the past few decades, Minnesota’s food supply has become part of a complex global industry. Food contains naturally occurring substances and may come into contact with many natural and artificial substances during production, processing, and preparation. Some hazards related to food include microorganisms, naturally-occurring chemicals, environmental contaminants, additives, and pesticides. When foods or beverages contaminated with disease-causing microbes are consumed, illness can occur (3).

Each year an estimated one in six Americans gets sick, 128,000 are hospitalized, and 3,000 die of foodborne illness. The annual number of confirmed foodborne illness outbreaks in Dakota County increased from five in 2007 to eight in
2011. Foodborne illness outbreaks in Dakota County are investigated by the Minnesota Department of Health. In 2012, 135 cases of foodborne illness were reported in Dakota County residents. Many mild cases are not detected and therefore not reported (213; 214; 186).

Campylobacteriosis, caused by the campylobacter bacteria, is the most commonly reported bacterial diarrheal illness in Minnesota residents. It is most often associated with uncooked poultry, unpasteurized milk, and contact with farm animals. The incidence rate of campylobacter in Dakota County decreased by 32 percent from 2009 to 2012 and the Dakota County rate (13.6 cases per 100,000) was below the state rate (17.7 cases per 100,000) in 2012. Dakota County’s rate is above the Healthy People 2020 goal of 8.5 cases per 100,000 (186; 4).

Salmonellosis, caused by the salmonella bacteria, is another common foodborne illness, causing diarrhea and vomiting, that is often associated with outbreaks. It is most often associated with improper food handling practices or contact with animals. The incidence rate of salmonella in Dakota County fluctuated from 2003 to 2012. The Dakota County rate in 2012 (12.8 cases per 100,000) was below the state rate (14.5 cases per 100,000). Dakota County’s rate is above the Healthy People 2020 goal of 11.4 cases per 100,000 (186) (4).

Shigellosis is another bacterial infection causing diarrheal disease. It is most often spread person-to-person, but can also be spread via food. Thirty-six cases of shigellosis were reported in Dakota County residents from 2008 to 2012 (186; 4).

**Waterborne illness**

Waterborne illnesses are spread through recreational or drinking water contaminated by infectious agents. These diseases can also be acquired from food or beverages, from contact with animals, or from contact with others who have the illness (215). From 2002 to 2011, Dakota County had one confirmed recreational water outbreak that resulted in 47 cases of illness (103).

Giardiasis is the most common waterborne illness in the United States. In 2012, there were 25 cases reported in Dakota County residents. The rate generally decreased from 2003 to 2012 (186).

**Rabies in animals**

Rabies is a fatal neurological disease caused by a virus. It is spread through saliva from the bite of an animal or human who is infected. Once symptoms occur, there is no cure, but there is a series of shots that can prevent the disease if given after exposure. In Minnesota, skunks and bats are the wild animals that carry rabies. They may pass it on through a bite to domestic animals that have not been vaccinated. Over the past 20 years, the incidence of rabies in domestic animals has decreased significantly due to effective vaccination. In the United States, most human cases of rabies are due to a bat bite that was not recognized or reported. Bats leave small teeth marks that are not easy to see and, therefore, may be missed (216). From 2009 to 2013, among the bats that were tested in Dakota County, eight tested positive for rabies (217).

**Injury and violence**

Injuries may be intentional (resulting from violence) or unintentional. Injuries are the leading cause of death for children and young adults in Minnesota. From infants to the elderly, injuries affect people in all stages of life. Deaths are only one impact of injury. Injuries also place an enormous burden on hospital emergency departments and trauma care systems, accounting for approximately one-third of all emergency department visits (3; 218).
Unintentional injuries caused 156 deaths in Dakota County residents in 2011. Unintentional injuries were the leading cause of death in Dakota County 15-24 year olds from 2007 to 2011. Figure 82 above shows the number of deaths in Dakota County for two of the leading causes of unintentional injury death – falls and motor vehicle crashes. The number of deaths due to motor vehicle crashes decreased slightly from 2002 to 2011, while the number of deaths due to falls increased. Unintentional injuries resulted in an average of 15,959 emergency room visits or hospitalizations per year from 2010-2012. The rate of non-fatal, unintentional injuries decreased by 24.5 percent from 2003 to 2012. The highest rate of unintentional injuries (fatal and non-fatal) is in persons 75 and older. Males have a higher rate than females.

**Traumatic brain and spinal cord injuries**

A traumatic brain or spinal cord injury is caused by a blow, jolt or penetrating injury to the head or spinal canal that disrupts brain and/or nervous system function. The injuries can range from mild to severe and deficits can be temporary or permanent. Secondary conditions that occur, such as respiratory infections, can be life-threatening. The leading causes of these types of injuries are falls and motor vehicle accidents (219).

There were 263 non-fatal, hospitalized traumatic brain injury (TBI) events for Dakota County residents in 2012. The rate of TBI injuries generally increased by 32 percent from 2003 to 2012 (116). There was an average of 16 non-fatal, hospitalized spinal cord injury events per year from 2008 to 2010 for Dakota County residents. The rate remained stable from 1999 to 2006 but increased 46 percent from 2006 to 2009 (73).

**Fall-related injury**

In Dakota County, falls are the leading cause of unintentional injury for children under age five treated in hospital emergency departments and the leading cause of hospitalized injury among residents over 65. In 2011, 47 percent of fatal, unintentional injuries and 35 percent of non-fatal, unintentional injuries were caused by falls. Falls can cause...
moderate to severe injuries. Particularly among older adults, falls may cause hip fractures and head traumas, increasing the risk of death. Among older adults (65+), falls are the leading cause of injury death and Minnesota has one of the nation’s highest rates of death due to falls among the elderly (116; 3).

Figure 83 – Rate of fall-related injuries

Figure 83 above shows that, in 2012, the rate of fall-related injuries in Dakota County (166.5 per 10,000 population) is below the statewide rate (190.9 per 10,000). The rate generally declined for both Dakota County and the state from 2008 to 2012. The highest rate of fall injuries was in persons 75 and older. Females have a higher rate of fall injuries than males (116; 3).

Firearm injury

Each day, approximately one Minnesotan dies and another is injured by a firearm. Firearms are the second leading cause of traumatic brain injury death in Minnesota. There were 72 non-fatal, accidental firearms injuries in Dakota County from 2007 to 2011. The majority of firearm-related deaths are suicides, not assaults or unintentional injuries (3; 116).

In 2010, four percent of Dakota County 6th graders, six percent of 9th graders and seven percent of 12th graders reported carrying a weapon on school property in the previous month. These percentages generally decreased in 6th and 9th grades from 1995 to 2010; for 12th graders, the percentage remained relatively stable during the same years (78). The Healthy People 2020 goal is 4.6 percent for students grades 9 through 12 (4).

Drowning

Every day, about ten people in the United States die from unintentional drowning. Of these, two are children aged 14 or younger. Nationally, African-Americans have a higher rate of death from drowning than Whites (220). From 2007 to 2011, there were 36 near-drowning accidents and 12 accidental drowning deaths in Dakota County (134; 116).

Motor vehicle crash injuries

Injuries caused by motor vehicle crashes can range from mild to severe, with traumatic brain injuries and spinal-cord injuries being the most severe. These types of injuries significantly decrease quality of life and have a serious economic cost. Statewide, 20-24 year olds, elderly, and males are most at risk for injury from motor vehicle crashes. In recent years, the number of crashes involving teen drivers has decreased. From 2004 to 2012, the percent of crashes
in Minnesota involving teen drivers (ages 15-19) dropped from 23 percent to 17 percent. Consequently, injuries and deaths due to crashes have also decreased in this population. Teen deaths (ages 13-19) dropped from 15.5 percent of all traffic fatalities in 2004 to 10 percent in 2012 and injuries dropped from 18 percent of all traffic injuries to 13 percent in the same time period (156).

Figure 84 – Rate of motor vehicle crash injuries

Motor vehicle crashes that occurred in Dakota County caused an average of 2,010 non-fatal injuries per year from 2018 to 2012. In 2011, 21.5 percent were moderate and three percent were severe. Figure 84 above shows that, in 2012, the rate of motor vehicle crash injuries in Dakota County (463.4 per 100,000) was below the statewide rate (545.0 per 100,000). The rate generally declined in Dakota County and the state from 2008 to 2012. The Dakota County rate (463.4 per 100,000) was below the state rate (545.0 per 100,000) for the three-year period 2010-2012. It was also below the Healthy People 2020 goal of 694.3 per 100,000 (156; 73; 4). In Dakota County, motor vehicle crash injuries are the leading cause of injury-related death for residents 25-44 and one of the leading causes of injury-related death for residents 45-64 (134).

The rate of motor vehicle-related deaths in Dakota County decreased by 36 percent from 2005 to 2011. There were 19 motor vehicle-related deaths in Dakota County in 2012. Statewide, motor vehicle-related deaths increased in 2012 after a sharp decrease over the previous several years (156).

In Minnesota, the most common factors involved in single vehicle crashes are: speeding, driver distraction, and weather. The most common factors involved in multiple vehicle crashes are: driver distraction, failure to yield the right of way, and following too closely. Distracted, or inattentive driving, occurs when a driver engages in any activity that may distract them from the primary task of driving and increase the risk of a crash. Distracted driving is a factor in 25 percent of crashes, resulting in at least 70 deaths and 350 serious injuries in Minnesota each year. These numbers may be underreported because of the challenge for law enforcement in determining that distraction was a factor in a crash. In Minnesota, it is illegal for a driver to read, compose or send text messages or emails or access the Internet using a wireless device while their vehicle is in traffic (in motion or stopped). Cell phone use is banned for teenage drivers during their permit and provisional license stages (221; 156).
**Alcohol-related motor vehicle crash injuries**

Driving under the influence of alcohol accounted for 26 percent of traffic deaths and nine percent of traffic injuries in Minnesota in 2012. While the number of crashes involving alcohol and arrests for driving while intoxicated have decreased in recent years, injuries and deaths due to these crashes still have a significant impact on the lives and health of Minnesotans (3; 156).

**Figure 85 – Rate of alcohol-related motor vehicle crash injuries**

![Rate of alcohol-related motor vehicle crash injuries, 2008-2012](image)


In 2012, 128 Dakota County residents were injured and three were killed in alcohol-related crashes. The Dakota County rate (31.6 per 100,000) was below the statewide rate (49.2 per 100,000). Figure 85 above shows that the rate has declined for both Dakota County and the state from 2008 to 2012, although the statewide rate increased by 11 percent from 2011 to 2012 (222).

**Work-related injury and illness**

In 2010, there were over 2.7 million people age 16 and older in the labor force in Minnesota who spend up to half their waking lives at work or commuting. People can be injured or exposed to hazardous substances in the workplace that lead to disability, illness, and death. Workplace settings have varying levels of safety and risk. In 2010, there were 76,700 non-fatal, workplace injuries and illnesses and 70 workplace deaths in Minnesota (223).

**Poisoning**

Poisonings are leading causes of injury death and hospitalization in Minnesota. These numbers have been increasing in recent years, largely due to the misuse of prescription drugs. Drug overdose death rates in the United States more than tripled from 1990 to 2008 (3). There were 34 accidental drug overdose deaths in Dakota County in 2011. Sixty-two percent involved multiple drugs. The majority of the deaths (68 percent) involved prescription drugs, sometimes in combination with other drugs.
From 2007 to 2011, there were 1,297 non-fatal accidental poisonings and 116 deaths due to accidental poisoning for Dakota County residents. Figure 86 above shows that since 2004, the rate of accidental poisonings seen in the emergency room or requiring hospitalization has increased in both Dakota County and Minnesota. Dakota County’s rate was consistently below the statewide rate and has grown more slowly than the state. In 2012, the rate in Dakota County was 75.1 per 100,000, compared to 101.1 per 100,000 for the state. However, the rate per 100,000 is highest in people ages 75 and older and children under five years of age. In 2012, 32 percent of poisonings in Dakota County were serious enough to require hospitalization (116).

Residential fire deaths

In Minnesota, the majority of deaths due to fire occur in the home. A significant portion of them are due to careless behavior, such as smoking in bed. Over the past 30 years, the number of deaths due to fire has been decreasing in Minnesota. However, since most of them are preventable, any number of deaths is too many. In Dakota County, there were nine deaths due to fire in the 10-year period from 2003 to 2012 (224).

Non-Fatal Intentional Injuries

Non-fatal intentional injuries are the result of attempted murder, aggravated assault, rape, domestic abuse, and child maltreatment.

Figure 87 – Rate of non-fatal intentional injuries
There were 606 non-fatal intentional injuries to Dakota County residents that required an emergency room visit or hospitalization in 2012. Persons age 20-29 have the highest rate of assaultive injuries and males have a higher rate than females. Figure 87 above shows the rate of non-fatal intentional injuries per 100,000 population that were seen in the emergency department or were hospitalized. From 2008 to 2012, both Dakota County and Minnesota had a slight decrease. Dakota County was consistently below the state. In 2012, the rate in Dakota County was 155.5 per 100,000, compared to the state (281.8 per 100,000). The rate was highest in 15-24 year olds. Males were more likely to have an intentional injury than females. In 2012, seven percent of these injuries required hospitalization (116).

**Vulnerable adult abuse**

Vulnerable adults include adults of all ages with physical or mental disabilities, who may be living at home or being cared for in a long-term care facility. Vulnerable adults are at risk for abuse and maltreatment, including physical, emotional, or sexual abuse; neglect; and financial exploitation (3). They may be victimized by professional staff, friends or family. In 2013, there were 1,100 adult protection reports in Dakota County. Fifty-five percent of the allegations were for adults 65 and older (225). In a 2009 national study, 11 percent of persons 60 & older reported experiencing mistreatment in the past year (226). Many cases of abuse or neglect are not reported to police or social services.

**Youth violence**

Youth violence is prevalent in the United States. Youth violence includes emotionally harmful behaviors, such as bullying, as well as robbery and assault that can cause serious injury or death. Violence can also affect communities by increasing health care costs and decreasing property values (227).

**Figure 88 – Students who have hit or beat up another person at least once in the past year**

Figure 88 above shows the percent of students who have hit or beat up another person at least once in the past year. Younger students are more likely to engage in this behavior. Until 2007, 9th graders had the highest percent, but the percent for 6th graders topped 9th graders in 2010. The percent has decreased in all grades, with the most significant decrease in 9th graders (2010 percents: 6th graders – 24 percent, 9th graders – 21 percent, 12th graders – 14 percent). In 2010, the percent for 6th graders was below the state (26 percent). 9th and 12th graders were similar to the state. Males were more likely to have reported this behavior than females. Statewide, African-American, American Indian, and Hispanic students are more likely to report they had hit or beat up another student than Whites and Asians. In
2010, nearly one-half (48 percent) of 6th graders reported being pushed, shoved, or grabbed in the previous year. This percentage decreased from 1995 to 2010. Females were more likely to have reported this than males (78).

In 2010, 11 percent of Dakota County 6th and 12th graders and 14 percent of 9th graders reported that they have damaged or destroyed property in the previous year. These percentages generally decreased in all grades from 1992 to 2010. Males were more likely to report this behavior than females (78).

**Violent crimes**

Homicide (murder), rape, aggravated assault, and robbery are classified as violent crimes.

Figure 89 – Violent crimes per 100,000

Homicide is rare in Dakota County, with 12 homicides reported in the five-year period from 2008 to 2012. The homicide rate was lower than the rate for Minnesota and the Twin Cities metro area during the period 2007-2011. Figure 89 above shows the rates per 100,000 for aggravated assault, robbery, and rape in Dakota County. Aggravated assaults are the most commonly reported violent crimes. From 2011 to 2012, the rate decreased by 21 percent from 98.5 per 100,000 to 78.0 per 100,000 after a sharp increase from 2009 to 2011. The rate of robbery per 100,000 decreased from 2008 to 2012 while the rate of rape per 100,000 increased slightly. In 2012, there were 71 rapes reported in Dakota County (84; 134).
Community Themes

Multiple methods were used to identify community themes, including a Community Health Opinion Survey that provided insights about health concerns of respondents who live and work in Dakota County, and a shorter opinion survey that was conducted with target populations to fill gaps in the groups reached with the Community Health Opinion Survey. Additional information was provided by the 2013 Dakota County Resident Survey and themes identified during hospital community needs assessments completed in 2012 and 2013.

Data Sources

The purpose of the Community Health Opinion Survey was to provide data on health issues that are important to the community. The survey instrument, which was developed jointly between Anoka, Dakota, Ramsey and Washington counties, consisted of 94 questions that were broken into 11 groups: alcohol, tobacco and other drugs; physical activity; nutrition; maternal/child health; environment; safety; mental health; chronic disease; infectious disease; economic and social factors; and availability of services. Respondents indicated their degree of concern for each item: not a concern, minor concern, moderate concern, or major concern. The survey was available in English and conducted through an online survey from April 1-May 10, 2013. The sample was a convenience sample and the results are not generalizable to the population as a whole. The survey was promoted through a news release; the county website; nearly 7,000 emails sent to community partners, program participants, volunteers, and staff; Public Health e-News; cities and Chambers of Commerce email distributions; and rack cards distributed through Public Health offices, libraries, and Workforce Centers. There were 1,304 respondents.

A follow-up survey which was a shortened version of the Community Health Opinion Survey was designed to gather data from several target populations that were under-represented in the Community Health Opinion Survey: 18-24 year olds, persons 75 and older, respondents with incomes at 200 percent of poverty or below, and respondents of color. Respondents were asked to indicate 3 of the 11 broad topics (alcohol, tobacco and other drugs; physical activity; nutrition; maternal/child health; environment; safety; mental health; chronic disease; infectious disease; economic and social factors; and availability of services) that were their top concerns and then indicate which one was the most important. The survey was available in English and Spanish and conducted on paper from September 3-23, 2013. The sample was a convenience sample and the results are not generalizable to the population as a whole. The survey was promoted to clients at each of the Public Health offices; through outreach workers; at senior centers; and through two non-profits, DARTS and Comunidades Latinas Unidas En Servicio (CLUES). There were 1,028 respondents (189 took the survey in Spanish).

The Dakota County Resident Survey allows residents an opportunity to rate the quality of life in the county as well as service delivery and their satisfaction with County government. The survey instrument contains several questions that are of interest to public health. Dakota County has conducted this survey periodically since 2001. In 2013, Dakota County partnered with Olmsted, St. Louis, Scott, and Washington counties to engage the National Research Center, Inc. to develop a survey with shared questions as well as questions unique to each county. The survey was administered by mail to randomly selected households in February 2013. Of the approximately 2,497 households that received a survey in the mail, 803 surveys were completed, providing a response rate of 32 percent.

In 2013 and 2014, hospitals completed Community Health Needs Assessments in accordance with the Affordable Care Act requirements. This included the two non-profit hospitals in Dakota County (Fairview Ridges Hospital and Regina Medical Center) and hospitals in the surrounding counties that serve Dakota County residents. Since these hospitals conducted key informant interviews, community dialogues, etc. to develop priorities, the Healthy Dakota Initiative chose not to conduct additional qualitative studies for this community health assessment. The themes identified by these hospitals are summarized below.
Limitations

An opinion survey is a useful snapshot of the current views of respondents. However, it is the opinion of the respondents surveyed and may not be representative of all county residents. A person’s opinion is shaped by their experience and perspective at the time they responded. These types of surveys do not offer an opportunity to examine complex issues in depth and the exact opinion of the respondent may not be represented because the choice of answers is limited.

While qualitative methods are useful for capturing rich, complex data that are not easily obtained through quantitative methods such as surveys, the data are limited by the fact that they are not generalizable to the population as a whole.

Analysis

Table 11 – Top concerns identified in the Community Health Opinion Survey

<table>
<thead>
<tr>
<th>Concern</th>
<th>Percent “Major Concern”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distracted driving</td>
<td>73%</td>
</tr>
<tr>
<td>Alcohol use by underage youth</td>
<td>59%</td>
</tr>
<tr>
<td>Driving under the influence</td>
<td>57%</td>
</tr>
<tr>
<td>Obesity (overweight) - children</td>
<td>54%</td>
</tr>
<tr>
<td>Use of illegal drugs (not including marijuana)</td>
<td>53%</td>
</tr>
<tr>
<td>Tobacco use by youth</td>
<td>53%</td>
</tr>
<tr>
<td>Too much screen time</td>
<td>50%</td>
</tr>
<tr>
<td>Mental health problems - youth</td>
<td>46%</td>
</tr>
<tr>
<td>Over-the-counter and prescription drug abuse</td>
<td>46%</td>
</tr>
<tr>
<td>Obesity (overweight) - adults</td>
<td>45%</td>
</tr>
</tbody>
</table>

Table 1 above shows the top 10 concerns from the Community Health Opinion Survey by percent of all respondents who indicated that the concern was a “major concern”. These concerns fall into five primary categories: safety; tobacco, alcohol, and other drug use; chronic disease and conditions; physical activity; and mental health.

Concerns by topic area

Safety

In the 2013 Community Health Opinion Survey, distracted driving (73 percent) and driving under the influence of alcohol or other drugs (57 percent) were the only two safety issues for which more than 50 percent of respondents indicated “major concern”. Distracted driving was the number one concern of respondents overall and a top 10 concern among all respondents, regardless of gender, age, educational status, poverty status or race/ethnicity. Respondents aged 55-74 and respondents who were uninsured were more concerned about this issue than respondents overall. In the 2013 Dakota County Resident Survey, 14 percent of residents indicated they feel “very unsafe” from distracted drivers on County roads. Dakota County’s average rating on this measure was about the middle of the range for the five counties that participated in the survey. Females and people 55 and older had a lower average rating (i.e., they felt more unsafe) than residents overall (72).

Driving under the influence of alcohol or other drugs was the third highest concern of respondents overall and a top 10 concern among all respondents, regardless of gender, age, educational status, poverty status or race/ethnicity. Respondents age 55-74, respondents of color, and those with less than a bachelor’s degree were more concerned about this issue than the respondents overall. In the 2013 Dakota County Resident Survey, 6.5 percent of residents...
indicated they feel “very unsafe” from drunk or impaired drivers on County roads. Dakota County’s average rating on this measure was about the middle of the range for the five counties that participated in this survey. Females and people 55 and older had a lower average rating (i.e., they felt more unsafe) than residents overall. Residents feel less safe from drunk or impaired drivers than they did in previous surveys (2006, 2008, and 2011) (72).

Alcohol, tobacco, and other drugs

In the 2013 Community Health Opinion Survey, there were three concerns related to alcohol, tobacco, and other drugs for which more than 50 percent of respondents indicated a major concern: alcohol use by underage youth (59 percent); use of illegal drugs, such as cocaine, heroin, and methamphetamines (53 percent); and tobacco use by youth (53 percent). Alcohol use by underage youth was the second highest concern of respondents overall and a top 10 concern among all respondents regardless of gender, age, educational status, poverty status or race/ethnicity. Among respondents of color, it was the number one concern (62 percent). Respondents aged 55-74, respondents of color, those with less than a bachelor’s degree, and those who live in Dakota County were more concerned about this issue than the respondents overall. In the 2013 Dakota County Resident Survey, less than half (48 percent) indicated that they felt underage alcohol use was a “major concern” or “moderate concern”. Dakota County’s average rating was the lowest among the five counties that participated in the survey. Females and people 55 and older had a higher average rating (i.e., they were more concerned) than residents overall. Residents were less concerned about this issue than they had been in previous surveys (2004, 2006, 2008, and 2011) (72).

Use of illegal drugs, such as cocaine, heroin, and methamphetamine was the fifth highest concern of respondents overall and a top 10 concern among all respondents, regardless of gender, age, educational status, poverty status or race/ethnicity. Male respondents, those aged 55-74, those with less than a bachelor’s degree, low-income respondents, respondents of color, and those who live in Dakota County were more concerned about this issue than respondents overall. In the 2013 Dakota County Resident Survey, less than half (47 percent) indicated that they felt illegal drug use was a “major concern” or “moderate concern”. Dakota County’s average rating was the lowest among the five counties that participated in the survey. Females and people 55 and older had a higher average rating (i.e., they were more concerned) than residents overall. Residents were less concerned about this issue than they had been in previous surveys (2006, 2008, and 2011) (72).

Tobacco use among youth was the sixth highest concern of respondents overall and a top 10 concern among respondents aged 35-74 and low-income respondents. Male respondents, those aged 55-74, those with less than a bachelor’s degree, and respondents of color were more concerned about this issue than respondents overall.

Over-the-counter and prescription drug abuse was the ninth highest concern of respondents overall and a top 10 concern among male respondents, those ages 25-64, those with less than a bachelor’s degree, low-income respondents, White respondents, and respondents who work in Dakota County. Respondents age 55-74 and those with less than a bachelor’s degree were more concerned about this issue than respondents overall. Regina Medical Center identified prescription drug misuse as a priority in its 2013 Community Health Needs Assessment (228).

Chronic Disease and Conditions

In the 2013 Dakota County Resident Survey, 61 percent of residents indicated that overweight adults and children was a “major concern” or “moderate concern”. This was the only health concern for which more than 50 percent of respondents in this survey indicated that it was a “major concern” or “moderate concern”. Residents had about the same level of concern about this issue as they had in the previous two surveys (2008, 2011) (72).

In the 2013 Community Health Opinion Survey, obesity (overweight) among children (54 percent) was the only concern related to chronic disease and conditions for which more than 50 percent of respondents indicated major concern. Obesity (overweight) among children was the fourth highest concern of respondents overall and a top 10 concern among all respondents, regardless of gender, age, educational status, poverty status or race/ethnicity. Male
respondents, those aged 55-74, those with a bachelor’s degree or higher, low-income respondents, and respondents of color were more concerned about this issue than respondents overall.

Obesity (overweight) among adults was the tenth highest concern of respondents overall and a top 10 concern among male respondents, those younger than 54, White respondents, and those without health insurance. Female respondents, those aged 55-74, those with a bachelor’s degree or higher, low-income respondents, and respondents of color were more concerned about this issue than respondents overall.

In the 2013 Community Health Opinion Survey, Alzheimer’s disease was a top 10 concern among respondents aged 65-74 (57 percent “major concern”).

Obesity and the related issues of nutrition and physical activity were identified as top concerns and/or priorities by both non-profit hospitals in Dakota County and the hospitals in the surrounding counties (228; 229; 230; 231; 232).

Physical activity and nutrition

In the 2013 Community Health Opinion Survey, there were no issues related to physical activity for which more than 50 percent of respondents indicated “major concern”.

Spending too much time watching TV, using computers, or playing video games was the seventh highest concern of respondents overall (50 percent) and a top 10 concern among all populations, except low-income respondents and respondents of color. Female respondents, those aged 55-74, those with a bachelor’s degree or higher, and low-income respondents were more concerned about this issue than respondents overall.

Mental Health

In the 2013 Community Health Opinion Survey, there were no issues related to mental health for which more than 50 percent of respondents indicated “major concern”.

Mental health problems among youth was the eighth highest concern among respondents overall (46 percent) and a top 10 concern among female respondents, those under 54 years of age, those with a bachelor’s degree or higher, and White respondents. Female respondents, those aged 35-64, those with a bachelor’s degree or higher, low-income respondents, and respondents of color were more concerned about this issue than respondents overall.

Mental health was identified as a top concern and/or priority by both non-profit hospitals in Dakota County (228; 229).

Economic and Social Factors

In the 2013 Community Health Opinion Survey, there were no issues related to economic and social factors for which more than 50 percent of respondents indicated “major concern”. There were also no economic and social factors issues in the top 10 for respondents overall.

Unemployment was a top 10 concern among respondents aged 65-74 (58 percent “major concern”) and low-income respondents (53 percent “major concern”). Poverty was a top 10 concern among respondents without health insurance (51 percent “major concern”).

Availability of services

In the 2013 Community Health Opinion Survey, there were no issues related to availability of services for which more than 50 percent of respondents indicated “major concern”. There were also no availability of services issues in the top 10 for respondents overall.
Lack of health insurance was a top 10 concern among respondents aged 55-64 (51 percent “major concern”), those aged 65-74 (56 percent “major concern”), low-income respondents (61 percent “major concern”), and respondents of color (59 percent “major concern”).

Lack of dental services at low or no cost was a top 10 concern among low-income respondents (53 percent “major concern”). Lack of options for older adults unable to live alone was a top 10 concern among low-income respondents (52 percent “major concern”). Lack of mental health services at low or no cost was a top 10 concern among respondents aged 55-64 (51 percent “major concern”) and respondents of color (58 percent). Long waits for access to mental health services was a top 10 concern among respondents aged 55-64 (51 percent “major concern”) and low-income respondents (53 percent).

Access to care issues, particularly for special populations (low-income/uninsured, people of color, mentally ill, homeless, undocumented, and persons with chemical dependency) were identified as top concerns and/or priorities in the Community Health Needs Assessments for both non-profit hospitals in Dakota County and many of the hospitals in the surrounding counties. Specific issues identified as priorities included: access to mental health care (distance to travel, long waits, and inadequate supply of mental health services/providers), access to dental care services, and culturally-sensitive care (228; 229; 230; 232).

Maternal and Child Health

In the 2013 Community Health Opinion Survey, there were no issues related to maternal and child health for which more than 50 percent of respondents indicated “major concern”. There were also no maternal and child health issues in the top 10 for respondents overall.

Children entering school not ready to learn was a top 10 concern among respondents aged 55-64 (53 percent). Drug or alcohol use during pregnancy was a top 10 concern among respondents aged 65-74 (55 percent).

Violence

In the 2013 Dakota County Resident Survey, 48 percent of residents indicated that they feel “very safe” from violent crimes. Dakota County’s average rating was the second highest on this measure among the five counties that participated in the survey. Females and people 55 and older had a lower average rating (i.e., they feel less safe) (72).

In the 2013 Community Health Opinion Survey, there were no issues related to violence for which more than 50 percent of respondents indicated “major concern”. There were also no violence issues in the top 10 for respondents overall.

Abuse or neglect of children was a top 10 concern among respondents aged 55-64 (55 percent “major concern”). Domestic violence was a top 10 concern among respondents aged 65-74 (55 percent “major concern”) and respondents of color (60 percent “major concern”). Rape (sexual assault) was a top 10 concern among respondents of color (59.5 percent “major concern”).

In the 2013 Dakota County Resident Survey, 49 percent of residents indicated that bullying was a “major concern” or “moderate concern”. Dakota County’s average rating was the second lowest among the five counties that participated in the survey (72).

Concerns by population

Gender

Among the top 10 concerns in the 2013 Community Health Opinion Survey, women are more concerned about distracted driving, alcohol use by underage youth, driving under the influence, too much screen time, mental health
problems among youth, lack of mental health services at low or no cost, long wait times to access mental health services, and overweight or obesity among adults than men. Men are more concerned about use of other illegal drugs, tobacco use by youth, and overweight or obesity among children than women.

**Age**

In the 2013 Community Health Opinion Survey, respondents aged 25-34 were the age group most concerned about lack of affordable child day care. Respondents aged 35-54 were the age group most concerned about mental health problems among adults. Respondents aged 55-64 were the age group with the highest level of concern about a variety of issues: distracted driving, alcohol use by underage, driving under the influence, tobacco use by youth, abuse or neglect of children, too much screen time, children entering school not ready to learn, over-the-counter or prescription drug abuse, mental health problems among youth, long wait times to access mental health services, lack of mental health services available at low or no cost. Respondents aged 65-74 were the age group most concerned about: use of other illegal drugs, overweight (and obesity) among children, unemployment, Alzheimer’s disease, lack of health insurance, drug or alcohol use during pregnancy, domestic violence, and overweight (and obesity) among adults.

A short follow-up survey targeted two age groups that were not well-represented in the 2013 Community Health Opinion Survey: 18-24 year olds and people 75 and older. The top concerns among respondents aged 18-24 were: alcohol, tobacco, and other drugs (59 percent) and nutrition (44 percent). Alcohol, tobacco and other drugs also ranked as the most important concern for this age group. Themes of the open-ended responses for this age group related to substance use included: prevalence of substance abuse, significant impact on children and adolescents through use and from being exposed to use by others, connection to violence, and consequences to users and others around them.

The top concern among respondents aged 75-84 was: alcohol, tobacco, and other drugs (60 percent). It also ranked as the most important concern for this age group. Themes of the open-ended responses for this age group related to substance use included: prevalence of substance abuse, significant impact on children and adolescents through use and from being exposed to use by others, consequences to users and others around them, and the connection to crime and violence. Other themes mentioned in open-ended responses for this age group included: importance of physical activity for seniors and the disabled, and need for safety from crime for seniors when outside of their homes.

The top concern among respondents aged 85 and older was: alcohol, tobacco, and other drugs (63.5 percent). It was also ranked as the most important concern for this age group. Themes of the open-ended responses for this age group related to substance use included: significant impact on children and adolescents and the connection to violence.

**Educational status**

In the 2013 Community Health Opinion Survey, respondents with less than a bachelor’s degree were more concerned about: use of other illegal drugs, alcohol use among underage youth, driving under the influence, tobacco use among youth, over-the-counter and prescription drug abuse, violence in schools, and drug or alcohol use during pregnancy than respondents with a bachelor’s degree or higher.

Respondents with a bachelor’s degree or higher were more concerned about: distracted driving, obesity (overweight) in children, too much screen time, mental health problems among youth, lack of mental health services at low or no cost, and long wait times to access mental health services than respondents with less than a bachelor’s degree. Some of the additional health issues identified by respondents with a bachelor’s degree or higher included: preparation for the growth of the older population, need to provide support for parents, and not enough mental health services/providers.
Poverty status

In the 2013 Community Health Opinion Survey, low-income respondents (200 percent of poverty or less) are more concerned about a variety of issues than those living at greater than 200 percent of poverty: distracted driving, lack of health insurance, obesity (overweight) among children, alcohol use by underage youth, other illegal drugs, driving under the influence, long wait times for access to mental health services, unemployment, lack of dental services at low or no cost, lack of options for older adults unable to care for themselves, too much screen time, mental health problems among youth, lack of mental health services at low or no cost. Some of the additional health problems identified by low-income respondents were: importance of keeping mothers and children healthy, because children are the future; difficulty accessing and paying for health care services, including mental health services; difficulty in getting Medical Assistance; unemployment; wages not keeping up with the cost of living; prevalence of mental health concerns; lack of mental health providers; importance of nutrition and physical activity for children; and prevalence of substance use, particularly in youth.

Respondents living at greater than 200 percent of poverty are more concerned about tobacco use in youth and over-the-counter and prescription drug abuse than respondents living at 200 percent of poverty or less.

Race/Ethnicity

In the 2013 Community Health Opinion Survey, respondents of color were more concerned about a variety of issues than White respondents. Alcohol use by underage youth is their number one concern. Other issues they are more concerned about: tobacco use by youth, driving under the influence, use of other illegal drugs, domestic violence, rape/sexual assault, lack of health insurance, lack of mental health services at low or no cost, mental health problems among youth, and obesity (overweight) among adults. White respondents were more concerned about: distracted driving, obesity and overweight among children, too much screen time, and over-the-counter prescription drug abuse than respondents of color.

The short follow-up survey targeted racial/ethnic groups that were not well-represented in the 2013 Community Health Opinion Survey: people of color and Hispanics. The top concerns among Asian/Asian-American respondents were safety (45 percent); alcohol, tobacco, and other drugs (42 percent) and nutrition (42 percent). Not enough Asian/Asian-American respondents indicated a most important concern, so this could not be analyzed. Blacks/African-Americans ranked issues relatively equally. Themes of open-ended responses for this racial group included: importance of safety for children; the dangers of substance use; and the significant impact of substance use on children and adolescents, by being exposed to use and using themselves.

In the short follow-up survey, the top concerns among Hispanic respondents were: alcohol, tobacco, and other drugs (65 percent); health of mothers and children (44 percent); and nutrition (42 percent). Alcohol, tobacco and other drugs also ranked as the most important concern for Hispanic respondents. Themes of the open-ended responses for this ethnic group included: lack of health insurance and inability to pay for medical care; importance of nutrition, especially for children; importance of safety for children; secondhand smoke exposure; the impact of substance use on users and those around them; and the significant impact of substance use on children and adolescents, by being exposed to use and using themselves.
Community Strengths

The Healthy Dakota Initiative Steering Committee also identified resources that may be available to contribute to or support community health initiatives. Committee members considered the following question: “What assets/strengths can be drawn upon in Dakota County to fulfill the vision of the Healthy Dakota Initiative?” Below is the list that resulted:

Organizations
- Non-profits (e.g., DARTS, CAP Agency, 360 Communities, Neighbors, Hastings Family Service)
- Schools
- Libraries
- Faith organizations
- Hospitals and health clinics
- Food shelves
- Senior centers
- Cities, including police and fire
- Social clubs (e.g., Elks, Moose, Rotary, Kiwanis)
- Youth-serving organizations (e.g., 4-H, Scouts, athletic associations)
- Apartment and housing complexes
- Interest groups (e.g., biking clubs)
- Art centers
- Professional and business associations
- Political parties
- Local media, including local cable access, local newspapers, radio stations, school newsletters, and social media

Places
- Community events
- Restaurants and bars
- Sporting events
- Schools
- Businesses
- Malls
- Community centers

People
- Political leaders
- Retired people
- Boomers and “young seniors”
- Mentors

Community initiatives
- City and county staff for outreach
- Current city and county groups and projects
- Neighborhood associations

The Steering Committee noted that these community resources will be an important source of knowledge, skills, and connections that will be very useful in developing and implementing community health improvement strategies.
Forces of Change

The forces of change assessment completed by the Healthy Dakota Initiative Steering Committee identified external factors that may influence health, such as policy changes, social movements, economic and political trends, and technological developments. Committee members considered trends and events that have occurred recently or may occur in the future. Opportunities and threats were identified for each of the forces that were identified (2).

Table 12 – Forces of change with threats and opportunities

<table>
<thead>
<tr>
<th>Category</th>
<th>Force</th>
<th>Threats</th>
<th>Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic factors</td>
<td>Insurance/Affordable Care Act</td>
<td>Who will pay?</td>
<td>Economic incentives for personal responsibility</td>
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<tr>
<td></td>
<td></td>
<td>Insurance costs, deductibles and copays rising, but still not covering the cost of care</td>
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<td></td>
<td>Decreasing reimbursement for health care providers</td>
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<td></td>
<td></td>
<td>People may not understand changes</td>
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<td></td>
<td>People may not comply with mandate</td>
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<td></td>
<td>Cost of not having insurance to individuals</td>
<td></td>
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<td></td>
<td></td>
<td>More costly for employers to provide coverage than to pay the penalty</td>
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<td></td>
<td></td>
<td>Bankruptcies due to medical costs</td>
<td></td>
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<td></td>
<td></td>
<td>Lack of personal accountability</td>
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<tr>
<td>Economic slowdown/recovery</td>
<td>Steady or increasing need for public assistance</td>
<td>Push for innovation</td>
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<td></td>
<td></td>
<td>Decreasing tax levies</td>
<td>Older adults continuing to work</td>
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<td></td>
<td></td>
<td>Impact on families, communities and schools</td>
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<td></td>
<td></td>
<td>Not enough public funding for waiver programs – frail elderly have to go to nursing homes before they need to</td>
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<tr>
<td></td>
<td></td>
<td>Unpredictability</td>
<td></td>
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<tr>
<td>Poverty</td>
<td>Not enough transportation options</td>
<td>Create more transportation options</td>
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<tr>
<td></td>
<td>Lack of affordable housing</td>
<td>Bring technology to a broader population</td>
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<tr>
<td></td>
<td>Technology is becoming necessary</td>
<td></td>
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<tr>
<td></td>
<td>People require more training to be employable</td>
<td>New educational opportunities that lead to employment (ex. PSEO)</td>
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<tr>
<td>Category</td>
<td>Force</td>
<td>Threats</td>
<td>Opportunities</td>
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<tr>
<td>Communication/Technology</td>
<td>Rapid change in technology/difficult to predict where it is going</td>
<td>Increased public knowledge/culture shift toward greater health awareness</td>
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<td></td>
<td>Unknown impact to the community</td>
<td>Ease of partnering with other organizations</td>
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<tr>
<td></td>
<td>Increased amount of screen time</td>
<td>Use of technology for remote communications and diagnosis</td>
<td>Create reliable information source (filter)</td>
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<tr>
<td></td>
<td>Not all information on the internet is correct &amp; reliable/potential for misinformation</td>
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<tr>
<td></td>
<td>Increased reliance on non-personal communication/increased isolation</td>
<td>Increased communication</td>
<td>Virtual support groups, connection over long distances</td>
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<td></td>
<td>Too much information</td>
<td>New communication channels to access</td>
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<tr>
<td></td>
<td>Difficulty during some disaster scenarios</td>
<td>Can eliminate transportation barriers (virtual)</td>
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<tr>
<td></td>
<td>Not equally accessible to all incomes &amp; social groups/part of population doesn’t have access</td>
<td>Easier to monitor health “at home” and address/communicate</td>
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<tr>
<td></td>
<td>Costly to purchase and implement</td>
<td>Cost is decreasing</td>
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<tr>
<td></td>
<td>Having technology is becoming a necessity</td>
<td>Integration of intake (Every Door is Open)</td>
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<td></td>
<td>Technology can crash</td>
<td>Longer lives</td>
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<td></td>
<td>High learning curve/need for education to use</td>
<td>Improved ease of use</td>
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<td></td>
<td>Not everything is on the grid</td>
<td>MNSure signup?</td>
<td></td>
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<tr>
<td></td>
<td>Privacy and security breaches</td>
<td>Improved privacy due to not having everything on paper</td>
<td></td>
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<tr>
<td>Category</td>
<td>Force</td>
<td>Threats</td>
<td>Opportunities</td>
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<td>------------------------------------------------------------------------</td>
<td>---------------------------------------------------</td>
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<tr>
<td><strong>Health issues</strong></td>
<td>Mental health issues/suicide</td>
<td>Lack of providers=untreated</td>
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<td></td>
<td></td>
<td>Increased homelessness, crime, etc.</td>
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<tr>
<td></td>
<td>Chronic disease</td>
<td>Uncertain long-term impact of wellness campaigns/efforts</td>
<td>Greater emphasis on prevention</td>
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<td></td>
<td></td>
<td>Decreased healthy behaviors in adolescents</td>
<td>Health care homes – greater integration</td>
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<tr>
<td></td>
<td></td>
<td>Lack of personal accountability</td>
<td>Improvements in food supply</td>
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<tr>
<td></td>
<td></td>
<td>Food supply – cost, quality, accessibility</td>
<td>New discoveries, ex. person-specific treatments</td>
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<td></td>
<td></td>
<td>Education to learn good decision-making</td>
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<td></td>
<td></td>
<td>Two parents working</td>
<td>Innovations, such as Nurselines, disease management programs</td>
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<td></td>
<td></td>
<td>Cost of extracurricular sports</td>
<td>Changes to systems and built environment</td>
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<td></td>
<td></td>
<td>Lack of transportation to sports</td>
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<tr>
<td>Environment</td>
<td>Loss of trees due to infestation and disease</td>
<td></td>
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<td></td>
<td>Loss of healthy landscapes &amp; green areas for recreation &amp; relaxation</td>
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<td>Loss of “nature ethic” – being comfortable in the great outdoors</td>
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<tr>
<td>Disaster preparedness</td>
<td>Climate change/unprepared for natural disasters</td>
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<td></td>
<td>Terrorism</td>
<td></td>
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<tr>
<td>Social/demographic changes</td>
<td>Aging of population</td>
<td>Changes in family composition/fewer caretakers (“sandwich” effect)</td>
<td>Family support</td>
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<td></td>
<td></td>
<td>Increased numbers of older adults</td>
<td>More volunteerism</td>
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<td></td>
<td>Increased demands on services, health care</td>
<td>More information available</td>
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<td></td>
<td>Technology makes it more difficult to access information</td>
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<td></td>
<td></td>
<td>Social isolation/unable to leave residence</td>
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<td></td>
<td>Transportation challenges</td>
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<td></td>
<td></td>
<td>Need for home care</td>
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<tr>
<td>Increasing diversity</td>
<td>Communication/language barriers</td>
<td></td>
<td>English as a second language</td>
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<tr>
<td></td>
<td>Diverse needs</td>
<td></td>
<td>New ways to do things</td>
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<tr>
<td></td>
<td>Illiteracy</td>
<td></td>
<td>More ways for people to become involved</td>
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<tr>
<td></td>
<td>Immigrants may need to learn computer skills</td>
<td></td>
<td>Increased understanding of diverse populations</td>
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<tr>
<td>Suburban environment/built environment</td>
<td>Cul-de-sacs</td>
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<td></td>
<td>Spread-out</td>
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<td></td>
<td>Unsafe bridges/infrastructure</td>
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<td></td>
<td>Reliance on personal autos</td>
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<tr>
<td>Dual-income households/single-parent households</td>
<td>Unable to miss work-delay in receiving health care</td>
<td></td>
<td>Fewer volunteers available</td>
</tr>
</tbody>
</table>
Public Health Priorities

The Healthy Dakota Initiative Steering Committee met in November 2013 to review the findings from the Community Health Assessment and to consider public input received during the comment period. The committee initially identified 12 priorities to evaluate on four dimensions: extent (e.g., groups at risk and number of people affected), seriousness (e.g., urgency of health problem, public concern, potential for long-term illness or disability, economic impact), gap in resources available (e.g., gaps or limitations in service or location of services, impact of lack of services on the community), and health disparities (e.g., differences in impact on various groups).

The prioritization process identified the following ten issues as top health priorities in Dakota County:

- Mental illness
- Physical activity/eating habits/obesity
- Use of alcohol, tobacco, and other drugs
- Promoting mental health
- Public health funding
- Preventing/management of chronic conditions
- Income/poverty/employment
- Healthy start for children and adolescents
- Access to health care
- Affordable housing

The data displayed in the Community Health Assessment supports the need for population health improvement in Dakota County. Our vision for a healthier Dakota County includes a focus on the values of connectedness, engagement, and inclusiveness.

Mental Illness

More than 26 percent of adults in the U.S. suffer from a mental disorder in any given year, with nearly six percent experiencing a severe mental illness. Mental health disorders are the leading cause of disability in the U.S. for 15-44 year olds. According to the U.S. Surgeon General, a range of effective treatments exist for most mental disorders, yet nearly half of all Americans who have a severe mental illness fail to seek treatment. Good mental health is essential to leading a healthy life.

Physical activity/eating habits/obesity

Unhealthy eating, along with physical inactivity, is one of the most important risk factors for chronic disease in the United States. A study in 2000 estimated that 400,000 deaths annually could be attributed to poor diet and physical inactivity. Unhealthy eating, combined with physical inactivity, contributes to the development of obesity and chronic diseases, such as heart disease, stroke, type 2 diabetes, high blood pressure, osteoporosis and certain cancers. Since the late 1970’s, the prevalence of overweight and obesity in the United States has nearly doubled in adults, more than doubled in children and more than tripled in adolescents.

Use of alcohol, tobacco, and other drugs

The misuse of alcohol and other drugs are important risk factors for chronic disease, death and disability in the United States. An estimated 79,000 deaths annually in the U.S. can be attributed to excessive alcohol use. Alcohol and illicit drug use are associated with unintentional injuries, violence, risky sexual behavior, and illegal behavior, and can lead to liver disease, cancer, heart disease, and neurological and psychiatric problems. Children exposed to alcohol or other drugs during pregnancy can suffer lifelong physical and mental disabilities. Use of alcohol or illicit drugs can lead to dependence in some people, which increases the risk of harmful consequences. Tobacco use is the single most preventable cause of disease, disability, and death in the United States, with an estimated 443,000 people dying each year from tobacco-related illness. Cigarette smoking is associated with cancer, emphysema, chronic bronchitis, heart
disease, and stroke. In addition, there are health effects for non-smokers who are exposed to secondhand smoke, including an increased risk of dying from lung cancer or heart disease, and children are at increased risk of sudden infant death syndrome (SIDS), ear infections and asthma. Mothers who smoke cigarettes during pregnancy are at risk for poor birth outcomes, such as preterm birth, low birth weight, and stillbirth.

**Promoting mental health**

According to the World Health Organization definition, mental health is “... a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community.” Mental health is the basis for well-being and function of the individual and the community. Mental health, social conditions, and health behaviors may interact to intensify the effects on overall health of individuals.

**Public health funding**

Adequate public health funding is necessary in order to maintain the infrastructure to keep the public healthy. Public health infrastructure refers to all aspects of the public health system that help health professionals carry out essential public health services to promote, protect and maintain the health of the community as a whole. Examples are: workforce capacity and competency, information and data systems, and organizational and systems capacity. It includes activities that are required by law, efforts to assure the delivery of public health services to diverse populations, and actions that help maintain the public health system.

**Preventing/management of chronic conditions**

The leading causes of morbidity and mortality in Dakota County include preventable chronic diseases such as cancer, cardiovascular disease, stroke, and diabetes. In addition, the long course of illness for some chronic diseases results in activity limitations and pain, decreasing the quality of life for many county residents.

**Income/poverty/employment**

The economic conditions in which people live and work can influence health and life expectancy. These conditions can affect a person’s life and work conditions, such as stress levels, access to healthy food, safe places to exercise, exposure to environmental hazards, and availability of early learning opportunities. These exposures interact to increase or decrease the risk for many major diseases, such as heart disease, stroke and Type II diabetes.

**Healthy start for children and adolescents**

The health of mothers, infants, and children is important for the health of the current generation and future generations. Healthy growth and development of infants depends on the health of the mother before conception and the health and safety of mother and infant during delivery. A positive, supportive environment for mother and infant following birth is also critical.

**Access to health care**

Ability to access health care is affected by insurance coverage, cost, language and cultural barriers, availability of providers, and transportation. People who are not able to access health care are at increased risk for serious medical problems, premature mortality and poor health outcomes. Inability to access health care often results in receiving medical treatment later in the course of illness and in more costly settings, which increases the financial burden on the health care system.

**Affordable housing**

Affordable housing is an important factor in both physical and mental health. Home ownership provides financial stability and control over the living environment. Home owners are more likely to be involved in the life of the community. Excessive housing costs limit the amount of funds available for other needs, such as food and medical care. It also results in elevated stress levels that have an impact on health. When housing is affordable, people do not have to move as frequently. Children who have a stable living environment have higher academic achievement and better health outcomes.


25. **Dakota County Water Resources.**


64. Dakota County Sheriff's Office. Sheriff's Sales. 2013.
80. **Center for the Study of Social Policy.** *Results-Based Public Policy Strategies for Promoting Youth Civic Engagement.* 2011.
95. **Dakota County Public Health.**


104. *Dakota County Financial Services*.


157. **Minnesota Department of Public Safety.**


167. **Dakota County Public Health.** *Dakota County Public Schools School Nursing Services Survey.* 2013.


225. **Minnesota Department of Human Services.** Number and Statewide Percent of Vulnerable Adult Reports by County, Age and Allegation Type. St. Paul, MN : Minnesota Department of Human Services, 2012.